PENSION REFORM REVERSALS: CAN ROBUST INSTITUTIONS AVERT A NEW TRAGEDY OF THE COMMONS? – EVIDENCE FROM CHILE (1980-2007) AND THE CLUB SEP COUNTRIES (2008-2015).

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Abstract

Since the outbreak of the great recession several economies from Latin America and Central and Eastern Europe have reversed their pension reforms through the full or partial nationalization of the pensions second tier, bestowing government officials with fiscal space and greater flexibility for public spending. The tradeoff, however, has been the increase in the implicit and explicit debt, generating regime uncertainty and demonstrating the institutional weakness of pension systems. The principles of robust political economy stress the often-overlooked idea of limited benevolence and the Hayekian knowledge problem. The theory suggests that in a context of imperfect information, decisions should be made within institutions that facilitate learning over time. In the context of self-interested behavior, it suggests that decisions should take place within institutions that can withstand the stresses brought by human imperfections. Under this umbrella, we can relax ideal assumptions about individuals' motivations and information and as such, we can evaluate the ability of a pension system to potentially channel both the incentives they provide and the opportunistic behavior in ways that maximizes the overall level of societal welfare. Drawing on the precepts of Robust Political Economy and Looking into Chile's pension revolution over the period 1980-2007 and into the ongoing reversals of the Club SEP countries over the period 2008-2015, I explore the circumstances under which voters, politicians and bureaucrats are incentivized to act opportunistically within the domain of pension systems. I then evaluate what set of political economic provisions have empirically limited the scope of human action when the incentives for depletion emerge and to what extent these institutional arrangements have channeled selfish behavior into maximizing the normative objectives of pensions. I find that Chile is the only country that passes the test of institutional robustness.

Chile's relative success (vis-à-vis the Club SEP countries) rest on the knowledge-generating properties of the original reform based on dispersed ownership, and on the exit properties provided by low switching costs and dispersed administration. I argue against the World Bank's endorsed multi-tier system and in favor of a single-pillar scheme à la Chile.

Dedication

Gracias Mamá porque nunca has dejado de creer en mí.

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I am also truthfully grateful to the academic staff at the Institute of Humane Studies for offering the Public Choice insight of "behavioral symmetry" together with the lenses of Robust Political Economy used throughout the full extent of this intellectual journey. This methodological framework worked not only as a scholarly can opener for me, but also and most importantly: it unfolded as an effective tool to delineate a comprehensive economic policy for global markets.

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Any errors that follow are mine alone.

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Abbreviations

IMF – International Monetary Fund

EU – European Union

TotC – Tragedy of the Commons

TotAC – Tragedy of the Alleged Commons

SEP – Second Pillar

PAYGO – Pay As You Go

PFA – Pension Fund Administrator

ISA – Individual Savings Account

GDP – Gross Domestic Product

RPE – Robust Political Economy

Glossary

Pension "system," "archetype" and "scheme" are used interchangeably.

"Tier" and "Pillar" are used interchangeably.

"PAYGO" and "Pay-As-You-Go" are used interchangeably.

Keywords – pension reform reversals; second pillar; alleged commons; creative accounting; institutional robustness; behavioral symmetry; limited benevolence; omniscience; bounded rationality; Hayekian knowledge problem; dispersed knowledge; dispersed ownership; dispersed administration; individual choice; transition deficit; transition costs; switching costs; competition.

Introduction

Demographic change is a common phenomenon of the first and second world as is the transition from industrial to post-industrial societies. Trusting the stock market has become somewhat uncertain and public welfare has led to only superficial security. We are in need of new embedding and new aftershocks, which could come about organically or, as recent evidence has it, carefully planned by a central authority. Unfortunately, the latest designs have taken a rather dangerous twofold spin. Firstly, and widely accepted, has been through the traditional monopoly power of the monetary supply, expanding it to historical levels, injecting too much liquidity and ultimately interfering with the otherwise Wicksellian natural rate of interest, which often tampers with the signals and incentives wrapped in the price system. Recent evidence from the housing bubbles leading to the 2008 Great Recession and the easy credit expansion leading to the Euro Crisis demonstrates that artificially lowering interest rates often distorts the production structure of the economy as exposed by the Mises-Hayek Business Cycle Theory.[1] This sort of intervention also generates a Cantillon effect, thus transferring purchasing power away from those who hold old money to those who get new money.[2] In other words, it can easily create a direct link for upward redistribution.

[1] The theory focuses on credit cycles emerging from the financial sector and the subsequent transmissions into the real economy. The main focus is on the key role that central monetary authorities have when enforcing long periods of easy credit. The theory stresses the often-overlooked signals that this monetary policy sends to market participants who react by sending resources to the wrong sectors of the economy. As such, the theory interprets business busts as the inevitable consequence of an endogenously orchestrated boom. (Hayek, Prices And Production, 1931) (Mises, 1953)

[2] 18th Century economist Richard Cantillon was the first to propose the idea that the first recipients of new money enjoy from higher living standards at the expense of later recipients. See, (Rothbard, 2006, p. 359)

The second new implanting has come about through a systematic, creative and strategic stripping of the accumulated retirement funds, namely from the World Bank's endorsed second tier. These discretionary takeovers, known as "pension reform reversals" or pension "re-reforms," include the full nationalization of private pension savings, or redirecting part of these funds—through creative accounting—to the Pay-As-You-Go public first pillar. As a result, the pensions' second tier has become the source of a new tragedy of the commons because the incumbents have rushed to deplete it before retirees could use them for old age consumption.[3] This second form of intervention is much more visible than a monetary intervention because it directly affects individual property and individual choice.

Be that as it may, this second type remains under researched leading to a great divergence between the vast literature on monetary theory and the still young literature on pension reform reversals. In addition, most of the academic research on pensions has focused primarily on its normative objectives: consumption smoothing, insurance, poverty relief and redistribution.[4] This scholarly development is taking place regardless of the overwhelming evidence that demonstrates a growing number of States joining the Club SEP countries today. Because of the unique nature of the seizure—i.e. the Second Pillar —and the symmetrical incentives among all participating countries, they have been grouped as the Club SEP countries.[5]

[3] See, (Latorre Artus, Polish Pensions Setback – A New Tragedy of the Alleged Commons, 2014) and (Busquets, 2012)
[4] See, (Barr, Reforming Pensions: Myths, Truths, and Policy Choices, 2000)
[5] The Club SEP considers the group of countries that have confiscated accumulated capital from the pensions' Second Pillar. 'SEP' stands for 'Second Pillar'. See, (Latorre Artus, China looks into individual retirement accounts amid the growing number of club SEP countries, 2014)

In fact, very little has been written regarding the real incentives and the unintended consequences caused by adopting a model with at least one pillar of poorly defined property rights, which has awaken political creativity that uses an alleged commons and seizes them at near zero political cost. Simply put: The pensions' second tier has become a rich source and a politically costless move for legal plunder. Therefore, the present study will concentrate on this second form of new embedding.

The dissertation will illustrate how and why these types of confiscations are inevitable when the second pillar isn't properly individualized, which is the main limitation of the well-intended World Bank-endorsed multi-pillar approach. As such, the main objective of the study is to contribute on a paradigmatic shift that highlights the shortcomings of the multi-tier formula, i.e. the accountability and the incentive problems that stem from the political monopoly over a fraction or the totality of the pensions systems, which, until now, have been methodically and naïvely shrugged off.[6] The dissertation will thus highlight the necessity to move toward a singular tier à la Chile (prior to 2007) where the property rights over the retirement funds are well defined by a system of Individual Savings Accounts and protected by the constitution. The forthcoming objective is to avert other countries from shadowing the path-dependent trajectories already evidenced by Poland, Hungary and a growing number of Club SEP countries.[7] ***The ultimate objective of this paper is to offer an economic policy for global markets, which strengthens the institutional robustness of pensions systems.***

[6] See, (Latorre Artus, 2014)

[7] See, (J.P., 2011) (Racz, 2011) (T.E., Hungarian Pensions: When solidarity is obligatory, 2010) (T.E., Pensions in Hungary and Romania: Get rich quick, 2010)

In the first part of the study I illustrate how the World Bank's model for pension design has paved the way for today's problem of political open access resource—or tragedy of the political commons—within the pensions domain. In chapter two, I explain how it has worked in conjunction with the European Sovereign Debt crisis to fast track the ongoing tragedy of the pensions commons and give birth to the new Club SEP countries; I also forecast and explain why the number of member countries will continue to rise by the end of 2015 (incentives matter). Chapter three is dedicated to the case study of Chile's pension revolution based on "forced savings through taxation." This chapter is the first of the twofold core of the dissertation since its institutional arrangements will be dissected in order to delineate a new economic policy for global markets in the domain of pension reform. At 35 years of age, Chile's pension system has already matured and the results of this exploration can be used to draw inferences on younger reforms elsewhere. Chapter four is the second part of the core, because it uses the methodological approach of robust political economy to dissect chapters two and three. In this part, I draw on the principles of robust political economy (hereafter: RPE) in order to delineate the necessary new embedding, i.e. the new standards for the institutional robustness of pensions. I take the methodological lenses of RPE in order to examine what kinds of pension systems and provisions have empirically limited human action when the incentives for depletion emerge. I also use the RPE lenses to evaluate the extent to which the pension systems of the Club SEP countries and Chile have channeled opportunistic behavior in ways that could maximize the normative objectives of pensions—or whether it has been plausible at all. Finally, I explore the findings and draw final policy recommendations to strengthen the institutional robustness of pensions.

Chapter 1: The Unintended Consequences of The World Bank's Multi-tier Formula

In *Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth,*[8] the World Bank set the latest standards for pension design based on a multi-pillar approach. More than eighty countries have followed the World Bank's endorsed recipe by reforming their unfunded Pay-As-You-Go pension systems and replacing them for new archetypes based on at least one funded pillar. The main drawback with the World Bank's formula is that there is growing evidence to suggest that the incentives triggered by the multi-pillar system have encouraged individuals within the political process—voters, bureaucrats and politicians—to overharvest the system, thus planting the initial seeds of its own demise. What is more, the original reforms have often individualized the second tier quite poorly and usually they have not come of age, which has a direct effect on individuals' proper understanding regarding their rightful property over these funds. These asymmetries of information between looters and looted, play against the institutional robustness of a pension system. The tragedy is that recent evidence—as the following chapter will explore—demonstrates that looted citizens have not reveled against these series of confiscations, which has sent—and will continue to send—a strong signal to other political elites to follow suit.

[8] See, (World Bank, 1994)

1.1 The Tragedy of the Commons

When Garrett Hardin originally described the tragedy of the commons (hereafter: TotC), he described it as the depletion of a finite resource caused by rational individuals rushing to take as much as possible before others do the same.[9] Because of its nature—i.e. it aptly triggers perverse incentives for individuals to overharvest the system—the shape of the TotC within pensions is threefold: first, in the case of the Pay-As-You-Go unfunded system it manifests itself through the logic of collective action. Since elderly voters are empirically more engaged in the democratic process that defines pension benefits (vis-à-vis the younger population whose pensions will come at a longer time span), and since politicians normally vote based on the "Overton Window" paradigm,[10] there is a perverse incentive from both interest groups—elderly voters and politicians—to overharvest the welfare State, e.g. "vote for me, I will give you more benefits." As a result, unfunded liabilities and the economic burden on younger generations and future administrations have continued to grow to unsustainable levels.

The second figure stems from the "last-man-standing" rule, a legally born moral hazard under which multiemployer plans operate in some countries. This rule states that every company is held accountable for all pension liabilities of every other firm within the plan. The tragedy arises because this regulation allows firms that go into bankruptcy to leave their liabilities behind to be absorbed by those still left in the plan. This form of TotC describes the perverse incentive for individual companies to contribute as little as

[9] See, (Hardin, 1968)

[10] Joseph Overton observed that politicians face a window of possibilities regarding politically acceptable policies. However, this window is largely defined not by what politicians truly prefer, but rather by what people support. See, (Russell, 2006)

possible, so long as they can keep the plans up and running. As a result this common pool continues to grow dangerously underfunded.[11]

1.2 The Tragedy of the "Alleged" Commons

The third TotC takes its shape from the political consumption of the pensions' second pillar, which is probably the greatest tragedy of all for three fundamental reasons. First, it drains out the accumulated capital from the contributions of its citizens, which was originally destined to smoothing out individual's consumption at old age. This takeover triggers a wide range of negative externalities, e.g. regime uncertainty and the unsustainable growth of the implicit and explicit debt. Second, this new shape stems exclusively from political coercion and as such, there is hardly any room for individual response. This is a systemic risk from the multi-pillar archetype, which individuals themselves cannot control.[12] This type of risk diverges from the risk of a funded system based on individual savings accounts—i.e. dispersed ownership—where individuals can choose both the Pension Fund Administrator—i.e. dispersed administration—and the specific portfolio diversification of their savings. That is a risk that individuals can afford and assess for themselves. Why? In a competitive system—i.e. with individual savings accounts, dispersed administration of the funds and low switching costs—if a private institution decides to consume and deplete the accumulated retirement funds, individuals can easily "vote" them out of the market by moving to another Pension Fund Administrator.[13] However, when politicians decide to deplete these pension savings by

[11] See, (Osorio, 2012)
[12] Unless these political maneuvers were sanctioned by civil unrest, thus keeping political action at check. But this is not what the evidence suggests. In fact, none of the countries with depleted pension savings have witnessed any kind of reaction from their citizenry against their political elites. See, (Latorre Artus, Polish Pensions Setback – A New Tragedy of the Alleged Commons, 2014)
[13] Provided that the system guaranties low switching costs by constitutional law, à la Chile.

the power of coercion there is little room for individual response. As a result, this sort of "political commons" or "political open access resource" triggers a perverse incentive to deplete the accumulated assets from the second pillar. The evidence from the Club SEP countries in the next chapter corroborates that this is a systemic risk that individuals cannot minimize by themselves, but only through the logic of collective action. Why? One of the underlying questions in this paper—and the main force greasing the wheels of this investigation—is why looted citizens have not rebelled against these series of confiscations. The hypothesis is based on the Hayekian knowledge-problem, i.e. people did not know the extent to which these assets truly belong to them. The reason? most reforms were crafted with a poor individualization of the second tier and thus, no individual incentive to internalize the importance of such alleged common pool resource. This played along with a lack of understanding regarding the difference between sound money and unfunded promises, and the fact that the original reforms did not come of age. These are probably the main variables why people did not react against the confiscations.

A systemic risk from political coercion could be minimized and tackled if people got together through the logic of collective action, concentrate efforts and rebel against these seizures. However, because there are great information asymmetries, this civilian unrest is unlikely to happen. In other words, it is my contention that there is a substantial and substantive knowledge-problem regarding both the rightful individual property over these alleged commons and the rightful understanding that unfunded promises made today need not be there at the time of retirement. If the average citizen understood that renouncing his/her accumulated sound capital for promises of future payments was not a safe investment, we would have probably witnessed a more costly takeover. The key task is thus, how to generate a robust pension system whereby such information asymmetries were minimized and where selfless behavior was channeled in ways that could maximize societal welfare.

And third, at the advent of the pension revolution triggered by the World Bank's formula, the instituting of a second pillar was never supposed to constitute a political open access resource. The depletion of these funds is a new tragedy of the "alleged" commons (Hereafter: TotAC), which reaffirms the institutional weakness of the multi-pillar system.

1.3 A key gap in the existing literature

The implementation of the highly publicized World Bank's formula for old age has yielded a wide range of unexpected consequences and divergent results across countries, which naturally nurtured a growing literature on pension reform. There are, however, three main lines of critical argumentation against the World Bank's promoted new embedding, two of which tackle the actual pension crisis.

The most widely accepted—yet incomplete—critique is formulated by Nicholas Barr, who succinctly articulates the World Bank's first shortcoming: "[I]ts categorization starts from instruments rather than objectives, and thus presupposes the choice, and to some extent also the mix, of instruments."[14] According to Barr, there is no one-size-fits-all formula and therefore policymakers enjoy from a "wide range of choice" regarding pension design. Barr's approach is based on the normative objectives of pensions, i.e. consumption smoothing, insurance, poverty relief and redistribution. However insightful, there is a very important limitation in Barr's thesis: it does not relax ideal assumptions about individuals' motivations and information and as such, it cannot evaluate the ability

[14] See, (Barr, Reforming Pensions: Myths, Truths, and Policy Choices, 2000)

of a pension scheme—regardless of the wide mix of instruments available—to potentially channel the incentives that it provides into maximizing the normative objectives of pensions. Neither can it evaluate opportunistic behavior in any way, shape or form that could potentially maximize societal welfare. Why? Because the new TotAC describes the coercive action from political elites around the world who are rushing to take and spend the accumulated funds from pensions for short-term political objectives, i.e. for usages unconnected to the objectives of pensions. This type of government failure is implicitly impossible with Barr's "wide range of choice." In other words, Barr's model depends, by and large, on altruist, selfless and omniscient individuals to meet the intended objectives of pensions. Barr's model assumes virtuousness and omniscience as given inputs because it does not take into account the empirical strains wrought by human errors, which manifest themselves quite visibly with the ongoing TotAC. The growing number of Club SEP countries around the world depleting the old-age savings of their citizens is an irrefutable indicator that Barr's "wide range of choice" needs urgent revision.

José Piñera, the architect of the oldest and more radical pension revolution,[15] advances a second line of critique by stressing the fact that recent efforts to reduce the unfunded liabilities from pensions will only balance the budget in the short to medium term. Piñera argues that these reforms are merely buying up time to the inevitable forthcoming default. Unlike Barr's normative argumentation (what ought to be), Piñera's analysis is rather positive (what is), by pointing out to the empirical debt problem. The increasing levels of sovereign debt, even after several pension reforms are coming of age and reaching

[15] See, (Piñera, Empowering Workers: The Privatization of Social Security in Chile, 1996) (Piñera, The Bull by the Horns: The battle for Chile's Social Security Reform, 2009) (Piñera, El cascabel al gato: la batalla por la reforma previsional, 1992)

maturity,[16] are irrefutable evidence of the pitfalls of the World Bank's endorsed formula. According to Piñera, the current European sovereign debt crisis is a clear symptom of the pension time bomb ticking, which could ultimately sink the euro.[17]

The third line of critique is put forward by the present study and is based on the ongoing TotAC:

I argue that the World Bank's multi-pillar pension system is not a robust institution because it cannot channel the incentive problem or the knowledge problem in ways that can maximize the normative objectives of pensions.

What is worse, the multi-pillar system encourages individuals to exploit the problem of political open access resource. Additionally, the multi-pillar pension system has worked in conjunction with the sovereign debt crisis to conform the main catalysts behind the discretionary nationalization of the pensions second pillar, a resource that did not represent an open access before the sovereign debt crisis. This consequentialist critique of the World Bank's endorsed multi-pillar system is a refined analysis of Piñera's because the main contention is grounded not only on the empirics of the sovereign debt crisis, but also on the empirics of the new TotAC. This is a rather positive analysis insofar as it includes the evidence of historical political behavior and the interaction of self-interested

[16] When a pension reform reaches maturity, it should automatically cancel out the critique against 'transitional costs' and the corresponding debt burden.
[17] (Piñera, Will The Pension Time Bomb Sink The Euro, 2004)

individuals within the political process. The growing evidence of depletion will be dissected under the lenses of robust political economy.[18]

[18] See, (Pennington, Robust Political Economy: Classical Liberalism and the Future of Public Policy, 2011) (Leeson & Subrick, 2006) (Boettke & Leeson, Spring 2004) (Boettke P. , 2012) (Pennington, Robust Political Economy, 2011) (Tarko, 2013)

Chapter 2: The Sovereign Debt Crisis and The New Club SEP Countries

Because of its similarities with the subprime mortgage crisis—i.e. the European monetary union translated into a sudden decrease of the long-term interest rates among the Club Med countries allowing a rapid and unsustainable credit expansion with the well-known unexpected consequences—the European sovereign debt crisis has usually been linked to the 2008 Financial Crisis and the Great Recession. Its structural shortcomings are characterized by high government deficits and the exponential growth of debt. However, it is important to note that the global financial meltdown is only a collateral bystander, which of course made things all the worse, but are not the main cause of the European sovereign debt crisis. In fact, the Eurozone debt crisis had already been propelled decades earlier by the European welfare leviathan. According to Piñera, the evidence from the entitlement State in Europe is overwhelming, irrefutable and it demonstrates how entrenched and entangled the entitlements are today with continuously soaring debt-to-GDP ratios. Because of the structural shortcomings of the three-pillar system explained in the previous chapter, today's pension crisis has become a ticking time bomb, which might eventually sink the monetary union.[19] These demographic, societal and regulatory transformations among EU nation States have been associated with growing fiscal imbalances.[20] According to Gokhale—as shown in figure 2.1 and Table 2.1—the

[19] See, (Piñera, Will The Pension Time Bomb Sink The Euro, 2004)

[20] Fiscal imbalances (FI) are the unfunded liabilities measured as percentage of annual GDP, and can be understood as the amount of assets that governments must invest today in order to close future budget gaps.

unfunded obligations within Europe evidence unsustainable levels of financial leverage with many member States at the verge of default.[21]

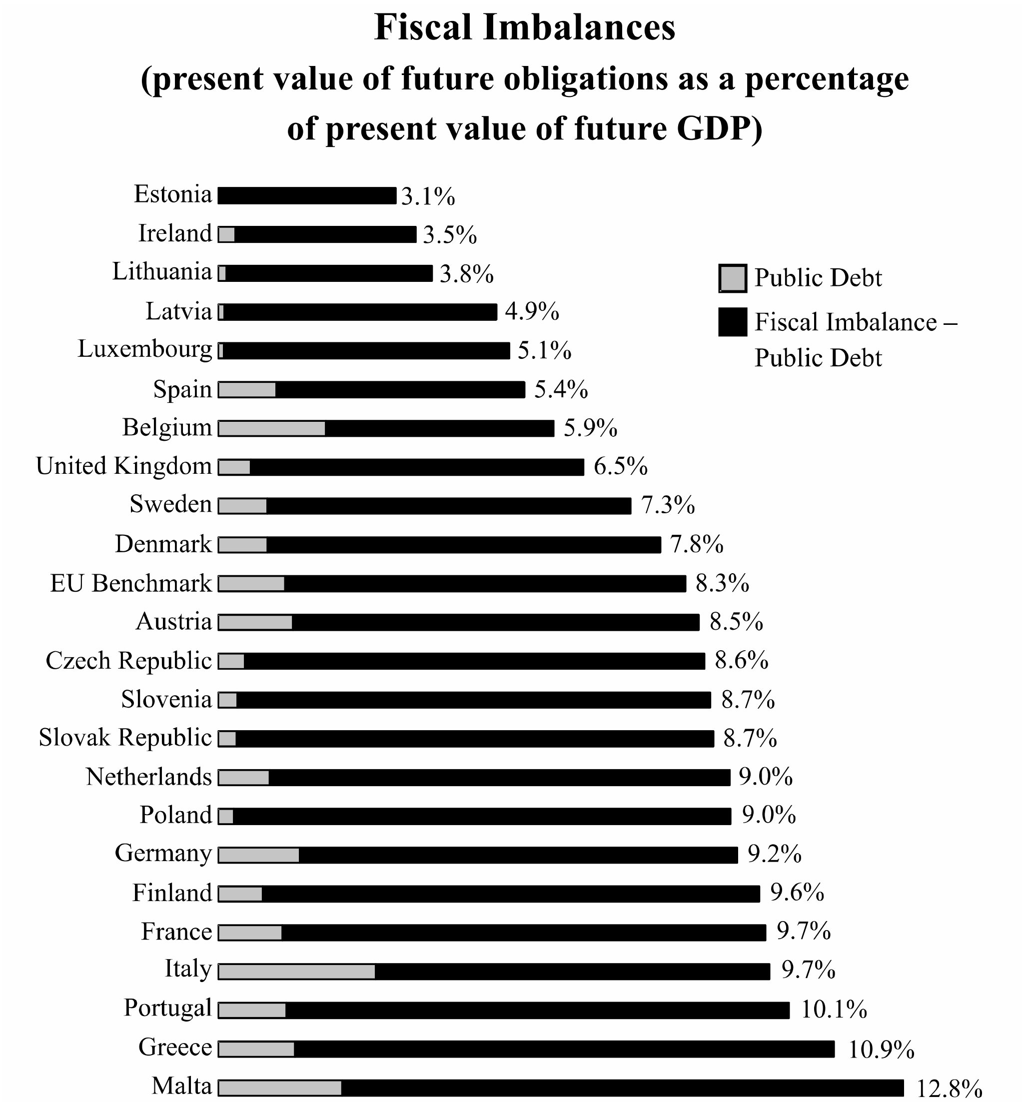

Figure 2.1 Fiscal Imbalances (present value of future obligations as a percentage of present value of future GDP)
Data Source: Jagadeesh Gokhale[22]

[21] The growing fiscal imbalances are quite alarming and a very revealing evidence of the pension crisis ahead. See, (Gokhale, 2009)
[22] (Gokhale, 2009, p. 7)

Fiscal Imbalance as Percentage of Annual GDP (2004)

Country	GDP 2005 (billions of euros)	FI (billions of euros)	As a % of Annual GDP
Belgium	288	854	296.50%
Denmark	197	754	382.50%
Germany	2,215	9,263	418.20%
Greece	168	1,470	875.20%
Spain	837	2,045	244.30%
France	1,659	9,111	549.20%
Ireland	148	600	405.20%
Italy	1,388	5,054	364.10%
Luxembourg	27	102	376.70%
Netherlands	489	2,556	522.80%
Austria	236	967	409.80%
Portugal	143	703	491.90%
Finland	152	820	539.30%
Sweden	282	1,215	430.70%
United Kingdom	1,734	7,666	442.10%
Cyprus*	13		
Czech Republic	87	514	590.80%
Estonia	9	41	455.60%
Hungary*	81		
Lithuania	18	90	497.20%
Latvia	11	68	619.10%
Malta	4	19	467.50%
Poland	204	3,163	1550.40%
Slovakia	34	391	1149.10%
Slovenia	26	197	758.50%
EU-25 Benchmark	454	1,971	434.20%

* Incomplete data available for Cyprus and Hungary.

Table 2.1 Fiscal Imbalance as percentage of Annual GDP (2004)
Data Source: Jagadeesh Gokhale[23]

These restructurings have a direct impact on the on going pension crisis, making the case for urgent new embedding. Unfortunately, the political elite is reacting by cashing in on the accumulated savings from the second pillar, leaving their citizens with the short end of the stick.

[23] (Gokhale, 2009, p. 8)

The greatest tragedy however—and the driving force behind this investigation—is that nobody rebelled against these seizures. As explained earlier, the hypothesis put forward in this paper is that the looted citizens did not understand the contours of the reform and/or the consequences for old age security, which begs the question: what kind of institutional arrangements would minimize the negative effects of bounded rationality and information asymmetries in the domain of pension reform and as such, limit the scope of what policymakers can confiscate?

2.1 The new Club SEP and the Pandora's box

2.1.1 Argentina

This new TotAC and the genesis of the Club SEP countries can be traced back to Argentine President Christina Fernández and her administration.[24] The infamous original bill was sent to the Argentine Congress back in 2008 allowing the government to seize USD 30 billion from pension funds, which, by the way, had been accumulating for over 14 years. Fernandez argued that she was rescuing the pension system from the global financial meltdown. However, evidence strongly suggests that the government needed to get its hands on these funds as it faced billions in due obligations. Sadly, nobody rebelled against these seizures. Of course the political class blamed the pension system and capitalism, but this is doubtfully sufficient ground to convince the citizenry to stay put, which begs for a reminder of this paper's main hypothesis based on the Hayekian knowledge-problem: the looted citizens did not fully understand the contours of the reform and/or the consequences for old age security.

[24] See, (Arza, 2012)

Be that as it may, a clever creative accounting was invented allowing political elites to seize the privately accumulated funds from pension contributions and exchange them for new promises of pension payments into the future, thus endorsing new obligations to future administrations while accessing the accumulated funds today. This move has opened a Pandora's box insofar as it became a new model for legal plunder at a global scale. As a result, several countries have followed suit and many more are making the case for reversing their pension systems before they leave office.

According to Datz & Dansci, the governments of Viktor Orban in Hungary and of Cristina Kirchner in Argentina enjoyed from vast legislative support and no significant popular backlash. They argue that the incumbents systematically blamed the capitalization system for several market failures in e.g. coverage, poor performance, and high administrative costs, all of which made the looting smoother and politically costless to carry on.[25] Be that as it may, I argue that there are deeper institutional weaknesses rooted within the multi-pillar system that allowed politicians to get away with the confiscation. I believe that because of its multi-tier structure, the system as such did not offer an easy individualization of the second pillar in many cases, with Poland being the prime example where the Supreme Court decided against individual property and in favor of a common pool resource.[26]

2.1.2 Bolivia

Soon after the Argentinean move Bolivia joined the Club SEP (2010) through a massive nationalization of all the accumulated pension savings worth above USD 3 billion. The Bolivian administration headed by Evo Morales took this initiative in the midst of a

[25] See, (Datz & Dancsi, 2013)
[26] See, (Latorre Artus, Polish Pensions Setback – A New Tragedy of the Alleged Commons, 2014)

major expansion plan to control the economy. The Bolivian pension re-reform had a special add-on: it lowered retirement age from 65 to 58, while increasing all pension benefits for current and future retirees.[27]

2.1.3 Hungary

Hungarians joined the momentum quite rapidly in 2011, but with absolutely no remorse: the Hungarian government admittedly coerced its citizen to give up their accumulated savings in order to refinance its short-term debt.[28] The reason for dismantling the second pillar was openly announced in order to meet the fiscal requirements set by the provisional loans from the EU and the IMF. This seizure allowed Hungarian officials to liquidate over 10 per cent of their debt.[29] Moreover, the nationalization was carried out to its full extent and with full force, creating the incentives for extortion: "if you don't give up your assets, you give up public welfare." Moreover, if a citizen decided to stay put, his/her funds would be transferred automatically, thus making the move toward the PAYGO system virtually mandatory. This seizure allowed Hungarian officials to liquidate over 10 per cent of their debt.

2.1.4 Poland

The case of Poland was more gradual, yet not less coercive.[30] On February of 2014, Polish officials carried out a law passed by parliament in 2013 allowing them to seize about EUR 37 billion from the pensions' second pillar. Before the seizure took place, the

[27] See, (Brian, 2010)
[28] Refinancing public debt was admittedly the main objective for taking over the private funds from the pensions second pillar. See, (Racz, 2011)
[29] See, (T.E., Hungarian Pensions: When solidarity is obligatory, 2010) (T.E., Pensions in Hungary and Romania: Get rich quick, 2010)
[30] See, (J.P., 2011)

latest official data showed that Poles were reaching the 55 per cent debt-to-GDP legal limit:

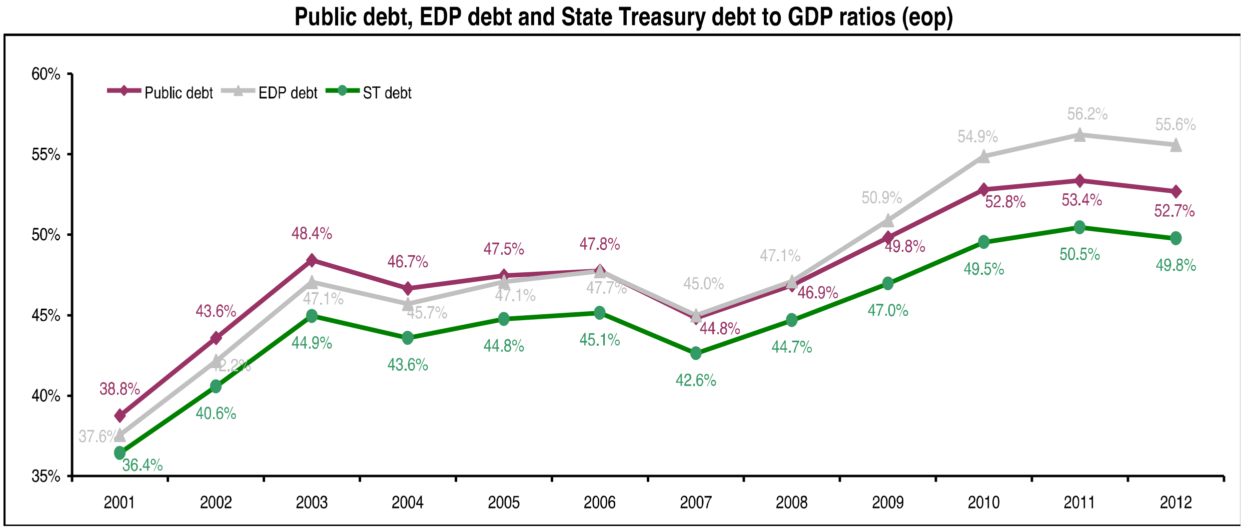

Figure 2.2 Public debt, EDP debt and State Treasury debt to GDP ratios (eop)
Data Source: Ministry of Finance[31]

Again here, the move seems directly related to balancing the budget in the short-term. This clever arrangement based on creative accounting—i.e. swapping accumulated assets and exchanging them for promises of payment to the future—reduced Polish sovereign debt by roughly 8 per cent of GDP.[32] The problem is that this short-term debt reduction was done not by efficient administration, but rather by drawing on private capital, which clearly doesn't fix the problem. It lowers the temperature, but it does not kill the bug. According to Balcerowicz, this short-term debt reduction has put Polish finances under a tremendous and unsustainable debt burden into the future.[33]

2.1.5 Baltic Countries, Bulgaria, Romania, and many more to join

The revolt-free seizures in Argentina (2008), Bolivia (2010), Hungary (2011) and Poland (2013-2014), has naturally greased the wheels for many other countries to join the

[31] (Ministry of Finance - Republic of Poland, 2013)
[32] See, (Latorre Artus, Polish Pensions Setback – A New Tragedy of the Alleged Commons, 2014)
[33] See, (Deon, 2011) (Dziennik, 2011)

momentum. This new phenomenon has rapidly spread around Europe spilling over the retirement funds of Lithuania, Latvia, Romania, Bulgaria, and because of the ongoing fiscal cliff it will probably reach the accumulated assets and sovereign funds of Ireland, France and the Club Med countries.[34]

2.2 Economic rationality versus political rationality

The growing trend of pension reform reversals indicate a strong path-dependent response to the latest global dynamics, which demonstrates a clear tension between economic rationality—i.e. long term goals—versus political rationality—i.e. short term objectives. Unfortunately, the accumulated savings from pensions are a very attractive pool of sound money, which plays against a backdrop of long-term austerity and fiscal responsibility. Moreover, seizing these funds becomes more attractive by the fact that current administration does not have to pay the tab. Since kicking the can is perfectly feasible, politically costless and endorses the fiscal cliff to future administrations, an economic rationality based on long-term objectives is overshadowed by the urgent need to face immediate obligations, which little—or nothing—have to do with the original objectives of pensions.

Policymakers around the world understand that the alleged commons from the pensions second pillar bestows them with a rich source of sound[35] money to pay off external obligations and short-term sovereign debt. These assets are the main objects of scrutiny because the discretional depletions are a growing trend among the first and second world. This empirical evidence plays against the accumulated pensions savings of younger reforms elsewhere, making the case for urgent new embedding.

[34] See, (Whitehouse, 2012)
[35] As opposed to printing new money, or issuing new long-term securities, or increasing the tax rate.

The present study has used historical data from the Club SEP countries to demonstrate why this confiscation is inevitable and how it can oftentimes become politically costless when the second pillar isn't properly individualized. These series of confiscations demonstrate and illustrate the main empirical limitation of the well-intended World Bank's multi-pillar approach. Now the study will focus on a complete different paradigm based on individual choice, dispersed ownership, dispersed knowledge, and dispersed administration. In order to do so, the study now focuses on the historical evidence from the oldest pension revolution.

Chapter 3: Chile's Pension Revolution: Forced Savings Through Taxation

3.1 Historical Background

On September 11th, 1973 Chile began a radical experimentation from a command economy to a capitalist one. The genesis can be traced back to a freedom revolution that started in the streets and continued in parliament by officially declaring unconstitutional the socialist government of Salvador Allende.[36] The struggle to free themselves from this populist regime ended with a military Coup d'état that radically replaced a centrally planned economy for one based on a bottom-up approach and individual choice.[37] Since these liberal reforms took place in the midst of the Cold War, Chile enjoyed from the complicity of the United States and as a result became a perfect laboratory to test the new economic ideas promoted by prominent economists of the Chicago school who would later be known as "The Chicago Boys." In the following years, Chile underwent a series of radical transformations with the pension revolution as the mother of all reforms.[38] It replaced the old and bankrupt Pay-As-You-Go system for a fully funded one, which is still the most complete and most radical reform up to date.[39]

3.2 Structure of the One-Tier System

The Chilean design is based on a one-pillar system of Individual Savings Accounts (hereafter: ISA), where its citizens are "forced" to save for old age, i.e. each citizen is

[36] See, (Piñera, Una Casa Dividida - How Allende Destroyed Democracy in Chile, 2003)
[37] See, (Fontaine, 1993) (Meller B., 2007)
[38] See, (Acuña & Iglesias, 2000) (Piñera, Empowering Workers: The Privatization of Social Security in Chile, 1996) (Ferreiro Yazigi, 2003)
[39] See, (Arenas De Mesa & Mesa-Lago, 2006)

assigned by the constitution his/her own and private account.[40] This properly individualized single-tier system does not give any room for a common pool resource.

The system of ISA is a system of forced savings because they are collected through taxation; however, the government outsources the *control* of these funds to several Pension Fund Administrators (hereafter: PFA). These PFAs are regulated but they are relatively free and compete with each other over the tax-money of the citizens.

3.2 Institutional Robustness of the Chilean Design

The institutional robustness of the system is found in its exit properties. Since PFAs operate within free markets and face competition, if a PFA wishes to collect these pension taxes, they must offer good rates of return; otherwise individuals will ***vote*** them out of the market. The ISAs grow along the course of forty or more years of taxation. The key element is that at retirement citizens need not look at the government or beg them for goodies or promises made forty or more years earlier, probably by political elites who are long gone. Instead of waiting for political promises to be fulfilled, Chilean citizens draw from their own nest eggs, which have been paid for by their own taxes.

[40] See, (Arrau P. , 1991) (Piñera, El cascabel al gato: la batalla por la reforma previsional, 1992) (Piñera, The Bull by the Horns: The battle for Chile's Social Security Reform, 2009)

Since its inception in 1981, the pension system has grown exponentially. The figure 3.1 represents the saving trends of the PFAs, as of June 2011, i.e. 30 years from the original reform. It reveals that the pension funds have spurred the country's savings rate by 26% with a total accumulation of 69,6% of total GDP.

Figure 3.1 AFPs latest yearly period have spurred the country's savings rate by 26%
Data source: Diario Estrategia and Investor Place[41]

CEU eTD Collection

[41] See, (Perry, 2011) (Diario Estrategia, 2011)

3.3 Positive Macroeconomic Effects of the Reform

Chile's pension revolution is the oldest and most radical pension reform in history, which greased the wheels for the country's exponential growth, known in the literature as the "Golden Age of Growth."[42] Figure 3.2 shows the expansion of Total Factor Productivity between the years 1960-2002.

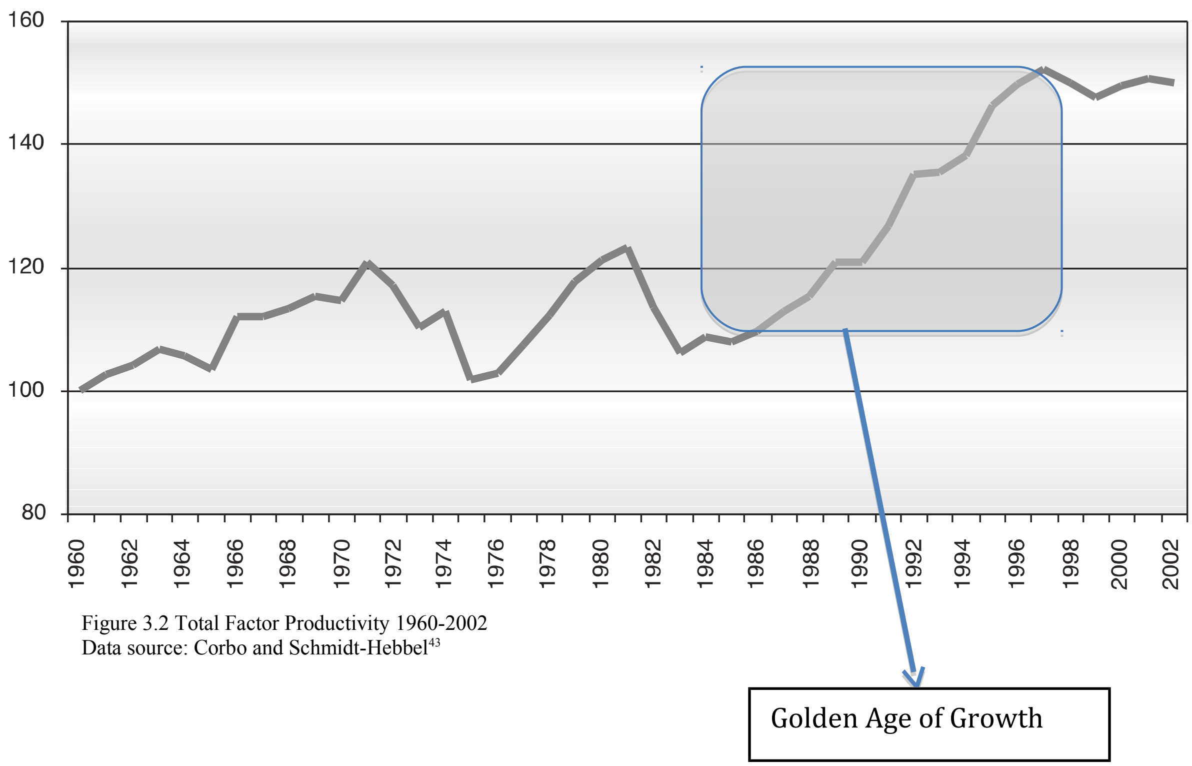

Figure 3.2 Total Factor Productivity 1960-2002
Data source: Corbo and Schmidt-Hebbel[43]

At thirty-five years of age the reform has matured and is now reaching the new steady state. Corbo and Schmidt-Hebbel have tested this model empirically and they conclude that the success of a pension reform based on ISA depends, by and large, on financial liberalization and on disciplined monetary policy.[44] The evidence found by Corbo and Schmidt-Hebbel goes beyond the robustness of the pension system because it also offers

[42] See, (Gallego & Loayza, 2000) (Gallego & Loayza, 2002)
[43] (Corbo & Schmidt-Hebbel, 2003)
[44] See, (Corbo & Schmidt-Hebbel, 2003, p. 300)

positive spillovers on domains outside the pension system, e.g. by raising formal employment and by greasing the wheels for financial development and economic growth to take off. Figure 3.2 illustrates de development of financial assets and financial aggregate reform indicators.

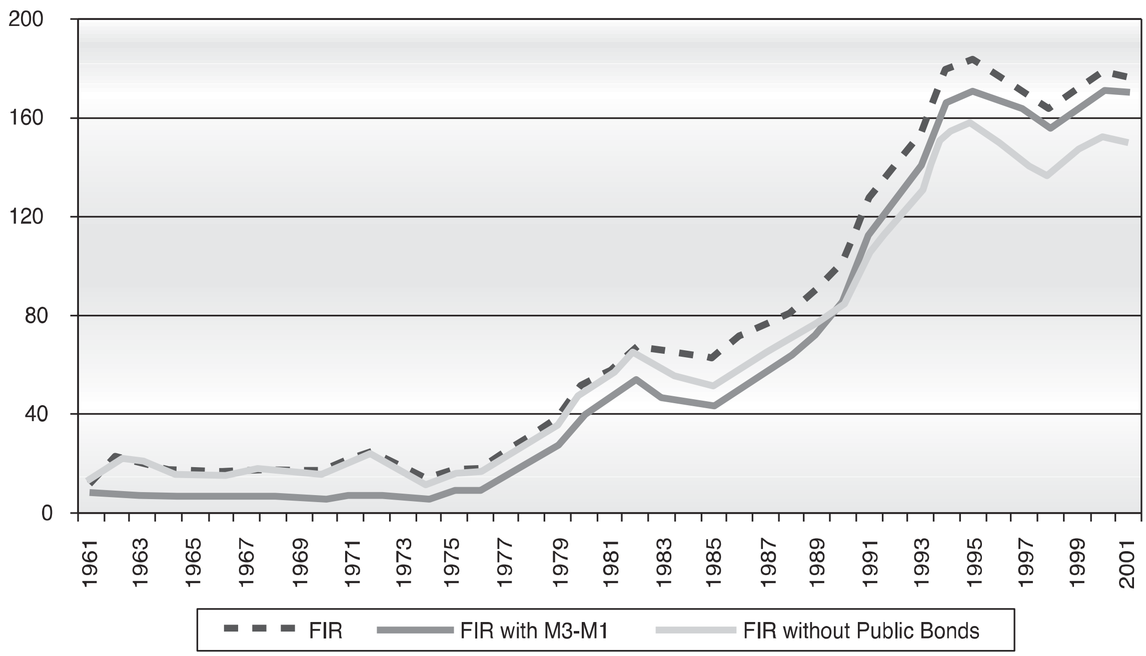

Figure 3.3 Financial Assets 1961-2001 as Percentage of GDP
Data source: Corbo and Schmidt-Hebbel[45]

More specifically, the study of Corbo and Schmidt-Hebbel revealed a strong and positive correlation between capital funding and financial maturity (by improving the allocation of resources in the economy and expanding its Total Factor Productivity frontier)[46] and also on GDP growth.[47] In addition, they suggest that if the reform is escorted by labor reforms that lower other roots of pure taxes on labor, a pension system based on ISAs may also contribute to raising formal and total employment. The most important corollary from Corbo and Schmidt-Hebbel's study is that these effects are magnified

45 (Corbo & Schmidt-Hebbel, 2003, p. 280)
46 See, (Arizala, Cavallo, & Galindo, 2009)
47 See, (Corbo & Schmidt-Hebbel, 2003)

when the original reform is done à la Chile, i.e. the more radical the reform, the more radical the replacement of the PAYGO system by a fully funded one and the more the transitional deficit is financed by fiscal readjustment, the greater the effects on the accumulation and efficient use of the factors of production.[48]

These complementary reforms can also be used and aimed at strengthening the institutional robustness of younger pension systems elsewhere and as such, avert the TotAC from spreading further.

[48] (Corbo & Schmidt-Hebbel, 2003)

Chapter 4: Robust Political Economy

The precepts of robust political economy stress the Hayekian knowledge problem of bounded rationality and highlight the often-overlooked idea of limited benevolence. In a world of imperfect information the theory suggests that decisions must be made within institutions that facilitate learning over time. In a world of self-interested individuals, it advocates the idea that decisions should take place within institutions that can endure the strains brought by human errors. Under these lenses we can relax the often-biased assumptions regarding individuals' information as well as the behavioral asymmetries represented by the classic dialectic between self-interested individuals in the private sector and the allegedly altruistic motivations of individuals in the public domain. By behavioral symmetry, robust political economy draws on public choice theory in order to depict a more realistic view of politics, i.e. individuals are self interested and responsive to incentives regardless of the domain where they operate, public or private. In other words, individuals do not magically turn intro altruists human beings once in public office, and then back to self-interested after 6pm when they go home.

Boettke and Leeson make a very succinct illustration: "*Robust political economy requires that both the assumptions of agent benevolence and omniscience be relaxed so that both incentive issues and knowledge problems can be adequately addressed*."[49] Once we relax these assumptions—i.e. agent benevolence and omniscience—we can then evaluate the capacity of a pension system to channel the incentives they provide and opportunistic behavior in ways that could maximize social welfare.

[49] See, (Boettke & Leeson, Spring 2004)

4.1 The Robustness of the Club Sep Countries

Two of the proponents of robust political economy, Leeson and Subrick, write: *"In the context of political economic systems, "robustness" refers to a political economic arrangement's ability to produce social welfare-enhancing outcomes in the face of deviations from ideal assumptions about individuals' motivations and information"*[50] In the context of pension systems, this paper has offered substantial evidence from the Club SEP countries, which corroborates these deviations from ideal motivations—e.g. self-interested politicians depleting the second pillar—and information—e.g. information asymmetries between electorates and bureaucrat officials.

The growing evidence from the Club SEP countries suggest that the World Bank's endorsed multi-pillar system cannot be a robust institution as such, because it has not been able to channel the ***incentive problem*** or the ***knowledge problem*** in ways that could maximize the normative objectives of pensions.

4.2 The Robustness of the Chilean Model

However, we have also seen evidence from Chile's single-tier system and the exponential growth of its constitutionally protected pension funds. Regarding the precepts of robust political economy, Mark Pennington explains: ***"If people are acting opportunistically, the capacity to exit from relationships with these actors provides a disciplinary check on potentially self-interested behavior."***[51] The one-pillar system of ISA has empirically provided this disciplinary check by constraining the capacity of a PFA to mismanage the

[50] See, (Leeson & Subrick, 2006)

[51] See, (Pennington, 2011) (Pennington, Robust Political Economy: Classical Liberalism and the Future of Public Policy, 2011)

investment portfolios. If they dare to do so, taxpayers will simply take their retirement funds (ISAs) elsewhere.

The institutional robustness of Chile's pension system rests on **the knowledge-generating properties** from the **dispersed ownership** of personal accounts (ISA), thus minimizing the information asymmetries that would occur otherwise. The institutional robustness also rests on **the exit properties** provided by **low switching costs**[52] as well as the competitive dynamics of **dispersed administration** through PFAs.

4.3 Lessons to avert the TotAC from spreading Globally

4.3.1 Lesson 1: Dispersed Ownership

Why is it important to have a system of dispersed ownership? Governments cannot collect the taxes from social security. Instead, pension contributions go directly to each taxpayer's unique personal account protected by the constitution.

Probably the most important element of robustness is offered by the system of ISAs and by the maturity of the system. Both, individual ownership and because the reform has come of age, has encouraged individuals for a span of 30 or more years to **learn about their true ownership** over these accumulated assets. Moreover, the current Socialist administration of Michelle Bachelet has been trying to dismantle de Chilean pension system and after two periods in power they still have not been able to do so.[53]

4.3.2 Lesson 2: The Principle of "Exit"

Why is it important to have a system with well-defined exit properties? A system of competing PFAs and switching costs close to zero provide **disciplinary checks** so

[52] While the Chilean pension system still evidences relatively high administration costs, the switching costs for individuals who wish to move their assets to another Pension Fund Administrator are near zero.
[53] See, (Latorre Artus, The World's Most Successful Pension Reform Based on Individual Choice has Been Called for Reversal, 2014f)

taxpayers can assess which PFA exhibits higher performance and which ones do not. Since individuals can easily change PFAs every month, the system also provides a disciplinary check on possible predatory behavior. Since knowledge is dispersed and competition enhanced, the system minimizes the likelihood of introduction of information asymmetries by competing PFAs, which lowers other risks associated with information monopoly, adverse selection, collective action practices and other rent seeking activities that would otherwise occur among PFAs.

4.3.3 Lesson 3: Dispersed Administration

Although the Chilean archetype evidences strong elements for a competitive market, the number of PFA's stretches to six in total, which could generate rent-seeking activities under certain circumstances, and the likelihood of cartel formation and regulatory capture. Here is where the Chilean system still evidences Pareto sub optimality. Increasing the range of choice to other financial institutions, thus avoiding the concentration of the administration of the funds, will be one of the recommendations for improvement in the system's robustness.

4.3.4 Lesson 4: Low Switching Costs

Recent evidence from Chile demonstrates that the exit properties provided by low switching costs and competing PFAs allows the average taxpayer to increase his/her specific knowledge regarding his/her true ownership of the funds, which in return has minimized the probability of revolt-free seizures.

The empirics from the Chilean model seem to confirm that the most robust pension system built up-to-date is one where not only ownership, but also where knowledge is dispersed. On the one hand, individuals need not know the extent to which their funds are being traded in national or international markets, provided that they enjoy from low switching costs, i.e. true exit opportunities. On the other, each PFA is free to engage in their own investment strategies, unlike public sovereign funds, where the State has the control of the funds in their entirety. Not only competition but also dispersed knowledge among PFAs has played in favor of the positive growth and impressive performance of the Chilean pension funds.

This goes in line with Hayek's contention regarding the use of knowledge in society, where all the planning is done, to a large extent, by the taxpayer who can choose where their funds go, every single month, to the click of a mouse and at a cost near zero. The rest of the planning is done by each PFA, using information and financial models that they alone deem best within their particular organizations. The main economic problem that Hayek sought to comprehend was *"[H]ow to secure the best use of resources known to any of the members of society, for ends whose relative importance only these individuals know. Or, to put it briefly, [the problem] of the utilization of knowledge which is not given to anyone in its totality."*[54]

Of course, Hayek was aiming at the aggregate, specially regarding the production, distribution and allocation of all resources in an economy. However, in the domain of pension reform, having a system of dispersed ownership and dispersed knowledge has also proven the most robust pension system so far. This is true if we see the constant and fruitless attempts from today's political class in Chile to dismantle the system à la Argentina, Hungary or Poland. But this is especially true if we agree with Hayek that the main problem is dictated by society's necessity of rapid adaptation to changes in time and

[54] See, (Hayek, The Use of Knowledge in Society, 1945, p. H3)

place. As Hayek greatly articulated it: *"[I]t would seem to follow that the ultimate decisions must be left to the people who are familiar with these circumstances, who know directly of the relevant changes and of the resources immediately available to meet them."*[55]

Finally, in assessing the robustness of a system, be that of pensions or any other domain, one needs to assess how well do they respond and adapt to change. Economic problems, as Hayek put it, arise from change. And the evidence from Chile and from the growing number of Club SEP countries is that the pension system that has best adapted to exogenous and endogenous stressors—e.g. political change within the country or global financial shocks thus altering the profitability of the accumulated funds—has been the single-pillar system of both dispersed ownership and dispersed knowledge.

[55] See, (Hayek, The Use of Knowledge in Society, 1945, p. H17)

Chapter 5: Conclusions and Policy Recommendations

The present study has been, by and large, a rather positive analysis insofar as it included the interaction of self-interested individuals within the political process in the domain of pension reform and pension reform reversals. First, it demonstrated with historical evidence the institutional weakness of the World Bank's multi-tier approach. The main weakness was found on the intrinsic nature of the second pillar, which oftentimes allows policymakers to consider it a commons and thus, overharvest the system. We could then evaluate the capacity of the one-tier system to channel the incentives they provide and opportunistic behavior in ways that maximizes social welfare.

First, regarding the opportunistic behavior and self-interests from one or all PFAs combined, the exit properties that Chilean citizens enjoy from unfair relationships have offered welfare-enhancing outcomes with regards to the growth and preservation of their pension funds. Secondly, regarding the incentives provided by the one-tier system: PFAs face competition among them, which drives them to offer good rate of returns and low administration costs. The first has been enhanced, but the administration costs have not yet been minimized to people's expectations. The suggestion here is to lower barriers to new entrants. This will take care of lowering the administration costs. The exit properties of the single-pillar model channels the incentives for depletion away from the PFAs, making the system much more robust than the World Bank's multi-tier formula.

One critique may arise regarding the transition costs that a radical reform based on individual capitalization would generate, i.e. social security taxes would go to individual's own accounts and as such, governments would not be able to collect this tax money to pay for today's pension benefits. However, this study understands these transition costs as the only feasible alternative to avert the tragedy of the commons and to stop the unsustainable growth of unsound promises.

The transition costs of moving toward a single-tier model are dissected as the necessary investment to avoid the forthcoming collapse of the system.

Moreover, balancing the budget today by wiping out people's savings will not solve governments' inefficiencies. A radical reform based on individual capitalization—while increasing the costs of transition in the short-term—will finally set governments out of the pension business in the long run. That will effectively solve the growing problem of public inefficiencies regarding pensions.

By drawing upon individual capitalization the main lesson of the study is that an effective solution against the ageing population and the sovereign-debt crisis can only come about from a drastic change in the policy recommendations proposed by the World Bank and the political and intellectual elite. In order to effectively avert the future collapse of the welfare State the establishment must adopt a complete paradigmatic shift from the deep-rooted *State Control* pretense of knowledge toward a new global mindset based on the outsourcing of the welfare State through economic policies that disperse ownership and disperse knowledge among the entire population.

It is envisaged that the main contribution that this paper has made to debates and discussions in the domain of pension reform has been in the form of a paradigmatic change in the way we understand social security. This means providing a more realistic account through the lenses of robust political economy in order to highlight the unexpected effects of a purely normative pursue of social security as most pension literature does today unfortunately. This should extend the scholarly understanding of pension reform in the sense that balancing the budget cannot come about from nationalizing private savings. Neither can it be sustained by forcing individual behavior as most literature suggests, i.e. through the extension of retirement age and/or the increasing of pension contributions.

I argue that these alternatives being offered by most pension scholars could work in the short to medium run only, however my contention is that human behavior cannot be forced endlessly. As explained before, one of the unintended consequences of forcing behavior is that eventually people will not be willing to pay an increasing burden upon their shoulders—even when it might work in theory through productivity gains which are transferred to wages and to taxes on wages. That may work in theory, but people will eventually rebel against an increasing burden.

By drawing upon the precepts of robust political economy we can forecast that people will not accept this soaring burden and will eventually vote with their feet by under-declaring income or fleeing to freer regions.

But more importantly, and as a general rule, any system based on short-lived governments that promise goodies today and bill our children tomorrow gives absolutely no assurance that the same guarantees will hold in the future. The latest developments evidenced by the Club SEP countries reaffirms the institutional weakness of such systems which deliberately endorses financial shortcomings into the future and where the logic of collective action is naturally enhanced. Under the current western social democratic model and its current sovereign debt crisis, the systemic unsustainability of the multi-pillar pension systems and their forthcoming collapse are inevitable.

The ongoing tragedy of the alleged pensions commons is a real threat stemming from our political elite. Policymakers have figured out that the accumulated pensions savings from the second pillar can offer a rich source of sound money and fiscal space at near zero political cost. As long as individuals stay put the number of Club SEP countries will continue to grow. In order to effectively address the problem, this paper has sketched the set of institutional arrangements that could minimize the negative effects of bounded rationality and information asymmetries and as such, limit the scope of what policymakers can confiscate. The answer has been offered by drawing upon the precepts of robust political economy and by looking into the empirical evidence from Chile's pension revolution based on a single-tier of individual capitalization.

I have argued that, on average, there is a lack of understanding regarding the real tradeoff between capital funding—thus real trust funds—and promises of future payments—i.e. unfunded liabilities that can easily be erased at the moment of retirement. Unfortunately, practice indicates that people still believes in unfunded promises and that in, e.g. thirty years from today, future administrations will honor the promises made by elites in the past. The evidence from the Club SEP countries suggests that a pension system that mixes capital funding with other pillars of redistribution and/or common pool resources does not allow the average taxpayer to fully grasp the contours and the consequences of this tradeoff.

Moreover, western economies with at least one tier of PAYGO destroy the essential link between effort and reward, i.e. between contributions and benefits. Adding this to an aging population and they became passengers in a titanic headed toward the pension iceberg.[56]

However, I believe that the battle has not been lost yet. All we need to do is spread the necessary knowledge to empower people and they can change the course of the titanic. Politicians can easily engage but only if the change toward a single-pillar system is politically profitable, the way that Joseph Overton once envisioned.[57] From an Overtonian viewpoint, avoiding the tragedy of the pensions commons, as well as the political profitability of changing to a single-tier system, requires from the understanding of the citizenry that the only sound system of welfare is one where their own taxes will save for old age consumption, i.e. a system where they do not depend on political promises and on younger generations to pay the tab. Once this knowledge is internalized among the population, people will force the change organically. The political move toward a system of dispersed ownership and dispersed administration will then be inevitable; not because they want to, but because they have to.

[56] See, (Piñera, Will The Pension Time Bomb Sink The Euro, 2004, p. 48)
[57] As explained in chapter one, Joseph Overton observed that politicians face a “window” of possibilities regarding politically acceptable policies. However, this "window" is largely defined not by what politicians truly prefer, but rather by what people support. See, (Russell, 2006)

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