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# On the Intertemporal Misallocation of Capital as Caused by Deviations from the Natural Rate of Interest: A Retrospective Study of Argentina 1990-2002, With Notes on Chile 1972-2000

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## Introduction

Argentina was once a quite prosperous nation, with vast agricultural and capital goods sectors. A century of rule by dictators and the military left the country a mere shadow of its once great self. Liberalization[1] in the 1990s was hailed as a rebirth, a catharsis that purged the system of its most unhealthy elements, providing the possibility to develop rapidly. However, the economic crisis of 2001 was the coup de grace, with Argentina now a less developed country. It is most unfortunate that this occurred, causing immense suffering to the working classes, setting the country back many years, harking back to the "Don't Cry For Me Argentina" variation of perpetual hubris.

In current contrast to Argentina, Chile has had a tumultuous history, not drastically different from the standard Latin American story for hundreds of years. With a military revolt in 1973, a murderous dictator who happened to embrace free markets under the auspices of Milton Friedman instituted a number of progressive economic and social reforms. These improvements allowed the population to become one of the most prosperous countries in Latin America.

The business cycle has plagued the countries of Latin America for at least the past hundred years. In fact, ever since the birth of modern society, people have wondered what causes the boom and bust cycle, with varying attempts at prevention and treatment. There are multiple, competing explanations for the origination and progression of the boom and bust cycle exhibited in Argentina, Chile, and many economies. The Austrian

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[1] Some may use the term "neoliberalism," however the author will not use this term, as it has pejorative, anti-capitalist connotations in the literature.

Business Cycle Theory proposes an explanation for the boom and bust cycles that plague modern economies. Being derived *a priori* from axiom, it has the significant advantage of not being changed with greater empirical observation, thus being applicable across all time and space. The creation of a central bank, one that monopolizes the issuance of currency, creates irreconcilable distortions in the economy. From attempts to avoid such distortion, the Austrian Business Cycle Theory emphasizes the role that changes in the capital structure can have on the economy, deriving from the aforementioned distortions. These changes, as caused by deviations from the natural rate of interest, the interest rate on the free market in the absence of any government intervention, are a necessary result of having a fiat currency, one that is not backed by gold or silver. The resolution of these inherent contradictions is the “bust” that is seen; this could be conceived as a Hegelian dialectical process.

The current literature describing the causes of the economic crisis of 2002 is weak and unsatisfactory. Common explanations include the poor selection and management of a monetary system and the fractured political system which allowed for high levels of deficit spending, permitted by the International Monetary Fund. (Alberola, Lopez and Serven 2004) (D'Amato, Garegnani and Sotes Paladino 2007) (Akkerman, et al. 2003) (Weisbrot 2002)These explanations, while may be true on the surface, do not have the necessary explanatory power that is needed to describe the decimation of a developed country. Thus, this paper presents the Austrian Business Cycle Theory as a possible explanation, one that would both predict the occurrence of the crisis, and the severity thereof.

Section one of this paper will present an abridged and relevant selection of history of Argentina. Section two will present a short history of Chile. Section three will present the Austrian Business Cycle Theory. The penultimate section will demonstrate the application of the Austrian Business Cycle Theory as a distal cause of the economic crisis of Argentina in 2001. The final section will offer concluding remarks and policy suggestions.

## A Concise History of Argentina[2]

This section will present a relevant history of Argentina from World War II to 2002 with special attention to events that can influence an economy as described by the Austrian Business Cycle Theory.

In 1946, Juan Perón came to power on a populist platform. Once elected, he instituted numerous measures that adversely affected the market economy, transitioning the economy to a perverted form of socialism. Five-year plans were popular, notably affecting manufacturing and agriculture, with the aims of reaching full employment, increasing worker pay above the market rate and promoting sector diversification, while enriching organized labour. Millions of dollars were spent on infrastructure improvements, especially for well-connected politicians. There was a large increase in social welfare spending.[3] With increasing participation in unions by workers, industrial

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[2] This section is an amalgamation, inter alia, of: (Akkerman, et al. 2003) (Bulmer-Thomas 2003) (Corbacho 2003) (Weisbrot 2002) (Brenta, Investigator of the Institute of Social and Economic History of Economic Sciences, University of Buenos Aires 2008) (Pecora 2008) (Pozzo 2008)

[3] Evita Peron was a strong advocate for the downtrodden and encouraged the construction of schools and hospitals.

actions became more frequent, with millions of worker-days forgone in pursuit of the vague, anti-capitalist objectives. The central bank was nationalized, as were the universities and transportation systems. Furthermore, an agency was created to centralize the export of all agricultural products. Initial economic growth gave way to an unsustainable trade deficit, causing a devaluation of the Peso and the economy drifted into a period of stagflation. After being excommunicated by the Pope in 1955, combined with decreasing domestic popularity, Peron was overthrown in a military coup d'état.

By 1958, the situation was grim. However, the Peso was further devalued and credit controls were imposed. Within a few years, the economy was temporarily back on track. With the installation of a new president in 1966, a new economic policy was instituted. A further 40% devaluation of the Peso was implemented, along with wage controls and a suspension of the right to engage in industrial actions. With the "re-election" of Juan Peron in 1973, many Peronist policies were reinstituted. Starting in the late-1970s, the government would kidnap intellectuals, students and anyone else who might publicly oppose the dictatorship. [4]The economy continued to languish, with significant foreign debt being accumulated. For example, the 1978 FIFA World Cup was financed mostly by foreign debt.

A military dictatorship gained power in 1976. This regime was renowned for its brutal repression and poor management. The dictatorship instituted the practice of disappearance, in which anyone who expressed any sentiments against the ruling junta would simply "disappear" permanently. Ironically, there were efforts to privatize state-

[4] Mothers of the disappeared ones continue to protest to this day, demanding information regarding the disposition of their sons and husbands.

owned industries, which were blocked by some of the military generals, who wanted jobs in the industries. In 1982, as domestic morale was declining rapidly, as was the economy, the junta needed an event to distract hoi polloi. An irrelevant series of islands located in the South Atlantic, the Falklands[5], was a constant source of dispute between the United Kingdom and Argentina[6], with each declaring its sovereignty[7]. The junta picked a military fight with the UK, lost badly and cowered away. Besides bankrupting the country, the conflict led to several hundred soldiers being killed. Further, the Falkland Islands conflict contributed to the accelerated decline of the military junta and the Argentine economy.

By 1983, the populace was thoroughly disillusioned with the military junta, which voluntarily called elections. Raul Alfonsin was elected president and instituted numerous democratic reforms, including granting amnesty to all the crimes committed under the military[8]. He was known as a "political animal," who had very little knowledge of economics. In 1985, Alfonsin instituted the Austral Plan, in which three zeros were removed from the Peso, the indexing of contracts to inflation was prohibited and price controls were instituted. As expected by standard economy theory, this plan failed, with

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[5] Las Islas Malvinas in Spanish.

[6] These islands continue to provoke dispute between the UK and Argentina, with the current President of Argentina renewing calls for Argentine sovereignty, mainly to distract the populace from the rapidly declining economic state of the country. (Ortiz 2009)

[7] The indigenous people were British, spoke the Queen's English and used the British Pound.

[8] Contrast this to Chile, in which the amnesty given to dictators was stripped away, allowing for the redress of grievances.

hyperinflation continuing to through the election in 1989[9] of the neo-Peronist Carlos Menem. The new president privatized many government companies, and instituted many “neoliberal” policies.

In 1991, a convertibility plan, a “plan of shock,” was instituted in order to stabilize the economy. Before this plan, there were widespread shortages, and in 1989, seven 0s were removed from the new Peso, in response to the hyperinflation of, inter alia, 20,000% in January of 1990. Composed of four different interventions, the plan was an attempt by the Peronist President Menem to transition rapidly toward capitalism and market-based policies.

The first part of the plan instituted a hard peg for the Peso with the Dollar. Full convertibility between the two was established, as all Pesos had to be backed 100% by United States Dollars. The primary objective was to control inflation. The central bank was prohibited by law from financing government deficits[10] and from acting as a lender of last resort to any bank. Banks were strongly encouraged by central bank policy to have a high margin of reserves, and a uniform set of loan regulations was instituted.

The second part of the plan was liberalization of trade policy. Tariffs on exports, as well as import restrictions, were removed, except for the shoe, textile and automobile

[9] This election was five months early, as Alfonsin did not want to continue to rule any further. Surprisingly, in light of the recent economic situation of Argentina, hoi polloi have come to love him, as a recent quote by a human rights campaigner exemplifies: ““Unlike other leaders in Argentina, he had a reputation as an austere and decent politician who maybe could have been incredibly incompetent to some, but at least he was a clean politician” (Barrionuevo 2009)

[10] This is known as monetizing the debt, when the government creates new currency to purchase its own debt.

markets. The tariff on imported capital goods was reduced to zero. This was a very significant move, for it forced complacent domestic industry to become competitive in the world market. It sent a signal to foreign investors that direct foreign investment was desired, along with supporting the agricultural sector of the economy by allowing for the exportation of their products. However, as limited tariffs remained on certain classes of goods, the desires of the unions and other politically well-connected entities were not ignored. This issue continued to plague the government, being a harbinger of the crisis to come.

The third part consisted of deregulation of economic actors. Price controls were abolished, in addition to many professional restrictions and regulations regarding trade between provinces. The national petroleum, transport, electric and port companies were privatized. This move allowed for the rational allocation of scarce capital to sectors that were most profitable and best serviced the demands of consumers, not the wishes of a few well-connected politicians. Further, the industries would be subject to market forces, and necessarily became more efficient by downsizing unneeded workers, allowing for lower wages to create new jobs.

The fourth part of the reform policies related to the financial system. Banks were required to hold 20% of deposits in foreign banks. In addition, non-performing loans were written down on bank balance sheets. Furthermore, the central bank arranged for various credit facilities in case of an emergency situation. Small, government-owned local banks were slowly privatized, or purchased by investors, many of whom were foreign.

All the above allowed for significant growth of the private sector. However, a failure to institute labour reforms impeded progress. For example, part-time work was disproportionately more costly than full-time employment. Union contracts with the private sector reflected wages paid in the more industrial area of Buenos Aires, thus making it more expensive to invest outside of the capital city. Additionally, there was a failure to root out, or at least reduce, the corruption in the government. Nonetheless, these reforms marked a major step forward for Argentina, a chance to rejuvenate its economy while reaping the benefits of globalization and free trade.

The "Tequila" crisis of 1994 primarily affected Mexico, precipitating a debt crisis and a revaluation of the Mexican Peso. However, declining confidence in the economies of Latin American countries caused a financial panic in Argentina. Many smaller, regional banks experienced runs, as they had a higher proportion of non-performing assets. As a result, many of the beneficial improvements that were instituted post-1991 were abrogated: the central bank bailed out many banks by taking on troubled assets, the lowering of the reserve ratio and the creation of deposit insurance all shifted risk from the private sector onto the public sector, creating significant moral hazards.

By the end of 1995, the worst of the crisis had passed, with confidence slowly returning to the financial sector. As the economy improved, greater financial regulation was imposed. There was a shift from reserve requirements to liquidity requirements. By 1998, banks were expected to hold 20% of liabilities in either the central bank of Argentina or foreign deposit accounts. Furthermore, the central bank established an effective line of credit with major international banks for up to seven billion dollars of liquidity on demand. In order to reduce the risk of lending to consumers, a centralized credit information repository was established. An interbank electronic payment system was created; previously, banks would meet in one of 83 clearing houses and physically transfer net cash balances.

Post-1995, the economy was recovering, with increased foreign direct investment being a primary contributor. The fixed exchange rate provided for a relatively strong damper on inflation, especially in light of past decades. [11, 12] Further, a stable political environment did not make entrepreneurs feel that their enterprises would be subject to seizure by the government, nor was there any expectation that other regulation would materially or adversely affect the economy. However, all was not well in Argentina, especially if an objective analysis is undertaken.

There was massive spending by the public sector. Total government spending went from 33% of GDP in 1991 to 27% in 1996; the drop was not due to reduced spending, but to increases in private sector economic output. In absolute terms, government spending increased 18% in constant peso terms over that period. (IMF 1998) The relative reductions in public spending can primarily be traced back to decreases in payment on public debts, transportation and communications. The increasing reliance on the private sector accounts for the decline in the latter.

There is an extensive social safety net in Argentina. Payments were made to pensioners benefited at least 3.5 million citizens at the time. Free and public education

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11 As the US dollar was the counter-currency, the Argentine economy suffered from the hidden inflation of the Greenspan, pre-dotcom era. However, this is not well-reflected in official statistical measures.

12 As the productivity of the general Argentine economy was increasing in this period, the value of the peso should have appreciated.

was provided at the pre-school, primary and secondary levels. Free health care was provided to pensioners. For the indigent, there are housing support programs, unemployment compensation, career training and income support programs. The above programs are not without costs: two thirds of public spending is in the area of social expenditure.[13] (IMF 1998) Social security, health care and education make up the vast majority of the spending. The defined benefit public pension systems imposed an especially burdensome obligation.

While the private sector was experiencing positive economic growth during this time, the government debt increased dramatically as well. With this growth in debt came the inevitable growth of government-granted privilege. There was widespread corruption, which not only displaced private capital, but also created an enriched political class. The debt was financed primarily by the International Monetary Fund, for there were multiple institutional failures that permitted this situation.[14]

The standard operating procedure of the IMF in the 1990s was to give substantial loans to governments, in return for the institution of free-market reforms. Often, the loans were not based on sound financial standing, and were taken for granted by governments as a source of cheap and easy money. This was the case in Argentina, as the IMF gave Argentina several multi-billion dollar loans in 2000, even though the country was plunging into deep recession. Furthermore, these loans often created perverse incentives, for if the IMF did not grant sovereign loans, this was taken as a sign by the private sector,

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[13] This is not significantly different from the current budget of the United States.

[14] For more information in this regard, see Blustein 2005, for a thorough review of the relationship between Argentina and the International Monetary Fund

especially foreigners, that the country was in a suboptimal state. In addition, the crowding out effect, particularly in a country the size of Argentina cannot be understated. As Nobel prize winner Robert Mundell said decades before the Argentine crisis “Fiscal equilibrium is the only safeguard now against inflation, yet fiscal equilibrium cannot be achieved with the current debt financing commitments of most of the LDCs [lesser developed countries]. Pumping more money into the hands of the LDCs can ameliorate the current debt repayment and service problems, but only at the expense of making the long-run problems of debt repayment even less manageable.” (Mundell 1983)

The economic situation started to decline in 1999. Unemployment rose, while domestic output contracted. The economies of major international trading partners started to decline; Brazil entered a period of economic stagnation around 1999. International capital inflows dried up, as did liquidity. To compensate for the liquidity deficit, localities took it on themselves to solve it. There was a long tradition of major towns and states of issuing their own currencies for general circulation, with them floating freely against the currency issued by the federal government. As the national currency became scarcer, the regional currencies took on new importance. [15] The economic condition was exasperated by the political situation of the country. Unable to run for a third term in 1999 due to term limits, Fernando de la Rua, the mayor of Buenos Aires known for his efficiency, became the first non-Peronist president in a decade.

In order to service the onerous debt that developed, the government was required to repay the debts in dollars. With the loss of the monetary base of the hard peg, the peso should have contracted, causing a further loss of liquidity, and creating a deflationary

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15 This is a good example of Gresham's Law, when “bad money drives out good.”

environment.[16] However, this would have been politically untenable[17]. An alternative, to break the hard peg and devalue the peso, would also have been extremely unpopular. Deposits in domestic banks were held as pesos, with the assumption that they would be convertible on demand to dollars. To break this implicit and explicit promise with the citizens of Argentina et al. would be political suicide; given Argentine history, that would result in mass social and political instability and upheaval.

Ultimately, the people lost confidence in the banks and started to withdraw hard currency, preferably in dollars. In order to stop this drain, the country's President (Fernando de la Rua) and Economic Minister (Domingo Cavallo) used emergency powers to impose a freeze on all bank accounts on December 1, 2001. Later in the crisis, if the account was denominated in dollars, only small withdrawals that were converted into pesos were permitted.

With the frequent turnover in the national leadership of the country[18], the political situation was very volatile. In late December, there were very large public demonstrations in public squares around the country. Supermarkets and places of public accommodation were looted and ransacked. On December 19, 2001, a domestic State of Emergency was declared, which allowed the national defense forces to be used for domestic operations.[19] Thousands of middle-class citizens flooded into the streets that evening, banging pots and

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[16] This is a legitimate example of deflation: a decrease in the money supply, not a fall in prices.

[17] Although contrary to conventional wisdom, it not something that should be feared. (Salerno 2002)

[18] Argentina had 6 presidents in the span of 2 years, December 2001 – December 2003.

[19] In light of the poor past performance of the military in governing the country, there was no attempt at a coup d'état.

calling for reform, in a form of demonstration popular in Spanish-speaking countries, called *cacerolazos*. Furthermore, the Economic Minister was forced to resign that evening. The protests escalated on the following day, especially in front of the Casa Rosada (the President's Office) in the Plaza de Mayo. The President made overtures to the opposition to join a national unity government; he was rebuffed. Immediately after, the President resigned and Adolfo Rodríguez Saá, governor of the San Luis province and a member of the Peronist party, took power. He immediately repudiated the entire foreign national debt[20], and ended the state of emergency. Further, he called for the creation of a circulating third currency, the Argentino. Saá resigned after a week in office, as he did not gain enough support from his own party.

The Assembly chose Eduardo Duhalde, the governor of Buenos Aires, as the next president. An emergency economic "stabilization" package was signed into law on January 6, 2002. This law increased the government control on the economy with various measures.

All bank accounts denominated in dollars were converted into pesos at the official exchange rate. Limited withdrawals of approximately 300 pesos a week eventually were permitted. The exchange rate was fixed at 1 USD=1.4 Peso for capital and foreign transactions, while a freely floating rate was permitted for tourists [21]. The withdrawal limit from bank accounts was slowly increased to 1,500 pesos per month, payable in installments weekly. The peso went from 1 peso= 1 US dollar to 4 peso = 1 US dollar

[20] Attempts continue to today to recover assets to pay off this significant debt.

[21] The author wonders what tourists would want to be in a country that was on the brink of political and social upheaval.

when it was allowed to freely float. Regional complementary competing currencies were developed, frequently trading at par with the peso or at a premium due to the dearth of pesos.

## A Short History of Chile[22]

In 1973, Chile's democratically elected Marxist president, Salvador Allende, was toppled in a coup d'état led by military general Augusto Pinochet. The economy had been languishing for years, with real GDP per capita growth of 1.7%, with high unemployment and marginal living standards; the government pursued an import substitution policy, limiting international trade and growth. Under the illegitimate military junta, civil liberties were abolished. Those who opposed the ruling junta were murdered, imprisoned, tortured and "disappeared," adversely affecting thousands of Chilean citizens. Opposition political parties were dissolved, with the leaders forced into exile.

As there was an absence of political opposition and dissent, General Pinochet was able to implement numerous economic reforms. Under a group colloquially referred to as the "Chicago boys," led by the renowned economist Milton Friedman, many free-market economic reforms were implemented. [23,24] The Chilean pension system was very

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[22] This section is derived from (Buchholz 2008), (Chakraborty 1999), (Edwards 1985), (Holston 2004) and (Schatan 2001)

[23] As the author is not an Objectivist, the author does not feel that the ends justify the means used. The political rights of the citizens are of the utmost importance. With that said, these policies allowed for great economic growth. Further, if instituted in a deliberative manner, these policies may have been diluted, which may have inhibited future economic growth.

inefficient, consuming more than 17% of GNP in 1971. The system was converted from defined-benefits to defined-contributions, with proceeds placed in private accounts and invested in relevant securities. (Buchholz 2008) In order to facilitate international trade, the Chilean Peso was devalued. Tariff rates were drastically reduced from approximately 90% to 10%. Enterprises that were nationalized under the previous administration were sold off and privatized. The financial sector was liberalized: interest rate caps were lifted, and new financial institutions were permitted. (Chakraborty 1999)

While GDP growth was limited at times during the 1970s, there was notable overall economic growth.

The liberalization of the Chilean economy continued through the 1980s. An active crawling peg for the Peso was instituted in 1978, in an attempt to control inflation; the Peso appreciated notably thereafter, creating a current account deficit. Inflation was contained to the single digits, a significant improvement from over one-thousand per cent per annum. To combat the trade deficit, the government devalued the Peso at a rate greater than inflation throughout the 1980s.

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[24] Milton Friedman has been much maligned for his contributions to the Pinochet regime. However, the author feels that is misplaced, as it is not the role of the economist to pass value judgments; it is merely the position of the economist to advise on possible policies and the expected results.

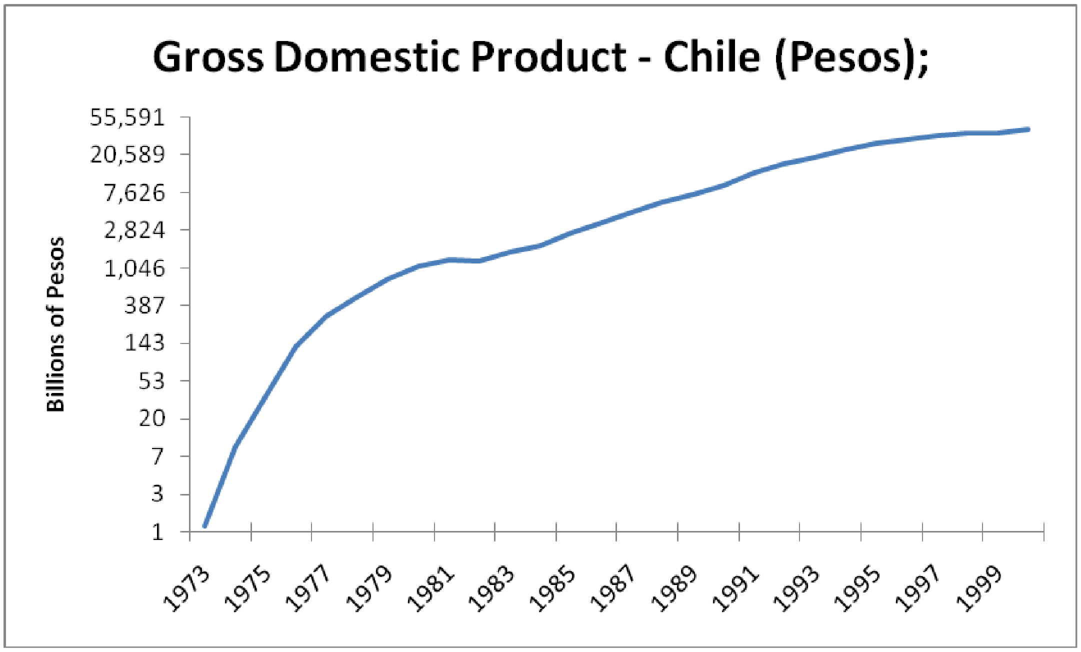


*Figure 1 (International Monetary Fund n.d.)*

In contrast to Argentina, Chile's government kept a tight lid on public spending. Although unemployment was elevated at times, this was mainly a result of productivity gains in the privatized firms, as well as the elimination of some government employees. The lack of a budget deficit, as well as a commitment to free-market policies permitted Chile to maintain exceptional growth throughout the 1990s. Along with economic prosperity came democratic reforms, including democratic elections.

## On The Austrian Business Cycle Theory[25]

[25] This section is adapted from various sources, including (Rothbard, America's Great Depression 2005) (Mises, et al. 1976) and (Rothbard, Man, Economy and State, The Scholars Edition 2004).

With many competing explanations for the cause of the business cycle, it is important to elucidate that theoretical construct which has the greatest explanatory and predictive power. The Austrian Business Cycle Theory (ABCT) stands in mark contrast to the standard neoclassical and Keynesian explanations of the business cycle. The ABCT has strong explanatory and predictive powers. However, it has been marginalized by mainstream economists.

A business cycle theory must be able to answer questions regarding *business cycles*, not mere business fluctuations. Below will be presented an abbreviated version of the theory, followed by the application thereof to Argentina.

It is the inherent job of the heroic capitalist-entrepreneur to predict the ever-changing demand for consumer and capital goods. Overall, they do an adequate job forecasting, with some succeeding and some failing miserably.[26] Some industries do well at times, with other industries becoming obviated or undesirable: the buggy manufacturing industry is no longer a significant part of the economy, yet the automobile industry has contributed significantly to growth in GDP. However, it is not possible for a decline in one industry to cause a "contagious" economy-wide decline. It is the inherent role of the entrepreneurs to adjust quickly to changing rapidly business conditions in response to new information, in response to consumer preferences. As it is a reasonable assumption to make that entrepreneurs will attempt to maximize profits, it is in their interests to respond quickly to changing market conditions. Thus, an important question that any business cycle theory must be able to answer is how a *cluster* of errors can form, how there can be multiple and simultaneous errors throughout the economy.

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[26] This does not mean the error term has mean zero.

The ABCT is the only theory that can provide satisfactory answers to the above question. Key to understanding the ABCT is to realize the importance of time preference, the desire for people to consume in the present compared to in the future, and the role of unique, heterogeneous capital structure. Time preference is coordinated throughout the economy through marginal supply and demand in the loanable funds market. The natural rate of interest is the natural evolution of this process, with varying pure rates of time preference throughout the economy. If people are more future oriented, more current consumption will be deferred to the future, increasing the savings in the economy. This increases the supply of loanable funds in the marketplace, thus lowering the interest rates. The converse is true of the opposite scenario, *ceteris paribus*.

The capitalist entrepreneur constantly appraises information available in the economy in order to make economic decisions. A critical piece of information is the interest rate, for it is a primary means of inter-temporal coordination of production. If the pure interest rate decreases, this result indicates that the consumer will desire more consumption in the future; entrepreneurs will respond to that signal by making relevant capital investments in lengthening the production cycle, by investing in capital to meet expected increases in future demand. This is compared to increasing current production of consumer goods. The capital goods sectors of the economy will be in a "boom" in this time, as demand for their products will have increased markedly. Businesses that supply higher-ordered capital goods[27], like steel and factory machines, will notice an uptick in demand. Businesses will reallocate production toward satisfying an expected increase in

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[27] A capital good that is of higher order is further away from the end consumer that is a lower ordered capital good

aggregate consumer demands in the future. Thus, the entrepreneur responds to this by increasing capital investment (especially higher ordered capital goods), with the expectation that the consumer will spend more in the future. This capital investment uses real resources (labour, raw materials, etcetera), which imposes real costs. Thus, a boom-bust cycle is not neutral, for resources are consumed which may not have legitimate, actual demand.

A critical component in the ABCT is the importance of the structure of production. The production process occurs within the passage of time. As modern society does not exist in isolation on an island, it is necessary for tools (labor-saving devices) to be developed in order to increase the productivity/usefulness of raw goods. These tools, and the goods and services that go into making final consumer goods, are part of the class of goods called capital goods. It is necessary to transform capital goods into consumer goods in order to satisfy consumer demands (it is usually not possible to eat metal ingots for breakfast, yet cereal is consumed with a metal spoon). The coordination of this process, that of turning a higher ordered capital good, into a lower ordered capital good and eventually into a consumer good, is the production process that separates modern capitalist economies from primitive existences. This allows for the wide variety of consumer goods, produced at a lower cost and higher quantity, that members of modern societies enjoy. It must be emphasized that capital is not a homogeneous, fungible "k" as described by modern economics. Capital is uniquely shaped for the production processes in which it is needed.

An entrepreneur produces in the expectation of selling the good to another entity. A great division of this process of production is another element that is a distinguishing characteristic of the modern economy. As this division becomes more elongated, with more specialized and productive techniques being employed in the production of goods and services, the requisite amount of coordination is necessary. The capital structure in an economy cannot be displayed as a mere letter *k*, for it is inclusive of various intangible, non-fungible and uniquely interrelated production processes. This coordination of different production processes is provided via, inter alia, in a bipartite fashion of the relative prices and the interest rate. The interest rate informs the entrepreneur as to the opportunity cost of using capital (money) in a certain production process for a certain time period. In addition, changes in the interest rate demonstrate an aggregate change in the time preference of economic actors. The price signal allows the entrepreneur to determine if the production of the good would be economically profitable.

If the above proceeds with a true, legitimate decrease in current consumption and increasing real savings, there will be no business cycle. There will be periods of "creative destruction,"[28] in which obsolete or inefficient producers are downsized. However, with the intervention of central bank in the economy, there is no legitimate instantiation of the changed time preference scales of consumers. Central banks constantly increase the supply of currency, as well as manipulate short-term interest rates. The supply of currency is not a mere nominal indicator, for it has real costs (as noted above). The entrepreneur receives incorrect information, acts on that incorrect information, and thus creates "malinvestment," for the investment is based on false premises. The boom is the time in which the entrepreneur, in expectation of increased demands in the future, makes investments in the present. This is propagated throughout an economy, with each

[28] This term is taken from (Schumpeter 1942)

economic actor making decisions based on the incorrect information. However, this period is actually wasteful, for valuable materials and other capital goods are expended in response to the mirage of lower interest rates.

The downturn, which inevitably follows any boom period, is an integral and in-fact necessary state after a boom time. While the exact cause that is the proximal cause of the bust is not a settled fact[29], the bust is a necessary and integral part of the artificial business cycle. The liquidation of the unsustainable capital investments is the primary occurrence in the bust. The interest rate will return to the natural rate, that which would occur in the absence of outside tampering. This adjustment process is the natural course of events that occurs after a boom period: the bigger the boom, the bigger the bust: the accumulation of greater numbers of errors in the boom cause exponentially increasing impact as time progresses.

## Modern Economic History of Argentina

As noted above, the Menem administration instituted a currency board. This board created a hard peg with the United States Dollar. This was supposed to free the country from the disastrous effects of hyperinflation, depression and stagnation that plagued the country for decades.[30] This peg was fixed as 1 Argentine Peso = 1 United States Dollar. Any funds were to be instantly convertible at any bank.

[29] It is usually when the central bank decelerates the rate of increase in the money supply due to inflation fears. (Mises, et al. 1976)

[30] It is no wonder then that Buenos Aires has the higher per-capita number of psychologists

A Peso was only to be issued when the central bank had received a dollar in deposits. During this time, the Argentine economy grew rapidly, with agricultural exports being a primary industry.[31] However, with the national currency was strictly correlated (in theory) with exports along with various financial funding agreements with the IMF, and as exports grew rapidly, thus creating significant increases in the money supply. As figure 2 indicates, there was a large increase in the money supply. Between 1991 and 2002, the money supply increased about two-fold.

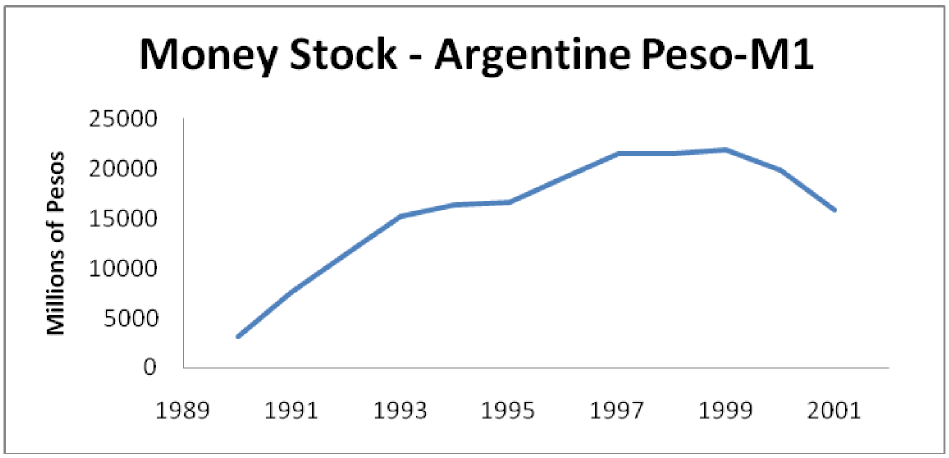


*Figure 2 (International Monetary Fund n.d.)*

This increase in the money supply should be compared to the country with which the peg was set: the United States. Even though the USA was only a minor trading partner, the trade during this period brought a great expansion in the currency stock.

During the 1990s, the United States underwent a period of great economic expansion. Even though it was the "great moderation" as described by some, the USA was in the middle of the "dot-com" bubble, as financed by easy credit of the Federal Reserve. Corresponding to this, as demonstrated in figure 3, the money supply of the

[31] The Patagonia region is one of the largest world suppliers of wheat and cattle

United States expanded significantly. An almost 50% increase in the money stock is sure to have systemic effects on an economy.

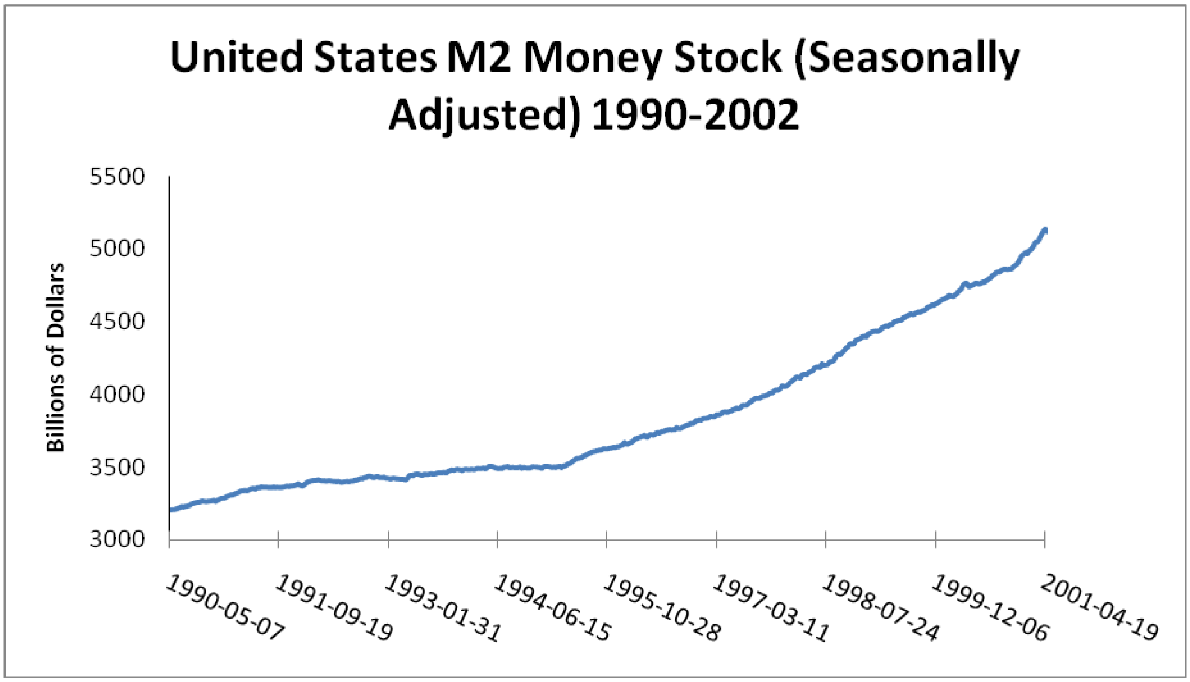


*Figure 3 ( Federal Reserve Bank of St. Louis n.d.)*

As the money supply increases, it necessarily causes an increase in the loanable funds available in the market.[32] This is especially true when open-market operations are used to inject the money into the economy. This increase in the money supply shifts the supply curve of loanable funds out; ergo, the cost/interest rate decreases. This is reflected in figure 4, which is the money market interest rate as measured by the central bank of Argentina, in January of the respective years. While no statistical tests are being performed, if economic theory is to be trusted, then it must be accepted that, *cetarius*

[32] This effect is compounded with the presence of fractional-reserve banking, especially with a reserve ratio around 10%, as it is in the USA.

*paribus*, the rate of interest must go down with an increase in the money supply[33]. It is interesting to note that in the middle of the 1995 crisis, a time in which interest rates normally rise significantly, the interest rate does not.


*Figure 4 Source: International Monetary Fund*

It will be posited that as Argentina was based on the USD, and the USD stock expanded greatly, Argentina imported the economic situation of America. This, combined with the monetary and fiscal policy of the government, created an intertempora misallocation of capital.

The easy-money policies of the Argentine Central Bank (BCRA) allowed for an unsustainable boom to develop in the economy. The increase in the money supply created an artificial deviation from the natural rate of interest. As the rates of interest through the time structure are an essential component for inter-temporal coordination of economic

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[33] This is different from and contrasting with the Fisher relation, which is the theory that the nominal interest rate equals the real rate of interest, with the proper premium for inflation.

activity, a misallocation of capital necessarily resulted. Figure 5 represents the gross fixed capital formation in Argentina. While it does not discriminate between different orders of capital goods, a key characteristic of the ABCT, it does demonstrate that there was a notable increase in the capital goods sector of the economy during the period 1990-1998. Under the ABCT, the marginal cost of capital goods is decreased, as there is a lower opportunity cost for the use of a capital good[34]. This change is not representative of legitimate changes in the value scales of consumers and producers, causing entrepreneurs to respond unknowingly to incorrect information. This occurs during the "boom" phase of the business cycle, when the zeitgeist reflects the positive economic conditions.

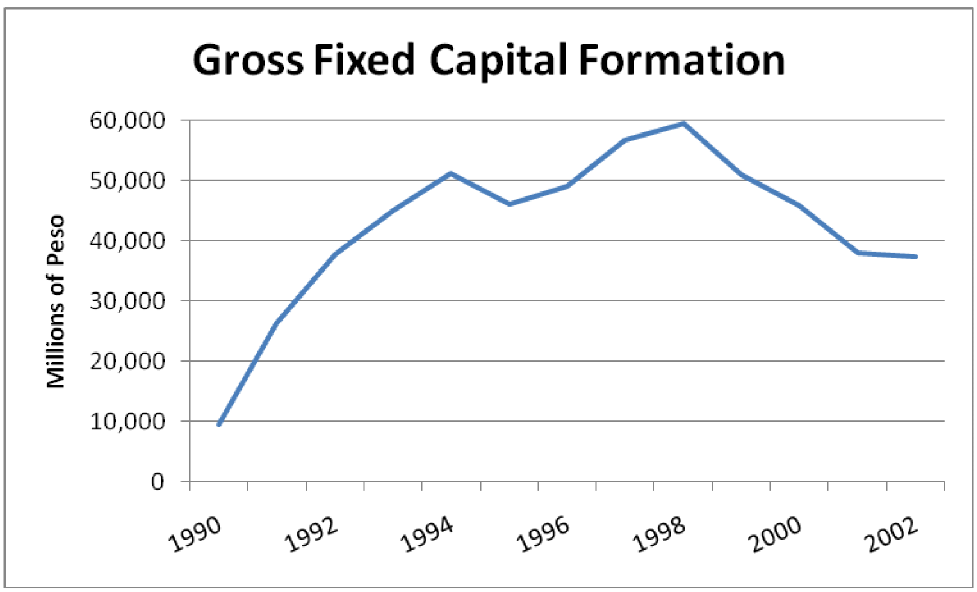


*Figure 5 (International Monetary Fund n.d.)*

[34] There is a lack of available data available the distinguished between the various orders of capital goods. Thus, even though the misallocation of capital within different orders of production is a key of the ABCT, it will not be considered in this essay.

With the profligate spending by the public sectors of the economy, the addiction of the government to patronage employment was sustained by the central bank. The IMF abetted this through continuing various loan programs, while drastically increasing the public debt of Argentina (see figure 6). Through the growth in the money supply, financing of the massive public-sector deficit was made easier in the domestic credit markets. However unintentional, the increase in the dollar reserves and thus the money stock abetted the unsustainable growth of wealth-destroying government work. The International Monetary Fund repeatedly imposed an assortment of austerity measures in order to continue financing agreements, all to no avail.

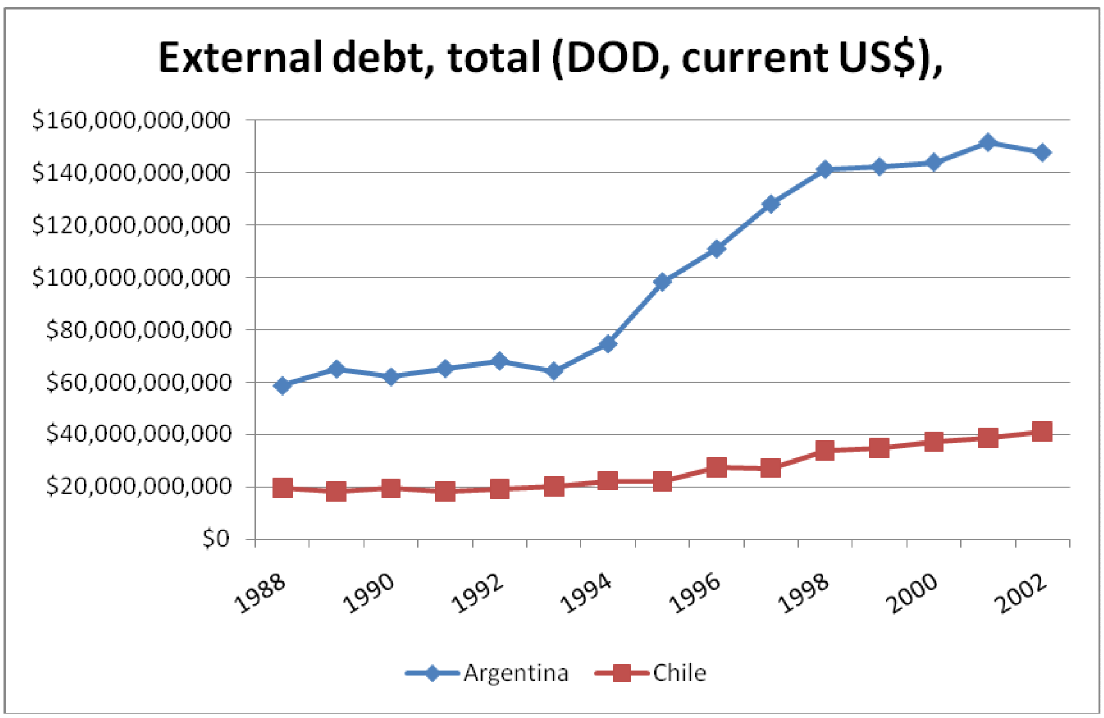


*Figure 6, Source: World Bank*

The "bust" was emerging in 1999, as fears of inflation caused the central bank to reduce the supply of pesos in circulation. As this propagated through the economy, it caused a change in gross economic conditions, primarily through increasing interest rates.

As the magnitude of the correction was exponentially increasing through 2001, unemployment increased as GDP growth slowed.

## Conclusion

The Austrian Business Cycle Theory is an important theory in modern macro-economics. While not as renowned as the monetarist or Keynesian view, it avails its users of its universal applicability, its ease of use and explanatory power. As the global economy has moved away from money based on gold and silver to one based on mere government fiat, it is more subject to the whims of politicians. The effect of this has disastrous effects for hoi polloi, causing a debasement of the purchasing power of the currency, as well as a boom and bust cycle.

Argentina was once a prosperous nation. However, a combination of poor government and financial management has left the country in a delicate state. It can be demonstrated how the hard currency peg instituted in 1991 directly contributed to the financial meltdown of 2001. With the artificial institution of a monetary system by the government, institutions and citizens were unable to conduct proper economic calculation. The upshot was the creation of an unsustainable increase in capital goods in the 1990s, unmatched by legitimate changes in the demand schedules of consumers. The amalgamation of the errors, instantiated simultaneously, combined with extremely weak-willed government, was a direct contributor of the crisis.

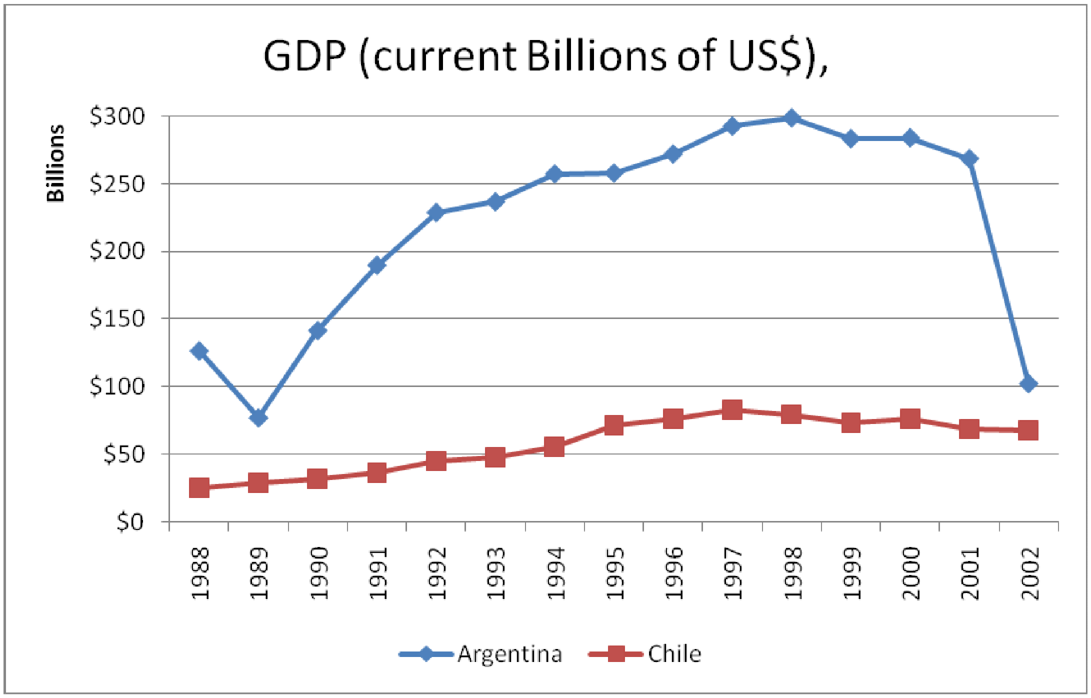


*Figure 7 Source: World Bank*

Further research on this subject is necessary. The Austrian Business Cycle Theory perspective has a great deal to offer that is not traditionally incorporated into the standard analysis. While this paper did not perform econometric analysis, additional empirical research could increase the acceptance of the theory. This is in light of the fact that traditional Austrian economics does not accept the empirical work of econometrics. It will be necessary to overcome this hurdle, as this theory could prevent future calamity.

In the current financial crisis, lessons can be drawn from the Argentine economic crisis of 2002. For example, the government cannot sustain a budget deficit of more than a few percent. Further, the longer the government prolongs the adjustment process, the more deleterious it will become. It is at their own peril that world leaders ignore the insights of the Austrian School of economics.

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