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**COMMODITY PRICE BOOMS AND POPULIST  
CYCLES. AN EXPLANATION OF ARGENTINA'S  
DECLINE IN THE 20TH CENTURY**

**Emilio Ocampo**

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WORKING PAPER

**Commodity Price Booms and Populist Cycles  
An Explanation of Argentina's Decline in the 20<sup>th</sup> Century**

Emilio Ocampo

May 2015

**Abstract**

Argentina's economic and institutional decline has long posed a conundrum to economists and social scientists. In particular, it challenges theories that seek to explain cross-country growth differences over time. Those theories that claim that institutions have a first-order effect on growth cannot explain the persistent economic decadence of a country that in 1930 was among the most institutionally advanced in Latin America. Theories that claim that education and growth precede inclusive institutions face a similar problem, since Argentina was one of the most educationally advanced countries in Latin America. The same can be said of theories that claim that social capital is the determinant factor that explains long-term growth. This paper emphasizes the key role played by recurrent cycles of populism in pushing the country into secular decadence and posits that, in Argentina, rising commodity prices have driven the cycles of populism.

**Key words:** Populism, commodity cycles, Argentina, inequality, institutions, social capital, economic growth, economic decline.

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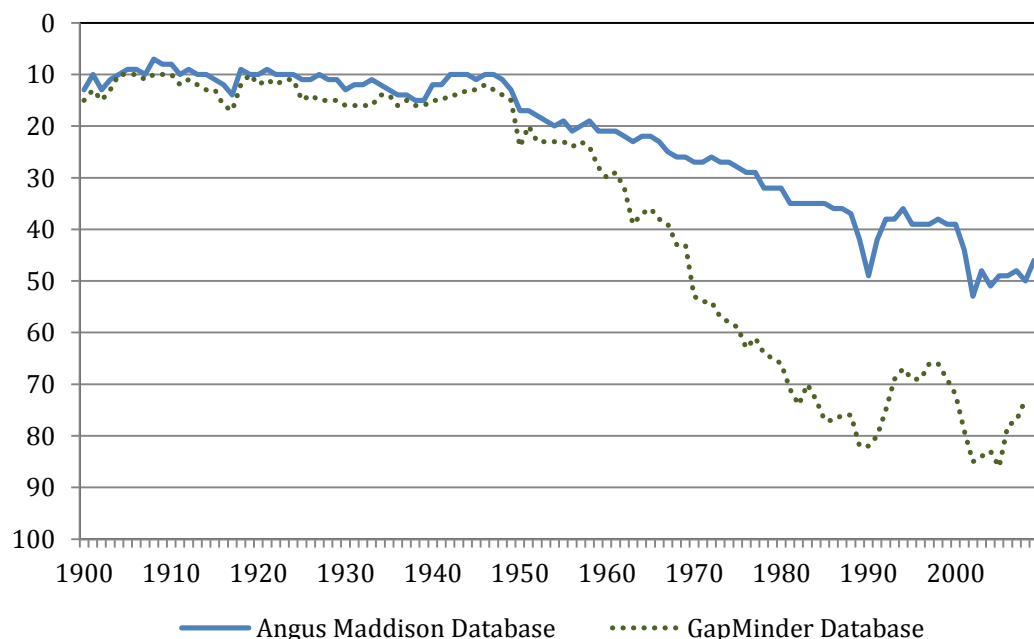
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## 1. Introduction

Seventy years ago a French journalist quipped that the United States was the only country that had gone from barbarism to decadence without civilization. In light of what has happened since, the comment seems more appropriate to describe Argentina. To paraphrase, one could say that Argentina is the only country that went from barbarism to decadence after a catching a glimpse of civilization.

The economic decline of Argentina during the 20<sup>th</sup> century is unparalleled in modern history (Taylor 1994). Three facts about this decadence stand out. First, from 1885 until 1929 the country ranked among the ten wealthiest in the world. Second, as can be seen in Figure 1 below, starting in 1930, Argentina's position in the world's GDP per capita ranking started to decline, first slowly (it recovered during WWII) and then after 1946, more rapidly and irreversibly.

**Figure 1**  
**Argentina's World Rank in Terms of GDP per capita (1900-2008)**



Source: The Maddison Project and Gapminder.

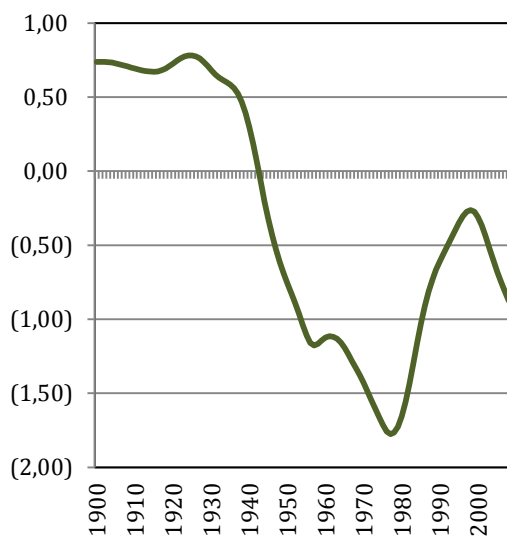
The end of WWII marked the beginning of the most politically successful populist experiment in the world: Peronism. Only briefly, during 1992-1999 and since 2006, this declining trend was reversed. As a result, whereas in 1946 Argentina ranked among the ten wealthiest nations on earth, by 2008 it ranked 46<sup>th</sup>. Third, economic decadence was accompanied by institutional decadence, particularly after 1930 (Figure 2). This decline accelerated in mid 1940s and began to reverse slightly in 1984 without ever recovering the levels attained in the first decades of the 20<sup>th</sup> century (Araoz, 2011). It follows from the above that something pivotal happened between 1943 and 1947.

Argentina's decadence has long posed a conundrum to economists and social scientists, who have used the words paradox, puzzle, riddle and tragedy to describe it.

In particular, it challenges modern theories that seek to explain the fundamental long term causes of economic growth. Theories that claim that “inclusive” institutions are the fundamental cause of growth (Acemoglu, Johnson and Robinson 2005 and 2005, AJR) cannot explain the secular decadence of the most institutionally advanced country in Latin America. Theories that claim that that high levels of education precede the establishment of inclusive political institutions (Gleaser, La Porta, Lopez-Silanes and Shleifer, 2004, GLLS), cannot explain the institutional degradation after 1930 of the most educationally advanced country in the region. Although they haven’t specifically addressed the case of Argentina, theories that emphasize the central role of social or civic capital in economic growth (Putnam 1995, Knack and Keefer 2003) face a similar problem: What changed in Argentine culture that made it more inimical to growth and why this change has been so persistent?

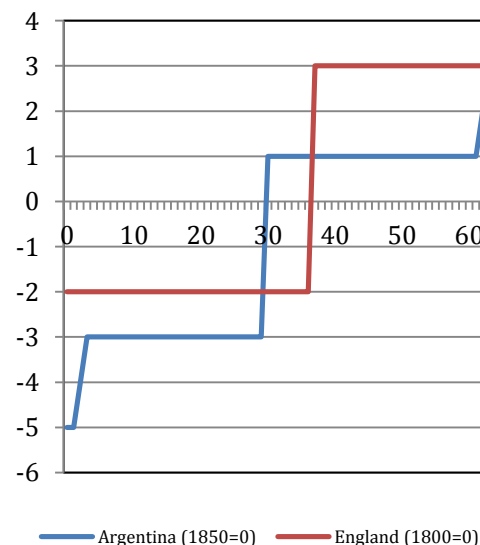
To avoid a conundrum, proponents of the first two theories brush-off some inconvenient facts. They either: a) deny that the country was ever institutionally developed and that its exceptionally high economic growth from 1870 to 1930 was simply an unsustainable “extractive” boom (Acemoglu and Robinson, 2012 and Acemoglu, 2013), which is refuted by the historical evidence (see Figure 2 and 3 below), or, b) argue that in 1900 the population of Argentina was not really well educated compared to that of Canada, Australia, the US and many European countries (Campante and Gleaser, 2013), which is true but not enough to explain what happened. If at the turn of the 20<sup>th</sup> century Argentina was more educated than the rest of the major Latin American countries why did it grow at a much slower rate since then? During the 1870-1930 period Argentina was one of the countries that made the biggest improvement in education and by 1930 it not only had significantly closed the gap with Europe and the Western Offshoots, but also its citizens were, by any measure, among the better educated in Latin America, if not the best. In fact, the Argentine experience before 1930 confirms the GLLS hypothesis: improved educational levels led to an improvement in political institutions.

**Figure 2**  
**Index of Institutional Quality for Argentina**  
**(1900-2006)**



Source: Araoz (2011).

**Figure 3**  
**Comparative Evolution Polity IV Index:**  
**Argentina vs. England**



Source: The Center for Systemic Peace.

## 2. Explaining Argentina's Decadence

The literature on Argentina's economic decline is vast. The first (and maybe premature, if not misguided) attempt to explain it can be traced back to Weill (1944). Carlos Diaz-Alejandro (1970) wrote the seminal work on the subject and many of his conclusions are still valid today. Cortés Conde (1989), Taylor (1994) and many others followed in his footsteps and added to our understanding of what happened. In the nineties however, as Argentina's economy rebounded, even development economists turned their attention to other subjects. In the past decade, as we approached what many consider the centennial of Argentina's decadence, there was a resurgence of interest. Among the most notable works during this period are Gerchunoff and Llach (2003), Sanz Villaroya (2003), Prados de la Escosura and Sanz Villaroya (2004), Prados de la Escosura (2009), Lagos, Llach, Fracchia and Marull (2011, LLFM), Della Paolera and Gallo (2012), Lagos and Llach (2014) and Di Tella, Gleaser and Llach (2014).

Economists have proposed a wide range of hypothesis to explain why Argentina went from being the seventh wealthiest country in the world in 1908 to dropping below the 45<sup>th</sup> position by the beginning of the 21<sup>st</sup> century. With the objective of being as inclusive and objective as possible LLFM (2011) tested over forty hypotheses. In their final analysis, only four were statistically significant: protectionism, macroeconomic instability, high and creeping inflation, and the impact of two world wars. However, these conclusions give us at most a proximate cause of Argentina's decadence but not its fundamental cause, i.e., what led successive governments to adopt policies that led to those results?

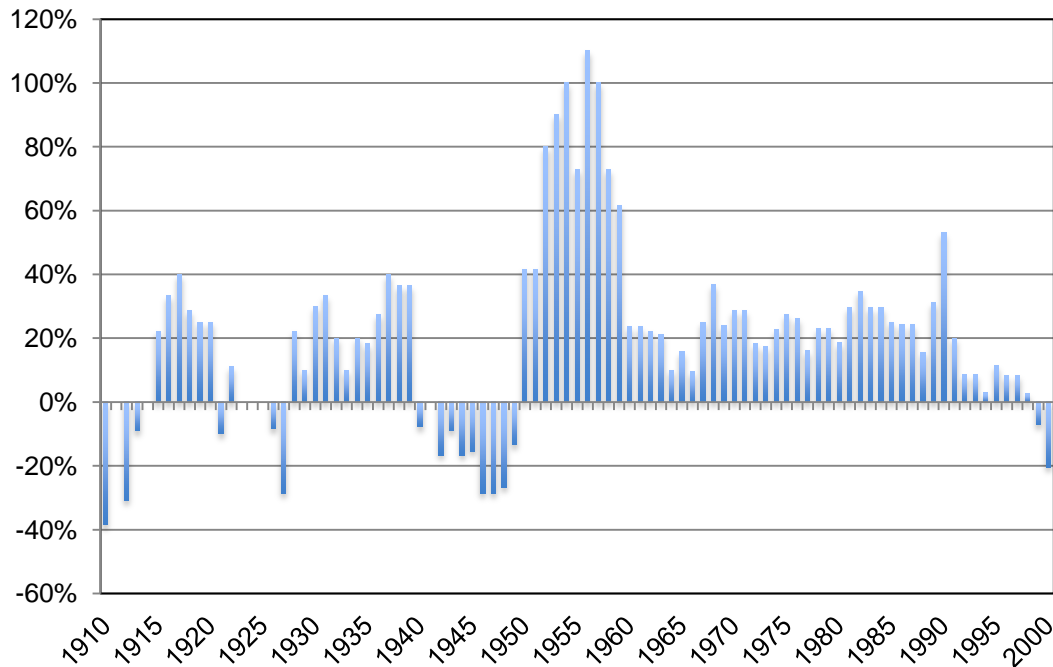
In reviewing recent research, Llach, Di Tella and Gleaser (2014) narrow the range of hypothesis to four, which can be summarized as follows: 1) Argentina's exceptionally high economic growth from 1870 until 1930 was a statistical anomaly, *ergo*, there is no decadence to explain, simply mean reversion, 2) what pushed the country into decline was a secular deterioration in the terms of trade after the Great Depression, 3) Argentine stopped growing after 1930 due to its inability to invest in new technologies which was partly the result of low levels of human capital, and 4) a vicious cycle of bad politics and bad economics, particularly after the mid 1940s, led to instability and stagnation.

This last explanation is broadly consistent with the ones proposed by Diaz-Alejandro, Cortés Conde and others. According to this view, Argentina's decline was caused by low rates of capital accumulation that resulted from, first, the replacement, after the Great Depression, of an export-oriented, market friendly regime by a mildly interventionist and protectionist one, and second, by recurrent cycles of strongly interventionist, protectionist and redistributionist policies followed by attempts, oftentimes misguided, to correct their effects after 1946. In other words, the decline can be traced mainly to the emergence and persistence of populist regimes that sought to correct income inequality with policies that undermined the country's institutions and degraded its social capital.

As the founder of the most enduring and politically successful form of populism in Latin America, Juan Peron plays a key role in this explanation. As can be seen in

Figure 4 below, during the decade Peron governed Argentina, the country experienced the largest relative drop in the world's GDP per capita rankings.

**Figure 4**  
**Change in Argentina's position in the World's Ranking of GDP per capita 1900-2000**  
**(in percentages)**



Note: Increases show a decline in the ranking. Source: Based on data from Maddison (2008).

In 1946 Argentina was not only the tenth wealthiest nation in the world but also the seventh largest western economy. Peron entered Argentina's political arena in 1943 as the leading member of a secret cabal of nationalistic military officers who staged a coup that deposed the conservative coalition elected in 1937 (Potash, 1969). During a stint as Secretary of Labor between 1944 and 1945 Peron forged valuable alliances with union leaders that helped him win a landslide election in February 1946. Ousted from the presidency in 1955 he returned to power in 1973. Although he died a year later, the party he founded has governed Argentina 22 out of the last 30 years. However, populism in Argentina has not been the exclusive domain of Peron or his followers. When in power, the main opposition party has also sometimes pursued populist economic policies with equally disastrous results. Peron's influence has extended to other Latin America countries where many political leaders have tried to emulate his success.

This paper proposes a theory that explains: a) what started this vicious cycle of bad politics and bad economics, b) why it has persisted even though the forces that gave rise to it have disappeared, and c) why agricultural commodity price cycles explain the cycles of populism in Argentina.

### 3. Background

The theory presented in this paper builds upon and connects with several strands of research. First and foremost with the hypothesis of the “natural resource curse” (NRC) that affects developing countries with relatively abundant natural resources. Secondly, with the theories of institutional change resulting from conflicts about the distribution of resources (AJR), and third with the theories that link culture and economic growth.

The NRC posits a negative relationship between natural resource abundance and economic growth in developing countries (Sachs and Warner, 2001 and Frankel, 2010). Most studies focus on countries that produce and export non-renewable resources –fossil fuels or minerals– and where the government plays an important role in their production, directly through a price board or indirectly through state owned companies (e.g., Nigeria and Venezuela). Also the period under study is usually limited to the last sixty years. Argentina does not fit this description and in many ways is a *rara avis*. With the exception of Brazil and Ukraine, there are no other developing countries among the top ten exporters of major agricultural commodities. Therefore some of the conclusions from the NRC literature are not always applicable to Argentina.

Whatever its origin, what is clear is that the effects of the NRC must be felt more intensely during a period of rising commodity prices. Recent research suggests that the NRC is not caused by a relative abundance of natural resources but by the lack of strong institutions (Melhum, Moene and Torvik, 2006). But very little has been written about the interrelationship between commodity price booms and institutions. A promising model (Robinson, Torvik and Verdier, 2002, RTV) predicts that at times of resource booms, incumbents will have an incentive to pursue populist policies to increase their chances of re-election. Whether they succeed or not is determined by the quality of the country’s institutions. However, this model does not contemplate the hypothesis that a) populism essentially implies institutional degradation, and b) populism seems to be an endogenous response to a boom in prices. Also, the RTV model seems more applicable to countries with governments that are directly involved in the production of exportable commodities and therefore can alter at their will the extraction path of natural resources, which is not the case of Argentina. On the other hand, two recent papers (Blanco and Grier, 2012 and Kaufman, 2013) have emphasized the importance of commodity booms in supporting the reemergence of populism all over Latin America.

A related question is what happens with inequality during commodity price booms, i.e. if booms generate inequality and inequality contributes to the rise of populism then we can establish a relationship between the former and the latter. But a cross-country study by Goderis and Malone (2011) finds that inequality falls immediately after a boom and then increases steadily over time as the economy grows and the initial impact wears off. Again, these results seem to be valid for countries that produce oil and minerals and not to major agricultural exporters such as Argentina (which was not included in the study).

The theory of institutional change proposed by AJR posits that institutions – economic and political, formal and informal– are endogenous and reflect an



underlying struggle for power among different interest groups. The distribution of power and formal political institutions jointly determine a certain economic outcome. Institutional drift and critical junctures (random shocks) can alter the direction of institutional change. According to this theory, the rise of populism is evidence of weak institutions not of institutional change. However, in an empirical study relevant to our theory, Rode and Revuelta (2011) found a strong negative relationship between populism and institutions, more specifically to economic freedom. In our view, populism can occur in countries with strong institutions. In essence, populism is institutional change, i.e., the result of an endogenous response to a critical juncture.

Finally, the theory developed in this paper also borrows concepts from a recent body of work that seeks to explain the impact of culture on institutions (Tabellini, 2008) and the origin, transmission and persistence of values and beliefs and their impact on economic outcomes (Guiso, Sapienza and Zingales (2006, 2007 and 2010, GSZ). I also incorporate the hypothesis that resentment is a major factor when it comes to explaining the popularity and persistence of Peronism in Argentina (Leis, 2004 and Leis and Viola, 2010).

Culture is broadly defined as shared values and beliefs about the scope of application of norms of good conduct. Social capital can be defined as those values and beliefs that lead to cooperation and help a society resolve collective action problems (GSZ 2007). An increasingly large body of literature suggests that social capital can explain why differences in economic performance persist over centuries (GSZ, 2010).

As with any form of capital, social or civic capital can be accumulated or depreciated (i.e., a deterioration of the set of values that promote cooperation). According to GSZ (2010) the latter can happen a) as a result of a change in the economic or social factors that foster the formation and transmission of civic capital (e.g. an increase in income inequality), and b) the occurrence of some major historical event that generates an enduring level of mistrust or changes people's beliefs and/or the perception of the moral acceptability of certain behaviors (e.g., hyperinflation or a major economic crisis). However these theories do not explore the possibility that populism could be a major factor in promoting such changes. Tabellini (2008) argues that culture is the key factor that helps us understand how distant political history influences the functioning of current institutions. Values and beliefs change slowly and are influenced by political and economic outcomes in the past. This can explain the puzzling persistence of institutional outcomes that are not conducive to growth.

Two values that are empirically associated with better institutional outcomes are generalized trust and generalized morality (as opposed to limited or personalized). Conceptually, the distinction between them concerns the scope of application of norms of good conduct (whether towards everybody or within a narrow group with which the individual identifies such as the immediate family). Resentment is antithetical to both values so it can be view as depreciation of social capital (e.g., if the country is controlled by a small clique for its own benefit why not cheat on taxes or respect the law?). Understanding how and why resentment rises is therefore important to understand the economic and institutional decline of countries such as Argentina and why formal and informal institutions are inconsistent. History shows that building resentment has been part and parcel of the political and electoral strategy of populist leaders. This is achieved with a Manichean and paranoid political discourse aided by massive government propaganda, which has been a defining

characteristic of populism (Hawkins, 2009).

When analyzing the role culture has played in economic development, GSZ (2006) rescue the work of Italian political theorist Antonio Gramsci. In Gramsci's neo Marxist view (1949), power is not merely domain but hegemony, i.e. the ability to influence society morally and intellectually. Hegemony, in its most complete form, is defined "as occurring when the intellectual, moral and philosophical leadership provided by the class or alliance of classes and class fractions which is ruling, successfully achieves its objective of providing the fundamental outlook for the whole society" (Corse, 1998). Although Gramsci was an enemy of Mussolini, who in turn was an inspiration to Peron, they all shared similar views about how to impose hegemony. Gramsci's ideas on hegemony are useful to understand Peronism and vice-versa (Corse, 1998, Laclau, 1983). Seeking hegemony was as part and parcel of Peronism as redistributionist and clientelist policies.

Peron used massive propaganda efforts to promote a "narrative" in which a small group of landowners (the "oligarchy") allied with British or US interests conspired against the will and well being of the Argentine people. This narrative not only delegitimized the rights of the landowners (one of Peron's main political enemies) but also justified expropriating their wealth, which entailed violating property rights. This narrative became, and still remains, an essential part of the dominant *weltanschauung* of Argentine society.

Bringing resentment into the picture opens a whole new set of issues that exceed the realm of economic analysis. Particularly interesting in this regard are Nietzsche's thoughts on the origin and political uses of resentment. Nietzsche believed socialism was a political theory born of resentment and a desire for revenge. In his view, it was "an attack of sickness" brought about by "underprivileged" human beings who blamed "society" for their "lack of power and self-confidence" (Buccola 2009). According to Nietzsche, feelings of resentment are not innate to less fortunate individuals but rather created by a third party, or parties, that use them as an instrument for their own will to power. In *The Antichrist* he blamed socialist agitators for undermining the sense of satisfaction that a worker was able to get out of his life and for making him envious and teaching him revenge. Furthermore in *The Will to Power* he accused them of "preaching of altruistic morality in the service of individual egoism: one of the most common lies of the nineteenth century." The same can be said about populism, particularly the strain embodied by Peronism.

Resentment also increases the electoral demand for redistributionist and clientelist policies, which are the essence of populism. These policies have historically led to growing inflation, which in turn contributes to erode generalized trust and social capital in general. By definition they also erode institutional quality. There is path dependence due to the absence of a learning process. Populism is self-destructive but its inevitable and recurrent crises reinforce the conspiratorial Manichean narrative that gives it birth. In essence, it sets off a vicious cycle in which values and beliefs undermine and are undermined by institutional changes. Given its cyclical nature, populism brings about arbitrary changes in the rules of the game that generate instability and lead to lower investment rates. It is a lethal cocktail mix that, as proved by the Argentine experience, can only lead to stagnation and decadence.

## 4. The Puzzles of Peronism

The rise of populism in Latin America is usually traced to income inequality and low levels of education (Kaufmann and Stallings, 1991 and Sachs, 1991). This raises an interesting question: why it has been so prevalent in Argentina, which for most of the 20<sup>th</sup> century has been one of the most educated, urbanized and egalitarian countries in the region? Second, one distinguishing feature of populism has been its self-destructive nature. In pursuit of their political objectives, populist regimes have resorted to deficit financing, inflation, interventionism, protectionism and exchange controls that almost unavoidably have led to major crises that ended up hurting the people that those policies were meant to help. This in turn raises two other questions. First, what explains this recurrence of these mistakes and ill-conceived policies? Is it just “bad memory” or ignorance that leads populist leaders to repeat the same mistakes?

One answer is that populist leaders follow some kind of “dynamic strategic considerations” (Dornbusch and Edwards, 1991). This places the blame squarely on opportunistic populist leaders, but in a democracy they can only be elected with the vote of a significant portion of the electorate. In fact, in Argentina Peronism always had a strong electoral support (at least initially). This raises another important question: if populism has proven to be inimical to their material well being in a significant way why do a majority of Argentine voters continue to find it appealing?

There are four possible answers to this question: a) they are ignorant: i.e., they have the “wrong” model in their head, b) they are not economic maximizers, i.e., they have other objectives in their welfare function besides money, c) they are irrational, i.e., they do make the connection between populism and decadence and would indeed prefer to be better off economically but still vote for populist leaders, and d) they are resentful, i.e., they do have the “right model” and would prefer to be better off economically but vote for populist leaders because they will punish the elite. This last answer could also be subsumed in b).

Di Tella and Dubra (2013, DD) discard a) and c), and argue that the answer is a combination of b) and d). In particular, they claim that Peronism, and populism in general, appeals to values and beliefs that are deeply ingrained in vast segments of Argentine society. Looking at the World Value Survey (WVS) panels for Argentina in the 1990s, they find that Argentina’s electorate has a leftist bias, as most people seem to believe that poverty is the result of luck rather than laziness (or that society treats them unfairly) and that the country is run by an elite looking out for its own interests and not for everybody’s benefit. As DD point out, these notions underlie the political discourse of Peronism:

“[Peron’s] speeches can be reduced to arguments in support of the idea that instead of individual effort (internal to the individual) or luck (external but without intention), the relevant influence on income is an external force with human intention. It is “others” who are actively taking actions which lower Argentinian’s income. It is not a question of making a bigger effort at the individual level; nor a question of taking a collective stand to reduce the influence of natural elements (through insurance or a better selection of

activities and crops). It is a question of actively opposing other actors that try to exploit Argentines.”

The “others” in Peron’s speeches are the landed oligarchy and “foreign interests” (based in the UK and/or the US). According to Diaz-Alejandro (1970) feelings of resentment against foreign investors started as soon as foreign capital started to pour into the country. And even though the interest of foreign investors were not necessarily aligned with those of the wealthy landowners, the notion that they were allied and running the country for their own benefit was widespread among many intellectuals in the early decades of the 20<sup>th</sup> century.

As the Latinobarometro’s survey results show, Argentines remain very egalitarian (see Table 1 below). Approximately 88% of respondents in the 2007 survey believed that the distribution of wealth was not fair. This egalitarian streak might explain why in Argentina populism has such a strong electoral appeal among the middle classes. This would be consistent with Director’s Law (Stigler, 1970).

**Table 1**  
**Results of Latinobarómetro Polls (2007)**

Answers to the question: How just and fair is the distribution of wealth?

<b>Country</b>	<b>Gini Index (2006)</b>	<b>% who responded negatively</b>	<b>Predicted Response given GINI Index</b>
Argentina	47.7%	88%	68%
Bolivia	56.4%	53%	76%
Brazil	56.8%	83%	77%
Chile	51.8%	80%	72%
Colombia	58.7%	81%	79%
Mexico	48.1%	72%	68%
Peru	50.9%	75%	71%
Uruguay	47.2%	67%	67%
Venezuela	44.8%	42%	65%

Source: Latinobarómetro, World Bank. Note: The predicted response is estimated using a simple regression analysis.

At this point we must ask ourselves why inequality was, and still is, such an important issue if Argentina had a more egalitarian distribution of income than other Latin American countries? Part of the explanation can be traced to the influence of the Argentine *intelligentsia*. During the century that spanned Argentina’s independence until 1910, it was guided by the paradigm of individual liberty, borrowed first from the classical thinkers of the Enlightenment and then, in the second half of the 19<sup>th</sup> century, from Comte and Spencer. The paradigm started to change at the turn of the century towards equality. By 1920, the Russian Revolution had as much influence on leading Argentine intellectuals as the French Revolution a hundred years earlier. In parallel, as a reaction, nationalist sentiment also grew. Although opposed to each other, both ideologies found a fundamental objection with the status quo. Both also contributed to develop the narrative in which a landed oligarchy allied with foreign capital ruled Argentina for their own benefit at the expense of the people. While the

economy grew, this narrative was politically irrelevant but after 1930 and growth slowed down it became increasingly important.

It was Peron who made this narrative politically powerful. It is unclear whether he believed in it or whether he was driven purely by opportunistic considerations. It has been argued that it was the fear of communism following the Russian Revolution that led him and many early populist leaders in Latin America to advocate anti-oligarchic and anti-imperialist reforms (Walker, 2008). Be it as it may, inspired by the Nazi-fascist experience in Europe Peron built a powerful propaganda machine that inculcated this “narrative” into vast segments of Argentine society. Over time Peronism became “an authentic demiurge of the resentment of the popular classes against the liberal project that was building the country” (Leis and Silva, 2010).

Did Peron appeal to values deeply ingrained in Argentine culture or did he nurture and promote them? Two observations support the latter. First, it is hard to believe that the five million immigrants that arrived in Argentina between 1870 and 1930 thought that they would be exploited by a landowning oligarchy. Second, Uruguay, which in 1945 was the closest thing to a mini-Argentina, did not have Peron and although its electorate has a leftist bias, evidence from the World Values Survey shows its population doesn't have the same levels of resentment. More importantly, during the recent commodity boom the Uruguayan government didn't resort to the populist economic policies adopted in Argentina, particularly taxes on agricultural exports.

A combination of several structural factors during the first decades of the 20<sup>th</sup> century contributed to give some credence to the narrative that bred this resentment (or vice versa), in particular: massive immigration, relatively high concentration of land ownership, growing inequality, particularly after the Great Depression, and massive inflows of foreign capital, particularly from the UK, until 1914.

From 1870 until 1930, Argentina received a massive flow of immigrants, mostly from Spain and the north of Italy. During this period in no other country in the world immigration had a higher relative impact on the native population. As Sanchez-Alonso (2007) has pointed out, prior to 1930 there was a good economic reason to restrict immigration: rising inequality, a decrease in the relative quality of immigrants and relatively stagnant wages for unskilled labor (which were nevertheless higher than in many European countries). According to one counterfactual analysis, in the absence of immigration, by 1914, the labor force would have been 30% smaller, salaries would have been 25% higher and labor productivity 21% higher (Taylor 1997).

Argentine workers clearly would have been better off with a more restrictive immigration policy. However, restrictions remained moderate until well into the 20<sup>th</sup> century. In contrast, in the United States easy naturalization and voting laws quickly transformed immigrants into a recognized electoral force. Things were different in Argentina. Why? First, only after 1912 there was universal suffrage. Second, most foreign workers did not naturalize (military service was compulsory) and therefore could not vote. As a result, the interests of the working class were not represented in Congress. According to one view, the main instigators of this “liberal immigration” policy were its key beneficiaries: the landowners and the foreign capitalists (Sanchez-Alonso, 2007). Be it as it may, by the mid 1930s, real wages in Argentina were not only the highest in Latin America but also twice as high as those prevalent in Spain,

Italy and Portugal and comparable to those of Great Britain (Williamson, 1999).

Massive immigration also had a less obvious but more lasting impact on Argentine society. In order to counteract what was viewed as a pernicious foreign influence, in 1908 the government enacted a widespread educational reform to instill nationalistic views and values on the population. The notion that Argentina was a country destined to greatness and built by godlike heroes was inculcated in children from a very young age. Not surprisingly, when this messianic version of history collided with the economic realities of post-1930 Argentina, it prepared a fertile ground for the Peronist narrative to take hold. Rather than trust institutions, Argentines were inclined to trust a *caudillo*.

The second factor to take into account was the concentration in land ownership. Many studies have shown that compared to Australia, Canada and the United States, farmland property in Argentina was concentrated in fewer hands (Engerman and Sokoloff, 2002, Adamopoulos, 2008 and Alvarez and Willebald, 2013). The Argentine civil code ensured (through hereditary laws) that with the passage of time such concentration would decrease, but this was a slow process that took at least three generations. Between 1870 and 1914, the combination of mass migration and favorable prices for most of the agricultural commodities that Argentina produced and exported led to a significant increase in the value of farmland in absolute and relative terms and consequently to higher inequality (Arroyo-Abad 2008). This in turn led to increasing discontent, as evidenced by a major uprising among small land tenants in 1912.

Another factor that played to the resentment narrative was the preponderance of foreign capital. The long investment boom, mostly in railways and meat packing plants, of the pre-1914 era was largely financed by British capital (Taylor 1996). And by that year almost 50% of the total capital stock was foreign owned. Diaz-Alejandro (1970) mentions several instances during the 1870-1930 period when nationalist sentiment flared up. Another point to emphasize is that this dependence on foreign capital left the country very vulnerable to external shocks, which would soon throw Argentina off its growth trajectory.

Concentrated land ownership and the preponderance of foreign capital were Argentina's "original sin." There wasn't anything inherently wrong with either one – Argentina was starved for capital and people– and it would have been unrealistic to expect a young country to resolve in a matter of decades an issue that took several centuries in most of Europe. But an inevitable fact remained: given the underlying structure of the Argentine economy, agricultural commodity price booms inevitably led to higher inequality and thus more power to the landed elite. The biggest irony is that after 1930, when concentration of land ownership and foreign capital were becoming less important in economic terms, they became more important in political terms. The reason is that while Argentina's wealth grew rapidly, the issue of inequality remained latent. But the Great Depression dealt a big blow to the expectations of a growing population made up mostly of first and second-generation immigrants who had crossed the Atlantic in pursuit of a better life. When GDP per capita growth slowed down and the country failed to live up to the expectation that it would follow in the footsteps of the United States, resentment against the landowning elite grew.

After the 1930s, the narrative developed by disgruntled intellectuals in the earlier part of the 20<sup>th</sup> century started to take root and became increasingly appealing to politicians. In fact, it has been used by the current government to garner support for its populist policies.

## **5. A Theory of Populist Cycles in Argentina**

The main hypothesis of this paper can be summarized as follows: although the rise of Peronism in the early 1940s was a response to specific demographic, cultural, political and economic factors prevalent in Argentina and Europe in the decade that followed the Great Depression, its remarkable persistence is explained mostly by cultural factors. A master of political propaganda, Peron indoctrinated vast segments of society with a belief that ensured the political appeal of redistributionist policies whenever agricultural commodity prices increased.

According to the theory proposed here, a rise in agricultural commodity prices acts as a “signal” that inequality will grow and thus alter the political equilibrium. Drawing an analogy with biology, rising commodity price provoke a Pavlovian-like reaction in an electorate indoctrinated by a Peronist narrative: voting for redistributionist policies. Opportunistic politicians are happy to oblige and the stronger their belief that the rise in commodity prices is permanent, the more populist they will become. This means that, in Argentina at least, commodity price booms have an impact on the demand and supply for economic populism.

In boom times, resentment becomes a winning political strategy for politicians trying to reach the presidency. As predicted by the RTV model, once in power, opportunistic politicians have strong incentives to expropriate the “surplus” rents generated by higher commodity prices to avoid a disruption of the political equilibrium. This expropriation generates a negative externality as it entails a violation of property rights and therefore leads to institutional degradation, which affects all economic agents. Over time this leads to lower investment and growth. However, in the short term it allows populist politicians to build a war chest that can be used to win re-election. To justify their actions, populist politicians have to convince voters that the landowners and the foreigners are conspiring to exploit the people and therefore justify the confiscation or expropriation of their rents and/or assets. Building resentment by reviving the narrative of a foreign conspiracy aided and abetted by a local oligarchy is part and parcel of the populist program.

The political impact of the boom depends partly on whether it is perceived as permanent or transitory. The more permanent it is, the stronger its political impact and the stronger the incentive for an incumbent to turn to populist policies and expropriate the rent of the agricultural sector. If the boom is anticipated, the incumbent can move pre-emptively to ensure that it does not alter the balance of power. If unexpected, the reaction will be gradual but equally strong, as has been the case in the recent decade. On the other hand, if the boom is transitory, the political impact will be lower. Peron had a Malthusian view of the world and both in 1946 and 1974 he believed that the world’s economy would face permanently higher commodity prices (Castro, 2006). It also appears that after mid 2006, the Kirchners reached the same conclusion and their policies became increasingly populist.

When commodity prices return to normal, populist leaders try to amend their ways and reluctantly adopt half-baked stabilizations plans. But accumulated macroeconomic imbalances usually push the economy into a deep crisis. However, instead of correcting the narrative, the crisis reinforces it, i.e., the failure of the redistributionist experiment is not viewed as the inevitable consequence of unsustainable policies but the result of a conspiracy between the oligarchy and foreign interests. Over time, poor economic performance leads to mistrust and reinforces resentment until another boom in agricultural commodity prices reignites the populist agenda. The country remains trapped in a vicious cycle of bad politics and bad economics. Civic and institutional capital is degraded through different iterations.

## **6. Commodity Price Cycles and Populism in Argentina (1900-2013)**

The starting point of this paper was a very simple observation. Over the last 100 years there have been four major supercycles in agricultural commodity prices: 1916-1920, 1946-1951, 1973-1974 and 2006-2012 (Henderson, Gloy and Boehlje, 2011, Erten and Ocampo, 2012 and Jacks, 2013). In the upward phase of last three of these supercycles Argentina experienced intense populist policies. There were also three brief price spikes in 1980-1981, 1983-1984 and 1988. During the first, the government was in the hands of the military and during the latter, of the Radical Party, which resorted to populist economic policies.

One possible explanation is serendipity. The second one is that populism has been the norm since 1946 so the theory is irrelevant. The third, proposed in this paper, is that price booms are viewed from the lens of a Manichean and paranoid narrative that Peron inculcated in vast segments of the population. According to this narrative, rising prices mean that the landed oligarchy will become richer and regain power. In the context of AJR, the boom is viewed as a “critical juncture” that can alter the distribution of economic resources and therefore lead to a change in the balance of power in society. Rising nominal prices are easily observable by all political actors and according to the prevalent narrative they will benefit mostly the landed oligarchy, which will attempt to regain the power lost in 1946. Populism is therefore an endogenous response of Argentine society to this critical juncture. Culture and institutions play a key role in this theory.

The theory explains the cycles of Argentine political history during the 20<sup>th</sup> century after the electoral reform of 1912, which expanded the democratic franchise through universal suffrage. The first test of this reform was the presidential election of 1916. Commodity prices started to rise in 1913 and continued to increase until 1920, when they reached a peak. The winning candidate was Hipolito Yrigoyen, who some argue led the first, very timid, populist experiment in Argentina. In reality, Yrigoyen followed economic policies that were similar to those of his predecessors. This is consistent with our theory that emphasized the importance of the narrative, i.e., before Peron commodity prices did not trigger economic populism.

In 1922 Yrigoyen was succeeded Marcelo T. De Alvear, who although a member of the Radical Party belonged to the landowning class (Yrigoyen was also a landowner). By then commodity prices had dropped by almost 20% from their peak. Alvear's policies were in many respects similar to the conservative regime that had preceded Yrigoyen. During most of his presidency commodity prices declined but in 1926 they



started to increase again and continued to increase until 1928, when Yrigoyen was re-elected president. His second term cannot be characterized as anything but chaotic, corrupt and incompetent.

From 1912 until 1930, Argentina managed an orderly transition of power, moving to more inclusive institutions. Although during this period industry was the fastest growing sector, the structure of the economy remained relatively unchanged. Contrary to AJR's view, from an institutional perspective, Argentina was on the road "to becoming a legitimate democracy with checks and balances and high economic growth" (Alston and Gallo, 2010).

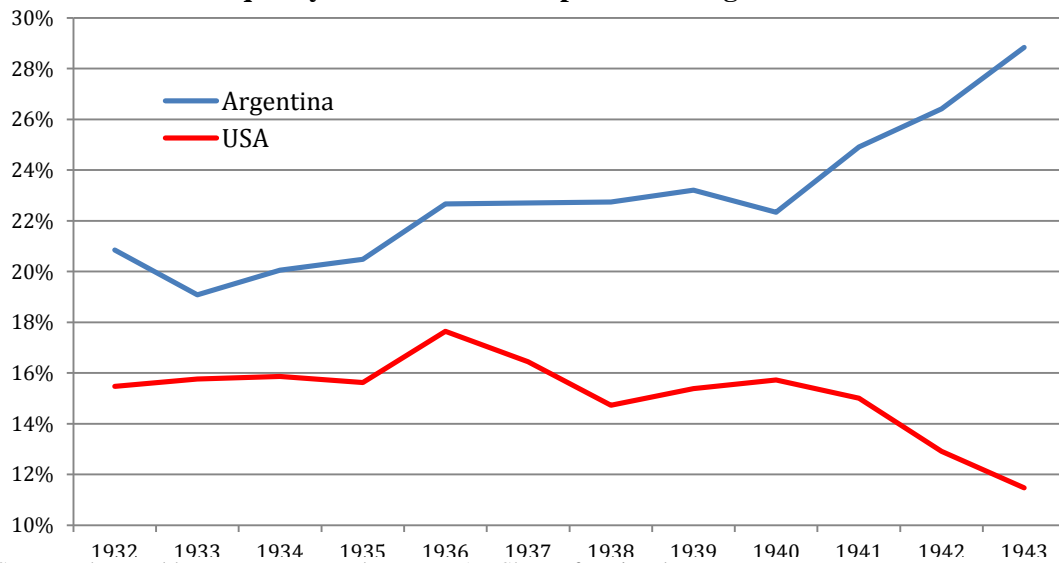
In October 1929, Wall Street crashed and the world was pushed into the Great Depression. Commodity prices fell sharply and the economy entered into a deep recession. The chaos in the Yrigoyen administration provoked a military coup that put an end to almost seventy years of democratic continuity. Behind it were nationalistic army officers fearful of communism (Peron included), many prominent members of the Conservative party that had ruled until 1916 as well some leading Radical Party members opposed to Yrigoyen. More importantly, in a decision that would have far ranging consequences, the Supreme Court implicitly legitimized the coup. By doing so it undermined its own legitimacy. Amid accusations of fraud a new president was elected in 1932 with the support of a coalition of conservatives, radicals and socialists.

For the next decade, electoral fraud was a staple of Argentine politics, particularly in the province of Buenos Aires. Again, the Supreme Court turned a blind eye to this situation, which "eroded the nascent foundations of a political belief system which might have brought about a true system of checks and balances" (Alston and Gallo, 2010). Institutionally, as was the case with most of Europe, Argentina drifted to less inclusive political institutions.

Another salient characteristic this era was growing commodity prices and rising income inequality. Starting in the mid 1930s nominal commodity prices and land prices increased. By 1939 the former were 60% higher than in 1932 whereas land prices had risen by 14%. As can be seen in Figure 5, inequality also increased markedly in the aftermath of the Great Depression and reached an all time high in 1943. By resorting to fraud, the Conservative party effectively protected the source of economic power of its main constituency.

Coincidentally, in 1943, Peron entered the political scene. His original motivations are not entirely clear but they were inspired by a nationalistic ideology and a deep aversion to communism. Peron and the members of his clique (the GOU) viewed the Conservative government (and the landowning elite) as too aligned with the Allies against Germany and Italy. Since the late 19<sup>th</sup> century, the Argentine army had been heavily influenced and indoctrinated by German officers. The Revolution of 1943 can be seen partly as a response to an external shock, i.e., World War II was a critical juncture for Argentina.

**Figure 5**  
**Inequality after the Great Depression: Argentina vs. US**



Source: The World Top Incomes Database, Top 1% Share of National Income.

In 1944 Peron engineered a palace coup and was appointed Vice President, War Minister and Secretary of Labor. During this time he forged an alliance with organized labor and built a platform to win the presidency. He also introduced mass propaganda into Argentine politics. As DD have pointed out, a key element of Peron's campaign was a narrative that sought to blame landowners and foreigners for the plight of the working classes. This narrative had a strong appeal: both inequality and commodity prices had risen significantly since the Great Depression (the latter had more than doubled since 1931).

In February 1946, Peron won the election with almost 54% of the votes. At this time thanks to the devastating effects of the World War II, Argentina was the seventh largest economy in the Western World and ranked among the top ten wealthiest countries in the planet. Also, a new and stronger commodity supercycle was underway. Peron held a Malthusian view of the world and expected massive food shortages. In one of his most famous speeches he asserted that "the future of the world, the future of humankind and the future of nations will be extraordinarily influenced by the magnitude of their reserves of food and commodities... The future is ours." Substantially higher agricultural commodity prices, which Peron expected would be a permanent feature of the world economy, allowed him to launch an aggressive redistributionist program that would change Argentina forever.

Once in power, Peron set out to neutralize his political enemies: the landowning elite and the communists. The main obstacle he faced was the Supreme Court, which declared some of his measures unconstitutional. It was almost a replay of president Roosevelt's experience following his re election in 1936. The difference was that Peron was successful. In 1947 he impeached four out of five judges of the Supreme Court and turned it into his own political instrument. It was the turning point in the evolution of judiciary independence and property rights in Argentina and a major source of institutional instability thereafter (Alston and Gallo, 2010). Inspired by the methods of Hitler and Mussolini, he built a massive propaganda machine that during a

decade drummed a narrative built on a foreign conspiracy.

In 1947, commodity prices peaked and gradually started to decline. By the end of 1951 they had collapsed to pre war levels forcing some into Peron's economic policy. Despite all his nationalistic rhetoric, the dictator turned to foreign capital to save the economy (Antunez and Gerchunoff, 2001). But a military coup in 1955 interrupted the learning process.

Although the Great Depression, the 1930 military coup, electoral fraud (and the passivity of the Supreme Court in the face of it) helped paved the way for Peron's ascent to power, the rise in inequality generated by rising commodity prices also played a major role. Taking advantage of this relationship, Peron used propaganda to inculcate in vast segments of the population a narrative that justified expropriating the rent of the landed oligarchy to reduce inequality. It was a clever political strategy that allowed him to neutralize conservatives and communists in one stroke. But it also condemned Argentina to a vicious political and economic cycle that ended up hurting the people he was supposed to help.

Another thirty years passed, and as Marx predicted, history repeated itself, this time as a farce. Peron returned to power in September 1973, when as a result of the oil shock commodity prices had skyrocketed. He applied the same economic policies: high taxes on the exports of agricultural commodities, increased public spending, large nominal salary hikes and price and exchange controls to tame inflation. Once again he believed the boom would be permanent (or at least long lasting). His ideas about food scarcity were very much in line with the Neo-Malthusian warnings of the so-called "Club of Rome" (Castro, 2006). He was not alone in believing this. For the last century once in every generation, the global economy witnesses a protracted and widespread commodity boom and in each boom, the recurrent common perception is that the world will quickly run out of raw materials (Jacks, 2013). But the evidence shows strong reversion to the mean. Peron died before commodity prices crashed in 1975 sending the Argentine economy into a tailspin. The military stepped in early 1976 and interrupted the learning process.

Another thirty years passed and, thanks to China, rising commodity price came back with a vengeance. This time it was not a tragedy, nor a farce, but a mix of both. By mid 2003, as a new supercycle was starting, the Peronist party was again in power. Despite a bombastic rhetoric, during the first three years of his mandate, Nestor Kirchner followed economic policies that cannot be characterized as populist (high real exchange rates, stable inflation and twin surpluses in fiscal and external accounts). But by mid 2006 it appeared that higher agricultural commodity prices would become a permanent feature of the world economy for a long time. As the theory predicts, Kirchner became increasingly populist and sought to remain in power indefinitely. To avoid constitutional term limits he appointed his wife as presidential candidate in the 2007 election, which she won handily. Kirchner's dream was to alternate mandates between the two and consolidate their hold on power indefinitely. The Kirchners invented a new political movement: Kirchnerism. However, its methods, policies and discourse very much belong to the mainstream of Peronism (Walker, 2008).

The narrative Peron was instrumental in inculcating in vast segments of Argentine society was again used with great political effect. In typical Peronist fashion,

landowners again became public enemy number one. The much-maligned oligarchs of a hundred years ago have disappeared. Land ownership in Argentina is still relatively more concentrated than in Canada, Uruguay and the US but not as concentrated as in Peru, Brazil, Paraguay or Venezuela. Also, in stark contrast to 1900, according to the latest FAO statistics the average farm size in Australia is now almost seven times larger than in Argentina (Table 2). In all these other countries, rising commodity prices still have an impact on inequality due to their effect on farmland values but the only major agricultural producer in the world that confiscates a significant portion of the rent of its farmers is Argentina.

Under the Kirchner's, agricultural export taxes, a typical measure used by populist government to expropriate rents from the farmers, grew from 23.6% to 35%. In one of the epic battles of their presidency, which they lost, the Kirchners tried to impose a progressive taxation regime on agricultural exports. As commodity prices strengthened in 2011, Cristina Kirchner was able to secure her reelection with 54% of the votes. The intensity of economic populism reached a peak by mid 2012. Then as predicted by the theory, a softening of commodity prices derailed her plans of indefinite reelection and cast serious doubts on the sustainability of her populist experiment. Since mid 2013, despite a populist rhetoric the government's economic policies have become increasingly orthodox.

**Table 2 - Land Ownership Statistics**

	<b>Gini Index (1)</b>	<b>Average Farm Size (Has.)</b>	
		<b>1990</b>	<b>2000</b>
Argentina	0.83	469	583
Australia	N/A	3,601	3,243
Brazil	0.85	65	73
Chile	N/A	N/A	84
Canada	0.64	349	273
Colombia	0.79	23	25
New Zealand	N/A	N/A	223
Peru	0.86	20	N/A
Paraguay	0.93	78	N/A
Spain	0.86	19	24
South Africa	N/A	N/A	288
Uruguay	N/A	N/A	287
UK	0.67	70	71
USA	0.74	187	178

Source: FAO. Notes: The Gini index refers to land ownership.

## **7. Empirical Strategy**

I used two different approaches to test the hypothesis of a positive causal relationship between the cycles of agricultural commodity prices and populism (or the demand and supply of populism). We use a simple OLS regression model to estimate the following function:

$$(1) \Delta \% IP_t = \alpha + \beta \Delta \% ACP_t + \varepsilon_t$$

Where  $IP_t$  is an index of economic populism,  $ACP_t$  is the average nominal price of Argentina's agricultural exports and  $\varepsilon_t$  is an error term. The theory predicts that  $\beta$  will have a positive statistically significant value. Obviously, given the limited number of observations, the value of an econometric model of this kind is limited.

For  $ACP_t$  I used the annual average nominal price in US dollars of wheat, corn, meat and soybeans weighted by their relative participation in Argentina's exports. Although this average excludes other agricultural products which were important in the earlier part of the 20<sup>th</sup> century, the cross correlation of these prices is very high. The annual data covers the period 1914-2013. I constructed a subseries that averages the price increase for each government since 1914. For presidents that started their mandate after June 30, the average for their period starts the following year.

Estimating  $IP_t$  poses the greatest difficulty as agreeing on a proper definition of populism has long eluded the efforts of economists, sociologists and political scientists (Gidron and Bonikowsky, 2013). Even if we agreed on a definition it would have to be measurable to test our hypothesis.

I considered several approaches. The first used an index of populist discourse built by Hawkins (2009), which provides a quantitative measure of populism for almost forty countries in terms of discourse through a thematic analysis of speeches of current and former political leaders. The advantage of this series is that it covers the period 1900-2012. The disadvantage is that it measures discourse and not actual policies. Also, according to this index Carlos Menem was more populist than Nestor or Cristina Kirchner, a result that for anybody who has lived in Argentina in the last twenty years makes no sense. Another alternative is the approach proposed by LLFM (2011) which defines populist economic policies as those that meet the following criteria: a) increases in the real exchange rate equal or higher than 20%; b) increases in public debt/GDP equal or higher than 20%; c) increases in public spending/GDP equal or higher than 3% of GDP in absolute terms; and d) reduction in Investment/GDP equal or higher to 2.5% of GDP. This approach can lead to strange conclusions. In particular, it suggests that Peron was not a populist during 1946-1955, as only one variable (Public Spending/GDP) meets the criteria. Also, a fall in Investment/GDP may not indicate the prevalence of populist policies but the opposite (e.g., public infrastructure programs increase the overall level of investment).

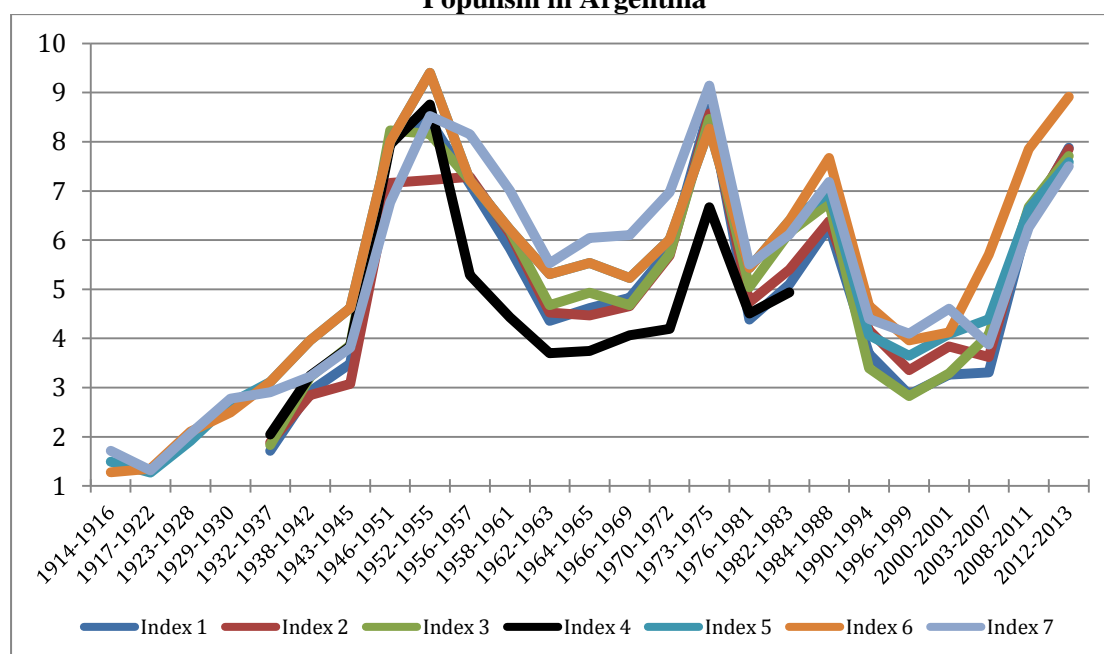
An important methodological issue when building the index is whether to use specific policies or economic outcomes. In theory the former would be more appropriate but unless policies are measurable and quantifiable it is hard to gauge their intensity. For example, to measure the intensity of price controls is very difficult given the available data. Another other problem is that some policies (such as exchange controls or taxes on agricultural exports) have been applied by governments that were not considered populist.

Keeping all these limitations in mind I built an index of economic populism that combines both macroeconomic outcomes and specific policies that can be easily measured. This index reflects the particular nature that economic populism has taken in Argentina and therefore may not be applicable to other countries (particularly as it

relates to rent extraction from the agricultural sector). I excluded three years from the sample: 1931, 1989 and 2002. In the first and last case the country experienced the full impact of severe economic crisis and in the second was in the midst of a hyperinflation. Therefore the macroeconomic variables do not fully reflect the impact of the policies adopted by the government.

The index averages the following variables: a) the gap between official and market exchange rates, which measures both a specific measure (foreign exchange controls) and a policy outcome (overvaluation of the currency) as well as an indicator of the willingness to impose price controls in general (Guisarri, 1989), b) the level public spending as a % of GDP, which measures both clientelism through subsidies and other social transfers, c) fiscal deficit as a % of GDP, which measures the degree of fiscal profligacy, d) the participation of wages and salaries as a % of GDP, which is a proxy for income redistribution, e) an index of real wages,<sup>1</sup> f) the number of public sector employees at the national level, which is a measure of clientelism, and g) the rate of extraction of resources from the agricultural sector based on the studies by Sturzenegger (2007, 2008), Anderson (2008) and Colomé et al. (2013). Although most governments in the last seventy years have resorted to some form of rent extraction from the agricultural sector, its intensity has increased markedly under populist governments. Given the lack of statistics for certain variables before 1933 we built seven versions of the index. Figure 6 below shows the value of each version on a scale from 1 to 10 for each presidential period.

**Figure 6**  
**Populism in Argentina**



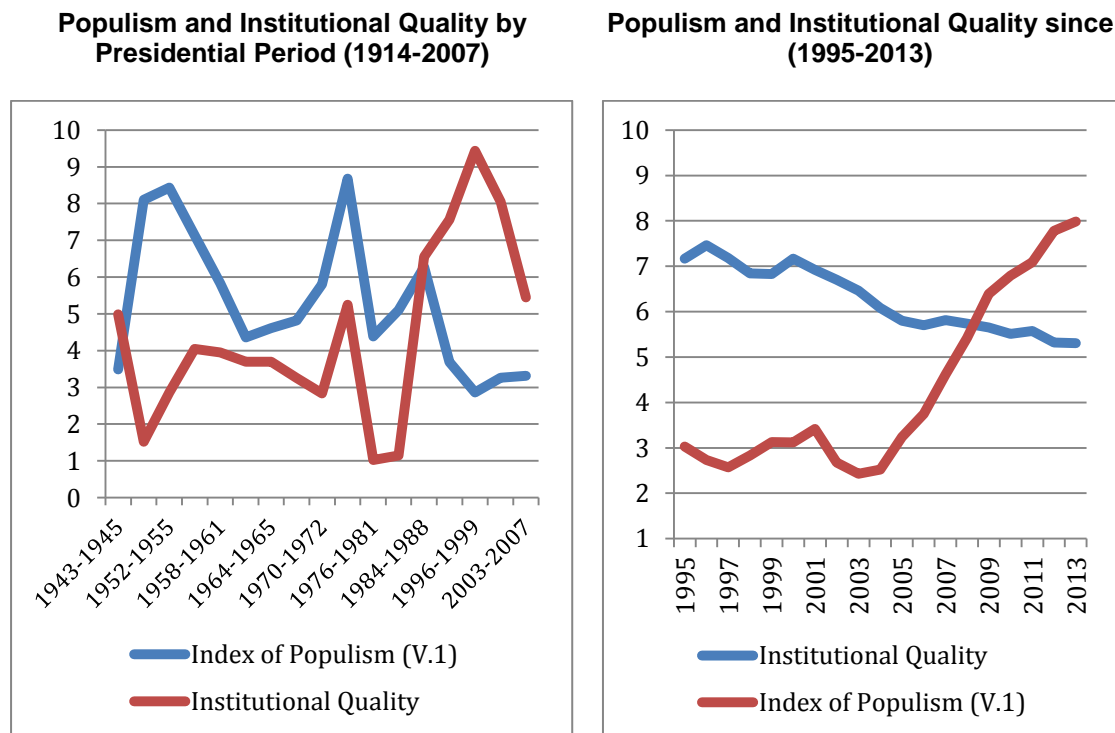
In essence, each version of the index is a simple average of a set of normalized macroeconomic variables. The underlying data is included in the Appendix. Table 3

<sup>1</sup> The inclusion of real wages as a variable is questionable (and can lead to strange results) given that over the long run it cannot be determined by economic policy. However, the experience in Argentina shows that in the short run governments can increase real wages.

shows for each individual components of the index, its average for each presidential period since 1914, Table 4 shows how each version of the index is built, Table 5 shows the average value of each version of the index by presidential period and Table 6 shows the cross correlations between each version of the index. Although they are an imperfect measure of populism, these seven indices broadly capture the intensity and timing of populist economic policies in Argentina in the last century. They also capture, in a crude way, its cyclical nature and confirm that Peronism did not monopolize populism.

To reflect certain non-economic aspects of populism we compared this index to an institutional index. The first institutional index covers the period 1914-2007 and is made up of a simple average of the following variables: press freedom index, central bank independence index and Polity IV score using data from Araoz (2011). The second index starts in 1995 is a simple average of the press freedom index (Freedom House), the index of economic freedom (Heritage Foundation) and Polity IV is the time period covered. The results can be viewed on Figure 7. As shown, economic populism is associated with lower institutional quality.

**Figure 7 - Populism and Institutional Quality in Argentina**



The theory proposed in this paper makes the following predictions: a) in periods of rising agricultural commodity prices, an incumbent will be more likely to resort to populist economic policies, b) the stronger the perception of the incumbent that the boom will last for a long time, the stronger will be the populist bias in economic policy, c) declining commodity prices will be associated with a weaker populist bias in economic policy (or a policy reversal).

The results of the OLS regression analysis of equation (1) using 19 observations (one for each presidential period since 1914) can be viewed on Table 7 below:

**Table 7 - OLS Estimates**

Dependent Variable	Index of Populism (V.1)					
	Equation (1)		Equation (2)		Equation (3)	
Intercept	-0.013	***	-0.066	***	-0.037	***
	(0.015)		(0.015)		(0.025)	
% Δ Prices	0.806	***	0.799	***	0.695	***
	(0.147)		(0.147)		(0.150)	
<u>Dummies</u>						
Peronism			0.074	*		
			(0.039)			
Radicalism			0.073		0.049	
			(0.045)		(0.037)	
Military (post 1955)			0.034		0.009	
			(0.040)		(0.032)	
Peronism w/o Menem					0.063	*
					(0.033)	
R-squared	0.6378		0.7359		0.7350	
Adjusted R-squared	0.0519		0.6604		0.6592	
Number of observations	19		19		19	

Single star, significant at 10 percent level; Double starred significant at 5 per cent level; Triple-starred significant at 1 percent level.

These results confirms that both Radicalism and Peronism resorted to populist economic policies (Canitrot, 1975) in the face of rising commodity prices and that military governments, with few exceptions, were insensitive to this factor. It seems the main difference between the populist experiments of Radicalism and Peronism, is that the former were luckier, i.e., it experienced stronger and longer commodity booms. A small sample size prevents us from reaching a definitive conclusion but the estimated model for each of the indices in in line with the predictions of the previous paragraph. At this point, it is important to clarify that I am not suggesting there is a precise mathematical relationship between commodity prices and economic populism or that there are no other factors at work. There are, in fact, many other factors at work, some of which are impossible to measure, but the data suggest that commodity prices have a strong, positive and statistically significant impact in triggering populist economic policies. The factor that explains this relationship is the prevalence of a



narrative that assigns a sinister role to the agricultural sector. This narrative was inculcated by Peron upon vast segments of the population during a decade using a powerful propaganda machine and is revived and fed by opportunistic politicians at election times.

A simpler way of proving the link between the rise of populism and commodity prices is with a signaling model. According to the theory, the more persistent the price boom, the higher the political impact, i.e., the candidate running on a populist platform will win the majority of the votes and once in power will adopt populist policies. Conceptually the signal gives us a crude measure of the impact of commodity prices on the demand for redistributionist policies among the electorate. We use this method to predict the outcome of the last eleven presidential elections in which a Peronist candidate was allowed to run (the elections of 1958 and 1963 are therefore excluded). The main source of data for nominal commodity prices for agricultural products compiled are the datasets from the US Department of Agriculture (USDA) and the World Bank (WB).

We define as a signal of a permanent commodity price boom an increase in nominal prices that is higher than 10% over a period of 12 months (which slightly higher than twice the historical average). We calculated the value of the signal for each election month (See Table 8 below). It is interesting to note that the prevalence of the signal during election months was much higher than for the period as a whole (81% vs. 35%), i.e., the election calendar had a bias that favored populist politicians.

**Table 8**  
**Boom Signal at Election Time**

	<b>Previous year</b>	<b>Previous 2 years</b>	<b>Previous 3 years</b>	<b>Populist candidate won?</b>	<b>Winning Candidate</b>
Feb-46	0	0	0	1	Peron
Nov-51	1	1	0	1	Peron
Mar-73	1	1	1	1	Campora
Sep-73	1	1	1	1	Peron
Oct-83	1	0	0	0	Alfonsin
May-89	1	1	0	1	Menem
May-95	0	0	0	0	Menem
Oct-99	0	0	0	0	De la Rúa
Apr-03	1	1	0	?	Kirchner
Oct-07	1	1	1	1	Fernández
Oct-11	1	1	0	1	Fernández

At each presidential election we assign a value of 1 if the winning candidate ran on a populist platform. This is an easy exercise for most elections but three elections pose a problem: 1983, 1989 and 2003. In 1983 Alfonsin was not the populist candidate but ended up applying populist economic policies. In 1989 Menem was the populist candidate but after he got elected he applied orthodox economic policies. In 2003, no candidate ran on a populist platform, Menem obtained the largest percentage of votes but Kirchner ended up becoming president. Although Kirchner didn't run on a populist platform, with the passage of time, his policies became increasingly populist.

These results are consistent with the view that in the aftermath of a serious crisis, the electoral demand for populism is more moderate even in the face of rising agricultural commodity prices. In Table 9 we estimate the frequency of Type I and Type II errors for each signal for the eleven presidential elections:

**Table 9**

Boom signal	Predicts Populist Platform Wins		Predicts Populist Policies 1 year after election		Average Error Before Election	Average Error After Election
	Type I Error	Type II Error	Type I Error	Type II Error		
1 year	9%	18%	9%	9%	13.6%	9.1%
2 years	9%	9%	18%	9%	9.1%	13.6%
3 years	27%	0%	18%	9%	13.6%	13.6%

The signal incorrectly predicted in 1983 that the winning candidate would be the one running on a populist platform but the winner ended up being Alfonsin, who ran as a moderate. However, as the signal predicted, he ended up adopting populist policies. The signal also incorrectly predicted a populist candidate would win the 2003 election. However in this election it was unclear who the populist candidate was. More likely it was Menem who won in the first round but decided not to go to the “ballotage” so it could be argued that the prediction was right.

There is always the possibility that a winning candidate will depart from the platform after the election, i.e., follow a “bait and switch” strategy or simply be forced to change policies due to changing economic conditions. To check this hypothesis we test two rules of thumb: a) estimate the value of the boom signal one year after the election, and b) estimate the prevalence of a commodity boom for each presidential mandate. The signal incorrectly predicts that Alfonsin would not follow populist policies one year after the 1983 election and that Menem would follow populist policies one year after the 1995 election. However, the latter took place in the aftermath of the Mexican crisis, which would have moderated the populist inclinations of any candidate. If we consider the prevalence of boom signals during each presidential mandate, the following rule of thumb yields 100% accurate predictions: if during more than 40% of the period, the signal equaled one, the incumbent applied populist economic policies.

## 8. Conclusion

Argentina’s economic and institutional decline has long posed a conundrum to economists and social scientists. In particular, it challenges modern theories that seek to explain cross-country differences in economic growth. Theories that claim that institutions have a first-order effect on growth cannot explain the secular economic decadence of what used to be one of the most institutionally advanced countries in Latin America. Theories that claim that that education precedes good institutions, cannot explain the institutional degradation of one the most educationally advanced countries in Latin America. Theories that claim that culture and social capital are the determinant factor face an equally daunting problem: explaining what changed in Argentine culture that was so important to push the country into a secular decline.

This paper argues that institutions and culture play a key role when it comes to explaining Argentina's economic decadence during the 20<sup>th</sup> century. The problem is methodological. Cross-country econometric studies linking institutions, education, inequality and growth by definition abstract from idiosyncratic factors. The central point of this paper is that Argentina's decadence since the mid 1940s cannot be understood without understanding Peronism and its cultural legacy. Economists have focused on the direct impact on growth of his economic policies but, with few exceptions, not on the indirect impact through culture and institutions.

Recent work linking culture, institutions and economic growth allows us to incorporate ideas developed by sociologists and political theorists that are key to understanding the economic and cultural impact of Peronism. In particular, we focus on a "narrative" that was a key element of Peron's strategy to achieve cultural hegemony. This narrative identified the landowning elite and foreign capital as enemies of the Argentine people. These beliefs, and the resentment they generated, became embedded in Argentine culture thanks to a massive propaganda effort. They are still pervasive today among broad segments of the electorate and have been used successfully by populist leaders. In essence, this narrative generates negative social capital (or "bad culture"), which is detrimental to long-term growth. The reaction of the average Argentine to the distribution of wealth in the country is evidence that this resentment survives and is strong. Although Argentina has one of the lowest levels of income inequality in Latin America, Argentines think wealth distribution is unfair. Unfairness, real or imaginary, breeds resentment.

Underlying the narrative is the notion that a persistent increase in the price of agricultural commodities can lead to a reallocation of economic resources in favor of the "landowning oligarchy." In essence, prices act as a signal of a potential change in the political equilibrium. When agricultural prices rise, they increase the demand for populism from the electorate and the incentives of politicians to resort to populist platforms or policies to win elections/reelections. Populism is an endogenous response to such signal.

The theory proposed in this paper is consistent with institutional explanations of the NRC, with AJR's theory of institutional change, with DD's emphasis on the impact of Peronist beliefs and with theories that emphasize the importance of culture for economic growth. In an ironic twist to the Prebisch-Singer hypothesis, it also predicts that import substitution industrialization strategies, a typical populist policy, will most likely take place at times of surging agricultural commodity prices.

The issues raised in this paper are not simply academic. China's continued economic growth seems to suggest that agricultural commodity prices might remain high for relatively long period of time. Will Argentina be able to shake off Peron's curse? If not, the country's continued economic decadence seems assured not only because of the implicit institutional volatility but also because the peak of each boom has been lower in real terms than the previous one. This means the value of the rent exacted from the agricultural sector has been lower, which in turn means that in each redistributive cycle the country started from a lower level. To borrow an idea from Greek mythology, it is as if Sisyphus instead of having to push a rock up the same mountain, he had to push it up increasingly higher peaks.

## 9. Bibliography

Acemoglu, Daron, and James A. Robinson (2012), Why Nations Fail?: The Origins of Power, Prosperity, and Poverty (Crown Business Books).

Acemoglu, Daron; James A. Robinson and Simon Johnson. (2005). "Institutions as a Fundamental Cause of Long-Run Growth" in Aghion, Philippe and Steven Durlauf (ed.), 2005. Handbook of Economic Growth, Handbook of Economic Growth, Elsevier, edition 1, volume 1, number 1, 386-472.

Adamopoulos, Tasso. (2008). "Land Inequality and the Transition to Modern Growth," *Review of Economic Dynamics*, vol. 11(2), pages 257-282, April.

Alston, Lee J. and Andres A. Gallo (2010), "Electoral fraud, the rise of Peron and demise of checks and balances in Argentina," *Explorations in Economic History* 47 (2010) 179–197.

Alvaredo, Facundo (2010), "The Rich in Argentina over the Twentieth Century, 1932–2004," in Top Incomes: A Global Perspective, ed. Anthony B. Atkinson and Thomas Piketty, (Oxford and New York: Oxford University Press, 2011), 253–98.

Alvarez, Jorge and Henry Willebald. (2013). "Agrarian Income Distribution, Land Ownership Systems and Economic Performance: Settler Economies during the First Globalization," PHES Facultad de Ciencias Sociales, Universidad de la Republica Documentos On line N°30, September.

Anderson, Kym and Ernesto Valenzuela, (2008) "Estimates of Global Distortions to Agricultural Incentives, 1955 to 2007", World Bank, Washington D.C., October.

Araoz, Maria Florencia (2011), "La Calidad Institucional en Argentina en el Largo Plazo," Universidad Carlos III de Madrid, Working Papers in Economic History, December 2011.

Arroyo Abad, L. (2008), "Inequality in Republican Latin America: Assessing the Effects of Factor Endowments and Trade," GPIH Working Paper 12, University of California, Davis (November).

Banfield, Edward, The Moral Basis of a Backward Society, (Glencoe, IL: The Free Press, 1958) 85-104.

Blanco, Luisa and Robin Grier. (2012). "Explaining the Rise of the Left in Latin America", *Latin American Research Review* 48 (1), 68-90.

Bluhm, Richard and Adam Szirmai (2011), "Institutions, inequality and growth: a review of theory and evidence on the institutional determinants of growth and

inequality”, Innocenti Working Paper No. 2011-02. Florence, UNICEF Innocenti Research Centre.

Buccola, Nicholas, (2009), “The Tyranny of the Least & the Dumbest: Nietzsche's Critique of Socialism,” *Quarterly Journal of Ideology*, Vol. 31, Number 3, (Spring 2009): 1-37.

Campante, Filipe and Edward L. Glaeser, (2009) “Yet Another Tale of Two Cities: Buenos Aires and Chicago,” NBER Working Paper No. 15104.

Canitrot, Adolfo. (1975), “La experiencia populista de redistribución de ingresos”, *Desarrollo Económico*, Vol. 15, No. 59. (Oct. - Dec.), pp. 331-351.

Cardoso, Heliana and Ann Helwege, “Populism, Profligacy, and Redistribution”, in The Macroeconomics of Populism in Latin America, Rudiger Dornbusch and Sebastián Edwards, editors, Chicago: University of Chicago Press, 1981.

Castro, Jorge, (2006). Vigencia del Pensamiento de Peron al finalizar el siglo, Buenos Aires: Instituto Nacional “Juan Domingo Perón”.

Coatsworth, John, Factors, (2005) “Endowments and Institutions in the Economic History of Latin America”, *Latin American Research Review*, Vol. 40, No. 3, October 2005.

Colomé, Rinaldo A. and Jorge D. Freitag, German M. Fusta, Virginia Martinelli and Federico Priotti. (2013). “Agricultural Protection Rates in Argentina. 1933-2011”, Working Paper.

Corse, Theron. (1998). “Building Hegemony: Peron, Gramsci and Political Strategy in the Age of the Masses”, *MACLAS Latin American Essays* 12 (1998), 107-118.

Cortés Conde, Roberto, (1998) Progreso and declinación de la economía argentina. Un análisis historico institucional. Buenos Aires: Fondo de Cultura Economica.

Della Paolera, Gerardo and Alan M. Taylor. (1999). “Economic Recovery from the Argentine Great Depression: Institutions, Expectations, and the Change of Macroeconomic Regime”, *Journal of Economic History*, vol. 59, no. 3 (September): 567-599.

Diaz-Alejandro, Carlos F. (1970) Essays on the Economic History of the Argentine Republic, New Haven: Yale University Press.

Di Tella, Guido, and Manuel Zymelman. (1967). Las etapas del desarrollo económico argentino. Buenos Aires: Editorial Universitaria de Buenos Aires.

Di Tella, Rafael, Edward Gleaser and Lucas Llach, “Exceptional Argentina.” en [Di Tella, Rafael and Edward Gleaser, Argentine Exceptionalism, forthcoming.]

Di Tella, Rafael and Juan Dubra, “Peronist Beliefs”, en [Di Tella, Rafael and Edward Gleaser, Argentine Exceptionalism, forthcoming]

Dornbusch, Rudiger and Sebastián Edwards. (1990). “Macroeconomic Populism.” *Journal of Development Economics*, Vol. 32, pp. 247-277.

Durlauf, Steven and Marcel Fafchamps (2005), “Social Capital”, in: *Handbook of Economic Growth*, edited by P. Aghion and S. Durlauf, Amsterdam: North Holland.

Engerman, Stanley and Kenneth Sokoloff. (2002). “Factor Endowments, Institutions, and Differential Growth Paths among New World Economies,” NBER Working Paper No. 9259.

Engerman, Stanley and Kenneth Sokoloff (2002), “Factor Endowments, Inequality, and Paths of Development Among New World Economies”, WP 9259, NBER.

*The Economist*, “The tragedy of Argentina A century of decline,” 15 February 2014. Available in <http://www.economist.com/news/briefing/21596582-one-hundred-years-ago-argentina-was-future-what-went-wrong-century-decline>

Erten, Bilge and José Antonio Ocampo, (2012), “Super-cycles of commodity prices since the mid-nineteenth century,” UN/DESA Working Papers, February.

Frankel, Jeffrey A. (2010) “The Natural Resource Curse: A Survey,” NBER Working Paper No. 15836, March.

Gallo, Andrés A. and Lee J. Alston, (2008). “Argentina’s Abandonment of the Rule of Law and Its Aftermath,” *Journal Law & Policy*, Washington University, Vol.26. Available at <http://digitalcommons.law.wustl.edu/wujlp/vol26/iss1/8>

Gerchunoff, Pablo and Damián Antunez, (2002), “De la bonanza peronista a la crisis de desarrollo,” in *Nueva Historia Argentina. Los años peronistas (1943-1955)*, Buenos Aires: Sudamericana, 125-206.

Gerchunoff, Pablo and Lucas Llach. (2003). “Ved en trono a la noble igualdad: Crecimiento, equidad and politica económica en Argentina 1880-2003,” PENT Fundacion para la integracion de Argentina en el mundo, Diciembre.

Gidron, Noah and Bart Bonikowski. (2013) “Varieties of Populism: Literature Review and Research Agenda,” Weatherhead Center, Harvard University, Working Paper, No.13-0004.

Glaeser, Edward L., Rafael La Porta, Florencio Lopez-de-Silanes, and Andrei Shleifer. (2004), “Do Institutions Cause Growth?”, *Journal of Economic Growth*, September, Vol. 9, No. 3, pp. 271-303.

Goderis, Benedikt and Samuel W. Malone. (2011). “Natural Resource Booms and Inequality: Theory and Evidence,” *Scandinavian Journal of Economics*, Wiley Blackwell, vol. 113, pages 388-417, 06.

Gerchunoff, Pablo and Damián Antúnez. (2001). “De la bonanza económica peronista a la crisis de desarrollo,” in Nueva Historia Argentina. Los años peronistas (1943-1955), Juan Carlos Torre (ed.), Editorial Sudamericana, Buenos Aires 2001.

Guisarri, Adrián. (1989) *La Argentina Informal: Realidad de la vida económica* (Buenos Aires: Emecé Editores, 1989).

Guiso, Luigi, Paola Sapienza and Luigi Zingales, (2006). “Does Culture Affect Economic Outcomes?”, *Journal of Economic Perspectives*, v. 20, 23-48.

Guiso, Luigi, Paola Sapienza and Luigi Zingales, (2007). “Social capital as good culture”, Working Paper, December.

Guiso, Luigi, Paola Sapienza and Luigi Zingales, (2010). “Civic capital as the missing link”, NBER Working Paper, March.

Hawkins, Kirk A. (2009). “Is Chávez Populist? Measuring Populist Discourse in Comparative Perspective”. *Comparative Political Studies*, 42, 1040-1067.

Hawkins, Kirk A. (2010). Populism in Latin America across the 20th Century. *The 19th Congress of the Latin American Studies Association*, Toronto.

Henderson, Jason, Brent Gloy and Michael Boehlje, (2011) “Agriculture’s Boom-Bust Cycles: Is This Time Different?”, Federal Reserve Bank of Kansas, *Economic Review*, IV: 81-103

Jacks, David F. (2013). “From Boom to Bust: A Typology of Real Commodity Prices in the Long Run,” NBER Working Paper No. 18874.

Jacks, David F., Kevin H. O’Rourke and Jeffrey G. Williamson. (2011). “Commodity Price Volatility and World Market Integration since 1700.” *Review of Economics and Statistics* 93(3), 2011: 800-813.

Kaufman, Robert R. (2013). “The Political Left, the Export Boom, and the Populist Temptation” in The Resurgence of the Latin American Left edited by Steven Levitsky and Kenneth M. Roberts (Baltimore: Johns Hopkins University Press, 2011).

Kaufman, Robert R. and Barbara Stallings, (1981) “The Political Economy of Latin American Populism”, in *The Macroeconomics of Populism in Latin America*, Rudiger Dornbusch and Sebastián Edwards, editors (Chicago: University of Chicago Press, 1981).

Keefer, Philip and Stephen Knack, (2003) “Social capital, social norms and the New Institutional Economics,” in: Handbook of New Institutional Economics, 27 (2005): 700-725.

Keefer, Philip and Stephen Knack. (1997). “Does Social Capital Have an Economic Payoff? A Cross-Country Investigation,” *The Quarterly Journal of Economics*, Vol. 112, No. 4 (November), pp. 1251-1288

Lagos, Martín; Juan J. Llach, Eduardo Fracchia and Fernando J. Marull. 2010. Claves del Retraso and del Progreso de la Argentina (Ed. Temas: Buenos Aires).

Laclau, Ernesto, Entrevista, *Diario El País*, Madrid, 6 de septiembre de 1983.

Leis, Hector Ricardo, “Sobre el resentimiento (y los argentinos)”. (2004) *Estudios Sociales*, 26 (primer semestre), Available at [http://bibliotecavirtual.unl.edu.ar:8180/publicaciones/bitstream/11185/1490/1/ES\\_14\\_26\\_2004\\_pag\\_9\\_25.pdf](http://bibliotecavirtual.unl.edu.ar:8180/publicaciones/bitstream/11185/1490/1/ES_14_26_2004_pag_9_25.pdf)

Leis, Hector R. and Eduardo Viola. (2010). “Argentina: retrocesos cíclicos de una sociedad movimientista,” *CADAL Documentos*, Año VIII Número 115, October 2010.

Llach, Lucas. (2014) “Rich but not yet modern.” in [Di Tella, Rafael and Edward Gleaser, *Argentine Exceptionalism*, forthcoming.]

Maddison, Angus, Statistics on world population, GDP and per capita GDP, 1-2008 AD, available at: <http://www.ggdgc.net/maddison/oriindex.htm>

Mehlum, Halvor, Karl O. Moene and Ragnar Torvik. (2006) “Cursed by Resources or Institutions?” *The World Economy*, (August) Vol. 29, No. 8, pp. 1117-1131. Available at: <http://ssrn.com/abstract=917226> or <http://dx.doi.org/10.1111/j.1467-9701.2006.00808.x>

Nietzsche, Friedrich, (1968). The Will to Power, ed. Walter Kaufmann (New York: Vintage).

Potash, Robert, (1969). The Army & Politics in Argentina: 1928-1945; Yrigoyen to Perón (Stanford: Stanford University Press).

Prados de la Escosura, Leandro. (2009). “Contract enforcement, capital accumulation, and Argentina’s long-run decline,” *Cliometrica, Journal of Historical Economics and Econometric History*, Association Française de Cliométrie (AFC), vol. 3(1), pages 1-26, January.

Prados de la Escosura, Leandro and Isabel Sanz Villarroja. (2004). “Institutional Instability and Growth In Argentina: A Long-Run View,” Working Papers in Economic History wh046705, Universidad Carlos III, Departamento de Historia Económica e Instituciones, Madrid.

Putnam, Robert D. (1993), “Social Capital and Institutional Success,” in Putnam, Robert D., Making Democracy Work (Princeton: Princeton University Press, 1993).

Robinson, James A., Ragnar Torvik and Thierry Verdier. (2002). “Political Foundations of the Resource Curse (June)”. CEPR Discussion Paper No. 3422. Available in: <http://ssrn.com/abstract=322585>

Robinson, James A. and Thierry Verdier (2002). “The Political Economy of Clientelism” CEPR Discussion Paper No. 3205 (February). Available in: <http://ssrn.com/abstract=303185>



Rode, Martin and Javier Revuelta (2013). "A note on populism and economic freedom across countries," Working Paper, XV Reunión de Economía Mundial, Santander, June.

Sachs, Jeffrey D., (1989). "Social Conflict and Populist Policies in Latin America", NBER Working Paper 2897, March. Available in <http://www.nber.org/papers/w2897>

Sachs, Jeffrey D., and Andrew M. Warner, (2001). "The Curse of Natural Resources". *European Economic Review*, 45(4-6): 827-838.

Sanz Villaroya, Isabel. (2007) "Libertad Económica and Convergencia en Argentina 1875-2000," *Revista de Instituciones, Ideas and Mercados*, No 47 , October, 203-235

Tabellini, Guido. (2008). "Institutions and culture," *The Journal of the European Economic Association*, Presidential Lecture to the European Economic Association, April.

Taylor, Alan M. (1994). "Three phases of Argentine economic growth," NBER Working Paper NBER No. 60 (October).

Taylor, Alan M., (1997). "Peopling the Pampas: On the Impact of Mass Migration to the River Plate, 1870–1914," *Explorations in Economic History* 34, no. 1: 100–23.

Taylor, Alan M. (2014). "The Argentina Paradox: Microexplanations and Macropuzzles," NBER Working Paper No. 19924, (February)

Walker, Ignacio, (2008). "Democracy and Populism in Latin America," Kellogg Institute for International Studies, Working Paper 347.

Weill, Felix J.,(1944). Argentine Riddle, (New York: John Day & Co.)

Williamson, Jeffrey A. (1999). "Real Wages, Inequality and Globalization in Latin America before 1940," *Revista de Historia Económica*, Año XVII, Numero especial.

## Appendix

**Table 3 - Index Components**

Presidency	Real Wage	Wages /GDP	Public Emplo yees (1914= 100)	NRA	Rev.Exp .Taxes/ Value of Ag.Exp.	Avg. Exp. Tax	FX Bk Mkt Spread	M FX/ X FX	Pub Sp/G DP	Fis Def/GD P(-)
1914-1916	88.1		103.6		0%	0%	0%	100%	13%	3%
1917-1922	89.8		119.2		2%	9%	0%	100%	10%	1%
1923-1928	130.5		149.2		1%	8%	0%	100%	13%	1%
1929-1930	138.4		171.1		1%	4%	0%	100%	16%	3%
1932-1937	141.9	37%	197.3	-15%	0%	0%	15%	109%	20%	2%
1938-1942	143.7	37%	247.2	7%	0%	0%	25%	121%	20%	4%
1943-1945	162.7	36%	311.0	3%	0%	0%	20%	126%	22%	4%
1946-1951	208.5	43%	449.6	38%	0%	0%	163%	140%	31%	10%
1952-1955	207.0	47%	519.8	-42%	0%	2%	377%	149%	30%	8%
1956-1957	229.1	43%	577.2	30%	0%	25%	109%	100%	26%	6%
1958-1961	202.3	39%	557.7	34%	0%	19%	44%	100%	27%	5%
1962-1963	202.0	38%	453.6	7%	1%	9%	0%	100%	25%	6%
1964-1965	235.2	38%	458.3	7%	1%	9%	27%	100%	23%	5%
1966-1969	239.3	43%	475.6	11%	10%	8%	5%	100%	25%	2%
1970-1972	243.2	43%	466.5	21%	10%	23%	23%	100%	23%	3%
1973-1975	267.3	47%	529.0	36%	10%	37%	95%	100%	28%	8%
1976-1981	184.1	34%	492.6	19%	5%	2%	15%	100%	29%	7%
1982-1983	195.9	31%	444.9	22%	8%	10%	48%	100%	29%	11%
1984-1988	225.6	38%	510.0	21%	11%	20%	25%	100%	35%	7%
1990-1994	164.7	43%	355.0	9%	5%	4%	1%	100%	27%	1%
1996-1999	155.6	39%	277.2	4%	0%	1%	0%	100%	28%	2%
2000-2001	153.1	40%	269.6	4%	0%	2%	0%	100%	30%	5%
2003-2007	178.3	32%	301.9	27%	23%	23%	1%	100%	29%	-2%
2008-2011	230.7	40%	372.7	35%	32%	30%	2%	100%	39%	3%
2012-2013	252.6	46%	409.7	35%	20%	29%	47%	100%	44%	4%

Source: Sturzenegger (2007), Colomé et al (2013), US Dept. of Agriculture, World Bank, CEPAL, INDEC and Orlando J. Ferreres y Asociados.

**Table 4**  
**Components of the Index of Populism**

<b>Variable</b>	<b>Index 1</b>	<b>Index 2</b>	<b>Index 3</b>	<b>Index 4</b>	<b>Index 5</b>	<b>Index 6</b>	<b>Index 7</b>
Real Wage Index	1		1		1	1	1
Share of Salaries in GDP	1	1		1			
Public Sector Employees	1	1	1	1	1	1	1
Nominal Rate of Assistance Agriculture	1	1	1				
Export Tax Revenue/Exports				1			
Average Export Tax			1		0.5	0.5	
Gap between official and free FX	1	1			0.5	0.5	
Import FX Rate/Export FX Rate	1	1	1	1	1	1	1
Public Spending / GDP	1		1				
Fiscal Deficit / GDP (+)	1	1	1	1	1	1	1
<b>Total number of variables included</b>	<b>9</b>	<b>8</b>	<b>8</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>5</b>

**Table 5**  
**Index of Populism by Presidency 1914-2013**

<b>Presidency</b>	<b>Index 1</b>	<b>Index 2</b>	<b>Index 3</b>	<b>Index 4</b>	<b>Index 5</b>	<b>Index 6</b>	<b>Index 7</b>
1914-1916					1.49	1.28	1.71
1917-1922					1.27	1.35	1.32
1923-1928					1.92	2.10	2.06
1929-1930					2.68	2.49	2.77
1932-1937	1.72	3.21	1.83	2.04	3.11	3.11	2.91
1938-1942	2.93	2.85	3.21	3.24	3.95	3.95	3.22
1943-1945	3.48	3.08	3.86	3.84	4.61	4.61	3.81
1946-1951	8.08	7.14	8.21	7.92	7.98	7.98	6.74
1952-1955	8.44	7.23	8.17	8.78	9.40	9.40	8.54
1956-1957	7.14	7.28	7.22	5.29	7.20	7.20	8.15
1958-1961	5.83	6.13	6.19	4.43	6.20	6.20	7.00
1962-1963	4.35	4.52	4.67	3.69	5.30	5.30	5.52
1964-1965	4.61	4.46	4.93	3.75	5.53	5.53	6.04
1966-1969	4.82	4.65	4.67	4.06	5.22	5.22	6.10
1970-1972	5.80	5.68	5.71	4.20	6.00	6.00	6.97
1973-1975	8.67	8.57	8.47	6.67	8.26	8.26	9.14
1976-1981	4.38	4.73	5.04	4.51	5.42	5.42	5.50
1982-1983	5.10	5.40	6.15	4.94	6.38	6.38	6.11
1984-1988	6.27	6.38	6.76		6.94	7.66	7.16
1990-1994	3.69	4.17	3.39		4.06	4.66	4.39
1996-1999	2.85	3.35	2.82		3.64	3.96	4.08
2000-2001	3.26	3.83	3.28		4.08	4.11	4.59
2003-2007	3.31	3.62	4.08		4.38	5.70	3.87
2008-2011	6.42	6.48	6.67		6.61	7.84	6.24
2012-2013	7.88	7.85	7.71		7.57	8.90	7.48

Source: USDA, World Bank, Orlando J. Ferreres and Lucas Llach.

**Table 6**  
**Cross Correlations**

Correlaciones	<b>Index 1</b>	<b>Index 2</b>	<b>Index 3</b>	<b>Index 4</b>	<b>Index 5</b>	<b>Index 6</b>	<b>Index 7</b>
Index 1	100%						
Index 2	98%	100%					
Index 3	98%	96%	100%				
Index 4	87%	76%	89%	100%			
Index 5	97%	93%	98%	94%	100%		
Index 6	92%	95%	92%	64%	89%	100%	
Index 7	93%	91%	95%	91%	97%	84%	100%