

The fall and rise of

Argentina

- a case study in case history repeats itself

*The effect of the in 2002 implied macroeconomic
policies on the following economic growth.*

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1. Introduction

1.1 Introduction to the Problem

January 2012¹. Europe is suffering from a severe economic crisis. In one country in particular faith is lost; Greece. Today many people question whether Greece will go bankrupt. To some others, it is just a question of when, but what everyone is most interested in, is what will happen next...

January 2002. After years of a declining Gross Domestic Product (GDP) and rising debts, the Argentine government decides to let go of their economic policies. (IMF, 2002) With help of the IMF, which supplied both money and an advisory panel of experts, Argentina was able to turn the wheel around. (IMF, 2003) Though the immediate effects made it seem like the situation was getting worse, Argentina started to generate economic growth relatively soon. (Dominguez and Tesar, 2007) This was only possible after some major changes were made, concerning more than just their form of governing and affecting every single inhabitant. (Schuler, 2002)

It has been exactly ten years ago since the Argentine economy reached an all-time low and Argentina became one of the few countries that has ever been declared insolvent. (IMF, 2002) Many articles appeared online at the time titled "What can we learn of the Argentine crisis?"² Apparently, not much has been learned. Currently the European Union is dealing with similar problems as Latin-America did then. (ECB, 2011)

Even though the situation in Greece is much more complex than the situation was ten years ago in Argentina, mostly due to their participation in the European Monetary Union, there are some outstanding similarities.³ Both countries have to deal with a structural problem, caused by a variety of factors. This includes a weak fiscal policy and a lack of flexibility in an economy which is merely based on importing products instead of producing much domestically. (Krueger, 2002) Tax revenues were not anywhere near the amount of money the government pumps into the economy, resulting in a high budget deficit. (Krueger, 2002)

Today it seems like everyone has an opinion on a possible bankruptcy for Greece, but it does not seem as if most people have a clear picture of what the true consequences of a bankruptcy can be. The aim of this paper is therefore to create a better awareness and understanding of the consequences of a defaulting country. The very similar Argentine bankruptcy will serve as an example. To start off, a brief description of economic growth is given and the Argentine economic situation in 2002 is introduced. Then there will be looked at which macroeconomic policies were introduced in 2002. It will be investigated how these policies effected the Argentine economic growth, both in the short- and long-run. To end with, an advice on a possible default is given to the Greek government.

¹ This paragraph is based on information of the ECB, 2011.

² Anne Krueger, First Deputy Managing Director at the IMF, for instance held a speech in 2002 at a conference in Cambridge titled "Crisis Prevention and Resolution: Lessons from Argentina".

³ The larger part of this paragraph is based on information of the ECB, 2011, unless mentioned differently.

1.2 Theoretic Framework

1.2.1 A brief description of economic growth⁴

Generally, when economists talk about economic growth, they are referring to growth in a nation's gross domestic product (GDP). The GDP is the total value of all final goods and services produced for the marketplace during a given year, within the nation's borders. This total value is measured by adding up the dollar values of the products.

To avoid overcounting, only the final products⁵ are included. Also, the goods and services must be produced in the relevant year. Second hand goods are thus not included; they were already counted in another year's GDP.

Only products that are produced to sell on the marketplace are taken into account. Anything produced for self purpose, like washing your own car, is thus not included. Financial assets, such as stocks and shares, are also not included, because they do not produce anything.

Measuring the production within the nation's borders, means, in Argentina's case, that everything foreign firms produce inside of Argentina is included, but that everything Argentines produce abroad is not included.

GDP is a flow variable: it measures the production over a period of time (almost always a year). When referring to a change in the GDP, mostly a change in the real GDP is meant. This is the change of the volume of the GDP, excluding the change in price level. Real GDP is considered to measure the average standard of living. A nominal rise in GDP includes the rise in the price level.

So what is the relevance of the GDP? First of all, a declining GDP alerts financial institutions and the government to recessions and therefore allows them to take measures in order to stabilize the economy before it is too late.

In the long-run, the change in GDP gives an indication whether the standard of living of inhabitants has improved and whether the output has grown fast enough to provide sufficient jobs for a growing population. It can be said that when production grows faster than the population, GDP per capita, thus the average standard of living, will rise, but when production grows more slowly than the population, this standard of living will fall.

A rise in GDP contributes to satisfying people's desires in a situation of scarcity. Especially for third-world nations where many people live below the poverty line, like in Argentina in 2002, economic growth is extremely important in order to improve their living conditions. For developed nations, GDP growth is also a significant factor when trying to accomplish social goals; when people's income rises, they will be more willing to sacrifice a part of their income to help the poor, but when the GDP is declining, people see their income being threatened and will see efforts to help the less fortunate as another threat.

Many aspects of wealth and people's standard of living, like leisure time and a clean environment, are not considered in the GDP, but these are mostly too difficult to measure. One must also remember that most important aspects of wealth, like food, housing and medical care, are included in the GDP.

⁴ The theoretical framework is based on "Macroeconomics: Principles and Applications", chapters 5, 8 and 13. Definitions used in the theoretical framework may be directly quoted from this book.

⁵ Products purchased by firms in order to edit these before they are sold are referred to as intermediate goods.

1.2.2 Measuring GDP

GDP can be calculated in several different ways. By looking at GDP from different aspects, measurement errors are avoided and different insights into the structure of an economy are created. One of the ways to measure the GDP is by measuring the total production⁶ of companies; this is done by adding up the values added⁷. Since production is always rewarded with income, adding up the four forms of income⁸ in a country should lead to the same number. It can thus be stated that the total production of a country always equals its total income.

Another important way of measuring the GDP is by adding up all purchases in the economy. This is called the expenditure approach. When adding up all purchases, the purchases are divided up according to the group in the economy that makes the purchase. Every purchase made can be placed within one of these groups.

Therefore it can be stated that $GDP = C + I + G + NX$. The four categories are:

1. Consumption of goods and services (C); purchased by households
2. Private investments of goods and services (I); purchased by businesses
3. Government goods and services (G); purchased by government agencies
4. Net exports (NX); purchased by foreigners

Consumption is the largest component of the GDP; it generally makes up about three quarters of the GDP. C includes almost all purchases made by households, except the earlier mentioned assets and used goods.

Private investment consists of new home constructions, changes in business firms' inventory stocks⁹ and business purchases of plant and equipment¹⁰. The latter is always is the largest component of I.

Government purchases include government consumption, the purchasing of goods and services, and public investment purchases. Transfer payments, money redistributed from one group of citizens to another, are not included in the GDP, because they are not purchases of goods and services. It can also be stated that they do not produce anything.

Net exports include the exports; all goods and services produced in Argentina, but purchased by foreigners, minus the imports; all goods and services purchased by foreigners, but bought by Argentines. The latter are not produced in Argentina and are therefore not part of the GDP.

⁶ The four production factors are land, labour, capital and entrepreneurship. The first two are primary production factors; they are by nature present at the earth. The other two production factors arise from the first two.

⁷ The value added of a company represents the production of that particular company. It is calculated by subtracting the costs of all the intermediate goods bought by the company from its total revenue.

⁸ Land is rewarded with rent, Labour is rewarded with wages, Capital is rewarded with interest and Entrepreneurship with profit. These are also called factor payments.

⁹ Inventory stocks are stocks of unsold goods. Even though these might not be sold during the year in question, they are produced and that is what is counted by the GDP.

¹⁰ These are not considered intermediate goods, because they last longer than one year and therefore only contribute to the total production in one year with a very small amount.

The effect of Argentina's macroeconomic policies in 2002 on the following economic growth.

1.2.3 Causes of sustainable, long-term economic growth

The next question that arises is what makes economies grow? In this paragraph economic growth in the long-run according to the Solow-model is discussed. This long-run economic growth is called the "steady state". It is proven that in the long-run, the economy tends to operate at its full employment output level¹¹. Therefore when we consider economic growth over the long-run, we must consider changes that cause full-employment output to increase.

One of the possibilities is a rise in labour supply, caused by a rise in the number of people who would like to work at any given wage. By the laws of the market mechanism¹², the average wage will now decrease and more employees will be hired. On the other side, an increase in labour demand could cause the average wage to rise and with that increase the amount of people willing to work. How the government can stimulate labour demand or supply will be discussed in section 3.6.

To make things complicated, an increase in labour supply does not necessarily have to improve the average standard of living. When employment increases while the capital stock remains constant, the amount of capital available to the average worker will decrease, and labour productivity decreases¹³. As was explained earlier, people earn income for the productivity they make. Thus, when their productivity declines, so will their wage.

The key solution to this problem is to increase the nation's stock of capital¹⁴. An increase in capital stock namely causes labour productivity, and with that the wages, to increase. When both the capital stock and the labour force rise in the same proportions, GDP per person employed will remain constant. In order to improve the average living standard, capital stock must increase relatively more than the labour force.

The government can stimulate investments in capital stock in several ways, for instance by reducing business taxes or providing specific investment incentives. The government can also stimulate households to save money, for instance by altering the tax and transfer system, causing supply of funds to go up and with that the price of funds, interest, to go down. At a lower interest rate, there is more demand for investment, thus investments will rise.

Another alternative is shrinking the government budget, which lowers the demand for funds, causing interest rates to fall and with that investment to go up.

There is one more source of economic growth in the long-run; technological change¹⁵.

Technological change namely affects the labour productivity in the same way as investments in capital stocks do; when new technological discoveries are made, the same amount of people may be able to produce more products. The government can increase the pace of technological change by investing in Research and Development (R&D).

¹¹ In a situation of full employment, there is no cyclical unemployment. The reasoning behind this statement can be found in "Macroeconomics; Principles and Applications".

¹² The rules of the market mechanism state that when demand rises and supply stays the same or rises relatively less, the price will go up and vice versa.

¹³ Labour productivity is the average production by an employee in a year, calculated by dividing the total output by the total employment.

¹⁴ Mostly, when there is referred to capital stock, plant and equipment bought by companies is meant. In this case though, increasing human capital, the skills and knowledge possessed by workers, is also meant.

¹⁵ With technological change, the invention or discovery of new inputs, outputs or methods of production is meant.

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1.2.4 The Equilibrium GDP and the AD-AS model

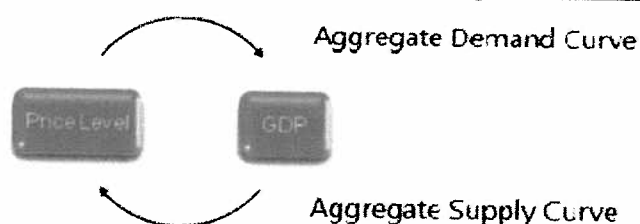
The equilibrium GDP (GDP_e) is the level of output in the short-run at which output and aggregate expenditure are equal.

Aggregate expenditure is the sum of *planned* spending by households, business firms, the government and foreigners on final goods and services. This means that the change in business' inventory stock is not included in the aggregated expenditure, because businesses do not plan this. Therefore there is a slight difference between aggregate expenditure and GDP. We calculate aggregate expenditure by adding C , I^p , G , and NX . I^p stands for the total private investments minus the changes in business stock.

If GDP is larger than the GDP_e , too much is produced and inventories pile up, forcing companies to cut back on their output. If GDP is smaller than the GDP_e , too less is produced and inventories fall empty, forcing companies to produce more. Therefore the economy will in the long-run always operate at the GDP_e .

The AD-AS model analyses economic growth in the short- to medium-run. It describes the two-way relation between price level¹⁶ and GDP and includes many aspects of the economy. In sections 3 and 4, many of these will be discussed. In order to understand those better, the AD-AS model is explained. The AD-AS model can also be used to explain economic growth. This will be done in sections 3.7 and 4.7.

Figure 1.1: The two-way relation between price level and GDP.



The Aggregate Demand (AD) curve shows the GDP_e at any given price level. The negative relationship between GDP_e and the price level can be explained in the following way: when the price level rises, the money demand curve shifts rightward¹⁷. According to the laws of the market mechanism, when there is more demand for money, the interest rate will rise. At a higher interest rate, investments and autonomous consumption¹⁸, and with that aggregate expenditure, go down, resulting in a lower GDP_e .

¹⁶ A rise in price level is called inflation. A decrease in price level is called deflation.

¹⁷ The money demand curve shows how much money households will be willing to hold, as opposed to invested in bonds, at any given interest rate. When the price level rises, people need more money in order to pay for purchases. At any given interest rate, households will have a higher demand for money, causing the curve to shift rightward.

¹⁸ Autonomous consumption (C^a) is the part of consumption that is independent of the income. When prices rise and this is not compensated with higher loans, people can buy less and thus consumption goes down. This is called a change in purchasing power.

The effect of Argentina's macroeconomic policies in 2002 on the following economic growth.

The Aggregate Supply (AS) curve shows the price level at any level of output (so GDP). When the price level rises due to a pass on of the costs companies face, the GDP must also rise. The costs companies face namely represent produced output. For instance, when the wages increase, the unit costs of a firm also increase and with that the prices. At the same time the rise in wages causes the income of employees to go up and with that GDP. Put otherwise, when output changes, so do the average costs and therefore the price. For every given output (or GDP), there is therefore a different price level. These are shown by the AS-curve.

The short-run macroeconomic equilibrium is the point where the economy will settle in the short-run. The economy must, in the short-run, be somewhere on the AD-curve; otherwise GDP would not be at its equilibrium value. At the same time, the economy must be operating on the AS curve, otherwise companies would not be asking the right price to make up for their costs. To find the ultimate macroeconomic short-run equilibrium, one must find the combination of output and price level that lies on both the AD- and AS-curve.

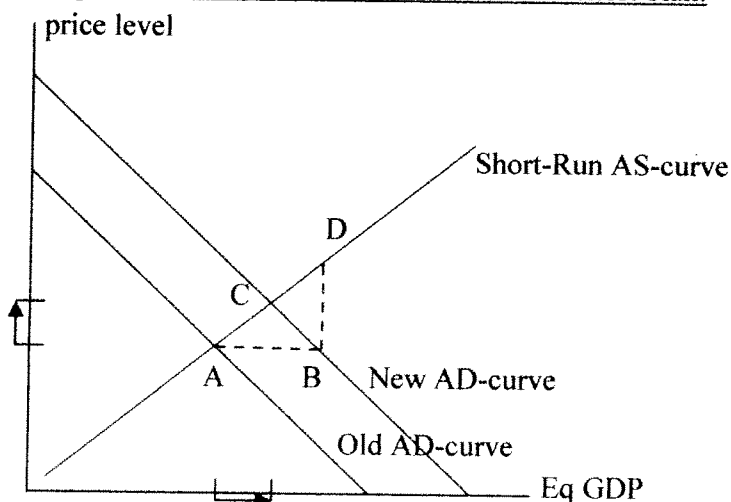
The AD- and AS-curve can be caused to move, creating a new GDP_e and price level.

A change in the AD-curve is called a Demand Shock. A positive demand shock causes the AD-curve to shift rightwards. A negative demand shock causes the AD-curve to shift leftwards. In this section two causes of demand shocks are discussed: a change in government expenditure (G) and a change in the money supply.

When G rises, the AD-curve shifts rightwards. The graph below shows that if the price level would remain constant, the GDP_e would move from point A to point B. But, a rise in the GDP causes unit costs to rise. Producers will now start to charge higher prices. (At GDP_e B, the price level would have to be at D to make up for the firms' unit costs.) A rise in prices causes the money demand to go up. Now interest rates will be raised and both C^a and I^p will fall, causing the GDP to fall until the economy settles at point C. This situation is shown in graph 1.1.

A fall in G causes the exact opposite to happen; the AD-curve shifts right wards, the GDP will fall, diminishing unit costs and lowering the price level. The fall in prices will cause money demand to fall. Falling interest rates will then result in a higher C^a en I^p , causing the economy to settle at a lower output and price level.

Graph 1.1 A Positive Demand Shock in the Short-Run.



The effect of Argentina's macroeconomic policies in 2002 on the following economic growth.

The government can also affect the money supply by its monetary policies. An increase in the money supply causes the AD-curve to shift to the right. This is because when the money supply rises, interest rates will fall, causing C^a and I^p to rise. The GDP_e will now be higher. But, at a higher GDP, the unit costs are higher, causing the price level to rise. The money demand now goes up as well, resulting in interest rates to increase. C^a and I^p will fall and the GDP will again settle somewhere in between.

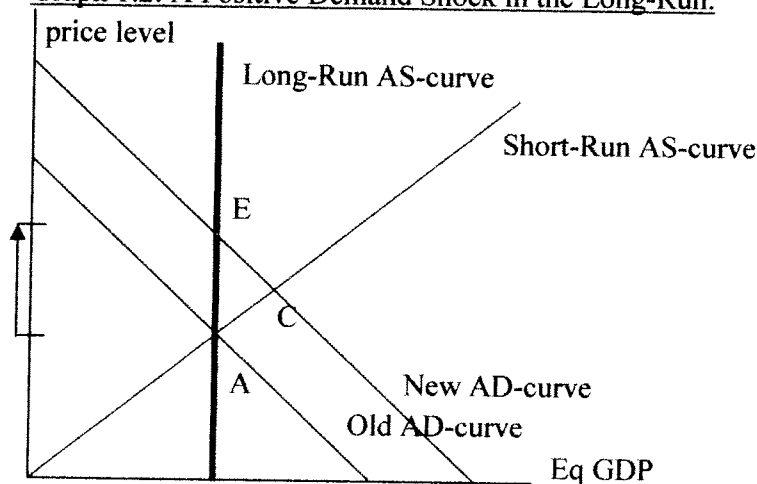
When the money supply decreases, the exact opposite will happen.

It can be concluded that a positive demand shock causes both the price level and the GDP_e to shift upwards. A negative demand shock causes the price level and the GDP_e to fall. But, this was all considering the short-run. One must not forget that when the GDP rises without the labour demand rising, GDP is higher than the full employment situation. Thus in the long-run, labour will become scarce, resulting in rising wages. These wages will cause unit costs to go up, resulting in a higher price level. GDP will now shift back to the initial situation until GDP_e equals the full employment situation again.

When GDP falls without a drop in the labour supply, GDP will be lower than the full employment situation. In the long-run, jobs will become scarce and employees will want to work for lower wages. Unit costs will fall, causing prices to drop and the GDP to rise until it is back at the GDP full employment situation.

In graph 1.2 the long-run AS-curve is drawn. It is seen that when the labour force remains unchanged after a positive demand shock, the GDP will, in the long-run, remain unchanged as well. The prices will rise, but so will the wages. A negative demand shock causes the price level and wages to fall. The real GDP, or purchasing power, will therefore remain unchanged. It can thus be concluded, like it was stated in the Solow-model, that real GDP can only grow when the labour force rises.

Graph 1.2: A Positive Demand Shock in the Long-Run.



There is one more conclusion that can be made. In the first situation, G was raised, but eventually the GDP remained constant. This is only possible when C and I fall proportionally. A rise in G therefore in the long-run causes C and I to fall (unless the labour force grows).

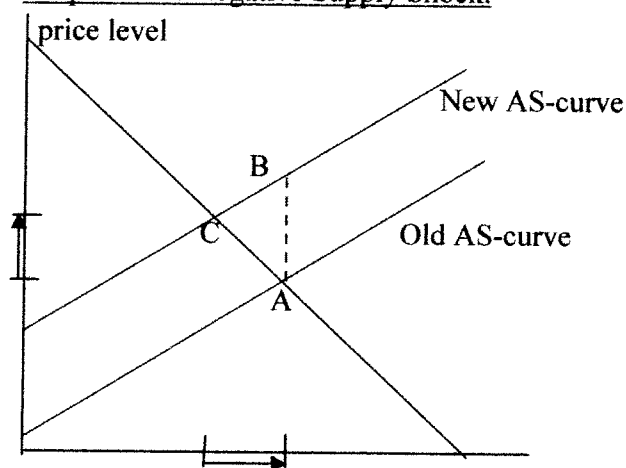
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The AS-curve can also shift. A shift of the AS-curve to the left is called a negative supply shock. Examples of this are rising oil prices or natural disasters. A shift of the AS-curve to the right is called a positive supply shock. This can be caused by lower costs, for instance due to technological change or a drop in oil prices. The government can influence this, as was explained earlier.

Graph 1.3 shows the consequences of a negative supply shock. When for instance the oil prices rise, unit costs go up, causing the price level to rise. (From point A to B) Demand will now fall. (From point B to C) This can be referred to as *stagflation*: a stagnating economy (output, so GDP, falls) combined with inflation (higher prices due to the higher unit costs).

On the other hand, when costs go down, so will the price level. At the same time demand will rise, resulting in a higher output and lower prices.

Graph 1.3: A Negative Supply Shock.



AS-shocks usually only last for a short period of time. The economy will then return to the initial situation. When a negative AS-shock is not just temporary, the GDP_e will become lower than the GDP full employment, causing wages and unit costs to go up. The AS-curve will shift back to its initial position and so will the GDP. In the case of a long lasting positive AS-shock, the GDP_e will become higher than the GDP full employment. Wages and unit costs will go down and again the economy returns to its initial situation.

It can be concluded that in the short-run, economic growth is triggered by demand and unit costs. Demand can grow when either C, I, G or NX grows. Economic growth caused by rising demand or unit costs will result in a higher price level.

The effect of Argentina's macroeconomic policies in 2002 on the following economic growth.

1.3 Introduction to the Argentine Economic Situation in 2002

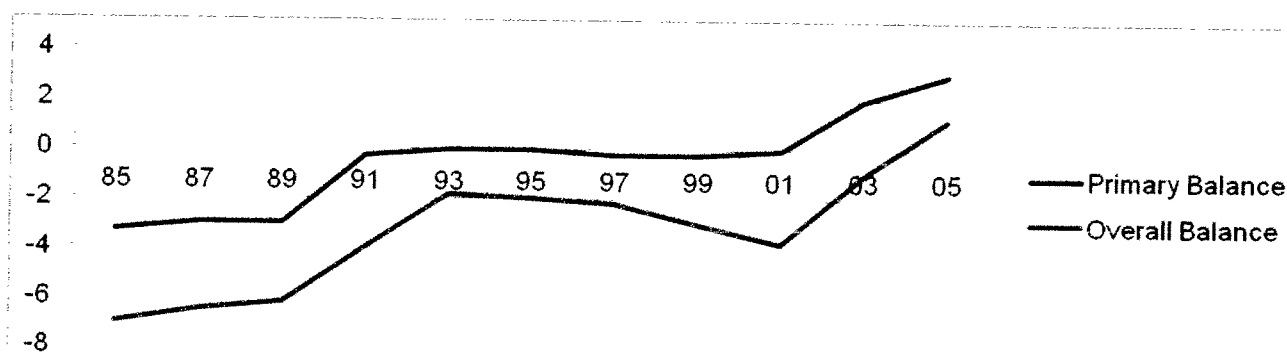
According to the Oxford Word Power Dictionary, "Bankruptcy is a legal status of an insolvent person or an organisation. That is, one that cannot repay the debts owed to creditors." Insolvent means that there are debts existing that cannot be paid back anymore.¹⁹ This is also the case when one cannot repay the interest on the loans. In the case of a bankruptcy, these debts are declared forgiven. This offers businesses a change to start all over.

The creditors are the ones who truly suffer in the case of a bankruptcy. They only get an amount of repayment based on what assets are available. Though this seems unfair, bankruptcies as a whole can be beneficial to an economy. The business gets another chance, hopefully having learned from the former mistakes and, by declaring a business bankrupt in a relatively early stage, creditors have a higher chance of getting most of their invested capital back.

Though these descriptions are concerning a company, it works quite the same way when a country defaults. Dornbusch explained this in relation to Argentina in the following way: "It is not respectful of national sovereignty to treat countries like corporations, but how else do you deal with repeated economic mismanagement of a country by its politicians? Turning things over to the military is no longer acceptable, thank God." (in IMF Survey, 2002) This section will explain why Argentina defaulted.

The main cause of the default was the fact that Argentine public expenditures had been higher than the fiscal revenues for decades. (Braun, 2006) This led to a negative overall balance as is shown in graph 1.4. (Krueger, 2002) When this is the case, a government basically has two options to finance the difference; they can print money or issue debts. (Braun, 2006) Argentina issued many debts as is shown in graph 1.5.

Graph 1.4: Argentine general government budget outcome as a % of the GDP.

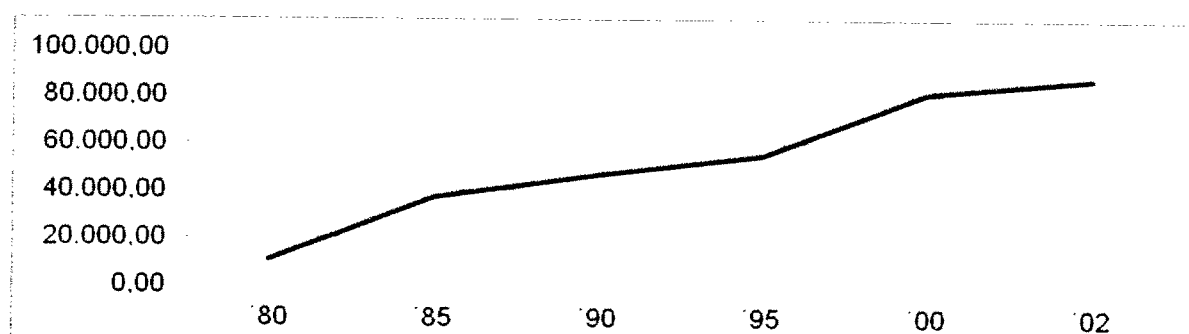


Based on information of the Argentine Economics Ministry (MECON), 2006

¹⁹ This paragraph is based on information of Investopia, 2011.

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Graph 1.5: The Argentine External Debt Stocks public and publicly guaranteed in millions of current US dollars.



Based on information of the Word Bank, 2012

Graph 1.5 shows the Argentine external debt stocks public and publicly guaranteed in current US dollars.²⁰ In this case, it includes all debts of the national government, political subdivisions and autonomous public bodies and the external obligations of private debtors that are guaranteed for repayment by a public entity. It includes only long-term debts²¹, including IMF credit. 'External' means that the debt is owed to foreign institutions and people residing outside of Argentina. The debt is repayable in foreign currencies, goods or services.

The budget deficit was caused by a continuing disappointing economic growth, while the government did not anticipate its expenditure and fiscal policies on this. (Braun, 2006, IMF, 2001) Causes of this disappointing growth are complex. (Krueger, 2002) In the period 1995-2001, tax revenues were disappointing, due to high interest rates and low exports. (Braun, 2006) On the other side, the government expenditure was much higher than expected. This was caused by the high costs of the pension reform and the high wages federal employees received. (Braun, 2006, Krueger, 2002) These wages were in 1998 an average of 45% higher than wages in the private sector. (Krueger, 2002)

The Argentine economy was also largely affected by the crises in Mexico, Asia and Russia²² (Dominguez and Tesar, 2007) This international volatility caused interest rates on the bonds of weaker states to be very high, leading to even higher government expenditures. (Braun, 2006) Argentina was considered a vulnerable country, due to their convertibility policies, and therefore faced interest rates as high as 12%. (Braun 2006 and Hornbeck, 2002) The effect of the high interest rates combined with the many loans the Argentine government issued is shown in table 1.1.

²⁰ The information in this paragraph is based on information of the World Bank, 2012.

²¹ Long-term debts are debts that do not have to be repaid within a one year period of time.

²² The crises caused foreign investors to lose faith in emerging markets like Argentina and resulted in volatilising capital flows.

The effect of Argentina's macroeconomic policies in 2002 on the following economic growth.

Table 1.1: Argentine Government Balance

	1993	1994	1995	1996	1997	1998	1999	2000	2001
Primary Balance	3.444	140	-1.143	-3.055	788	1,543	-2.133	1.253	-4.063
Interest (accrual)	3.407	4.040	4.807	5.613	6.843	7.858	9.655	11.528	13.024
Overall Balance	37	-3.900	-5.950	-8.668	-6.055	-6.315	-11.788	-10.275	-17.087

Source: MECON, 2005

Another problem was the convertibility policies. (Braun, 2006) These were officially started in 1991 to end the hyperinflation the country had been dealing with for years. (Hornbeck, 2002 and IMF, 1991) The Argentine currency, the peso, was pegged to the dollar at a one-to-one rate. (Calomiris, 2006) The Argentine Central Bank was only able to do this, by making sure every peso was covered by a dollar. (Schuler, 2002) Printing pesos can then only be done to exchange these for dollars outside of Argentina. (IMF, 1991) This is the main reason why the government could not print money to make up for its budget deficit. (Schuler, 2002) Though the policies have been criticized a lot, it did effectively bring down inflation. (IMF, 2000) When the dollar revaluated, the peg made the peso revalue as well. (Hall and Lieberman, 2001) Due to insufficient domestic flexibility²³, the actual value of the peso had not risen, so the appreciation led to overvaluation of the currency. (Krueger, 2002) Overvaluation makes a country's products relatively more expensive and therefore harms its international competitive position, negatively affecting exports. (Dominguez and Tesar, 2007) This especially became a problem when Brazil devaluated its currency and thus became a much more attractive trading partner than Argentina. (Dominguez and Tesar, 2007) Also, Brazil had accounted for 30% of the Argentine export, but Argentina was had now become too expensive for Brazil. (Hornbeck, 2002) The results were immediately visible in the declining Argentine export, bringing down economic growth and tax revenues. (Dominguez and Tesar, 2007)

Instead of encouraging and stimulating the economy by lowering the tax rates²⁴, the Argentine government imposed higher tax rates, discouraging production and leading to tax evasion. (Schuler, 2002) These pro-cyclic policies contributed to the low tax revenues²⁵ and disappointing economic growth. (Schuler, 2002)

Once the Argentine government took note of the terrible situation it was in, it was already too late. (Schuler, 2002) In 2001 the Argentine Gross Public Debt was more than 50% of their GDP. (MECON, 2011) In the period 1995-2001, the Argentine poverty rate rose from 19% to 35,4%. (INDEC, 2002) By December 2001, 18% of the Argentine population was unemployed. (IMF, 2001)

²³ This is important, because when pegging your currency to the dollar, you need to be able to adjust your economy to maintain competitiveness. Due to Argentina's structural problems, the economy was not able to do this. (Krueger, 2005)

²⁴ Based on Keynesian theories

²⁵ Based on Laffer's theory.

After De La Rue became Argentina's president in December 1999, he tried several things to improve the economic conditions. (Hornbeck, 2002) Shortly after starting his term, he asked the IMF for help²⁶ and cut \$1 billion in government expenditure. (IMF, 2000) In 2001 the economy kept shrinking and De La Rue announced debt restructuring (IMF, 2001) This means they exchanged \$29,5 billion worth of short-term loans for long-term loans. (IMF, 2001) Because of the high risks attached to the loans, the interest rates were extremely high. (Hornbeck, 2002) Under pressure of the IMF, the Argentine government introduced the "Zero Deficit Law", making sure not more money was spent than raised. (IMF, 2001)

Even after all these measures, the Argentine situation had not really changed. (IMF, 2001) It seemed like the government had insufficient knowledge on how to cope with the existing problems; they only made the situation worse. (Schuler, 2002) Once the world started to realize that the Argentine economic situation was getting worse instead of better, faith was lost. ("Spiegel", 2008) Even with a debt of over 80 billion dollars, the Argentine government needed more money. (IMF, 2001) When the IMF decided to not grant Argentina a new loan, because Argentina had repeatedly not met the set fiscal targets, there was nothing left the Argentine government could do. (IMF, 2001) On December 7th, 2001, Argentina therefore announced that it could no longer repay its foreign debts. (Hornbeck, 2002) This means Argentina declared herself insolvent.

It can be concluded that Argentina went bankrupt, because the government had spent more money than they had raised for a long period of time. This was caused by fiscal mismanagement and disappointing economic growth. The disappointing economic growth was the effect of many factors like the foreign crises, the convertibility policies and high interest rates. When faith in Argentina was lost, interest rates on their state bonds became so high that it was impossible for Argentina to manage the debts. Argentina then had no other choice but to default herself.

²⁶ The help was granted in March in the form of a \$7,2 billion stand-by conditional arrangement. In December, the IMF also arranged a \$40 billion multilateral assistance package. (IMF, 2001)

2. The Macroeconomic Policies implied in 2002

2.1 Introduction

After Argentina's default in December 2001, the country went into complete chaos. (Hornbeck, 2002) Supermarkets were plundered, almost all unions held a strike and the inhabitants started rioting. (Hornbeck, 2002) On December 20th, De La Rue resigned. (Hornbeck, 2002) After electing three different presidents in ten days, Senator Duhaldo was elected. (Hornbeck, 2002) Throughout 2002, Duhaldo and the IMF imposed many different policies concerning many economic aspects.²⁷ The main aim of these policies was to create a structural strong economy and with that restore confidence in the Argentine economy.

As the IMF made clear in 2002, the Argentine problem was a complicated puzzle where all the pieces of the puzzle were linked. There were numerous minor changes made that all together completely changed the structure of the Argentine economy.

In order to understand the economic growth better, the main changes will be discussed shortly. The changes are divided over three categories: the monetary policies, fiscal policies and the other important structural reforms.

2.2 The Monetary Policies

The aim of the monetary policies was to improve the external accounts and create a better business environment. The latter would generate more production and with that raise tax incomes. (Jusué and Navarro, 2008, Calomiris, 2006) Because this caused a risk of hyperinflation, the Argentine Central Bank (ACB) had to stay alert and try to maintain a low inflation. (IMF, 2002)

The most important aspect of the monetary policies was the devaluation of the peso by letting go of the convertibility policies and accept a floating exchange rate regime. (Calomiris, 2006) This would cause the peso to float from its overvaluated value to its real exchange rate value.

Letting go of the peg with the dollar meant that the Central Bank of Argentina would become independent again and needed some structural reforms. (IMF, 2002) This banking reform will be discussed in section 2.4.

The Argentine government wanted to devalue the peso steadily. (Baccino, 2002) In the first week of January, they set the exchange rate such that one dollar was worth 1,4 peso. They also imposed exchange controls. These restricted the buying of foreign currencies in order to maintain the old exchange rate. (Baccino, 2002)

Because of the high risk of devaluation, many Argentine people wanted to trade their pesos for dollars. (Baccino, 2002) By the laws of the market mechanism, the peso devaluated more and more as supply of pesos was high as well as demand for dollars. (Petras, 2002) In reality, the 1,4 exchange rate was therefore very unrealistic. (Petras, 2002) By the end of January, this fixed exchange rate was released. (Oanda, 2012) How the peso then devaluated further will be discussed in sections 3 and 4.

²⁷ The larger part of this paragraph is based on information of the IMF, 2002, unless mentioned differently.

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The aim of the devaluation was to generate a real exchange valuation. (Jusué and Navarro, 2008) If the peso would devalue, Argentine products would become relatively cheap and therefore more attractive to foreign investors. (Calomiris, 2006) This would cause exports to rise. It would also make imported products more expensive, causing imports to decline and thus improve the Argentine external accounts. (Jusué and Navarro, 2008)

Another import aspect of the release of the currency board was redenomination, also called "pesofication". (IMF, 2002) Redenomination of Argentina's dollar denominated debts means that the debt Argentina had in dollars was transferred to debt in pesos.²⁸ This was done to make sure Argentina's debt situation was manageable and Argentina would not become insolvent again. The same was done with Argentina's existing contracts. If this would not have been done, relative prices of the already existing contracts in dollars, like transport and energy, would have become extremely high after the peso's devaluation. Due to the redenomination of the energy contracts, the relative energy prices went down, making production cheaper and thus creating a better business environment.

Foreign currency deposits and bank loans were also redenominated, but this was done asymmetrically.²⁸ Bank loans were redenominated from dollars into pesos at face value. This means that the actual value of the loans depreciated soon. Depositors complained about this devaluation of their money and therefore dollar-denominated deposits were converted into pesos at a higher peso value. The downside of this asymmetric pesofication is that the banks' liabilities depreciated in value much less than their assets, leading to a substantial loss. The costs of this were as high as \$35 billion. (Schuler, 2003) The government therefore issued bonds to the banks which replaced the lost value as a compensation measure. Even though this seemed to be a favourable compensation, the real effect on the wealth of the Argentines was very little, since the bonds had to be paid through taxes.

The devaluation and rise in exports caused a risk of hyperinflation. (Jusué and Navarro, 2008) To maintain inflation as low as possible is important to restore confidence in the economy, create a favourable business environment and maintain the purchasing power of the Argentine people. (IMF, 2002) This was done by pressuring the peso, but this time within the framework of a freely floating exchange rate system. (IMF, 2002) A Central Bank's most important measure of controlling inflation is the interest rate. (IMF, 2002) In order to prevent monetary inflation, it is also important for the ACB to base the growth of the amount of pesos on the accumulation of international reserves, instead of printing money to boost the economy. (IMF Survey, 2002)

The last monetary policy that is discussed is the restructuring of the Argentine debts.²⁹ Argentina announced in December 2001 that it could no longer repay its debts. (Hornbeck, 2002) The existing debts therefore had to be restructured. (IMF, 2002) Debt restructuring allowed Argentina to reduce and renegotiate its existing debts in order to restore liquidity. (IMF, 2002) This was also important for the creditors, as they need to make sure a country is able to pay back as much as

²⁸ The larger part of this paragraph is based on information of Calomiris, 2006, unless mentioned differently.

²⁹ The larger part of this paragraph is based on information of Hornbeck, 2004, unless mentioned differently. For more information on the debt restructuring of Argentina, please read Hornbeck's CRS report for Congress of 2004.

possible. The restructuring was done in different ways, for instance by replacing old bonds with new bonds with a much lower nominal value and by extending and smoothing out the existing debt repayment schedule. This diminishes the debt itself and the interest costs.

Debt restructuring does result in an unprecedented loss for bondholders. Argentina had 88 bond issues outstanding to numerous, diverse creditors. (IMF Survey, 2002) This created problems concerning the coordination, collective action and intercreditor equity. (IMF Survey, 2002) 47% of the bondholders were Argentines. Argentines themselves will therefore be hurt the most by the debt restructuring. Not only the creditors were affected; also the long-term financial sustainability of Argentina was hurt. When Argentina in the future needs to lend money to make investments, it will be extremely difficult and expensive.

Due to the large amount of bonds, it took quite some time to reach a final agreement. A final offer was made in June 2004. It was agreed that the net value of the Argentine debt would be reduced with 75%. At that time, not all parts of the total debt were restructured. Some debts, like debt owed to the IMF, were never restructured at all and others were restructured after all in 2010. (IMF, 2010)

2.3 The Fiscal Policies

Besides an external surplus, one of the main goals was to achieve a fiscal surplus. (Jusué and Navarro, 2008) In this case, when the fiscal surplus is discussed, primary budget surplus is meant. This surplus exists after all public expenditures have been met except for interest on debt. (World Bank, 2011) The remaining surplus is in theory completely available for debt service. (Hall and Lieberman, 2001) Therefore, when a country has a fiscal surplus, it shows it has the capacity to service its debts. (Hall and Lieberman, 2001) Because Argentina defaulted on its debts and thus lost faith of investors, this is very important to restore the confidence in the economy again. (Jusué and Navarro, 2008)

To change the fiscal policies was probably the most difficult task. (IMF, 2002) Cutting on public expenditure was politically difficult. (IMF, 2002) One of the complications here was that one of the largest government expenditures was securities for the many poor people and these could not be cut according to humanity laws. (IMF, 2002) This was also one of the conditions set to the loans granted by the IMF and the World Bank. (IMF, 2002)

As Mussa explained in 2002, following a cyclical policy during a crisis, thus raising tax rates, works demotivative instead of stimulating and will aggregate the crisis. A higher tax rate can also lead to lower tax revenues as is shown in the Laffer curve (1974).

Still the Argentine government managed to raise its tax revenues, but this was mainly caused by the economic growth. (Hornbeck, 2004) Argentina did raise some of its tax revenues in order to achieve fiscal surplus, but the larger part of the raise in tax revenue was achieved through the rise in export, which will be explained in section 3 and 4. (Jusué and Navarro, 2008)

Besides making changes that affect the fiscal surplus directly, structural reforms were also made concerning the fiscal system.³⁰ The entire system had to get rid of its corrupt nature and become more transparent and clear. The intergovernmental relations needed to be reformed. For instance transfers to provincial governments were made more stable and predictable and the coparticipation system was now to include all taxes and revenues, including those achieved from export. The Argentine government also started to use some of its fiscal surplus to generate a fund to avoid future complications.

³⁰ This paragraph is based on information of the IMF, 2003.

2.3 Other Structural Reforms

As was mentioned before, there were many minor changes made. This paragraph mentions just a few important ones.

One of the changes was the restrictions on wage indexation. (Jusué and Navarro, 2008) This would put a stop to the relatively extremely high state employed wages that had partly caused the budget deficit and limits cost inflation. (Jusué and Navarro, 2008)

Another attempt to fight the budget deficit was large scale privatization. (IMF, 2002) For instance the oil, electricity, telecoms, water and airline companies were sold to private investors. (IMF, 2004) Private companies were hired to run airports, trains and roads. (The Economist, 2004) Though this effectively contributed to the fiscal surplus, many of the new privatised companies were poorly regulated or corrupt; reaping exorbitant profits. (The Economist, 2004)

Many changes were made concerning the Argentine law. (IMF, 2002) There were amendments made to the insolvency law and the economic subversion law was completely repealed. (IMF, 2002)

In order to fight the poverty in Argentina many new social policies were implied with help of the IMF and the World Bank. These provided social assistance and provided solutions for the high unemployment. (Jusué and Navarro, 2008, IMF, 2002) The IMF and Argentina agreed on a programme that would double the outlays of a social safety net. (IMF, 2003) This should go from 0,6% of the GDP in 2001 to 1,2% in 2003. (IMF, 2003)

Also, the "Programme for Unemployed Heads of Family" was introduced, aiming to provide direct income support to those families who suffered from unemployment due to the crisis. (GSD RC, 2009)

Penalties for firing employees were doubled in order to try to stop the rising unemployment. (IMF, 2002)

The banking sector faced a huge structural reform.³¹ The aim was to strengthen the fragile sector and to "put public banks on a sound financial footing". (IMF Survey, 2003) Besides making the Central Bank more independent, this was done by reforming, restructuring and downsizing public banks. A framework was set up for bank intervention and resolution. Examples of this are:

- Time deposits had been forced to be prolonged in 2001. (Schuler, 2003) This was continued throughout 2002 in order to maintain a low inflation. (Schuler, 2003)
- In order to pesoficate Argentina, the Argentine government seized the dollar reserves of the banks, costing them approximately \$1.6 billion. (Schuler, 2003)
- Authorities implemented a consistent, sustainable liquidity support policy. In August 2002 some results were already visible. Krueger mentioned in the IMF Survey of that month: "Liquidity assistance to banks has dramatically expanded the monetary base, with the year-on-year change in currency issue moving from minus 27 percent in December to plus 26 percent by the end of June."

³¹ This paragraph is based on information of the IMF Survey of August 2003.

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By the end of 2003, freedom of banks was restored, eliminating the temporary rules about lending out money to the private sector. (IMF Survey, October 2003) Around the same time, the Argentine government hoped to finish paying off the losses banks made because of the asymmetric pesofication, mentioned in section 2.2. (IMF Survey, October 2003)

On the other side, the IMF supported bank lending. IMF states this is essential to the recovery of the private sector and production.

Last but not least, external conditions were very favourable. (Dominguez and Tesar, 2007) One of these was the rising demand for soya, which will be discussed in section 4.4.

It can be concluded that in order to improve economic conditions, Argentina reformed its entire economy. Throughout 2002, some major changes were made concerning the monetary- and fiscal policies. The currency board was ended, dollar denominated debts, contracts and bank deposits were redenominated and the public debt was restructured. Tax rates were changed in order to generate a fiscal surplus. Also, many other structural changes were made in the hope of improving the business climate such that economic growth could be generated. Examples of this are large skill privatization, the banking reforms and the new social security.

3. The Short-Term Effects on the Economy

3.1 Introduction

The most common way of measuring economic growth is by measuring the percentage change in GDP.³² This is explained in the theoretic framework. To understand GDP growth better, this section starts with taking a careful look at the major changes that appeared in the Argentine economic situation. First the effects of the monetary policies on the inflation and exchange rate will be discussed. Those affected many economic aspects of which the changes in import, export and employment will be discussed. Finally, GDP will be discussed with its effect on the income and purchasing power of the Argentine people. Besides the changes in the economic indicators, the causes and consequences of these will also be discussed. Even though they are all discussed separately, it will also be discussed how they have affected each other.

When there is looked at the short-term consequences of the macroeconomic policies, it is seen that the Argentine economic situation was getting worse on many aspects. As was mentioned before, many of the economic aspects influenced each other. It therefore differs per indicator when they changed from making the economic situation worse to making it better, but generally speaking the short-run, worsened economic situation is considered to be the year 2002. These short-term consequences will be discussed in this section.

3.2 Inflation

One of the main consequences of the in early 2002 imposed monetary policies was a drastically rising inflation rate. (World Bank, 2012) Because inflation affects many other economical aspects, as will be discussed later on in this section, it is believed to be an important indicator of the economic situation and important in order to understand the following discussed economic indicators.

Inflation is a general rise in the price level of a country.³³ It basically means that certain goods become more expensive. Inflation is measured as an average of many different goods, reflecting the basket of goods and services of the average consumer. (World Bank, 2012) Whether inflation affects you therefore depends partly on the share of the relevant goods in your total purchases. If life in general becomes more expensive, people buy less and their wealth goes down.³⁴ A too high inflation rate is considered to be harmful to an economy. This will be explained later on considering Argentina.

The opposite of inflation, deflation, meaning that prices are falling, is also pressuring economic growth, because people will postpone their purchases.³³ Therefore generally speaking, inflation of 2% is considered to be "healthy" for an economy.

³² The information on GDP given in this paragraph is based on "Macroeconomics: Principles and Applications" (Hall and Lieberman, 2001),

³³ The larger part of this paragraph is based on information of "Macroeconomics: Principles and Applications" (Hall and Lieberman, 2001), unless mentioned differently.

³⁴ This is referred to as purchasing power and will be discussed in section 3.7.

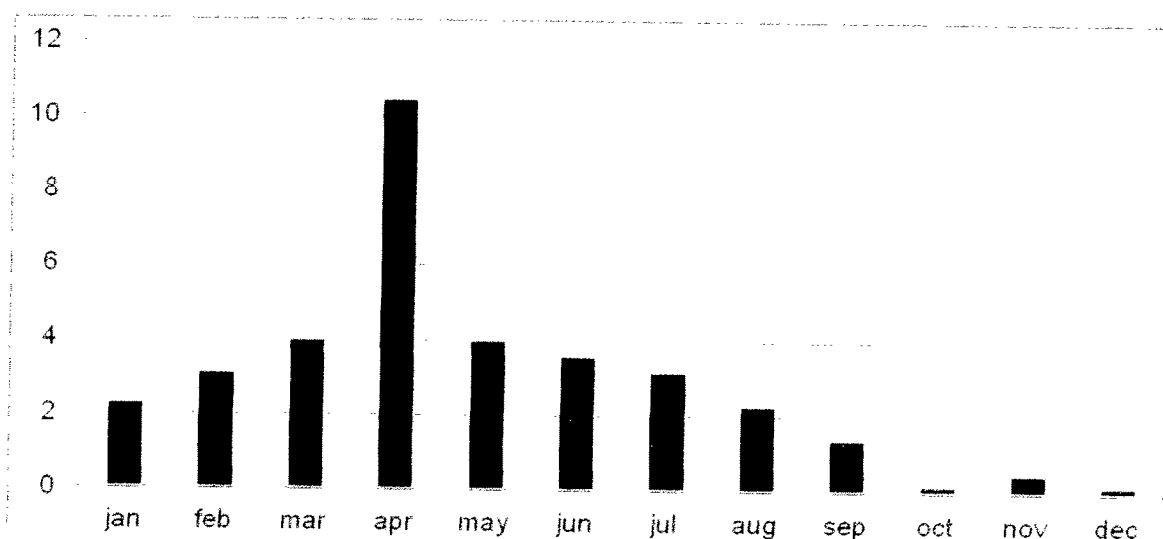
The effect of Argentina's macroeconomic policies in 2002 on the following economic growth.

There are many different institutions that publish inflation rates.³³ It differs a lot which goods are taken into account and how heavy they are considered to weigh. Governments can be corrupt and manipulate their inflation rate to make their economy look healthier. Therefore it can be difficult to find the right information and draw the right conclusions. In this section and in section 4.2 the inflation rates the Argentine government published itself via INDEC and the independent inflation rate the World Bank published will be discussed.

Graph 3.2 shows the monthly inflation in Argentina in 2002 according to INDEC. As was mentioned in section 1.2, Argentina was dealing with hyperinflation at the end of the 1980s/start of the 1990s. Therefore they introduced the convertibility policies. These worked effectively, as before the financial collapse at the end of 2001, Argentina was mainly coping with deflation. (INDEC, 2012) As soon as Argentina let go of these policies in January 2002, the prices of the Argentine goods began to rise. (INDEC, 2002) The total inflation in 2002 was 35,2%, (INDEC, 2002) which is so high that it is considered to be hyperinflation. (Hall and Lieberman, 2001) Table 3.2 shows how INDEC composed its inflation index.

According to the World Bank, inflation was "only" 25,9%. (World Bank, 2012) The World Bank uses The Laspeyres formula³⁵ to build up its inflation rate. (World Bank, 2012) Still this is a number high enough to state that Argentina was dealing with hyperinflation. (Hall and Lieberman, 2001)

Graph 3.1: Monthly inflation in Argentina in 2002.



Based on information of INDEC, 2002

³⁵ For more information on The Laspeyres formula, see <http://www.statcan.gc.ca/concepts/cf/8102792-eng.htm>.

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Table 3.1: Consumer Price Index³⁶ of Argentina in 2002, decomposed.

Categories	INDEX 2002
General index	124,33
Foods and beverages	130,84
Apparel	125,73
Housing and basic services	105,76
Household equipment and maintenance	132,71
Medical attention and health-care expenses	124,26
Transportation and communication	121,91
Leisure	131,41
Education	102,22
Other goods and service	134,14

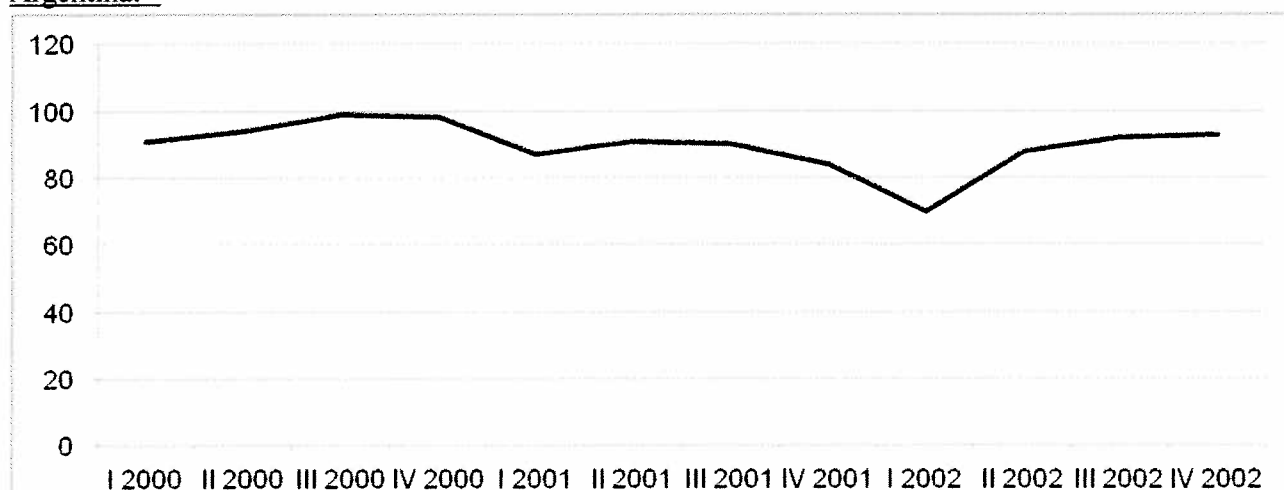
Source: INDEC, 2012

Graph 3.1 shows that the rise in price level was not evenly spread throughout the year. (INDEC, 2002) This has to do with a change in the aspects that cause inflation. (JBIC, 2004)

Inflation is mostly caused by scarcity, thus a higher demand than supply, higher costs of for instance labour or resources, leading to a higher cost price, or the federal bank printing money which is not covered by production. (Hall and Lieberman, 2001)

In Argentina's case it is very hard to say what exactly caused prices to rise. (JBIC, 2004) In graph 3.2 is seen that at the start of 2002, industrial production was still low.³⁷ Production is always triggered by demand, so if demand was high, the production would have risen. A high demand, thus scarcity, can therefore not be the cause of the high inflation. (Hall and Lieberman, 2001 and JBIC, 2004)

Graph 3.2: Industrial Production in Argentina.³⁸



Based on information of MECON, 2003

³⁶ The Consumer Price Index (CPI) is the inflation rate as an index. (Hall and Lieberman, 2001) The base year here is 1999. Because in the years before 2002 there was deflation, inflation as compared to the year before was much higher than 24,33%. (INDEC, 2012) This 24,33% is as opposed to 1999.

³⁷ The cause of this low production will be discussed in section 3.7.

³⁸ The graph is in index numbers. The base year is 1997. The numbers represent each quarter of a year.

Part of the hyperinflation was caused by the high costs faced by companies, which was passed on to consumers. Because the peso devaluated, importing products became relatively more expensive. This will be discussed in sections 3.3 and 3.5. Natural resources imported from other countries became therefore relatively more expensive, causing the cost prices to rise. (JBIC, 2004)

The largest boost to the hyperinflation was the end of the currency board, explained in section 2.2. Converting all the dollar deposits into pesos caused the money supply (of pesos) to rise. (JBIC, 2004) Normally, when the cause of the rise in supply of money is not a higher production, this causes extreme monetary inflation. In Argentina, monetary inflation was still relatively low, since the deposits were frozen and therefore most of the "new" money could not enter the economy and thus could not contribute to inflation. (JBIC, 2004)

Of course this was only a matter of time, because the deposits freeze was only a temporary solution. Whether a time bomb was created and Argentina did suffer from hyperinflation will be discussed in section 4.2.

Besides the negative effect on the purchasing power, which will be discussed in section 3.7, there are soem other effects of hyperinflation on the economy. Those that are in relation to Argentina in 2002 will be discussed.

One of the risks of hyperinflation is the fact that it may lead to a vicious cycle.³⁹ People will start hoarding; spending their money fast before it has devaluated. This higher demand will lead to more scarcity, so the prices will rise and inflation will go up even more. It also leads to saving accounts being emptied.

A higher price level also deteriorates the international competitive position, due to higher relative prices. (Hall and Lieberman, 2001)

But, hyperinflation does not only have negative aspects.³³ One of the positive effects of the hyperinflation was that Argentina's denominated debts were relatively cheaper to pay off. The debts were still the same amount of pesos, but that amount had lost its value due to the devaluation of the value of the money. This was beneficial to the Argentine government, but also to all the Argentine people itself who owned debts, for instance in the form of a mortgage. Of course this does at the same time cause another setback for the Argentine creditors. This loss is normally accounted for by higher interest rates, but the government had decided to maintain these fixed to the rates prior to the devaluation and inflation. (JBIC, 2004)

Inflation in Argentina had an important effect on the exchange rate, import and export. These will be discussed briefly in sections 3.3, 3.4 and 3.5.

Jusué and Navarro have studied the inflation uncertainty.⁴⁰ It is seen in graph 3.3 that in the year 2002 it was almost impossible for economist to predict the inflation. For the Argentine people it was therefore very difficult to anticipate on the future. Should they buy as quickly as possible, because there will be hyperinflation, or should they postpone their purchases, because deflation is on its way?

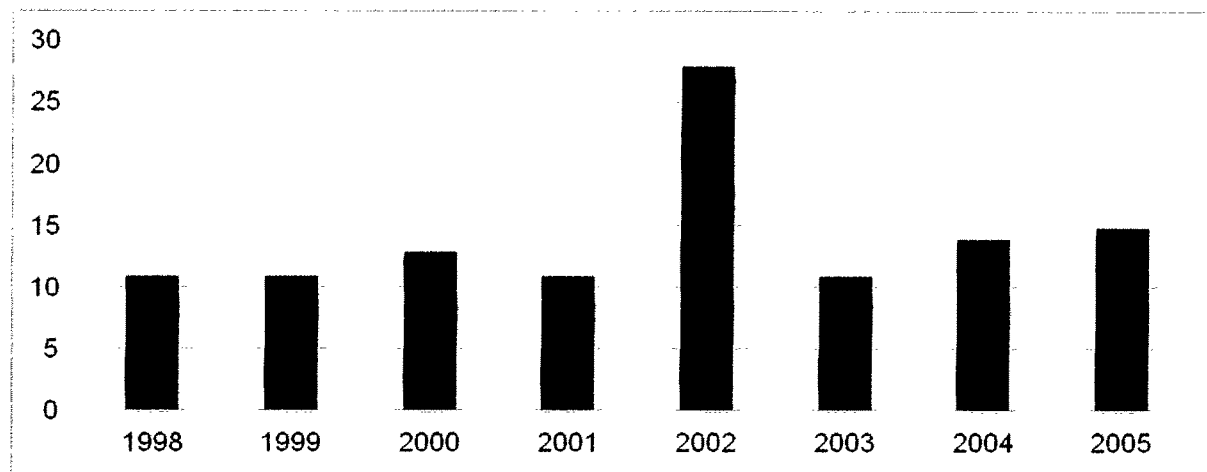
³⁹ The larger part of this paragraph is based on information of Hall and Lieberman, 2001, unless mentioned differently.

⁴⁰ This paragraph is based on information of Jusué and Navarro, 2008.

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Inflation uncertainty also affects the investment climate negatively. When companies' turnovers are falling due to the high prices, it is not a good time to start a new business and as an existing business you would rather cut your spending instead of expand your company, affecting employment.

Graph 3.3: Inflation Uncertainty in Argentina.



Based on information of Jusué and Navarro, 2008

It can be concluded that Argentina suffered from hyperinflation, especially in the first six months of 2002. This was mainly caused by the ending of the currency board in January 2002. Besides affecting the people's purchasing power, it has a negative effect on businesses and their international competitive position. It makes it difficult for consumers to anticipate their purchases to the prices and can cause a vicious cycle. It negatively affected creditors, but at the same time positively affected debtors, including the state with its enormous debt.

3.3 Exchange Rate

The exchange rate is the amount of money of one country's currency (in Argentina's case the peso) that is traded for one unit of another country's currency.⁴¹

There are generally two reasons why one would trade its currency for another one: one wants to buy goods or services from another country, or one wants to buy foreign assets. The lower the exchange rate of a country is, the higher the demand for its currency is. This is because a lower exchange rate means one has to give up less of its own currency to obtain the foreign currency. The foreign currency can then be used to buy goods that are relatively cheap.

Parallel with the demand for foreign currencies, runs the supply of the own currency, which needs to be traded in order to receive the foreign currencies.

The demand for a foreign currency (and thus the supply of the domestic currency) can also rise without the exchange rate falling, for instance because the demand for foreign products rises after a rise in the Real GDP or because the products are simply cheaper in foreign countries.⁴¹ The demand also rises when the relatively interest rate is higher in foreign countries; investors will

⁴¹ This paragraph is based on information of "Macroeconomics; Principles and Applications" (Hall and Lieberman, 2001).

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want to invest their money in assets of this country, raising the demand for the currency. In the latter case, it is important to consider the expected changes in the exchange rate. If for instance the price of dollars in pesos will fall in the future, the real value of bought American assets in pesos will decline.

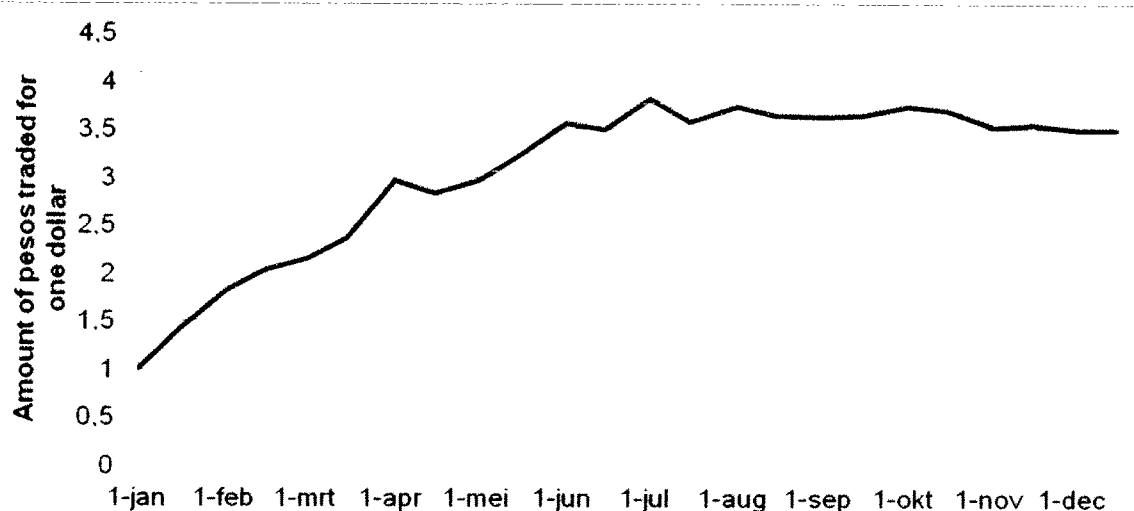
On the other side, foreigners offer (supply) their own currency to trade (demand) for the domestic currency for the same reasons.

When the government does not intervene in the foreign currency market, it is said that an exchange rate floats.⁴¹ The exchange rate then sets at the equilibrium exchange rate. This is determined by the laws of the market mechanism. When the supply of a currency rises more than the demand for the same currency, a lower exchange rate will come to existence. This is called depreciation. Imports and foreign investments will now become more expensive and thus will fall, but exporting products becomes cheaper, improving the international competitive position. Vice versa it is called appreciation when a higher exchange rate comes to existence. Exports will now decline, but imports and foreign investments will rise.

As was explained in section 2.2, the Argentine government was pressuring the exchange rate of the peso against the dollar at a one to one rate. In January 2002, they started to let the peso float freely. Immediately the exchange rate started to devalue⁴². (Calomiris, 2006) The government was already expecting this. (Calomiris, 2006) As was mentioned in section 2.2, the government tried to decelerate the devaluation process, by first implementing a new fixed exchange rate at 1 dollar to 1,4 peso.

Information of Oanda shows that the currency board was completely abolished on January the 22nd. One US Dollar was then for the first time worth more than 1,4 Pesos; namely 1,850 Pesos. From this moment on, the exchange rate started to depreciate quickly. The next day the exchange rate was 1 : 1,900. (Oanda, 2012) The exchange rate depreciated further throughout 2002, until it stabilized around 1 : 3,5 at the end of the year. (Oanda, 2012) This is shown in graph 3.4.

Graph 3.4: The Dollar-Peso Exchange Rate in 2002.



Based on information of Oanda, 2012

⁴² When a fixed exchange rate changes to a lower fixed exchange rate this is called devaluation instead of depreciation.

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The cause of the depreciation and the devaluation was obviously the abandoning of the currency board. (Calomiris, 2006) The demand for pesos was low, because Argentina did not have many products to export, as was explained in section 1.3. The hyperinflation worsened Argentina's international competitive position too. (Hall and Lieberman, 2001) As faith in the peso was lost, many Argentines traded pesos for other foreign currencies, causing supply of pesos to rise. (Dominguez and Tesar, 2007) This all resulted in a depreciation of the peso as opposed to the dollar of 71,43%.⁴³

The consequences of a devaluated and depreciated exchange rate are mostly visible in the changes in export and import. (Hall and Lieberman, 2001) These will be discussed briefly in the following two sections.

Also, foreign debtors were negatively affected by the devaluation and depreciation of the peso. (Calomiris, 2006) To facilitate the situation, it is assumed that all foreign investors invested dollars. The amount of money invested in dollars was equal to the amount in pesos.⁴⁴ Now the peso had devaluated, the amount of pesos was worth less dollars, resulting in a loss. To make up for this loss, the Argentine government redenominated all dollar denominated debts, as was discussed in section 2.2.

It can be concluded that the release of the currency board caused the peso to devalue, affecting export, import and foreign investors.

3.4 Exports

When calculating short-run economic growth by adding up the purchases, there is looked at Consumption, Investments, Government expenditure and Net Exports (NX). In 2002, in Argentina the main change took place in Net Exports. The following two sections will therefore elaborate some more on these. We calculate Net Exports by subtracting imports from exports. Both components of NX will be discussed separately. The other components of the GDP will be discussed in section 3.7.

It was explained in the previous section that, generally speaking, when a country's currency depreciates or devaluates, its exports start to rise drastically. In Argentina, this was not the case. The government was expecting a rise of only 4%. (Campell, 2002) Jorge Campbell, who was the secretary of International Economic Relations, stated that the barrier to Argentina's export success was "the insular mind-set of its businesses". According to him, companies traditionally have rather catered to the large middle class of Argentina itself than to look for markets abroad. Another complicating factor was the relatively low quality of Argentina's food and agricultural products. (Dominguez and Tesar, 2007) In 2002, these food products made up for 46% of the total Argentine export. (World Bank, 2012) A third contributing factor was mentioned in section 3.2, namely the high inflation rate, which deteriorates the international competitive position.

The total dollar value of the exports in 2002 was 25,536 million dollars. (CNCE, 2003) This was actually a decline of almost 10% as compared to the previous year, but it does not say anything about the volume of the exports. (CNCE, 2003) To say whether the volume of the exports had grown or declined is difficult, because throughout 2002, the dollar value compared to the peso had

⁴³ Based on information of Oanda, the peso : dollar rate changes from 1 : 1, to 1 : 0,2857 throughout 2002.

⁴⁴ The following reasoning is based on information of "Macroeconomics; Principles and Applications" (Hall and Lieberman, 2001)

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devaluated. (Section 3.3) The dollar value therefore would have declined, even if the exports would not have changed in volume (or amount of pesos) at all. (World Bank, 2012) Keeping the dollar fixed at its 2000 value, the export rose from 31.784.877.124 to 32.767.969.134 dollars, which is a slight rise of 3%. (World Bank, 2012)

In 2002, 3.551 new Exporting Companies were set up.⁴⁵ This made the total Exporting Companies to rise to 12.902. There had not been so many new exporting companies in one year since 1998. This rise was probably caused partly because of the reduction in energy costs as a result of the in section 2.2 named dollar denominated contract redenomination. This made it seem like the government policies aiming to improve the business environment had worked. At the same time though, many companies did not make it through the year. In 2001, the total of exporting companies was 11.302, so the total rise was only 1.600. These new exporting companies also made up for only 1% of the total export value, even though their share in the amount of companies was 28%.

3.5 Imports

In section 3.3 it was concluded that a depreciating and devaluating peso would lead to a fall in imports. Imports also fall when people's average standard of living falls, which happened as well, as will be discussed in section 3.7. (Hall and Lieberman, 2001)

Looking at the imports at a constant dollar value again, we can see that the imports have indeed more than halved compared to 2001. (World Bank, 2012)

A fall in the imports meant that there was a smaller access to foreign goods and services for the Argentine people in 2002 than there was in 2001.⁴⁶ One third of the imports in 2002 were services. In 2001, that was almost 50%. This means that Argentina started to import relatively more goods than services in 2002 than in 2001. Generally speaking, more developed countries import more services than goods. (Hall and Lieberman, 2001) The fall in the share of services in the imports was a sign that Argentina was becoming a less developed, poorer country.

With imports having a total dollar value (keeping the dollar fixed at its 2000 value again) of 14,069,392,078 and total exports having a total dollar value of 32.767.969.134, the Argentina current account improved drastically. (World Bank, 2012) A large external surplus arose. (World Bank, 2012) One of the most important goals, as was discussed in section 2, was thus already achieved in 2002. The effect of this on the GDP will be discussed in section 3.7.

It can thus be concluded that while NX had always been a declining factor of the GDP, throughout 2002 it became a contributing factor. This will be discussed into more detail in section 3.7.

⁴⁵ This paragraph is based on information of CNCE, 2003.

⁴⁶ The larger part of this paragraph is based on information of the World Bank, 2012, unless mentioned differently.

3.6 Employment

In the theoretical framework it was stated that sustainable growth in the long-run is caused either by a technological change or by a rise in the labour supply. The unemployment is therefore a good indicator when concerning long-term economic growth and will therefore be discussed in this paragraph.

The employment rate is the fraction of the labour force that does not have a job.⁴⁷ The labour force includes all people who are working or willing to work. A high unemployment is considered to be harmful to an economy. Of course all the unemployed people are missing out on an income. Since they mostly receive social assistance by the government, this is not only a problem for them, but for the entire society. The employed inhabitants have to pay for the unemployed through taxes. They thus lose a part of their income and purchasing power.

Another cost to the entire population is the opportunity cost of lost output. Theoretically those unemployed inhabitants could be producing goods or services. Inhabitants can now consume less output, since the output is not being created.

Besides economic costs, unemployment can cause psychological and physical damage. It causes greater wealth differences and may therefore cause setbacks in achieving important social goals. For Argentina this was an important aspect, since they received a lot of pressure from international organisations like the IMF to enhance their social equity as a condition to obtain the loans.

Last but not least, unemployment can tribute to a vicious cycle of poverty affecting the lives of entire families.

When the labour market is disfunctioning, thus not providing jobs for the entire workforce, the government usually steps in.²⁵ Growth in employment can be caused by either a rise in labour supply or an increase in labour demand. One of the first things the government usually does is lowering the income tax. If this tax is paid by the employers, this will bring down his labour costs and thus increases demand. If the tax is paid by the employees, their threshold wage⁴⁸ will lower and thus supply increases. The government could also decrease unemployment benefits⁴⁹ in order to increase labour supply.

Another solution is to subsidize employers when hiring new employees. Measures to increase the skills of the workforce, for instance by making university education free, can also be helpful. There is one similarity that stands out of all these policies: they cost a lot of money; money that, as was discussed in section 2.3, the Argentine government did not have. In this paragraph the cause and course of the unemployment in 2002 will be discussed, as well as the effects on the economy and society.

⁴⁷ This paragraph is based on information of "Macroeconomics: Principles and Applications" (Hall and Lieberman, 2001)

⁴⁸ The threshold wage is the lowest wage for which an employee would want to work. For an example of how this works, see "Macroeconomics: Principles and Applications"

⁴⁹ Unemployment benefits consist of government assistance received by the unemployed, for instance the dole. When these are high, the incentives to work are low. When the government cuts in these expenses people are forced to find work in order to maintain a (relatively) high standard of living.

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Already in the early 1990s, the Argentine unemployment rate started to rise. (World Bank, 2012) In 1994, 12,1% of the total labour force was unemployed. (World Bank, 2012) In May 2002, this had risen to 21,5%. (INDEC, 2012) In the rural areas adjacent to Buenos Aires, the capital, unemployment was even higher, namely 24,2%. (INDEC, 2012) Besides having more than 4 million⁵⁰ unemployed inhabitants, Argentina was dealing with another 3,4 million⁵¹ underemployed workers; making not enough money (in the formal sector) to secure a living. (GSD RC, 2009)

The cause of the unemployment was, as was shown in Graph 3.2, the declining industrial production. (JBIC, 2004) When companies lower their production, they are in need of less labour and will fire employees. (Hall and Lieberman, 2001)

It was already mentioned in section 2.3 that the government had to cut spending and could not provide enough social assistance. Many unemployed Argentines were having severe problems surviving without government support and sought jobs in the fast growing informal sector⁵². (UC Atlas, 2012) The informal sector is illegal and therefore secretive and thus cannot be measured. (ILO, 2012) It can be estimated though, as is done by the Informal Labour Module. (ILO, 2012) They estimated that in 2001 38% of all the employed Argentines were working in the informal sector. (ILO, 2008) At the start of 2003, that was almost 50%, meaning that the informal sector had grown more than 30%. (ILO, 2008)

The high unemployment and low government assistance led to a rise in (extreme) poverty. In 2002, the poverty rate of people living under the international standards of \$2 was 19,7%; an incredible amount of almost 7,5 million people⁵³. (World Bank, 2012) More than half of these people (9,9%) even lived under the \$1,25 standard. (World Bank, 2012)

It can be concluded that in 2002 Argentina was dealing with an incredibly high cyclical unemployment⁵⁴. This caused the informal sector to rise and resulted in severe poverty amongst a large part of the population.

⁵⁰ In 2002, the Argentine total work force was 17,000,168.4. (World Bank, 2012)

⁵¹ In 2002, 20% of the total work force was underemployed. (GSD RC, 2009)

⁵² Working in the informal sector is considered to be a bad thing, because it is nearly always badly paid (under the minimum wage) and does not offer any security for the future. Many people working in the informal sector, especially men, have to do physically demanding work for many hours straight, possibly causing serious health problems for which they are not insured. For more information on the informal sector, please see ILOs report.

⁵³ In 2002 the total Argentine population was 37.944.000. (World Research Institute, 2012)

⁵⁴ Cyclical unemployment exists when the demand of labour is lower than the supply, due to a declining production. (Hall and Lieberman, 2001) This is proved by graph 3.2.

3.7 GDP

The theoretical framework (section 1.2) gives a clear description on what GDP is, how it's measured and how it can be caused to grow. It was stated that in the short-run, so in 2002, GDP growth is triggered by a rise in demand. Graph 3.2 showed that the production, and thus demand, declined in 2002. Still, the total Argentine GDP (in pesos) rose 16,33%. This can only be the case if the price level in Argentina rose, not necessarily improving the life of the Argentine people. This is what will be explained in this section.

The average purchasing power of a country shows how many products can be bought with an average wage.⁵⁵ The purchasing power can change when the income (GDP) and/or the price level changes. When the GDP rises and the price level remains constant, the average person can buy more goods, thus his purchasing power rises. When the price level rises and GDP remains constant, the average person can buy fewer goods, thus his purchasing power declines.

The above mentioned rise in GDP is calculated in current prices. (World Bank, 2012) As was shown in the AS-AD model, when the price level rises, so does the GDP (in the short-run), but this does not say anything about the purchasing power of the Argentine people.

As was shown in section 3.2, inflation was really high in 2002.⁵⁶ Thus while the GDP nominally rose 16,33%, the average purchasing power declined 10,9%.

This did not account for all Argentine inhabitants. At the same time the GDP shrunk with 10,9%, unemployment was also rising. (Section 3.6) To see the difference in purchasing power of the employed, there is looked at the GDP per person employed in dollars while keeping the purchasing power of the dollar equal to a certain year. When this is done for Argentina, keeping the dollar at its purchasing power in 1990, it is seen that the Argentine real wages rose slightly. The average employed in Argentina saw their real wage growing from \$23.139 to \$23.177 in 2002. At the same time this means that the purchasing power of the unemployed had to decline more than the average of 10,9%. (Hall and Lieberman, 2001) To make things worse, the total population of Argentina was growing, making the average GDP per capita decline 12%. (World Bank, 2012)

The result of the declining purchasing power was rising extreme poverty. This was already mentioned in section 3.6. A lower purchasing power can lead to less consumption. (Hall and Lieberman, 2001) This could lead to a cyclical movement, causing GDP to keep on declining. (Hall and Lieberman, 2001) Whether this happened or not will be discussed in section 4.

The changes in real GDP varied per month.⁵⁷ An all-time low record of -16,30% was reached in March. From June onwards, the real GDP started to rise again slightly for two months. The last months of the year, the real GDP remained constant. This was partly due to the low inflation rate.

⁵⁵ The larger part of this paragraph is based on information of "Macroeconomics; Principles and Applications" (Hall and Lieberman, 2001)

⁵⁶ This paragraph is based on information of the World Bank, 2012.

⁵⁷ This paragraph is based on information of INDEC, 2002 and 2012.

In the theoretical framework is explained why $GDP = C + I + G + NX$.

In 2001, C made up for 85% of the GDP.⁵⁸ In 2002, that had fallen to 73%. Taking the decline of the GDP into account, this means households in Argentina spent much less. (Hall and Lieberman, 2001) It is generally considered that when one buys less, one's wealth goes down. (Hall and Lieberman, 2001) The reason for this decline in consumption was the decline in the purchasing power. (Calomiris, 2006) In 2002, G made up for 12% of the GDP. This was a slight decline as opposed to the 14% in 2001. In sections 1.3 and 2.2 it became clear that a decline in G was necessary.

Even though the value of the exports only increased 3%, the share of exports in the GDP rose from 12% to 28%. This was only possible because the share of the other components of the GDP fell drastically. (Hall and Lieberman, 2001) Imports made up for 13% of the GDP, making NX make up for 15% of the GDP. (World Bank, 2012)

Adding up 73, 12 and 15 makes 100. That would indicate that no investments were made in 2002.⁵⁹ One must remember that there are different types of investments. If for instance the stock of products decreased, investments in plants and equipment could still have risen. After all, investments were extremely low. This was caused by the lower production and the declining Foreign Direct Investment, due to a lack of demand and trust. (Chudnovsky and López, 2008)

By analysing the situation according to the AD-AS model, it is seen that a decline in real GDP while the price level rises must be caused by a negative supply shock.⁶⁰ It was explained that a possible cause of a negative supply shock is a rise in (oil) prices. In sections 3.3 and 3.4, it was explained that due to the devaluation of the peso, the relative prices of imported goods (like oil) indeed rose drastically. Other causes of the decline in demand and output were the low trust, the low purchasing power (thus demand) and the financial crisis of 2001. (JBIC, 2004)

After reading the theoretical framework, producing economic growth does not seem too difficult when there is a government to help stimulating the right processes. The major drawback is that all of these stimulations cost money. In order to achieve economic growth, capital must grow. In order to make these investments, funds are needed. These funds mostly consist of the savings of households. In a situation like the Argentine situation in 2002, where people barely have enough money to survive and faith in banks is lost⁶¹, savings are low, causing a lack of money for investments and thus high interest rate. The Argentine government also did not have the financial assets to stimulate its economy, as became clear in sections 1.3 and 2.

How the GDP was able to grow in the long-run will be discussed in section 4.

We can conclude that even though the value of the GDP increased nominally, the real value of the GDP, and thus the purchasing power, declined severely. This decline was caused by a combination of many factors, caused partly by the newly implemented policies and partly still by the shocks of the financial crisis in 2001. Because of the financial problems amongst businesses, the government and households, investments to stimulate the economic growth could not be made.

⁵⁸ All data mentioned in this paragraph is based on information of the World Bank, 2012.

⁵⁹ The following reasoning is based on information of "Macroeconomics; Principles and Applications" (Hall and Lieberman, 2001).

⁶⁰ Supply shocks always only lead to a temporary change in GDP. In section 4.7 the long-run change in GDP will be discussed.

⁶¹ Faith was low because the Argentine people were afraid of another deposit freeze as was mentioned in section 1.3 and because they had no trust in the value of the peso.

4. The Long-Term Effects on the Economy

4.1 Introduction

When there is looked at the long-term consequences of the macroeconomic policies, it can be seen that the economy started to recover soon after the year 2002. When discussing the long-run, the, mainly positive, changes in the economy from the year 2003 and onwards are meant. The long-term consequences will be discussed in this section in the same order as in section 3, in order to make an easy comparison.

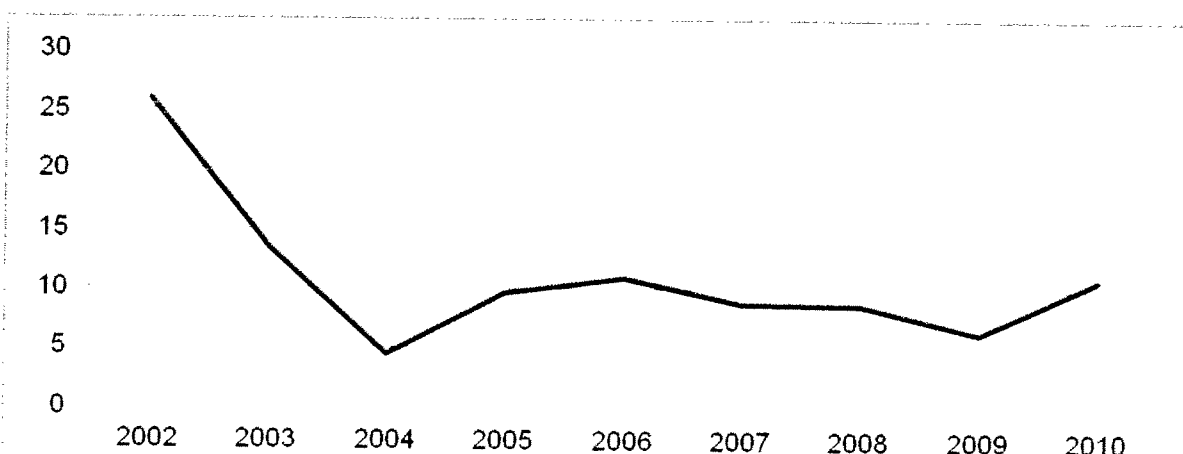
4.2 Inflation

In graph 3.3 it was shown that inflation uncertainty started falling after 2002.⁶² This means that inflation was more predictable and thus more stable. (Jusué and Navarro, 2008) Graph 4.1 shows that the inflation rate was indeed more stable, but the level of the inflation was still relatively high. (World Bank, 2012) This was partly caused by increasing unit costs, due to the rises in wages and high relative prices of imported inputs, caused by the devaluation.

On the other side, consumption and investment were rising as a result of economic growth and government policies (this will be discussed more carefully in section 4.7). Together with the trade surplus, this caused effective demand to rise. Output was becoming closer to its potential output. By the laws of the market mechanism, prices go up when demand grows faster than supply can grow. (Hall and Lieberman, 2001)

It is therefore remarkable that the inflation rate started falling after 2002. Especially considering the fact that many of the imposed capital controls on deposits were lifted, causing the money supply to rise, without a reward in the form of production, causing monetary inflation. (JBIC, 2004)

Graph 4.1: Annual inflation in Argentina.



Based on data of the World Bank, 2012⁶³

⁶² The larger part of this paragraph is based on information of Mercado, 2007, unless mentioned differently.

⁶³ This time the difference between the calculations of INDEC and the World Bank is negligible and will therefore not be discussed separately.

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One of the reasons why there was no hyperinflation after the lift of the capital controls (thus a rise in supply of money), was the rising demand for money. (JBIC, 2004) In the theoretical framework was explained how a higher price level leads to a higher demand for money, but the high demand for money was also triggered by the past capital controls; the Argentine people were afraid of not having access to their money again and therefore rather held it at home in cash. (JBIC, 2004)

The rise in the informal sector, which was discussed in section 3.6, could also have contributed to the rise in money demand, since informal workers are mostly paid in cash to avoid the banks and the government finding out. (JBIC, 2004 and Hall and Lieberman, 2001) Also, not all of the deposits were emptied after the capital controls were released, because people kept hoping for a despesofication. (JBIC, 2004)

Maintaining inflation low was important in order to improve the international competitive position of Argentina and to allow real GDP to grow.⁶⁴ The government and the federal bank therefore tried their best to lower the inflation rate, but this was difficult because inflation policies can be ambiguous. Raising interest rates would bring down demand, but at the same time rise unit costs. (Hall and Lieberman, 2001) Also, to maintain a depreciated real exchange rate, favourable to maintain exports high, the government intervened in the market by buying excess supply of foreign currency. On the other side, measures of sterilization were needed to avoid an excessive expansion in the money supply, one of the main causes of the hyperinflation in early 2002.

The government tried several different policies. Throughout 2006 for instance, the government made price agreements with certain sectors and firms. Graph 4.1 shows that the inflation rate started falling from 2006 onwards. This policy thus worked.

The effects of the inflation were similar to the ones discussed in section 3.2. The effect on purchasing power was different, due to a faster rising nominal GDP. (World Bank, 2012) This will be discussed in section 4.7.

4.3 Exchange Rate

Graph 4.2 shows the exchange rate in the years after 2002 on the first of January. It was explained in section 3.2 that a depreciating exchange rate improves the international competitive position. It was therefore very important for Argentina to maintain the depreciated value of the peso. (JBIC, 2004)

Even though the government officially had let go of its currency board, it kept pressuring its currency in order to maintain its devaluated value. (JBIC, 2004) One of the examples of this was given in section 4.2: buying the foreign currency and with that supplying the own currency. By the law of the market mechanism, a high supply leads to a low "price". Another measure the federal bank has is the interest rate.⁶⁵ When the bank lowers the interest rate, Argentine assets become less attractive. This lowers the demand for the peso, because there are less foreign investors. At the same time it raises the supply of the peso, because there will be more Argentines willing to invest in foreign countries. Thus, the exchange rate depreciates.

Graph 4.3 shows the lending interest rates in Argentina and confirms this reasoning, with the

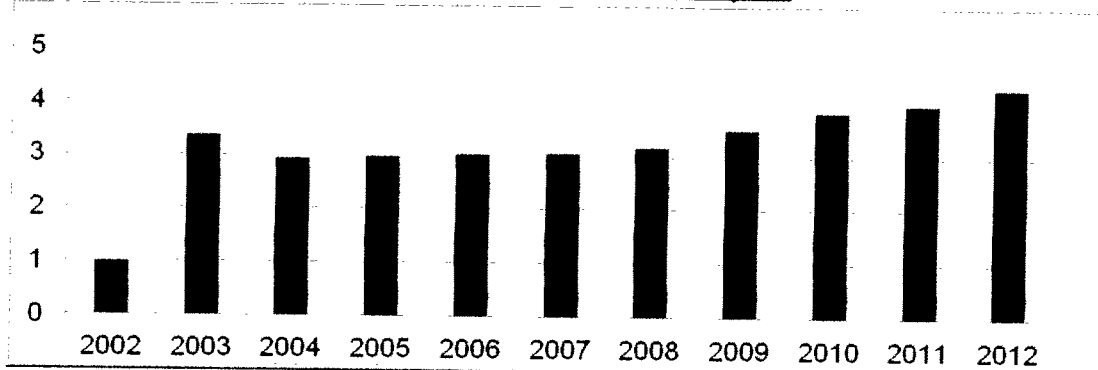
⁶⁴ The larger part of this paragraph is based on information of Mercado, 2007, unless mentioned differently.

⁶⁵ The following reasoning is based on information of "Macroeconomics; Principles and Applications" (Hall and Lieberman, 2001)

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exception of a few years. It was namely explained in section 4.2, that there are also several reasons for maintaining a low interest rate, for instance to lower cost inflation.

Graph 4.2: The Dollar-Peso Exchange Rate at 01-01 each year.



Based on information of <http://www.oanda.com/convert/classic>, 2012

Graph 4.3: Lending interest rates in Argentina.



Based on information of the World Bank, 2012

It can be concluded that the peso maintained its low value compared to the dollar. This was positively influenced by the government.

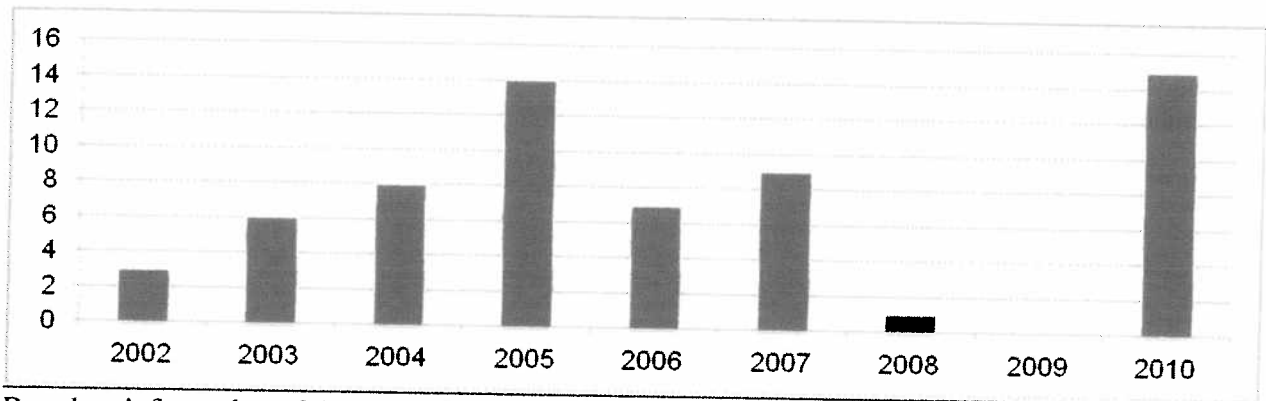
4.4 Exports

Graph 4.4 shows the growth in exports based on constant prices. This means that the actual value of the exports in pesos rose more, due to the high inflation rate. The graph shows that it took some time before the exports of Argentina started to experience high growth. The reasons for this were explained in section 3.4. It is also seen that in 2009 the exports shrunk (by 6%), due to the stagnating international trade, caused by the financial crisis. (World Bank, 2012) Argentina suffered relatively only very little from the crisis. (IMF, 2011) This is for instance seen in the high rise in exports in 2010. (IMF, 2011)

Generally, Brazil and the EU both make up for almost 20% of the exports. (TDS, 2012) Other important markets are China (10%), Chile (7%) and the US (6%). (Approximates of TDS, 2012)

The effect of Argentina's macroeconomic policies in 2002 on the following economic growth.

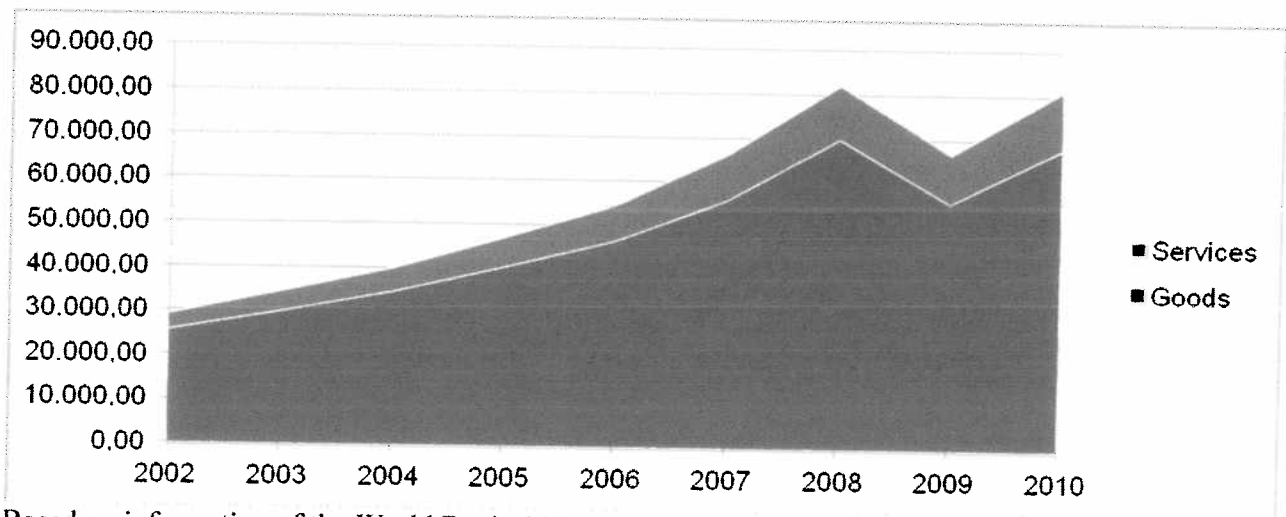
Graph 4.4: Annual % growth in the Total Exports of Argentina



Based on information of the World Bank, 2012

Graph 4.5 shows the total value of the exports in current US\$, so including the rise in price level. It is seen that the largest part of the exports consists of goods. (World Bank, 2012) These goods are mainly agricultural products, like grains and cattle. (Mercado, 2007) This is because Argentina has a relatively high amount of natural resources and the production sector anticipates on this. (Mercado, 2007) During the past years, about half of the exported manufactured products were food products. (World Bank, 2012) The effect of this on the wages will be discussed in section 3.7. During the past years, out of all manufactured exported products, only about 7% were high-technology products. (World Bank, 2012) This is typical for developing countries. (IMF, 2010) It is seen that the share of services and high-technology products is growing, meaning that Argentina is heading towards becoming a developed country. (IMF, 2010)

Graph 4.5: Exports of Goods and Services in current US\$, in millions of dollars.



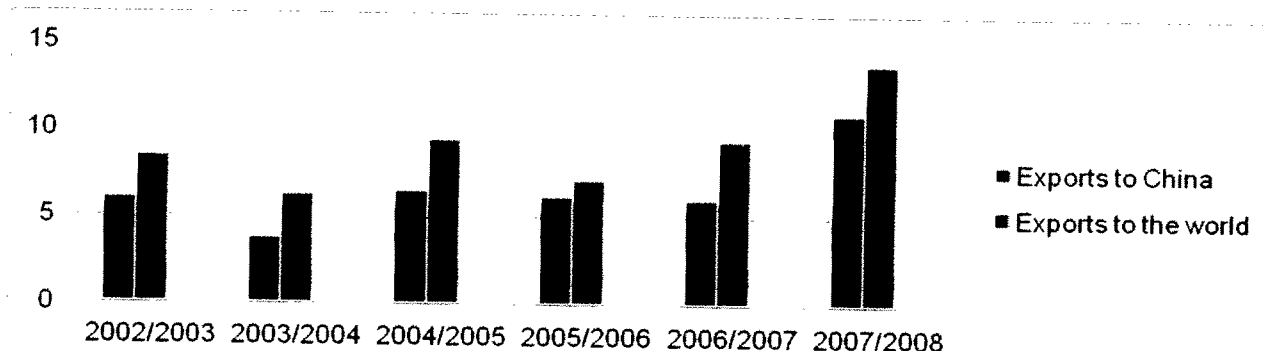
Based on information of the World Bank, 2012

One of the causes of the rising exports, was the rising demand for Argentine products like soybeans and soy oil.⁶⁶ Graph 4.5 shows the Argentine soybean export in million metric tons to the world and to its main soy-trading partner China. The demand for soy oil experienced a similar rise.

⁶⁶ This paragraph is based on information of Chen, Muhammad and Marchant, 2010.

The effect of Argentina's macroeconomic policies in 2002 on the following economic growth.

Graph 4.5: Argentina's Soybean Export in Million Metric Tons.



Source: Wei Chen, Andrew Muhammad, Mary A. Marchant (2010)

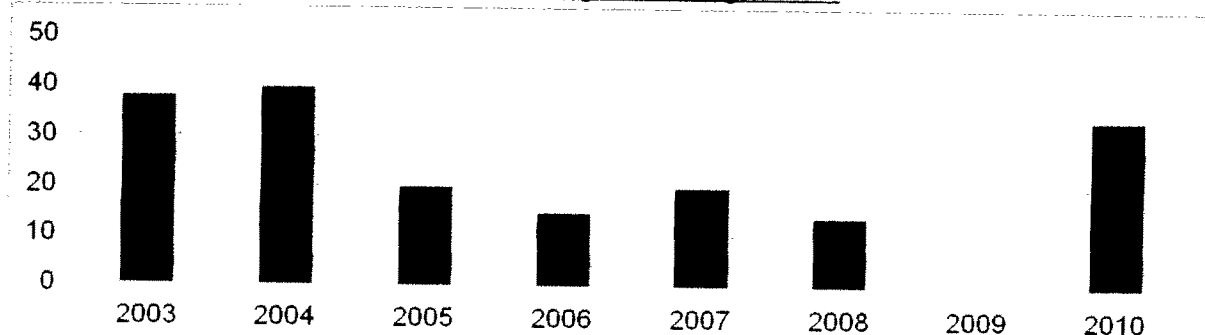
Other influential factors were the improved quality of the Argentine export products, mostly by technological improvements, and the governmental export subsidies. (JBIC, 2004) The international competitive position further improved as a cause of the earlier named depreciation. (Calomiris, 2006)

It can be concluded that the Argentine exports experienced a vast increase, due to their depreciated currency, export subsidies, improved quality and the rising demand for Argentine products.

4.5 Imports

Graph 4.6 shows a vast increase in the imports after the year 2002. The growth is based on constant prices. (World Bank, 2012) The growth was caused by a rise in the purchasing power of the Argentine people and companies. (INDEC, 2007) Also, the Argentine participation in the MERCOSUR custom union made trade with other Latin-American countries duty-free, creating an incentive for the Argentines to import more. (INDEC, 2007) It is seen that the imports rose, relatively, much more than the exports.⁶⁷ The trade surplus did remain, because the total value in pesos of the exports was more than the total value in pesos of the imports. The conditions therefore seemed favourable: the external surplus was remained, but the wealth seemed increased.

Graph 4.6: Annual % growth in the Total Imports of Argentina⁶⁸



Based on information of the World Bank, 2012

⁶⁷ This paragraph is based on information of the World Bank, 2012.

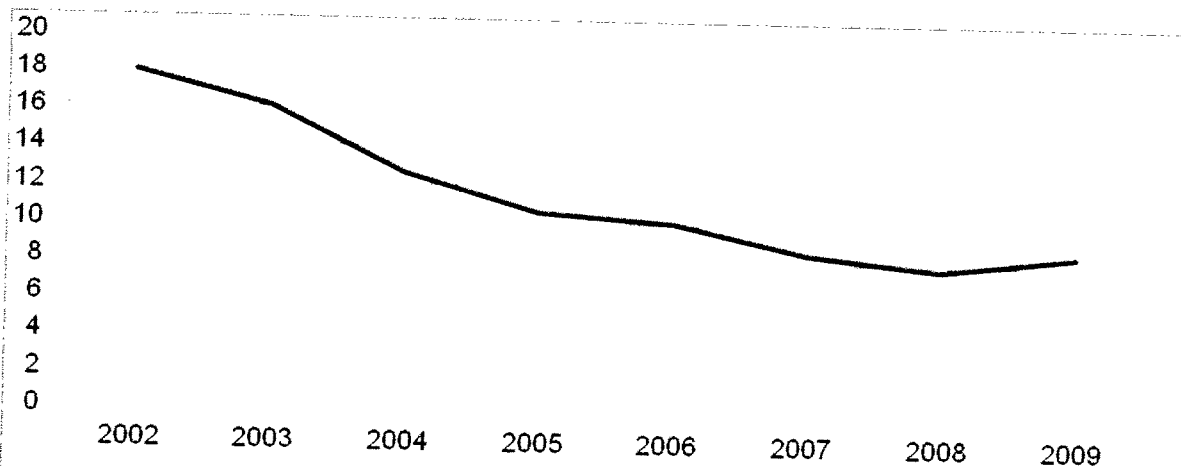
⁶⁸ In 2002 and 2009 the total imports faced a decrease.

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4.6 Employment

Around the same time that the inflation rate went down, employment started to rise. (INDEC, 2012) In October 2002, the unemployment rate had already declined to 17,8%. (INDEC, 2012) Graph 4.7 shows that this trend continued throughout the past years. The cause of the lower unemployment was the rise in production, mainly triggered by the higher demand of foreigners for Argentine products. (Ernst, 2005)

Graph 4.7: Unemployment as a % of the labour force.



Based on information of the World Bank, 2012.

Even though the unemployment has declined, the social goals implemented by the centre-left governments of Kirchner (2003-2007) are not achieved yet.⁶⁹ He is aiming to reach full employment. The main reason why this is not happening is because of the low level of education in Argentina. Now that companies want to focus more on the quality of their goods and want to produce less agricultural products, there is a huge lack of skilled workers. In the area of computer systems for instance, there were an estimated 50.000 available jobs in 2011.

At the same time, the larger part of the population is unskilled and is having great difficulty finding a job. (Valente, 2011) This indicates that there currently is mainly structural unemployment in Argentina. (Hall and Lieberman, 2001) It is clear that the government should be investing in education, but still the percentage share of government expenditure spend on education is not rising. (World Bank, 2012)

Another contributing factor is the high raise in wages over the past years, which were not offset by rising productivity, but with respect to the rise in prices. This makes labour less attractive to companies.

The informal sector in Argentina is also declining, but this is going slowly. (Esquivel, 2010) It was mentioned in section 3.6 that in January 2003, 50% of the Argentine employees were working in the informal sector. The Ministry of Labour estimated that in 2004 about 10.1% of the total employees in the public sector were informal. (MTESS, 2004) In the private sector, informal workers accounted for 53.4% of the total workers. (MTESS, 2004) According to the World Bank,

⁶⁹ This paragraph is based on information of Valente, 2011.

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in 2006 about 40% of the Argentine workers are working in the informal sector. This percentage was a bit smaller in urban areas; 39%, but in scattered rural areas the percentage was much higher; 63.9%.

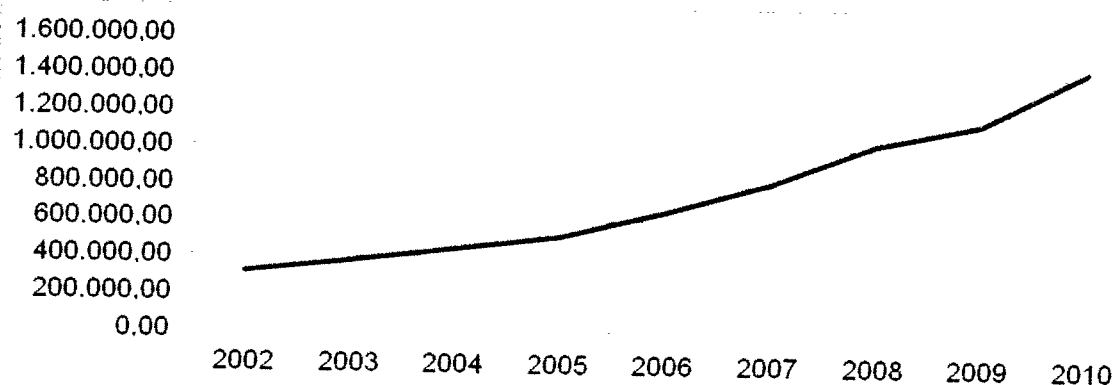
Even though the sector is declining it is still contributing to the problems in Argentina. (Valente, 2011) Workers coming from the informal sector are mostly unskilled and do not have a record of any experience and therefore face a high risk of becoming unemployed. (Valente, 2011) This is also one of the problems why the informal sector does not decline faster. (Esquivel, 2010)

It can be concluded that, even though the unemployment rate had halved as compared to 2002 (World Bank, 2012), there is a lot of room for improvement. The governmental policies need to aim at better education and a smaller informal sector. As for now, the average living standard of the Argentines did improve, as will be shown in the next section.

3.7 GDP

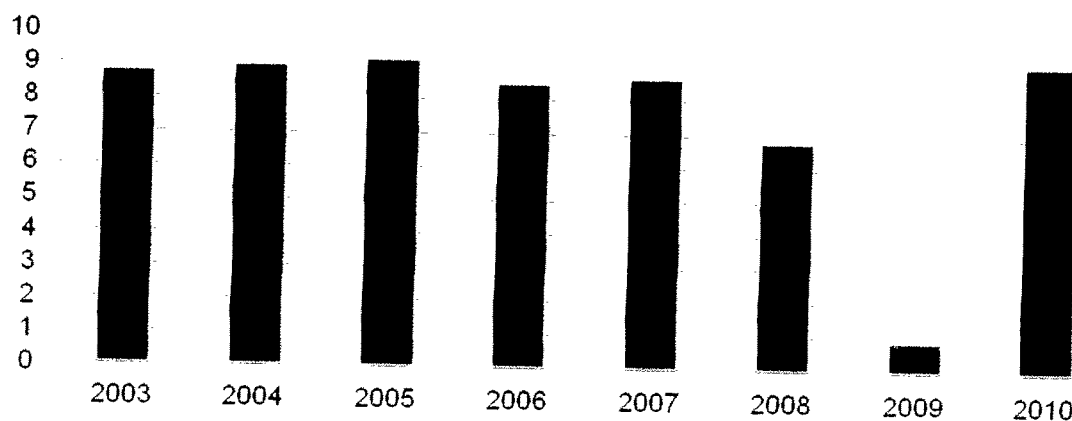
Graph 4.8 shows the rise in the Argentine nominal GDP in pesos. Nominally the GDP grew an impressive 362% during the years 2003-2010. (World Bank, 2012) This time the price level grew much less, resulting in a higher purchasing power. (Hall and Lieberman, 2001) The real rise in GDP, thus the rise in purchasing power, is shown in graph 4.8.

Graph 4.7: GDP in millions of pesos.



Based on information of the World Bank, 2012

Graph 4.8: Real % rise in the Argentine GDP.

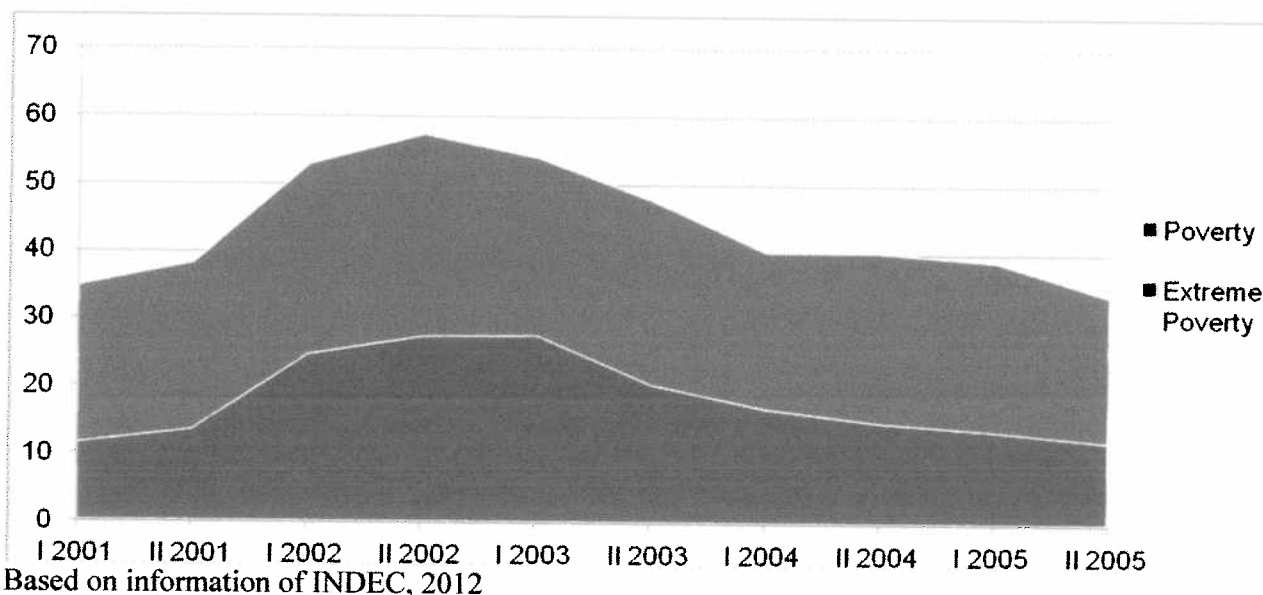


Based on information of the World Bank, 2012

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This rise in average purchasing power combined with the falling unemployment led to a fall in poverty. (Mercado, 2007) The poverty rate did decline slower than it had risen. Graph 4.9 shows that it took three years to reach the level of poverty before the default. After 2005, the poverty rate declined further. INDEC is known for setting poverty standards lower than most research institutes. (Mercado, 2007) Data of the World Bank shows for instance that poverty ratio of inhabitants living under the 2\$ a day standard has declined from 19,7% in 2002 to 2,4% in 2009. The rising purchasing power led to a higher consumption, both inside and outside Argentina. (Mercado, 2007) The latter caused imports to rise, as was visible in section 4.5.

Graph 4.9: Poverty and Extreme Poverty as a % of the total population⁷⁰



The population grew with a smaller percentage than the GDP did, resulting in a rise in GDP per capita.⁷¹ When keeping the peso at a constant purchasing power, GDP per capita rose from 6.247 in 2002 to 10.446 in 2010. This means the average Argentine inhabitant saw a rise of 67,2% in its purchasing power in only eight years. This time, while the GDP rose, unemployment was falling. As a result of this, the GDP is now divided over more employees. The average GDP per employed, keeping the purchasing power constant again, rose from 23.177 US\$ in 2002, to 27.578 US\$ in 2008. This is a rise in purchasing power of 19%; much lower than the rise in purchasing power of the average Argentine.

When putting the GDP growth over the period 2003-2010 in the perspective of the AD-AS model, we can still consider the period the short-run (so there is no vertical AS-curve). (Hall and Lieberman, 2001) Thus, it can be said that the larger part of the economic growth was caused by a trigger of demand. (Hall and Lieberman, 2001) All four sources of economic growth, together making up GDP, will next be discussed separately.

⁷⁰ I stands for May and II stands for October.

⁷¹ This paragraph is based on information of the World Bank, 2012.

While Consumption had always made up for about 84% of the GDP, it had declined to 73% in 2002. (World Bank, 2012) During the period 2003-2010, this rate remained quite stable. (World Bank, 2012) Because the absolute value of the GDP rose, so did the absolute value of the consumption. This was caused by the stimulating governmental policies and the rise in purchasing power. (Mercado, 2007)

In 2004, the interest rate⁷² fell from 19,1 to 6,8%. (World Bank, 2012) Lower interest rates trigger demand as well. (Hall and Lieberman, 2001) From 2006 onwards, these interest rates started to rise again. (World Bank, 2012) Besides affected by governmental policies, which were explained in section 4.2, the interest rates declined due to a higher supply of money. (World Bank, 2012) The supply of money was higher, because people had more money left to save now their income had risen. (Hall and Lieberman, 2001) Gross Domestic Savings were almost 84 billion pesos in 2002. (World Bank, 2012) In 2010, they were a little over 365 billion pesos. (World Bank, 2012) The stable consumption percentage show that the total consumption did not suffer from this. Another possible factor that boosted domestic demand was the fact that imports had become more expensive (JBIC, 2004) It had now become more attractive for Argentines to buy domestically produced products. (JBIC, 2004) This was for instance seen in a rise in the production of textiles. (JBIC, 2004)

The share of government expenditure in the GDP remained around 12%. (World Bank, 2012) This means the total value of government expenses rose. The government was able to this, because tax revenues rose. (Hornbeck, 2004) In 2009 and 2010, the government expenses rose a lot, making up for 15% of the GDP. (World Bank, 2012)

In sections 4.4 and 4.5 it was explained why exports and imports rose. It was also stated that the trade surplus remained, making NX a positive number. During the period 2003-2010, exports generally made up for about 24% of the GDP. The value of imported product has risen a lot, which was shown in section 4.5. In 2010, they were as high as almost 20% of the GDP. This caused NX to make up for only 4% of the GDP.

Though interest rates in Argentina were still high compared to most developed countries, they had declined drastically compared to the situation in 2002. (World Bank, 2012) This triggers investments, as it makes investments cheaper. (Hall and Lieberman, 2001)

It can be calculated that investments made up for the remaining 11% of the GDP. Considering the fact that in 2002 the investments made up 0% of the GDP and the rise in the absolute value of the GDP, it can be concluded that the governmental policies aiming to create a better business environment, had, in combination with the rising GDP and money supply, had definitely worked. The results were clearly visible in the rise in investments.

According to the AD-AS model, a rise in both real GDP and the price level is caused by a positive demand shock. In this section it was indeed proven that C, I, G and E rose. As was mentioned before, the money supply also rose, bringing down interest rates and thus causing another positive demand shock.

⁷² The discussed interest rates in this paragraph are the interest rates for loaning money.

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There is one more explanation for the rise in GDP.⁷³ The main exports of Argentina were agricultural products. A real depreciation of the exchange rate pressures the domestic price level. A rise in the price level would cause nominal wages to rise, especially because these agricultural products were the main foodstuffs for the Argentine labour force. In the theoretical framework was explained how the GDP equals the total income. A rise in the income, due to the depreciation, can thus lead to a rise in GDP.

In order to keep domestic prices and wages under control, the government implemented macro-meso policies. They for instance implemented a widespread system of export taxes. Mercado claimed that this is unsustainable and that in the future changes in export composition as well as in the consumption pattern are needed.

We can conclude that during the years 2003-2010, the GDP faced an incredible rise, both nominal as real. The purchasing power of the Argentines thus increased, resulting in higher consumption and growing imports. Poverty and extreme poverty were reduced. The rising GDP was triggered by rising outputs. The outputs rose because international and domestic demand rose. Internationally, this was caused by the improved international competitive position. Domestically, the higher purchasing power and governmental incentives rose demand. Part of the rise in GDP was caused by the rising price level as a result of the depreciation of the peso.

⁷³ This paragraph is based on information of Mercado, 2006.

5. Short Summary and Conclusion

Years of disappointing economic growth and fiscal mismanagement led to a high budget deficit for the Argentine government. This was also partly the result of many factors like foreign crises, the convertibility policies and high interest rates. Throughout 2001 it became clear that Argentina could not repay its debts, leading to an official default in December 2001.

Throughout 2002, the Argentine government set up a set of monetary and fiscal policies. The monetary policies aimed at improving the external accounts and creating a better business environment. The latter would generate more production and thus raise tax incomes. Some aspects of the monetary policies were the devaluation of the peso and the asymmetric redenomination of dollar denominated debts, contracts and foreign accounts and bank deposits. The government also had the change to restructure its existing debts. The aim of the fiscal policies was achieving a fiscal surplus. The surplus was eventually mainly achieved because tax revenues rose as a result of economic growth. Besides these policies, structural reforms were made concerning many aspects of the economy.

The short-term consequences seemed to make the economic situation even worse. Argentina experienced hyperinflation in the first months of 2002. By the end of 2002, the peso had devaluated from the fixed 1 : 1 rate to 1 : 3,5. This negatively affected foreign debtors and caused imports to fall drastically. Even though exports only slightly rose, the high fall in imports led to an external surplus on the current account. A lower demand in combination with other unfavourable conditions caused domestic production to decline, resulting in a high cyclical unemployment and a rising informal sector. The effects were also visible in the real GDP, which faced a decline of 10,9%. The rise in unemployment and decline in purchasing power caused severe poverty amongst the Argentine citizens. Because of the financial problems amongst businesses, the government and households, investments to stimulate the economic growth could not be made.

During the years 2003-2011, the Argentine economy managed to break through this negative tendency. Inflation reached a quite stable, lower level, but it was still relatively high. The nominal GDP rose faster than the inflation, resulting in a higher purchasing power. The peso depreciated further, partly influenced by the government. This, in combination with export subsidies, a higher international demand and a better quality, resulted in a high rise in exports. Imports also grew, due to the higher purchasing power, but the external surplus was remained. The rise in purchasing power caused the domestic demand to rise. Together with the rise in international demand for Argentine products, this boosted production. This was visible in a much lower unemployment rate. The large informal sector and low level of education keep the structural unemployment rate to be relatively high. After all, the rise in domestic and international demand caused an incredible rise in the GDP, both nominal as real. Internationally this was caused by the improved international competitive position. Domestically, the higher purchasing power and governmental incentives rose demand. The rise in purchasing power caused consumption and imports to rise. Poverty and extreme poverty were largely reduced.

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It can now be concluded that a default has an effect on every aspect of an economy.

In the short-run, a default is very unfavourable. As a result of the above named negative developments, the real economic growth was very negatively affected. In Argentina, the average purchasing power fell 10,9% throughout 2002 and extreme poverty rose to almost 20% of the population. Nominal GDP did rise, but this was caused by a rise in price level, which is not considered to be 'useful' economic growth. An external did already arise in the short-run.

In the long-run though, Argentina's default had a positive effect on economic growth. But, the positive effects would have never been achieved without the massive structural reforms that were made. Therefore it can be concluded that a default is only useful when the country changes the entire structure of its economy.

In the period 2003-2010, nominal GDP rose an incredible 362%. Because from 2003 onwards the price level started falling, the real GDP also experienced a large rise of 67%.

With this the life of the Argentine people improved drastically. Employment fell from 21,5% to 8%, the purchasing power rose 67% and poverty rates fell from almost 19,7% to 2,4%.

The aims of the policies were to create a structural strong economy and with that restore confidence in the Argentine economy. This should be visible in both an external and fiscal surplus. Indeed, Argentina managed to get an external surplus already in 2002. Throughout the years, this remained. Graph 1.5 showed that from 2004 onwards a fiscal surplus was achieved. This twin surplus had not occurred since 1920 and proved that the growth was sustainable. (Mercado, 2007)

The default was necessary, because it offered Argentina to start all over. It caused money to be available for the structural reforms, which otherwise would have to be used to pay off the large debts. The default harmed Argentina's image, but when Argentina paid off its debts to the IMF two years early in 2006, the world started to gain confidence in the Argentine economy again. (IMF Survey, 2006) This at the same time ended Argentina's conditional contract with the IMF, creating a more independent government. (Mercado, 2007) Their strong survival throughout the financial crisis is another prove that the Argentine economy structurally is much stronger.

As concerning the economic structure the Argentine government is not completely there yet. Its economy is still merely based on agricultural products. To improve this, the workforce needs to gain more skills. It is important for the government to invest in education in order to keep the economy growing. Policies aiming to diminish the informal sector are also favourable, because that would enlarge the work force and thus create sustainable, long-term economic growth.

Furthermore the government wanted to create a better business climate. In 2010, investments made up for about 11% of the GDP, while in 2002 that had been 0%. Considering the absolute rise of the GDP, it can be concluded that the business climate has definitely improved. The Argentine Stock Index (Merval) has also risen drastically since 2002. (MERV, 2012) The better business environment and rising demand did not only cause real GDP to grow, but also made tax revenues grow, contributing to the earlier named fiscal surplus.

Thus, though in the short-run the default caused negative economic growth, already after one year a strong, sustainable economic growth was generated. The Argentine future looks bright!

6. Additional: an Advice to Greece

Just like in Argentina, years of disappointing economic growth and fiscal mismanagement led to a high budget deficit for the Greek government. Though the Greece situation is quite similar to the Argentine situation, there are some extra complications, like Greece's participation in the EMU, which makes them unable to devalue their currency. (ECB, 2011) An advice for Greece whether to default or not, can therefore not be given, but may it be decided that Greece will default on its debts, it is important to learn from the experiences in Argentina.

The Argentina case proved that a default is only successful when there are massive structural reforms made, concerning every aspect of the economy. When the structure of the economy is not changed, the state of the economy will not be affected by a default. The country will thus generate a public state debt quickly and the main problem remains unsolved.

In a hopeless case, a default is in theory also favourable for creditors, because it makes sure they will receive as much of their money back as possible. (Investopia, 2011) When the structure of an economy is not changed, the government will not be able to earn a fiscal surplus. Thus, the chance for creditors to receive their money back is extremely small.

In Argentina's case, the situation worsened before economic growth was generated. In Greece's case, this phenomenon will probably also occur. It is favourable for the Greece government to inform its people well on this; the Argentina case can possibly serve as an example. This will reduce panic amongst the Greece citizens and thus hopefully result into fewer riots.

The high unemployment and poverty created by the default in Argentina were very harmful to the Argentine society. The informal sector for instance expanded drastically in 2002. Today, this is still a large problem in Argentina. For Greece, it is important to generate a strong social security system beforehand, to avoid such complications in both the short- and long run and so that it cannot be a limiting factor for the future economic growth.

When the Greece citizens are well informed on this, it will hopefully reduce panic and will make them sympathise the default better. This will also hopefully prevent Greek citizens to seek a job in the informal sector.

The ECB and the EU could play an important role setting up this social security system.

Thus, may Greece default on its debts, it is important for them to imply a set of strict policies that will turn around the entire structure of the Greek economy. In combination with a strong social security system and well informed inhabitants, Greece should be able to turn the wheel around and become a wealthy nation again.

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