

Pension Reform in Chile – An Annotated Bibliography

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Abstract

Chile privatized its social security system in 1981. Almost immediately, scholars began analyzing the impact of the new system to gauge its effectiveness and they continue to do so to this day. This bibliography collects and describes the most significant scholarly articles, books, and book chapters written in English discussing and analyzing Chile's privatized social security system.

On September 11, 1973, Chile's experiment with socialism under the democratically elected Salvador Allende came to an abrupt and violent end in a coup organized by General Augusto Pinochet. After consolidating political power, Pinochet embarked on a series of neoliberal economic reforms designed to restructure the economic system into one based on free-markets and capitalism. One of Pinochet's most ambitious efforts at reform was a complete overhaul of the country's social security system. With the support of Pinochet's Minister of Labor and Social Security, José Piñera, Chile passed a series of laws in 1979 and 1980, becoming effective in 1981, that eliminated much of the earlier pay-as-you-go system and set up a new social security system based almost exclusively on private-accounts that participants individually managed and controlled. This type of social security system had never been tried before on this scale, and almost immediately scholars began to examine the impact and effectiveness of these reforms and continue to do so to this day.

This bibliography collects and describes the most significant scholarly articles, books, and book chapters written in English discussing and analyzing Chile's privatized social security system. My goal is to give researchers a tool that they can use to quickly identify useful scholarship on this topic. To locate sources for this bibliography, I searched the following databases: Web of Knowledge (Social Science Citation Index), Ageline, EconLit, PAIS International, WestlawNext (Law Reviews and Journals), LegalTrac, Index to Legal Periodicals, Index to Foreign Legal Periodicals, Worldcat, Google Scholar, and Google Books at various times between October, 2011 and June, 2015.

I would also like to note that this is a selected bibliography. I did not include sources that discuss pension privatization more generally or in countries other than Chile. While I do include some sources that compare Chile's pension system to another country or region, but only if the discussion of Chile was extensive and substantial. Finally, I did not include sources written in languages other than English.

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HISTORY AND DEVELOPMENT OF PENSION REFORM IN CHILE

Borzutzky, Silvia. "Chile's Pioneering Privatization." In *The Marketization of Social Security*, edited by John E. Dixon and Mark Hyde, 43–63. Westport, CT: Quorum Books, 2001.

Borzutzky discusses the Chilean pension system pre- and post-1981 reform with an emphasis on the underlying political and economic context. She begins with a discussion of the challenges the pension system faced prior to the reform and various failed attempts at reform before Pinochet. She then discusses how Pinochet imposed his vision through authoritarian means with the goal of transforming the Chilean economic system by strengthening the private sector and lessening the economic burden on the state. She follows with a discussion of the reform's financial and administrative structure and economic and social impact.

———. "From Chicago to Santiago: Neoliberalism and Social Security Privatization in Chile." *Governance: An International Journal of Policy and Administration* 18, no. 4 (October, 2005): 655–674.

Borzutzky examines the ideological sources and political context that lie at the heart of Chile's 1981 pension reform. She focuses on the neoliberal ideological underpinnings of the reform effort by tracing it to participants in an exchange program between the University of Chicago and Catholic University of Chile. These participants, who became known as the "Chicago Boys," were strongly influenced by Milton Friedman and Friedrich von Hayek, both proponents of free market liberalization and decentralization. She questions the legitimacy of reforms, supposedly based on freedom, yet authored by a repressive authoritarian regime. She also disputes that it was successful, highlights the economic problems and equality that persist, and argues that the promises of the neoliberals have never been realized.

———. *Vital Connections: Politics, Social Security, and Inequality in Chile*. Notre Dame, IN: University of Notre Dame Press, 2002.

Borzutzky provides an in-depth examination of the history of Chile's social security system throughout the twentieth century. She begins with a discussion of the social, political, and economic background that created its first social security system in the 1920s. Throughout this discussion, she emphasizes the role that "clientelism," i.e., mutual social obligations, played in Chilean society at that time. She then discusses President Frei's failed social security reform effort in the 1960s and President Allende's move toward a socialist-state model in the early 1970s in which he greatly expanded social security coverage. In the final chapters, she examines the free market-based reform imposed by Pinochet in 1981 with an emphasis on his radical privatization of the social security system. In the final chapters, she identifies the winners and losers from Pinochet's social security privatization and other neoliberal reforms.

Buchholz, Gregory J., Alberto Coustasse, Patricio Silva, and Peter Hilsenrath. "The Chilean Pension System at 25 Years: The Evolution of a Revolution." *Journal of Economic Issues* 42, no. 3 (September, 2008): 633–647.

The authors examine the root causes of Chile's 1981 pension reform and its effectiveness 25 years after its implementation. They first discuss the unique circumstances that brought about the reform efforts which include Pinochet's need for an economic team to help him address Chile's economic problems and the availability of a group of Chilean economists trained at the University of Chicago at a time when neoliberal economic policies were experiencing a global ascendancy. They then follow with a discussion of some of the problems associated with the reform with an emphasis on its inequity and low participation rate. Finally, they investigate the efficiency gains promised by proponents of the reform and conclude they have only been partially realized.

Ghilarducci, Teresa and Patricia Ledesma Liébana. "Unions' Role in Argentine and Chilean Pension Reform." *World Development* 28, no. 4 (April, 2000): 753–762.

In this study, the authors compare the differing history of privatized social security reforms in Chile and Argentina with a focus on the contrasting roles that unions played in development and implementation of the reform.

Chile's 1981 social security reform was imposed by Pinochet and unions were completely excluded. Chilean workers are now subject to greatly increased risk and high administrative fees that are paid to monopolistic funds that enjoy great profits at workers' expense. In contrast, Argentina's 1991 social security reform included unions in the reform process and resulted in better choices and less risk for participants. The authors argue that some of the problems engendered by pension privatization can be alleviated by including unions in the process of reform.

Himick, Darlene. "Accounting and Chilean Pension Reform." *Accounting, Auditing & Accountability Journal* 22, no. 3 (2009): 405–428.

In this study based on archival research, Himick investigates the role that accounting played in the implementation of Chile's 1981 social security reform effort and the Pinochet regime's broader goal of modernizing Chile's economy. By discovering and highlighting how Chile's authoritarian regime used accounting to stifle dissent and shut down rationale debate about the desirability and costs associated with social security privatization, he questions its usefulness as a model for adoption by democratic societies.

Laursen, Eric. "Chile's Pension Revolution." Chapter 20 in *The People's Pension: The Struggle to Defend Social Security since Reagan*. Oakland, CA: AK Press, 2012.

Laursen provides an overview of the background, context, and personalities behind Chile's pension privatization reforms and how its supposed success was used by U.S. politicians and conservative think-tanks to argue for social security privatization in the United States and other countries. The chapter is part of the movement to phase out or privatize social security in the United States following the election of President Ronald Reagan in 1980.

Madrid, Raúl L. "Ideas, Economic Pressures, and Pension Privatization." *Latin American Politics and Society* 47, no. 2 (Summer, 2005): 23–50.

Madrid discusses why policy makers in Latin America have turned to pension privatization to help alleviate many public pensions' financial problems. He argues that this movement toward privatization has occurred despite the lack of real evidence to support the usefulness of public pensions to address the public pension system's financial problems. He credits the salience of the privatization model with policy makers to the success of Chile's economy after it privatized its social security system, which he believes are unrelated to the reforms of its social security system, and the World Bank's promotion of privatization as a solution. He cites this as evidence that ideology and influence can trump evidence and merit when addressing pension policy and reform.

Paul, Susanne S. and James A. Paul. "The World Bank, Pensions, and Income (in)Security in the Global South." *International Journal of Health Services* 25, no. 4 (January, 1995): 697–725.

The authors investigate the financial problems many of the world's public pension plans face and the World Bank's role in promoting privatization of public pension systems as a means to help alleviate those financial problems. They point out that even by the World Bank's own estimates, Chile's 1981 pension reform did not address the system's problems and Chile's pension system still faces extreme inequity, lack of protection of the vulnerable, inadequate benefits and coverage, inefficient administration, uncollected taxes, long-term performance problems, lack of worker control over funds, and excessive transition costs. The authors criticize the World Bank for ignoring these problems in its promotion of public pension plan privatization worldwide and point out alternative reforms that they believe will address public pension funding problems better than privatization.

Taylor, Marcus. "The Reformulation of Social Policy in Chile, 1973–2001: Questioning a Neoliberal Model." *Global Social Policy* 3, no. 1 (April 2003, 2003): 21–44.

Taylor critically evaluates the purported success of the Chilean social policy model based on privatization. He considers the Chilean model to be an authoritarian neoliberal revolution designed to restructure the relationship between the state and its citizens. He cites significant structural and economic problems associated with Chile's

reform of its pension, education, and health care systems as evidence to support his argument. He believes the Chilean model of reform is fundamentally flawed due to its inefficient allocation of resources and extreme income inequality and warns policy makers to be wary of claims of its purported successes.

Valdés-Prieto, Salvador. "The Latin American Experience with Pension Reform." *Annals of Public and Cooperative Economics* 69, no. 4 (December, 1998): 483–516.

Valdés-Prieto investigates why so many Latin American countries adopted privatization-based pension reforms, what issues remain related to adoption of these reforms, and what can be learned from these pension reform efforts. He first identifies Latin American social security systems and financial problems associated with those systems. He discusses how Chile's 1981 reform provided a successful model which other countries could emulate when the necessity for reforming their systems began in earnest in the 1990s. He then surveys the implementation of pension reforms in Chile, Peru, Colombia, and Argentina and concludes that the experience of Chile is the only one to realize general success of implementation of its pension reform efforts.

THE CHILEAN PENSION SYSTEM POST-REFORM

Barr, Nicholas and Peter A. Diamond. "Chile: The Pension System." In *Reforming Pensions: Principles and Policy Choices*, 227–238. Oxford: Oxford University Press, 2008.

In this chapter, Barr and Diamond describe the post-1981 Chilean pension system. They begin with a basic overview of the system, including its mandatory and voluntary individual accounts, poverty relief provisions, funding, and regulations. Following the basic overview, they provide an assessment of the system based on the following benchmarks: pensioner poverty, coverage, vertical equity, gender equity, administrative costs, competition, and diversification, fiscal costs, economic growth, and the voluntary pension provisions. They conclude that individual accounts can be part of a good pension reform but they do not necessarily lower transaction costs and to work effectively need to include robust poverty relief.

Barrientos, Armando. *Pension Reform in Latin America*. Aldershot, UK: Ashgate, 1998.

Barrientos outlines pension reforms in Latin American with an emphasis on Chile's 1981 pension reform. He begins with a discussion of the social insurance background of Latin American pension systems, and follows with discussion of the reformed pension schemes, the post-reform pension fund management marketplace, the reform's impact on savings and economic growth, coverage, and retirement income. He concludes with an assessment of the reforms and lessons that can be learned by other countries.

Borzutzky, Silvia. "Cooperation or Confrontation between the State and the Market?: Social Security and Health Policies." In *After Pinochet: The Chilean Road to Democracy and the Market*, edited by Silvia Borzutzky and Lois Hecht Oppenheim, 142–166. Gainesville, FL: University Press of Florida, 2006.

This chapter outlines Chile's post-Pinochet pension and health system, focusing on changes during the Frei and Lagos administrations. These later administrations have kept the basic pension system imposed by the Pinochet regime, but have adopted reforms such as providing unemployment insurance, broadening voluntary pension contribution options, and increasing the number of pension funds, thus giving participants more ability to adjust their investment preferences.

———. "Reforming the Reform: Attempting Social Solidarity and Equity in Chile's Privatized Social Security System." *Journal of Policy Practice* 11, no. 1–2 (2012): 77–91.

Borzutzky analyzes the 2008 reform of Chile's pension system during the Bachelet administration, also known as the "reform of the reform." This latest reform was intended to universalize benefits, increase pension values, and reduce poverty among the elderly. She assesses the reform based on these goals and concludes that it will likely improve equity, expand coverage, and reintroduce social solidarity to the system. However, she cautions

that the system is still hamstrung by the monopolistic nature of the system, high pension fund administrative costs, and low value of the new minimum pension guarantee.

Büchi Buc, and Hernán Alberto. "Social Security Reform in Chile." In *Bigger Economies, Smaller Governments: Privatization in Latin America*, edited by William P. Glade and Rossana Corona, 59–88. Boulder, CO: Westview Press, 1996.

Büchi Buc provides an overview of Chile's 1981 pension reform. He begins with a discussion of Chile's pre-reform, pay-as-you-go pension system, emphasizing the system's inadequate funding for the benefits required by law to be paid out. He then discusses the objectives underlying the reform, including preventing pension system insolvency, deregulating the economy, and reducing taxes to improve the moribund economy. He follows with a discussion of the reforms themselves, including its new insurance and administrative institutions, investment scheme, benefits, and performance and ends with a discussion of the challenges that remain to effectively realize the goals of the reform. This chapter is part of the book discussing privatization programs instituted throughout Latin America in large part due to the perceived success of Chile's pension reform.

Diamond, Peter A. and Salvador Valdés-Prieto. "Social Security Reforms." In *The Chilean Economy: Policy Lessons and Challenges*, edited by Barry Bosworth, Rudiger Dornbusch and Raúl Labán, 257–328. Washington, DC: Brookings Institution, 1994.

Diamond and Valdés-Prieto examine the 1981 pension reform in this chapter of a book on the Chilean economy. The chapter begins with an overview of the reforms, emphasizing the privatized mandatory savings scheme at its core and the special challenges that developed during the transition period from the old system to the new one. They then outline an economic analysis of the new Chilean pension system in areas such as disability and survivors' insurance, annuities market, generational redistribution, impacts on the labor market, investment fund performance, impact on capital markets, government guarantees, and the political economy. They conclude with a discussion on the lessons that can be learned from Chile's pension reform and suggestions for reforming the reforms. Two short comments from Nancy Birdsall and John Williamson follow this chapter.

Edwards, Sebastian. "Chile: Radical Change Towards a Funded Pension System." In *Redesigning Social Security*, edited by Horst Siebert, 233–263. Tübingen, Germany: Mohr Siebeck, 1998.

Edwards begins the chapter with a discussion of Chile's first pay-as-you-go pension system from its early days until its complete overhaul in 1981. He then summarizes the basic features of the 1981 social security reform and evaluates the results obtained from the reforms. He highlights the impact of the reform on labor markets and capital markets as well as the general savings rate. Throughout the chapter, Edwards touts the success of the reform as replacing an inefficient, insolvent pension system with one that is performing reasonably well. This chapter is part of the book based on papers presented at the Kiel Week Conference 1997 on social security reform.

———. "The Chilean Pension Reform: A Pioneering Program." In *Privatizing Social Security*, edited by Martin S. Feldstein, 33–62. Chicago: University of Chicago Press, 1998.

Edwards analyzes Chile's 1981 pension reform and evaluates its successes in this book chapter. He begins with a description of Chile's Pinochet-era, market-based reforms, highlighting the most salient ones including trade liberalization, privatization, fiscal reforms, financial system reforms, and social security reforms. Within this broader context, he then discusses the social security reforms of 1981, including its basic features, transitional issues, and impact on the general economy, including the labor, capital, and savings markets. This chapter is based on a paper presented at a NBER conference on Privatizing Social Security held in Cambridge, UK in August, 1996.

Mesa-Lago, Carmelo. "Pension Re-Reform in Chile." *Zeitschrift für Ausländisches und Internationales Arbeits- und Sozialrecht (ZAIS)*. 26, no. 3 (2012): 197–211.

Mesa-Lago assesses the successes and challenges of the 2008 “re-reform” of Chile’s privatized pension system based on the following criteria: social dialog, universal coverage, equal treatment, social solidarity, gender equity, benefit sufficiency, reasonable administrative costs, social participation in the administration, state role and supervision, and financial sustainability. She generally finds that the re-reform improves many of the flaws of the prior system, but that many challenges remain.

Mujica Riveros, Patricio. “The Chilean Experience.” In *Social Security Systems in Latin America*, edited by Francisco E. Baretto de Oliveira, 113–149. Washington, DC: Inter-American Development Bank, 1994.

In this book chapter, Mujica Riveros describes and critiques the Chilean social welfare, health, and pension systems. His discussion of the pension system begins with a description of the system set up after the 1981 reforms, with a focus on economic data such as pension fund coverage, social insurance deficits, and pension fund growth. He then briefly evaluates the pension system, focusing on the challenges the current pension system faces related to coverage, transparency, and adequate regulation of investments.

Rofman, Rafael, Eduardo Fajnzylber, and Germán Herrera. “Reforming the Pension Reforms: Argentina and Chile.” *Cepal Review* no. 101 (August, 2010): 85–109.

The authors examine efforts by both Argentina and Chile to reform their pension systems from 2005–2008. The authors first examine pension systems in both countries up to 2005. They then outline the efforts to re-reform each country’s system due to inadequate coverage and low-level benefits. The authors contrast the robust debate in Chile about the re-reform efforts with the comparative lack of political debate in Argentina. The authors believe these political differences led to reforms that were quite different in both coverage and implementation, with broader coverage and more rapid implementation occurring in Argentina compared to Chile.

Vial Ruiz-Tagle, Joaquin and Francisca Castro. “The Chilean Pension System.” *OECD Journal on Budgeting* 1, no. 1 (2001): 117–137.

Ruiz-Tagle, previously Chile’s Director of the Budget & Castro, and Castro, previously a Chilean Ministry of Finance official, provide an overview of the private-accounts based reform of Chile’s pension system with an emphasis on its fiscal impact. They recognize there have been positive impacts but the high administrative and transition costs point to a more mixed picture of its success.

Vial, Joaquín and Angel Melguizo. “Moving from Pay-as-You-Go to Privately Managed Individual Pension Accounts: What Have We Learned After 25 Years of the Chilean Pension Reform.” *Pensions: An International Journal* 14, no. 1 (2009): 14–27.

Vial and Melguizo look at the performance of Chilean pension reform both retrospectively and prospectively and conclude that the reform has generally been successful. The article begins with a brief analysis of these aspects of the 1981 reform: the benefits for those who are covered by the new system, the reform’s impact on women, the better than expected rates of return, the high administrative costs, the relative fairness over the previous system, the increase in lack of coverage, the expense of the system, and its positive impact on growth. They then discuss the benefits of the 2006–2007 reform, which they believe corrected many of the problems identified in the earlier section. While they generally believe Chile’s reform has been a success, they hesitate to recommend it as a worldwide model, as it may not be easy to replicate in other countries with very different institutions, economic systems, and political cultures.

EFFECTIVENESS OF THE REFORMS

Antía, Florencia and Arnaldo Provasi Lanzara. “Multi-Pillared Social Insurance Systems: The Post-Reform Picture in Chile, Uruguay and Brazil.” *International Social Security Review* 64, no. 1 (January–March 2011): 53–71.

In this article, Antía and Lanzara compare and contrast the status of social insurance reforms in Chile, Uruguay, and Brazil. The authors compare three models of social insurance reform: structural, mixed, and parametric,

using Chile as an example of structural reform, Uruguay as an example of mixed reform, and Brazil as an example of parametric reform. While each reform was quite different in approach, they all represent a trend linking contributions with benefits, a greater reliance on individual accounts, and the development of multi-pillared social insurance programs. The authors are concerned that these developments may adversely affect the long-term viability of public social insurance programs if high-income earners no longer participate in the reformed social insurance systems.

Arenas de Mesa, Alberto, David Bravo, Jere R. Behrman, Olivia S. Mitchell, and Petra E. Todd. "The Chilean Pension Reform Turns 25: Lessons from the Social Protection Survey." In *Lessons from Pension Reform in the Americas*, edited by Stephen J. Kay and Tapen Sinha, 25–58. Oxford: Oxford University Press, 2008.

This chapter introduces a new longitudinal survey for microeconomic data of individual respondents in Chile known as the Social Protection Survey (Encuesta de Previsión Social or EPS). Using data from this survey, the authors look at who participates in the Chilean retirement system, how much the participants have accumulated in their retirement system, what benefits they expect to receive, and how knowledgeable they are about their retirement system, all with the goal of determining whether Chileans will have adequate resources for a secure retirement. The survey results show that there are significant gaps in all these measures and that while the system is still quite young, it is unknown how well retirees who have only contributed to the new system will do.

Attansio, Orazio, Costas Meghir, and Andres Otero. "The Design of a Multi-Tier Contributory Pension System: The Distributional Impact of the 2008 Chilean Pension Reform." In *Social Insurance, Informality, and Labor Markets: How to Protect Workers While Creating Good Jobs*, edited by Markus Frölich, David Kaplan, Carmen Pagés, Jamele Rigolini, and David Robalino, 291–346. Oxford, UK: Oxford University Press, 2014.

In this chapter, the authors assess the effect of Chile's 2008 pension reform on realized and expected pension wealth and pensions at retirement. Their analysis shows general improvement in pension wealth and pensions at retirement, especially for women and a lessening in pension inequality between and within groups. This chapter is part of a book on the impact social insurance systems have on the supply and demand of the labor market.

Barr, Nicholas and Peter A. Diamond. "Chile: Proposed Directions for Reform." In *Reforming Pensions: Principles and Policy Choices*, 239–257. Oxford: Oxford University Press, 2008.

Barr and Diamand evaluate the reform recommendations in the 2006 report by the Chilean Presidential Advisory Council on Pension Reform. The authors agree with the council that Chile has done a good job implementing its private accounts-based pension system, but that it needs to do a better job addressing issues related to distributional and antipoverty institutions. While the authors believe that the recommendations of the council are not perfect, they do an excellent job addressing some of the problems of the current system in areas such as poverty reduction, equity among income groups, and gender inequality, which they believe are three of the biggest challenges facing the post-reform Chilean retirement system.

Barrientos, Armando and Luis Firinguetti. "Individual Capitalisation Pension Plans and Old-Age Pension Benefits for Low-Paid Workers in Chile." *International Contributions to Labour Studies* 5, (1995): 27–43.

The authors examine whether Chile's individual accounts-based retirement system can provide adequate retirement income for low wage and irregularly employed workers. After simulating the pension funds for these types of workers and then estimating the potential pension annuities, they conclude that only with highly favorable conditions will low wage or irregularly employed workers have adequate resources in retirement.

Berstein, Solange, Guillermo Larrain, and Francisco Pino. "Chilean Pension Reform: Coverage Facts and Policy Alternatives." *Economía: Journal of the Latin American and Caribbean Economic Association* 6, no. 2 (Spring, 2006): 227–279.

Using data from the 2002 Social Security Survey, the authors look at the low coverage by participants in Chile's individual accounts-based retirement system. Based on their analysis, a considerable number of old-age

retirees will receive pension benefits below the minimum guaranteed by the state. At the same time, a significant number of people in this group will not be eligible for the minimum guarantee. They identify women and the self-employed as being particularly vulnerable to this result. They evaluate possible policy prescriptions to address these issues, including lowering the amount needed to contribute to receive the minimum pension guarantee and a default inclusion in the system for self-employed workers.

Borzutzky, Silvia. "Pension Market Failure in Chile: Foundations, Analysis and Policy Reforms." In *Comparing How Various Nations Administer Retirement Income: Essays on Social Security, Privatisation, and Inter-Generational Covenants*, edited by Mark Hyde and John E. Dixon, 193–212. Lewiston, NY: Edwin Mellen Press, 2010.

Borzutzky outlines some of the significant concerns she has with social security privatization. She is concerned that the philosophical underpinnings of social security privatization based on classical liberalism are fundamentally at odds with the universality, equity, sufficiency, and solidarity which form the core of public social security systems. She also criticizes the performance of privatized social security and believes efforts to reform privatization schemes lead to what she calls "path dependency," or a failure to address fundamental inequities in privatized systems due to preexisting institutional dependence on the systems as structured, flawed though they may be.

Bustos Castillo, Raúl. "Analysis of a National Private Pension Scheme: The Case of Chile: Comments." *International Labour Review* 132, no. 3 (1993): 407–416.

The authors comment on a widely circulated article published in Volume 131 of this same journal by Colin Gillion and Alejandro Bonilla entitled "Analysis of a National Private Pension Scheme: The Case of Chile" (also annotated in this bibliography). The authors identify various factual errors found in the Gillion/Bonilla article, criticize the model used to project pension levels, and address concerns that the current Chilean pension system does not comply with various International Labour Office conventions.

Fajnzylber, Eduardo and David A. Robalino. "Assessing Fiscal Costs and Pension Distribution in Transitions to Defined Contribution Systems: A Retrospective Analysis for Chile." In *Nonfinancial Defined Contribution Pension Schemes in a Changing Pension World: Volume 1 Progress, Lessons, and Implementation*, edited by Robert Holzmann, Edward Palmer, and David Robalino, 281–315. Washington, DC: World Bank, 2012.

In this chapter of a book on nonfinancial defined contribution (NDC) pension schemes, the authors investigate what would have happened if Chile had implemented an NDC instead of the financial defined contribution (FDC) pension system it did adopt when it reformed its pension system in 1981. Based on their analysis, the authors show that with all things being equal, Chile would have generated fiscal savings the equivalent of 50 percent of GDP in the first 45 years of the reform.

Fazio, Hugo and Manuel Riesco. "The Chilean Pension Fund Associations." *New Left Review* no. 223 (May–June, 1997): 90–100.

In this article translated by Patrick Camiller, Fazio and Riesco discuss and analyze the effectiveness of Chile's privately managed pension funds known as AFPs (Asociaciones de Fondos de Pensiones) on the economy and on workers in Chile. In their opinion, AFPs have generally had a positive impact on the Chilean economy, although they recognize that this model would not readily translate to other countries. They cite the positive impact AFPs have had on the ownership structure of Chilean companies. However, their evaluation of the impact on workers is far more mixed. They recognize that the benefits to workers have been unevenly distributed and that far too many people have been left behind in the new system.

Fischer, Ronald, Pablo González, and Pablo Serra. "Does Competition in Privatized Social Services Work?: The Chilean Experience." *World Development* 34, no. 4 (April, 2006): 647–664.

The authors evaluate some of the underlying economic assumptions made about Chile's 1981 privatization of pensions and health insurance, in particular claims that privatization would increase economic efficiency and better address household needs. They conclude that privatization has been largely successful at reducing political manipulation of the public pension system but fault it for increasing participant information costs and higher administrative costs.

Gillion, Colin and Alejandro Bonilla. "Analysis of a National Private Pension Scheme: The Case of Chile." *International Labour Review* 131, no. 2 (1992): 171–195.

Gillion and Bonilla analyze the effectiveness of Chile's private pension scheme. They begin with a description of the current system based on private accounts. They then investigate the advantages and disadvantages, both current and estimated, with the adoption of this scheme and conclude that the reform provides modest benefits for most workers under normal conditions but leaves workers vulnerable should current high rates of return decline.

Hiscock, Julia and David E. Hojman. "Social Policy in a Fast-Growing Economy: The Case of Chile." *Social Policy & Administration* 31, no. 4 (December, 1997): 354–370.

Hiscock and Hojman examine the historical roots, current makeup, and general effectiveness of Chile's free-market based social policies in the areas of pensions, health, and education. After discussing each policy section, they then explore the role that the Pinochet dictatorship had in implementing the social policy changes, how these social policies interact in a rapidly growing free market economy, whether the policies have been successful, and how the Chilean people have adapted to them. The authors credit the policies for helping to control the rampant inefficiencies and corruption that was endemic in the previous systems, but fault them for creating a two-tier system where many people are left with inadequate resources to meet their basic needs.

Mesa-Lago, Carmelo. "Re-Reform of Latin American Private Pensions Systems: Argentinian and Chilean Models and Lessons." *Geneva Papers on Risk and Insurance-Issues and Practice* 34, no. 4 (October, 2009): 602–617.

Mesa-Lago compares and contrasts efforts by Chile and Argentina in 2008 to address systemic problems in their market-based pension systems. She begins with an analysis of the need by both countries to re-reform their pension systems due to lack of participation, chronic inequities, and high administrative costs, especially in Chile. The author recommends that Chile and Argentina consider the following criteria when considering re-reform measures: social dialogue among the interested parties, universal coverage, equal treatment, gender equity, benefit sufficiency, system supervision, reasonable administrative costs, social participation, and financial sustainability. She then evaluates current re-reform efforts based on these criteria in both Chile and Argentina and considers the impact these re-reform efforts will have on the rest of Latin America.

———. "Social Protection in Chile: Reforms to Improve Equity." *International Labour Review* 147, no. 4 (December, 2008): 377–402.

Mesa-Lago examines efforts by Chile's democratic government to re-reform its pension, health care and social assistance systems after the 1980 market-based reforms. While the 1980 reforms had led to a strong economy, the social reform programs have created gross inequities and poverty and are widely seen as needing reform. Mesa-Lago examines the effectiveness of the re-reforms and credits the government for addressing many of the problems created by the previous system, while recognizing that significant challenges remain.

Mesa-Lago, Carmelo and Alberto Arenas de Mesa. "The Chilean Pension System: Evaluation, Lessons, and Challenges." In *Do Options Exist?: The Reform of Pension and Health Care Systems in Latin America*, edited by María Amparo Cruz Saco and Carmelo Mesa-Lago, 56–84. Pittsburgh, PA: University of Pittsburgh Press, 1998.

In this book chapter, Mesa-Lago and Arenas de Mesa evaluate the success of Chile's free-market pension system fifteen years after its implementation. The criteria they use to measure the success include overall coverage and participation, payment delays, entitlement conditions and benefits, gender differences, contributions by insured

and related administrative costs, investment performance, net impact on government savings and transition costs from the old to the new system. Following this discussion, they discuss the challenges that remain and lessons that other countries can learn from Chile's experience implementing a free market based pension reform.

Mittelstaedt, H. Fred and John C. Olsen. "An Empirical Analysis of the Investment Performance of the Chilean Pension System." *Journal of Pension Economics and Finance* 2, no. 1 (March, 2003): 7–24.

In this article, the authors evaluate Chile's 12 percent real rate of return on its pension investments. This high rate of return is often used as an indicator of the success of its free market-based pension reforms. In this study, the first one using risk-adjusted monthly returns, the authors find that the high rate of returns are consistent with the riskiness associated with Chilean investments and events unique to Chile, such as a financial crisis and the selling off of public utilities. They caution countries considering investment in the stocks not to assume that they will realize Chile's 12 percent rate of return by investing in stocks and to be wary of the risks with these investments.

Piñera, José. "Empowering Workers: The Privatization of Social Security in Chile." *Cato Journal* 15, no. 2–3 (Fall–Winter, 1995): 155–166.

As Chile's Minister of Labor and Social Security from 1978–1980, Piñera instituted sweeping market-based pension reforms. In this article based on a presentation he made on January 17, 1996 at the Mon Pelerin Society's regional meeting in Cancun, Mexico, he describes the pension system he implemented, the challenges he faced during the transition to the new system, and what he regards as its success, in particular for modernizing Chile's financial system, improving the economy, increasing participant's real rate return, and reducing poverty.

———. "The Success of Chile's Privatized Social Security." In *Toward Liberty: The Idea that is Changing the World: 25 Years of Public Policy from the Cato Institute*, edited by David Boaz, 105–110. Washington, DC: Cato Institute, 2002.

Piñera, the architect of Chile's transition from a pay-as-you-go social security system toward a privatized one, outlines what he perceives to be the successes of the reform. He considers it to be successful at removing the inequalities endemic in the earlier system, making the labor market more efficient, lessening unemployment, boosting economic growth, and encouraging a cultural shift towards saving and investment. While Piñera agrees that mistakes were made when setting up the new system, he does not mention what those mistake were. This chapter is part of a book discussing various public policy reform efforts promoted by the libertarian Cato Institute.

Reyes, Gonzalo. "Market Design for the Provision of Social Insurance: The Case of Disability and Survivors Insurance in Chile." *Journal of Pension Economics and Finance* 9, no. 3 (July, 2010): 421–444.

In this case study, Reyes describes recent reforms to disability and survivor benefits incorporated into Chile's privatized pension system. Prior to these reforms, each pension fund manager (AFP) was independently responsible for insuring these benefits. This led to an uncompetitive system that featured incentives for insurer claim skimming, unreasonable claim denials, lack of price transparency, and other market distortions and externalities. In an attempt to address these market flaws, Chile recently implemented a centralized auction mechanism for its disability and survivors insurance. Reyes then goes on to explain how the new auction mechanism operates and describes some early results of the reformed system.

Riesco, Manuel. "Social Security Or Plunder?" In *Neoliberalism's Fractured Showcase: Another Chile is Possible*, edited by Ximena de la Barra, 179–197. Leiden: Brill, 2011.

In this chapter, part of a book highly critical of Chile's neoliberal revolution imposed during the Pinochet regime, Riesco examines the flaws in the country's privatized social security system. He cites the 2008 global financial crisis and the loss of millions in Chile's pension funds as evidence of the current system's failure. He believes the current government's reform efforts at guaranteeing a basic benefit level are a step in the right direction, but the

system is still in need of reforms such as requiring employer contributions that are used to actually pay pensions (and given to pension funds to invest) and allowing participants to return to a public system.

Santamaria, Marco. "Privatizing Social Security: The Chilean Case." *Columbia Journal of World Business* 27, no. 1 (Spring, 1992): 38–51.

Santamaria examines the economic impact of Chile's privatized social security system. He begins with a description of the deficiencies in the older, pay-as-you-go system, including its inefficiencies, inequities, and low benefits. He then describes the benefits of the new privatized systems that reduced government involvement, improved economic inefficiencies, promoted greater equity, and enlarged participant benefits. He then goes on to describe the impact the reform has had on Chile's economy, employee net wages, employer labor costs, government expenditures, savings rate, and financial markets.

Soto, Mauricio. "The Chilean Pension Reform: 25 Years Later." *Pensions: An International Journal* 12, no. 2 (2007): 98–106.

Twenty-five years after the implementation of Chile's privatization of social security, Soto evaluates what he believes has worked well and what did not work so well. He credits the reform for overhauling a chaotic, inefficient, and insolvent pension system, managing the transition costs well, and helping to develop an efficient market for capital. He faults the reform for failing to provide universal coverage and high administrative costs and considers the number of low income workers who will rely on the minimum benefits as a mixed result that helps keep them out of poverty, but keeps in place some of the same fiscal problems that the previous pay-as-you-go system had.

Zurita, Salvador. "Minimum Pension Insurance in the Chilean Pension System." *Revista De Análisis Económico* 9, no. 1 (June, 1994): 105–126.

Chile's 1981 pension reform included a minimum pension benefit for low-income workers. Zurita proposes an economic model based on a contingent claims analysis that estimates how much this minimum pension benefit will cost the government. His model suggests that the costs will be higher than previous estimates based on a deterministic model.

ECONOMIC IMPACT OF THE REFORMS

Arenas de Mesa, Alberto and Carmelo Mesa-Lago. "The Structural Pension Reform in Chile: Effects, Comparisons with Other Latin American Reforms, and Lessons." *Oxford Review of Economic Policy* 22, no. 1 (Spring, 2006): 149–167.

The authors evaluate the macroeconomic, microeconomic and social effects of Chile's pension reform almost thirty years after its implementation. They conclude that at the macroeconomic level, the reforms have had a negative impact on national saving, at the microeconomic level, the reform has helped develop and national capital market and provide decent but stagnant returns, but has increased administrative costs, and at the social level, the costs have been high, especially in the areas of coverage and gender inequality.

Agostini, Claudio, Eduardo Saavedra, and Manuel Willington. "Economies of Scale and Merger Efficiencies in the Chilean Pension Fund Market." *Journal of Competition Law & Economics* 10, no. 1 (March, 2014): 137–159.

The number of pension fund management firms in Chile has dropped from 21 in 1994 to 6 in 2012. The authors investigate the welfare implications of the merger of two medium-sized pension fund managers using a merger simulation model and estimated financial data from Chile. The model indicates that the merger would encourage small price increases, in spite of cost savings, thus reducing consumer welfare, but that aggregate welfare increases due to economies of scale efficiency gains.

Berstein, Solange M. and Rómulo A. Chumacero. "Quantifying the Costs of Investment Limits for Chilean Pension Funds." *Fiscal Studies* 27, no. 1 (March, 2006): 99–123.

The authors investigate the impact of Chile's limits on pension fund administrators from freely choosing their pension fund allocations on members' savings and risk profiles. They conclude that fund assets could be about 10 percent higher and that pension fund account holders would have been exposed to less volatility without this limit.

Berstein, Solange M., Olga Fuentes, and Félix Villatoro. "Default Investment Strategies in a Defined Contribution Pension System: A Pension Risk Model Application for the Chilean Case." *Journal of Pension Economics & Finance* 12, no. 4 (October, 2013): 379–414.

The authors investigate optimal default investment options for participants in a defined contribution system. Using a pension risk model based on the Chilean economy, incorporating life-cycle income, human capital risk, investment and annuitization risk, they find that investment in riskier funds is preferred when a solidarity pillar is included, but with no solidarity pillar, no particular investment strategy is recommended.

Borzutzky, Silvia. "Chile: Has Social Security Privatisation Fostered Economic Development?" *International Journal of Social Welfare* 10, no. 4 (October, 2001): 294–299.

Borzutzky evaluates the impact Chile's privatization of social security has had on its economy and society. The first part of the article briefly describes Chile's social security system both prior to and after privatization. She then describes how it has affected Chile's economy and society by showing how it has fostered greater inequities, lowered the rates of coverage, and has done little to improve the economy. Since an overhaul of the privatized system is unrealistic, she recommends reforms that increase coverage and reduce AFP commissions to better address these flaws.

———. "Chile: Social Security, Privatization and Economic Growth." In *Social Security, the Economy and Development*, edited by James Midgley and Kwong-Leung Tang, 110–136. New York: Palgrave Macmillan, 2008.

In this chapter in a book about economic development and social security, Borzutzky examines the relationship between Chile's economic growth and its social security system, both prior to and after its 1981 privatization. In marked contrast to other sources, Borzutzky's analysis indicates that Chile's privatized social security system has hindered Chile's economic growth, rather than promoting it, due primarily to the increased income inequality caused by the privatized system. She advocates adoption of the 2006 Marcel Commission report recommending more universal benefits to help address some of these inequities.

Cerda, Rodrigo A. "The Chilean Pension Reform: A Model to Follow?" *Journal of Policy Modeling* 30, no. 3 (May–June, 2008): 541–558.

Cerda constructs and analyzes a counter-factual simulation model he created to compare the impact of continuing Chile's old pay-as-you-go (PAYG) social security system with its current privatized system based on individual accounts. According to Cerda's simulation model, Chile would have larger fiscal deficits, reduced coverage rates, and lower participant benefits if it had continued using the old PAYG system. His model also shows that there would have been significant negative impacts on the broader performance of Chile's economy.

———. "Does Social Security Affect Retirement and Labor Supply? Evidence from Chile." *Developing Economies* 43, no. 2 (June, 2005): 235–264.

Cerda compares the impact of a social security system based on individual accounts with a traditional pay-as-you-go (PAYG) system on the labor supply and individual retirement decisions. According to his analysis,

increased benefits encourage earlier retirement and greater variability encourages later retirement due to uncertainty. These empirical findings help explain why the retirement rate in Chile has decreased during the 1990s.

———. “Social Security and Wealth Accumulation in Developing Economies: Evidence from the 1981 Chilean Reform.” *World Development* 36, no. 10 (October, 2008): 2029–2044.

Cerda examines the impact on wealth accumulation of a social security system based on individual accounts compared to a pay-as-you-go (PAYG) system. According to Cerda’s analysis of data from Chile’s 2004 Social Protection Survey (Encuesta de Protección Social), there is no evidence that a social security system based on individual accounts impacts wealth, except for poorer individuals. For poorer individuals, it reduces wealth, primarily in the area of real estate, by almost 0.1 peso compared to a PAYG system.

Coronado, Julia Lynn. “The Effects of Social Security Privatization on Household Saving: Evidence from Chile.” *Contributions to Economic Analysis & Policy* 1, no. 1 (2002): Art. 7.

Using data gathered from households in Chile from 1987–1988, Coronado examines the impact a privatized social security system has on household savings rate. According to her analysis, households in Chile boosted their savings rate between 5 and 10 percent due to Chile’s privatization of social security. Her findings are consistent with macroeconomic data that indicates that household savings in Chile increased relative to GDP after social security privatization.

Cox Edwards, Alejandra. “Pension Reforms and Employment.” *International Economic Journal* 19, no. 2 (June, 2005): 305–319.

Using a time series analysis and evidence from Chile’s reform of its social security system, Cox Edward evaluates the impact payroll taxes have on the demand for labor and participation in the labor force. Her analysis of the data from Chile suggests that the reduction in payroll taxes boosted employment by 2 percent and contributed to a 0.7 labor force participation increase.

Cox Edwards, Alejandra and Estelle James. “Impact of Social Security Reform on Labor Force Participation Rates of Pensioners and Nonpensioners: Evidence from Chile.” *Journal of Human Capital* 4, no. 2 (Summer, 2010): 130–172.

The authors use Chile’s experience transitioning from a defined-benefit pension system to defined-contribution system, to investigate whether a country’s pension system impacts a worker’s decision to retire and reduces work force participation among older workers. According to their findings, Chile’s pension system reforms dramatically increased labor force participation among older workers compared to the earlier system.

Edwards, Sebastian and Alejandra Cox Edwards. “Economic Reforms and Labour Markets: Policy Issues and Lessons from Chile.” *Economic Policy* 15, no. 30 (April, 2000): 183–229.

Chile’s labor market has experienced significant changes since it instituted a series of market-based reforms in the 1980s, including, among others, the reform of its social security system. The authors analyze the impact of these reforms on the labor market, including the reduction in payroll taxes instituted as part of the social security reforms. Based on an economic model of the social security reforms in Chile, they conclude that the reforms were responsible for an increase in wages and decline in the unemployment rate.

———. “Social Security Privatization Reform and Labor Markets: The Case of Chile.” *Economic Development and Cultural Change* 50, no. 3 (April, 2002): 465–489.

The authors evaluate Chile’s pension reform on the country’s level of employment, rate of employment, and wages by first developing an economic model for a labor market in a developing but emerging economy and then

applying that model to Chile's parameter values. Their results from their simulation exercise suggest Chile's social security reform caused a modest increase in aggregate employment and a small increase in average wages.

Encina, Jenny. "Pension Reform in Chile: A Difference in Difference Matching Estimation." *Estudios de Economía* 40, no. 1 (June, 2013): 81–95.

Encina investigates the impact of changes made in 2008 to Chile's pension system that improved access to the system and increased the minimum pension guarantee for those whose pension contributions were low. She concludes that the changes reduced participation in the work force and did not alleviate poverty for participants who were affected by the changes.

Fajnzylber, Eduardo and Gonzalo Reyes. "Knowledge, Information, and Retirement Saving Decisions: Evidence from a Large-Scale Intervention in Chile." *Economía* 15, no. 2 (Spring, 2015): 83–117.

In 2005, most Chilean workers were sent a personalized pension projection (PPP) to help improve the information they were receiving about their pension benefits and make informed decisions based on that information. The authors then examined the savings decisions made by workers who did receive the PPP and those who did not. Their results show that workers, especially older and female workers, who received the PPP did increase the amount they were saving compared to those who did not.

Fernandez, Viviana. "Profitability of Chile's Defined-Contribution-Based Pension System During the Multifund Era." *Emerging Markets Finance & Trade* 49, no. 5 (September–October, 2013): 4–25.

In 2002, Chile added five multifunds, A, B, C, D, and E, to its preexisting defined-contribution retirement system. These multifunds vary in their risk and investment profile. This article attempts to analyze the profitability of these funds and finds that most funds have shown similar profitability over time. It also shows that asset allocation herding varies depending on the fund and asset, thus indicating that the multifunds may be herding less than had been shown in the earlier system.

———. "Stock Volatility and Pension Funds under an Individual Capitalization-Based System." *Journal of Business Research* 67, no. 4 (April, 2014): 536–541.

In the first of its kind of a study in a developing country, Fernandez investigates the feedback effects between returns on stocks and investments in stocks by Chile's forty-two pension fund administrators. Her findings show that a feedback effect is shown through both Granger causality and Arellano-Bond regressions, however the effect is small and should not have an adverse affect on the domestic stock market.

Haindl Rondanelli, Erik. "Chilean Pension Fund Reform and its Impact on Savings." In *Generating Savings for Latin American Development*, edited by Robert Grosse, 113–134. Coral Gables, FL: North-South Center Press at the University of Miami, 1997.

Haindl Rondanelli uses economic modeling to gauge the impact of Chile's privatized pension system on aggregate savings. According to his model, two-thirds of the increase in savings of 6.6 percent of GDP can be attributed to the pension reform. This chapter is part of larger volume on savings in Latin America and its relationship to economic development and is a continuation of the University of Miami's North-South Center External Debt Program.

Holzmann, Robert. "Pension Reform, Financial Market Development, and Economic Growth: Preliminary Evidence from Chile." *International Monetary Fund Staff Papers* 44, no. 2 (June, 1997): 149–178.

Holzmann empirically investigates claims that Chile's 1981 pension reform has had a positive impact on Chile's economy. According to his tentative empirical findings, Chile's pension reform contributed to development of an improved financial market, contrary to common belief about the effects of pension reform, the private saving

market was not adversely impacted by Chile's pension reforms, and pension reform contributed to a higher growth rate than would otherwise have been present.

Joubert, Clement. "Pension Design with a Large Informal Labor Market: Evidence from Chile." *International Economic Review* 56, no. 2 (May, 2015): 673–694.

Using data from Chile, the author empirically investigates the fiscal and welfare tradeoffs involved when workers are able to work informally and avoid participating in a pension system. The author finds that higher mandatory pension limits can actually increase the aggregate cost of the pension system by encouraging workers to work informally and thus reduce tax revenues.

Landerretche, Oscar M. and Claudia Martínez. "Voluntary Savings, Financial Behavior, and Pension Finance Literacy: Evidence from Chile." *Journal of Pension Economics and Finance* 12, no. 3 (July, 2013): 251–297.

In this article, the authors use household data from Chile to investigate the impact financial literacy has on voluntary saving and pension behavior. Their findings show that having at least one pensioner in a household and getting better scores on financial literacy tests has a positive impact on voluntary savings outside the pension system, increases the likelihood of pension type switching, and boosts participation in the pension system for those not required to participate.

Lira, Ricardo. "Pension Funds and Housing Finance in Chile: A Question of Social Efficiency." *Journal of Housing Research* 5, no. 2 (1994): 229–245.

Lira investigates whether allowing private investors in Chile's individual retirement accounts to use those pensions to invest in home purchases would improve efficiency without compromising the social security objectives such as adequate retirement income. According to his analysis, it is possible that pension funds could be used to purchase homes without adversely affecting pension benefits.

Sánchez Martín, Alfonso R., Sergi Jiménez Martín, David A. Robalino, and Federico Todeschini. "Labor Income and the Design of Default Portfolios in Mandatory Pension Systems: An Application to Chile." In *Social Insurance, Informality, and Labor Markets: How to Protect Workers While Creating Good Jobs*, edited by Markus Frölich, David Kaplan, Carmen Pagés, Jamele Rigolini, and David Robalino, 227–263. Oxford, UK: Oxford University Press, 2014.

Using data from Chile, the authors incorporate variations in optimal pension risk and savings rate for an individual based on observable factors such as age, gender, education, and occupation to determine a default pension portfolio for individuals in a mandatory pension scheme. Their analysis shows sizable welfare improvements when age, gender, education, occupation are taken into account when designing default portfolios. This chapter is part of a book on the impact social insurance programs have on the supply and demand on the labor market.

Ruiz-Tagle, Jaime and Pablo Tapia. "Chile: Early Retirement, Impatience and Risk Aversion." *Cepal Review* no. 105 (December, 2011): 103–121.

The authors investigate possible reasons for early retirement using a theoretical model and evidence from Chile. According to their analysis, the higher an individual's level of risk aversion, possibly related to future life expectancy, the greater the person's relative level of impatience will be, thus increasing the likelihood of choosing to retire early.

Sebastian, Edwards and Alejandra Cox Edwards. "Social Security Privatization Reform and Labor Markets: The Case of Chile." *Economic Development and Cultural Change* 50, no. 3 (April, 2002): 465–489.

The authors examine the impact of Chile's social security privatization on the country's labor market, in particular, the level of employment, rate of employment and wages earned. For their analysis, they first developed a emerging market-economy model, and then simulated the model using data from Chile. The results of their analysis indicate that the reforms resulted in a small increase in Chile's aggregate employment level and minimal increase in average wages, thus concluding that the reforms likely provided a modest improvement in the labor market.

Sepúlveda, Jean P. "On the Relationship Between Concentration and Competition: Evidence from the Chilean Private Pension System." *Applied Economics Letters* 19, no. 14 (2012): 1385–1389.

In this study, Sepulveda uses a methodology developed by Panzar and Rosse to determine the level of competition in a market. Based on his analysis, Chile's pension fund administration market can be described as a cartel and the degree of competition has significantly decreased from 1996–2008. This finding is consistent with earlier studies that drew similar conclusions about the level of competition in Chile's pension system.

SOCIAL IMPACT OF THE REFORMS

Arenas de Mesa, Alberto and Verónica Montecinos. "The Privatization of Social Security and Women's Welfare: Gender Effects of the Chilean Reform." *Latin American Research Review* 34, no. 3 (1999): 7–37.

In this study, the author investigates Chile's privatized pension system's underreported adverse impact on women. They conclude that women are worse off than they were under the previous system because the current system fails to account for women's increased life expectancy, earlier retirement age, reduced employment levels, and salaries. They hope their conclusions will spur improvements that address these inequities in both Chile and other countries considering adopting a pension system based on private accounts.

Barrientos, Armando. "Pension Reform, Personal Pensions and Gender Differences in Pension Coverage." *World Development* 26, no. 1 (January, 1998): 125–137.

Barrientos examines the reasons behind the lack of a gender gap in private pension coverage in Chile as compared to other countries. In the article, he uses cross-section data to evaluate what causes pension participation in Chile and its effects. He cites the structure of Chile's system and the propensities of female pensioners as reasons for the difference.

Cox Edwards, Alejandra. "Gender Effects of Social Security Reform in Chile." *World Bank Economic Review* 16, no. 3 (2002): 321–343.

In this study, Cox Edward examines the differences in contributions and benefits, both before and after Chile's pension reform, with an emphasis on the gender impact. According to her analysis, the post-reform system created a more sustainable pension system, incentivized labor force participation, and improved financial security in retirement. The impact on women was more mixed, with some women benefiting from the new system compared to the previous one, while others do not, in particular single women with more education.

James, Estelle, Alejandra Cox Edwards, and Rebeca Wong. "Chile." In *The Gender Impact of Social Security Reform*, 48–92. Chicago: University of Chicago Press, 2008.

In this chapter of a book on the impact of social security reform efforts on the elderly in various countries throughout the world, the authors empirically study the impact of Chile's privatized social security system on women. According to their analysis, women disproportionately acquire smaller accumulations and reduced annuity payouts than men due primarily to their reduced participation in the pension system, lower wages, and younger retirement age.

Ortiz, Pablo Arellano. "Recent Coverage Developments in Social Security Protection for Chilean Women." Chapter 7 in *Women's Rights to Social Security and Social Protection*, edited by Beth Goldblatt and Lucie Lamarche. Portland, OR: Hart Publishing, 2014.

Ortiz investigates the success of Chile's 2008 reform of its privatized social security system to help expand coverage. He first analyzes general measures that may assist women but are not explicitly written for that purpose, including the "basic solidary pension" and "solidarity-based top-up benefit" and some additional assistance measures. He then looks at the reform's provisions that were written to explicitly address gender inequities. He concludes by saying that the measures have been successful at addressing many of the gender inequities found in the system pre-reform.

POLITICAL IMPACT OF THE REFORMS

Borzutzky, Silvia. "The Politics of Privatization." In *Do Options Exist?: The Reform of Pension and Health Care Systems in Latin America*, edited by María Amparo Cruz Saco and Carmelo Mesa-Lago, 35–55. Pittsburgh, PA: University of Pittsburgh Press, 1998.

Borzutzky analyzes the sociopolitical impact of Chile's neoliberal social security reform. She places the reform of social security at the core of the Pinochet regime's goal of lessening workers' political and economic power by transferring that power to the pension fund administrators and financial system and examines the challenges democratically elected administrations have had in their attempts to reform and address the current system's inequities.

Castiglioni, Rossana. "The Politics of Retrenchment: The Quandaries of Social Protection Under Military Rule in Chile, 1973–1990." *Latin American Politics and Society* 43, no. 4 (Winter, 2001): 37–66.

In this study, Castiglioni examines the politics behind Chile's privatization of pensions, education, and health care during the Pinochet dictatorship. He argues that Pinochet's extraordinary concentration of power and ideological fervor of his appointed ministers allowed for much more radical retrenchment of social protection in the pension and educational systems as compared to the health care system. The Pinochet regime's efforts to remake the health care system were stymied by what he calls veto players, in particular the Colegio Médico, a professional association of physicians, which had the power to prevent much of what was proposed.

Ewig, Christina and Stephen J. Kay. "New Political Legacies and the Politics of Health and Pension Re-Reforms in Chile." In *Public and Private Social Policy: Health and Pension Policies in a New Era*, edited by Daniel Béland and Brian Gran, 249–268. New York: Palgrave Macmillan, 2008.

In this chapter of a book on public-private partnership to provide social benefits, Ewig and Kay investigate what lessons can be learned from Chile's re-reform of its privatized health care and pension system. According to their analysis, while Chile's re-reform efforts do show a reassertion of public participation in the regulation of the privatized social welfare system, they also show that once private actors are given a significant role in the social welfare system, they become entrenched and radical changes to the social welfare system become politically difficult.

———. "Postretrenchment Politics: Policy Feedback in Chile's Health and Pension Reforms." *Latin American Politics and Society* 53, no. 4 (Winter, 2011): 67–99.

The authors describe a realignment in how politics play out after the pension and health care reform of the 1980s. In spite of the strong leftward shift in governance post-Pinochet, the social welfare system in Chile has changed only slightly. The authors credit the relative strength of the private sector, the forces of globalization, and the lock-in effect of the reforms, for keeping the 1980-era social welfare "retrenchment" policies in place during this "postretrenchment" era.

Godoy, Oscar and Salvador Valdés-Prieto. "Democracy and Pensions in Chile: Experience with Two Systems." In *The Economics of Pensions: Principles, Policies, and International Experience*, edited by Salvador Valdés Prieto, 58–91. New York: Cambridge University Press, 1997.

In the first part of this book chapter, Godoy and Valdés-Prieto compare the two different pension systems currently operating in Chile, the 1952 reform of the existing pay-as-you-go system and the 1981 privatized pension system, from the perspective of democratic political development and social democratic and liberal democratic models. The second part analyzes two political case studies for each of these two systems, which indicate that the members of the 1952 pension system continue to face political manipulation while the members of the 1981 system have gained greater independence from the political class.

Hertel-Fernandez, Alexander. "Retrenchment Reconsidered: Continuity and Change in the Post-Authoritarian Institutions of Chilean Social Policy." *Social Policy & Administration* 43, no. 4 (August, 2009): 382–396.

Hertel-Fernandez investigates the changes that have been made to the Pinochet-era, neoliberal policy reforms in the areas of the taxation, health care, and pensions. He argues that the internal features that promoted autonomy and limited political interference that were added to these policy reforms to ensure entrenchment and persistence have enabled later democratic administrations to reform them in more equitable ways.

Lessons for Other Countries

Arenas de Mesa, Alberto and Fabio Bertranou. "Learning from Social Security Reforms: Two Different Cases, Chile and Argentina." *World Development* 25, no. 3 (1997): 329–348.

Arenas de Mesa and Bertranou compare the Chilean model of social security reform based solely on private accounts with the public/private or integrated Argentinean model. After describing the two models, the authors compare them using a variety of equitable and performance based factors. They conclude that the Argentinean model offers substantial benefits over the Chilean model due to its increased inter- and intragenerational solidarity, lower transition costs, mandatory participation, and improved regulatory scheme.

———. "Pension Reform and Pension Coverage in Chile: Lessons for Other Countries." *Bulletin of Latin American Research* 15, no. 3 (September, 1996): 309–322.

Barrientos examines whether Chile's privatized pension system will ensure adequate post-retirement income when it matures, by focusing primarily on pension coverage in the work force. He begins with an analysis of the current system's pension coverage, followed by a multivariate analysis of pension plan participation, and then with an examination of the reasons behind the current system's persistent lack of coverage, including the informal economy, low pay, irregular employment, gender, and age. He cautions that this lack of coverage will likely lead to hardship and poverty for many in retirement.

Borzutzky, Silvia. "Privatizing Social Security: Relevance of the Chilean Experience." In *Alternatives to Social Security: An International Inquiry*, edited by James Midgley and Michael W. Sherraden, 75–90. Westport, CT: Auburn House, 1997.

In this chapter of a book on how other countries have implemented social security reform, Borzutzky investigates what can be learned from Chile's privatized social security model. According to Borzutzky, the high administrative costs and lack of coverage associated with Chile's privatized social security system make it an unappealing model for other countries. In addition, the undemocratic and authoritarian manner in which the system was imposed make it unlikely that most countries would be able to implement such radical reforms.

———. "Social Security Privatisation: The Lessons from the Chilean Experience for Other Latin American Countries and the USA." *International Journal of Social Welfare* 12, no. 2 (March, 2003): 86–96.

In this article, Borzutzky analyzes the economic and social impact of Chile's privatized social security system and its implications for other countries considering this model, in particular the United States. Her analysis indicates that Chile's system fails to provide adequate retirement for lower income groups, especially considering its

high administrative costs and adverse impact on women, nor has it increased Chile's savings rate or decreased Chile's budget deficit.

Cortázar, René. "The New Chilean Pension System: Lessons After Fifteen Years." In *Sustaining Social Security*, edited by United Nations Department for Economic and Social Information and Policy Analysis, 123–142. New York: United Nations, 1997.

This book chapter examines problems facing social security systems worldwide. Cortázar reviews Chile's privatized pension system fifteen years after its implementation. He credits the reform for improving capital market, complementing concurrent reform efforts such as unemployment insurance, providing a better redistribution balance, and protecting the pension system from political manipulation. He faults it for its high administrative costs and increased concentrations of wealth.

Diamond, Peter A. "Privatization of Social Security: Lessons from Chile." *Revista De Analisis Economico* 9, no. 1 (June, 1994): 21–33.

This article is based on a lecture delivered at the 12th Latin American Meeting of the Econometric Society in Tucumán, Argentina, in August 1993, where Diamond examines lessons he draws from Chile's 1981 pension reform. He credits the reform for protecting the system from political risk and improving the functionality of capital markets, but faults it for high administrative costs. He believes the high administrative costs, which are much higher than public pension systems, stem from it being a private system and not something particularly costly about Chile's pension system.

Fontaine, Juan Andrés. "Are there (Good) Macroeconomic Reasons for Limiting External Investments by Pension Funds?: The Chilean Experience." In *The Economics of Pensions: Principles, Policies, and International Experience*, edited by Salvador Valdés Prieto, 251–274. New York: Cambridge University Press, 1997.

Using Chile as an example, Fontaine evaluates current arguments for and against restricting the flow of capital, especially as they apply to pension funds. Arguments for this type of restriction are usually based on reducing tax avoidance, protection from market failures, and lessening exchange rate fluctuations. Fontaine concludes that these factors do not apply to Chile and that capital controls on pension fund accounts are not needed, with the limited exceptions such as during the development of a private pension system or a balance-of-payments crisis.

James, Estelle, Guillermo Martinez, and Augusto Iglesias. "The Payout Stage in Chile: Who Annuityizes and Why?" *Journal of Pension Economics and Finance* 5, no. 2 (July, 2006): 121–154.

Since Chile adopted its 1981 pension reform, over two-thirds of retirees in Chile have chosen to annuityize their pension benefits, which is much higher than other countries. James argues that the primary reasons for this increased annuityization stem from regulations that limit payout choice, guarantees that incentivize annuityization, and competition in the insurance market.

Mitchell, Olivia S., Petra E. Todd, and David Bravo. "Learning from the Chilean Experience: The Determinants of Pension Switching." In *Overcoming the Saving Slump: How to Increase the Effectiveness of Financial Education and Saving Programs*, edited by Annamaria Lusardi, 301–323. Chicago: University of Chicago Press, 2008.

Using household data gathered from the Encuesta de Protección Social (EPS), the authors study the impact of consumer knowledge on Chile's pension fund marketplace. In particular they examined how new regulations implemented in 1997 designed to curb rampant pension fund switching. According to their analysis, the regulation successfully reduced pension switching, but this effect was concentrated almost exclusively on the wealthy and better-educated.

Myers, Robert J. and Peter A. Diamond. "Social Security Reform in Chile: Two Views." In *Social Security: What Role for the Future?*, edited by Peter A. Diamond, David C. Lindeman, and Howard Young, 209–224. Washington, DC: National Academy of Social Insurance, 1996.

In this chapter, an actuary, Robert J. Myers, and an economist, Peter A. Diamond, provide an analysis of Chile's post-reform, privatized social security system. Myers recognizes that the new system does have problems, such as lack of compliance, poor usage of investments, high administrative costs, unrealistic investment return assumptions, but concludes that it has been successful when compared to the previous system. Diamond credits the reforms with insulating the social security system from political risk, increasing capital, and creating a functioning capital market. He faults it for providing weak insurance coverage and high administrative costs.

Olivares, José A. "Rear-View-Mirror Driving in Defined Contribution Systems: The Strange Formula of the Chilean Pension Funds." *Applied Economics* 40, no. 15 (2008): 2009–2019.

Chile's pension fund managers are required by law to meet certain minimum returns or benchmarks for their investors. Olivares investigates the impact that this requirement has had on pension fund behavior. His findings indicate that the benchmarks explain 99 percent of pension fund performance in all types of funds.

Ortiz, Pablo Arellano. "Universalism and Individualism in Chilean Pension Law: Implications for Central and Eastern Europe." Chapter 13 in *Labour Markets, Industrial Relations and Human Resources Management, from Recession to Recovery*, edited by R. Blanpain, William Bromwich, Olga Rymkevich, and Iacopo Senatori. Frederick, MD: Aspen, 2012.

Ortiz considers the impact Chile's 2008 pension reform may have globally by encouraging a movement away from multi-pillar pension systems toward one based on the capacity of the contributors. He first outlines how the 2008 reform changed Chile from a multi-pillar system to one based on a single pillar broken up into different parts: one part based on contributions, the other part based on taxation that is intended to even out the inequities present in the earlier system. He then considers the impact Chile's new model may have on other pension systems, especially those in Central and Eastern Europe. This chapter is part of a book on social models for human resources management.

Queisser, Monika. "Chile and Beyond: The Second-Generation Pension Reforms in Latin America." *International Social Security Review* 48, no. 3–4 (January, 1995): 23–39.

Queisser examines the role of Chile's 1981 pension reform on what she calls the "second generation" pension reforms in Argentina, Colombia, and Peru. The first part of the article provides an overview of the pension problems faced by Latin American countries. She then discusses how Chile's pension reform became a model for the region, with an emphasis on the private nature of the reforms, transition arrangements, strong performance compared to its neighbors, and some problems it has faced. She then discusses how other Latin American countries were able to learn from the success and challenges of Chile's reform efforts and borrow what they needed to fit each country's unique circumstances.

Ruiz, José Luis. "Annuity Choices in Chile: A Dynamic Approach." In "Asset Pricing and Emerging Markets," supplement, *Emerging Markets Finance and Trade* 50, no. 5 (Sept.–Oct. 2014): 6–21.

In this study, the author uses data from Chile to investigate the personal characteristics of retirees who choose to annuitize pension income. His results show those who annuitize tend to be in good health, have higher levels of education, are familiar with the pension system, and have been contacted by annuity sales agents.

Ruiz, José Luis and Olivia S. Mitchell. "Pension Payouts in Chile: Past, Present, and Future Prospects." In *Securing Lifelong Retirement Income: Global Annuity Markets and Policy*, edited by Olivia S. Mitchell, John Piggott, and Noriyuki Takayama, 106–130. Oxford: Oxford University Press, 2011.

In this chapter of a book on methods for securing lifetime retirement income, Ruiz and Mitchell examine payouts in Chile's privatized social security system. Throughout the chapter, the authors focus on Chile's significantly higher percentage of retirees choosing annuities. They attribute this difference to factors peculiar to

Chile's privatized system, including generous annuity payments, information transparency, access to early retirement, and pension fund incentives.

Schmidt-Hebbel, Klaus. "Chile's Pension Revolution Coming of Age." In *Pension Reform in Six Countries: What can we Learn from each Other?*, edited by Axel H. Börsch-Supan and Meinhard Miegel, 139–170. Berlin: Springer, 2001.

Schmidt-Hebbel outlines Chile's move from a "one-pillar" social security system based on its previous PAYG defined-benefit system to a "three-pillar" social security system based on means testing for old-age poor and minimum guaranteed pension, a defined contribution scheme with personal accounts, and tax incentives to encourage additional savings. According to the author, Chile's move to personal accounts combined with means testing of benefits has been a success, but its system still faces significant microeconomic challenges.

Tamborini, Christopher R. "Social Security: The Chilean Approach to Retirement." In *Social Security: New Issues and Developments*, edited by Paul O. Deaven and William H. Andrews, 73–100. New York: Nova Science Publishers, Inc, 2008.

In this book chapter previously published as a Congressional Research Service report, Tamborini gives an overview of Chile's individual retirement account-based social security system. It begins with a brief comparison of U.S. and Chilean retirement systems and then assesses the effectiveness of Chile's system, which he calls mixed. He credits the reform with improving Chile's economy and providing returns that have been larger than expected. However, the administrative costs and transition costs have been high and many workers have been left out of the system, especially female and low-income workers.

White, Joseph. "Looking in the Wrong Place: Why Chile Provides no Evidence for Social Security Privatization." *Public Budgeting and Finance* 20, no. 4 (Winter, 2000): 52–62.

White cautions the United States against using Chile's experience with a privatized social security system as evidence for or against reform of its social security system because of the lack of evidence available to truly gauge the impacts of privatization on the Chilean pension system. He cites Chile's economic situation, the role of government funding, and the actual investments made by Chilean pensions as examples of why Chile's situation is so different from the U.S. and therefore any comparisons are useless.