

CIGLOB

CENTRO INTERNACIONAL DE
GLOBALIZACIÓN Y DESARROLLO

International Center for Globalization and Development

Documento de Trabajo
Working Paper

N°19

The Paradoxes of Chilean Development

Solimano&Schaper

Marzo 2014

www.ciglob.org

Contact us / Contáctenos:
contact@ciglob.org

Santiago - Chile

Chapter 12, in Hansen, A. and U. Wethal (editors) *Emerging Economies and Challenges to Sustainability. Theories, strategies and local realities*, Routledge, London and New York, 2015.

The Paradoxes of Chilean Economic Development: Growth, Inequality , De-industrialization and Sustainability Risks*

Andrés Solimano (International Center for Globalization and Development, CIGLOB).

Marianne Schaper (formerly at UN-ECLAC).

Early version: March 10, 2014

Final Version 2015

*Comments by Ulrikke B. Wethal and Arve Hansen are appreciated. Effective research assistance by Fernando Greve is acknowledged.

1. Introduction

Chile has been portrayed by the international financial press as a showcase of sound economic management, rapid growth, macroeconomic stability, export-orientation and liberal rules for foreign direct investment. The strategy of economic development followed by Chile in the last three decades or so has relied in neoliberal principles of privatization, marketization and deregulation extended both to productive sectors and social sectors. The main yardstick to judge economic development has been the level of GDP per capita as the “magic blueprint” to achieve national prosperity and material welfare. In some respects this has succeeded as the GDP per capita reached close to US\$ 19,000, in purchasing power parity, one of the highest of the Latin American region. Moreover, since 2009, the country is a member of the Organization for Economic Cooperation and Development (OECD), the club formed, mainly, by the rich economies of the world.

Chile is considered the remaining bulwark of neoliberal economics within the Latin American region, distancing itself from the policies of other countries of the region that seek greater economic autonomy from foreign multinational corporations and hegemonic super-powers, through regional integration and resource nationalism.¹

Chilean economic growth relies on the dynamism of exports, private investment and private consumption. Exports are intensive in natural resources (mainly copper) but the share in total exports of other primary products such as fishmeal and forestry has been declining along with the importance of manufacturing exports. In turn, after decades of neoliberal policies and in spite of a rising GDP trajectory, the country has been undergoing a steady process of de-industrialization. In fact, the share of manufacturing in GDP reached a historical low of 10 percent in 2012, a level resembling that of the early 1940s. In contrast, in 1970 manufacturing was 17 percent of GDP.

Social indicators show a mix of declining poverty along with persistent inequality of income and a high level of concentration of wealth ownership in tiny but powerful economic elites. The Gini coefficient for monetary incomes (adjusting for transfers) has moved within a range of 52 and 56 percent in the last two decades (and before), a level that

¹ See Bull (2014).

places the country among the top 15 most unequal countries in the world (Solimano, 2012). In turn, the income share of the richest one percent of the population captures near 33 percent of national income, also a very high number by international standards, see below.

Thus, the Chilean growth model has been highly unbalanced, favoring the rapid growth of natural resource intensive and environment degrading industries to the detriment of knowledge and high-skill intensive sectors. Although poverty has declined, inequality in the distribution of income and wealth has remained among the highest in the world and growth has come at a high cost for the environment, particularly air and water pollution. Large amounts of SO_x and arsenic emissions are generated by the mining sector, with important health impacts on the population. Being an energy intensive activity, mining is also particularly pressed by energy scarcity, as the country happens to be highly dependent on fossil fuel imports. In addition, water demand exceeds supply in the northern and central part of the country, where most of the water intensive mining and agriculture activities take place, and surrounding communities often lack sufficient water supply for their consumption leading to some rationing in its use. Taxes have been too low to cover externalities created through local air, land and water pollution, and fossil fuels are not priced in line with their carbon content and local Externalities. The large number of industries that intensively use or extract natural resources (aquaculture, fisheries, forestry, etc.) and/or are environmentally dirty (pulp and paper, chemicals, steel, copper, etc.) are mostly exempt from paying royalties and/or environmental taxes (with the exception of a specific tax on mining established in 2005).

In this context, investments in natural resources and environment intensive sectors have remained very attractive, thanks to the large natural resource rents. In fact, according to OECD, natural resource rents (difference between profits and the opportunity cost of capital) accruing to private and public companies are high in Chile, reaching around 19 percent of GDP over the period 2008-2012. Moreover, taxes are much lower than in other resource-rich countries. In terms of the structure of the economy, the fact that producers using natural resources and exhausting the environment are not required to pay for this relevant factor of production entails an implicit benefit compared to sectors that are not

resource-dependent and are environmentally clean such as high tech, knowledge-based and human capital-intensive activities which have to pay market prices for all their inputs.

The Chilean growth model appears in sharp contrast with the nature of economic growth in most OECD countries, characterized by an increasing share of high-skills and technology intensive activities in GDP. In fact, at the global level, and given increasing environmental problems and a growing population with rising demands, the nature of economic growth in the coming decades should be fundamentally different in order to be deemed sustainable. However, for a resource rich country like Chile, rising commodity prices as well as the threat of being inflicted with a “Dutch disease”, making manufactured goods as well as tradable services less competitive by raising the value of the currency, does not facilitate a transition away from a natural resource intensive economy.

The purpose of this chapter is to examine the main features of the Chilean development model of the last three decades regarding growth, distribution, the nature of the productive structure, reliance of natural resources and energy use and environmental impacts. The chapter assesses main trends in economic, social, resource and energy sustainability over time and highlights the structural imbalances generated by the neoliberal model imposed during the military regime of the 1970s and 1980s and continued by post-authoritarian administrations since 1990. Finally, the chapter identifies areas of reform for redressing current trends and building a more equitable and socially cohesive society along with maintaining growth that is more friendly with the environment and respectful of its natural resource base and the welfare of present and future generations.

2. Growth, Poverty and Inequality

Economic growth accelerated in Chile since the mid to late 1980s compared to its historical record of the period 1940-85 where the average annual rate of growth of GDP was 3.1 percent (1.2 percent in per capita terms). In contrast, the rate of growth of GDP in the period 1990-2012 was 5.2 percent (close to 3.5 percent per capita). This has allowed a transition from an economy with a per capita income of around US\$ 5,000 in the late 1980s to near US\$ 19,000 today. Nevertheless, as we shall see, the fruits of that growth have concentrated, largely, in top income earners and the growth path has been quite uneven during the last

two and a half decades. In the 1990s the economy grew, on average, near two percent faster than in the period of 2000-2012 although in the last four years, a recovery of growth has taken place in the period 2010 -2013 albeit, again, some recent cyclical growth deceleration is underway (early 2014).

The social consequences of the growth process as measured by poverty and inequality are shown in Figure 1. Two results stand at visual scrutiny: First, along with rising GDP we observe a decline in poverty from 38 percent in 1990 to 14 percent in 2011. Second, it is also noticeable that while GDP grows and poverty declines, inequality remains at a high level, with the (monetary, say after transfer) income Gini index in the range 0.56-0.52 between the early 1990s to present. This is an important result and suggests that economic growth per se did not lead to a closing of the gaps between top and bottom income earners or between other income segments.

In turn, a feature of the income distribution of Chile is its concentration at the top of the income scale. Using data on tax compliance prepared by Chile 's Internal Revenue Service, Lopez, Figueroa and Gutierrez(2012) calculate that the income share of the top 1 percent in the period 2005-2010 was 32 percent, the income share of the top 0.1 percent (one-thousandth of the population) was 19.9 percent and the share of the top 0.01 percent was 11.5 percent.¹

These numbers are certainly very high by global standards. In fact, they are above the top income shares of high-inequality OECD countries such as the USA and the UK. In 2007, in the USA the income share of the top 1 percent was 23 percent, in the UK it was 14 percent (in France that share is 8 percent), using income data from their respective Internal Revenue Services.²

In the graphical terms of Gini coefficient analysis, the numbers for Chile show an extremely sharp departure of the Lorenz curve to the right from the proportional equality 45 degree line³ These results, in turn, provide strong empirical evidence backing the assertion

² Atkinson, Picketty and Saez (2011).

³ That line, by construction, indicates that 1 percent of the population captures one percent of the income, ten percent of the population ten percent of income and so on.

that income inequality in Chile is closely connected with a very high appropriation of income at the very top of the distribution rather than with dire poverty at the bottom.

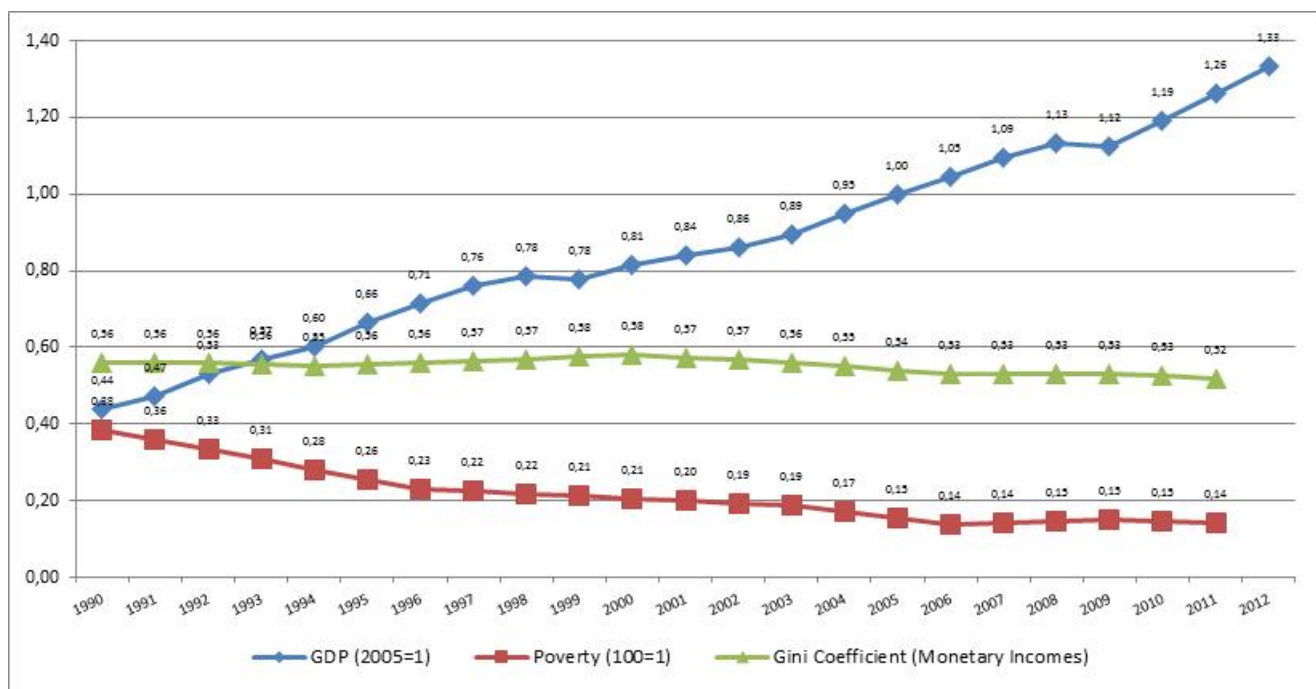
Table 1
Chile Growth, Poverty and Inequality (1990-2012)

Year	1) GDP* (rate of change, annual percent)	2) GDP* (2005=1)	3) Poverty* (100=1)	4) Gini Coefficient**	
				4b) Primary Income (before taxes and transfers)	4b) Monetary Income (adjusted by taxes and subsidies)
1990	3.70	0.44	0.38	0.57	0.56
1991	7.97	0.47	-	-	-
1992	12.28	0.53	-	0.56	0.56
1993	6.99	0.57	-	-	-
1994	5.71	0.60	-	0.57	0.55
1995	10.63	0.66	-	-	-
1996	7.41	0.71	0.23	0.57	0.56
1997	6.61	0.76	-	-	-
1998	3.23	0.78	-	0.58	0.57
1999	-0.76	0.78	-	-	-
2000	4.50	0.81	0.21	0.58	0.58
2001	3.35	0.84	-	-	-
2002	2.17	0.86	-	-	-
2003	3.96	0.89	0.19	0.57	0.56
2004	6.04	0.95	-	-	-
2005	5.56	1.00	-	-	-
2006	4.59	1.05	0.14	0.54	0.53
2007	4.60	1.09	-	-	-
2008	3.66	1.13	-	-	-
2009	-1.04	1.12	0.15	0.55	0.53
2010	6.10	1.19	-	-	-
2011	5.99	1.26	0.14	0.54	0.52
2012	5.60	1.33	-	-	-
Average					
1990-2000	6.20	0.65	0.27	0.57	0.56
2001-2011	4.09	1.04	0.15	0.55	0.54
1990-2011	5.15	0.84	0.21	0.56	0.55

Source: (*) World Bank.
(**) Ministry of Social Development of Chile.

Figure 1

Chile: Growth, Poverty and Inequality (1990-2012)



The income data can be complemented by international rankings of wealth ownership such as the “billionaires list” prepared by the US-based magazine *Forbes* that compiles annual data on individuals or families holding net assets over one-billion dollars. In this respect, Chile had, in 2013, 12 families (Luksic, Matte, Paulman, Piñera among them) in the *Forbes* list of billionaires, in a country of 17.3 million people, with a combined wealth that amounts over 15 percent of the GDP,.

Does Social Policy Compensates for high Inequality?

In the 1980s, under the Pinochet regime, Chile moved to “market- based” social policies, a trend that was praised by the International Financial Institutions of Washington DC at that time. This orientation of the social policies was preserved, albeit with some modifications, by the center-left governments and center- right (the so-called political duopoly) that came to government after the end of the military regime in early 1990. Market-oriented social policies promoted the participation of the private sector in education, health and the pension

system, in the delivery of social services and in shifting the cost of these services to beneficiaries reducing their financial burden on the state. In the education sector, the state largely withdrew from its traditional role as a main funder of schools and universities. As a result of this change in the policy paradigm and according to the OECD and the World Bank, Chilean families pay, relative to their budget, the highest proportion in the education of their children (near 28 percent) compared with the rest of OECD economies.⁴ It is apparent that in this system richer families can afford to educate their children in better and more expensive educational facilities (primary, secondary and tertiary) than the middle class and the poor. In the largely privatized system access to education depends on the position of the student and his or her family in the income scale affecting the socio-economic equalizing role education is generally supposed to play in society. To allow middle income and lower income families to enter the expensive university system (with a growing importance of private universities along with the shift of funding of public universities from the state to the students) required a massive system of education loans for higher education was put in place by the government and administered by commercial banks with the predictable result of making students acquire significant levels of debt to finance their education. ⁱⁱ A less recognized but equally important implicit objective of promoting indebtedness among students was the hope by the dominant elites to appease their critical attitudes and resistance to the privatized education system, although it has operated the opposite way as seen in the student's movement of 2011 with the motto of "quality and free education for all".

The health sector comprises a two tier system. Over 80 percent of the population uses the public health system that tends to be undercapitalized and with long waiting periods, while the upper middle class and the rich goes to a system of good quality but expensive private clinics.

Regarding social security, Chile was a pioneer in privatizing the pension system for the civilian population. The new scheme is based on a private capitalization pension system (called the *Administradoras de Fondos de Pensiones*, AFP system for its acronyms in Spanish) in which near 8 million people hold individual pension savings accounts managed

⁴ See Solimano (2012).

by only six private companies. To protect the private monopoly of pension management, the state is barred, by law, to offer pension fund management services to the population. The system is highly profitable for the six managing companies. In addition, it provides a huge source of funding, at a low cost, to large corporations and banks both in Chile and abroad. It is estimated that US\$ 44 billion of workers' pension funds were invested by the AFP system in the top 10 banks and 10 corporations. In addition, the AFP have invested around US\$ 50 billion abroad to acquire foreign securities and bonds, while the total resources of the private capitalization system is around US\$ 170 billion. The other side of the coin in this big dance of funds, that have generally been invested at good returns, is that the retirees of the system (mostly low to middle income contributors) receive *meager pensions* and that the state has to bill an important share of the basic pension segment. In fact, the replacement rates (ratio of pension to last salaries) are between 40 to 50 percent while the average of the OECD is near 75 percent.⁵ Interestingly the only segment/section/part of the population that is enrolled in a publicly managed pension system (receiving permanent contributions from both the state and the beneficiary) is the armed forces that enjoy much higher pensions (and better hospitals) than the civilian population under the privatized system. Tellingly, in 1981, the armed forces refused to enter in the new AFP private pension capitalization system put in place by economic advisers of the military regime of Augusto Pinochet. Also a small fraction of the population remained in what was left of the old pay-as-you-go-system and, have consistently, received higher pensions than those that moved into the private capitalization scheme.

Let us take a look at the level of public spending in Chile. Public spending in education reached 3.2 percent of GDP and health 3.7 percent (average 2006-2012, see figure 2.1). In turn, defense spending was 2.3 percent of GDP in the period 2006-2012. These numbers are modest when compared with the levels of public spending in education and health of other countries, irrespective of GDP per capita levels. In fact, as displayed in figure 2.1, Chile's levels of public spending in the two social sectors is *below* (as a share of GDP) the corresponding average levels in Latin America and the OECD. Furthermore, Chile's levels of public spending in *defense* relative to GDP, (including military equipment, salaries and pensions of army personnel) is *higher* than in Argentina, Mexico, Brazil and Uruguay and

⁵ See OECD (2013). Use reference in main text

also higher than the average of the OECD (see figure 2.4) ⁶. The reason of this high level of defense spending in Chile is probably related with the fact that the armed forces, by law and without the same parliamentary scrutiny of civilian public budget, receive 10 percent of the gross income of CODELCO (*Corporación del Cobre*) the main state-owned copper producing company in the country. In recent years international copper prices have been very high.

Figure 2.1

Chile Public Spending in Education, Health and Defense

(percent of GDP, 1995-2012)

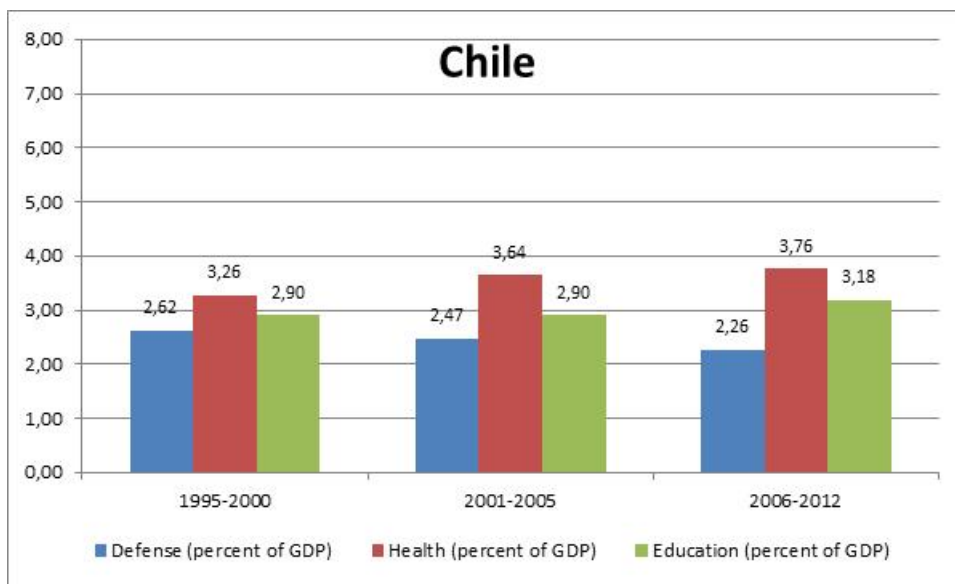


Figure 2.2

Latin America: Public Spending in Education, Health and Defense,

(Percent of GDP, 1995-2012)

⁶ The data is from SIPRI, Swedish International Peace research Institute.

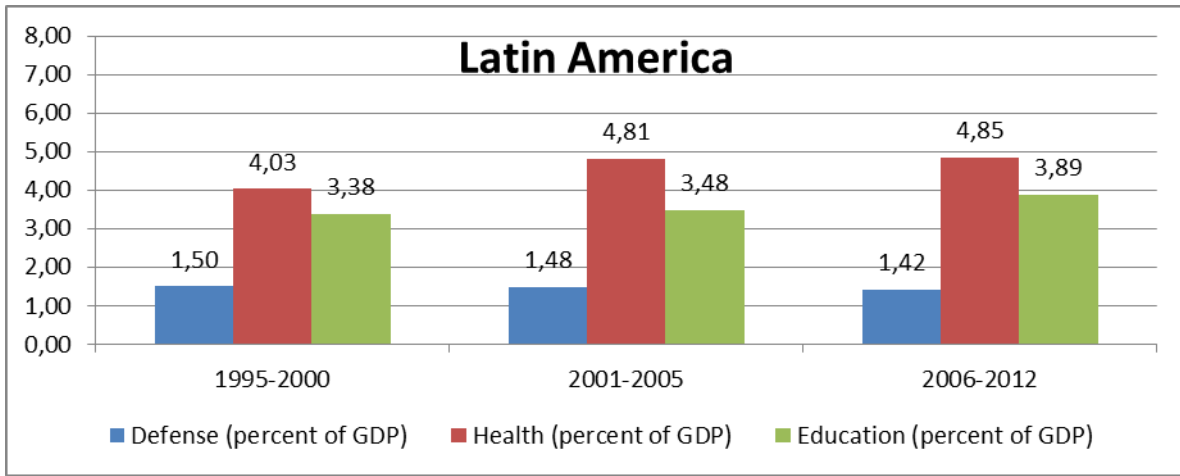
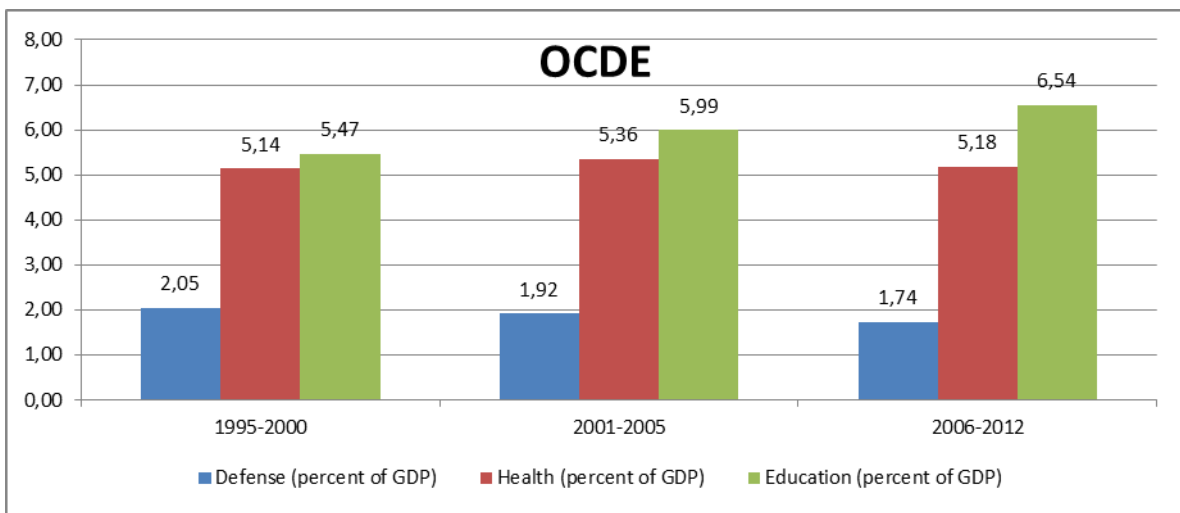


Figure 2.3

OCDE: Public Spending in Education, Health and Defense,

(Percent of GDP, 1995-2012).



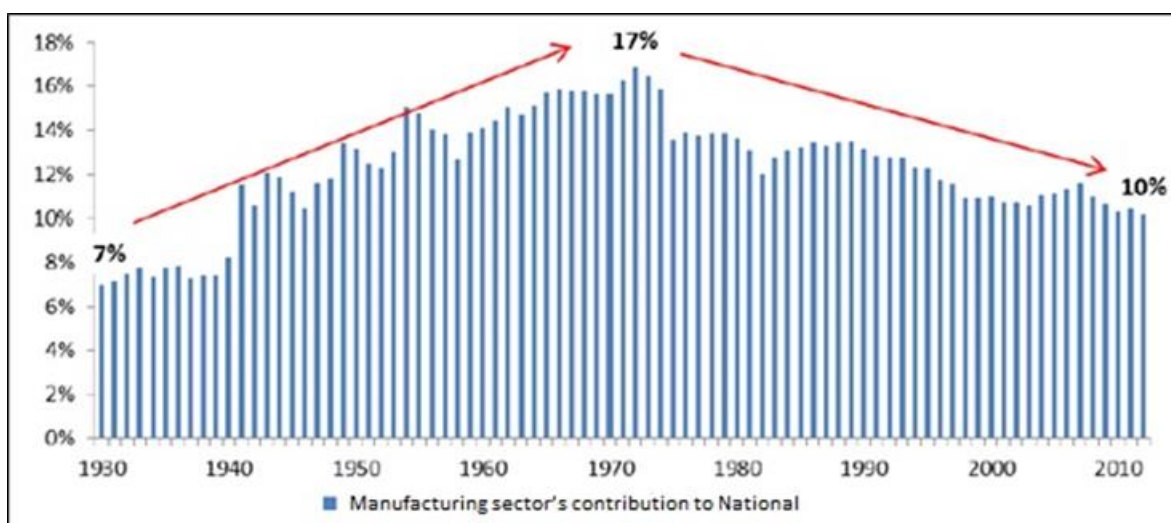
3. The Composition of Chilean GDP : The De-industrialization Process.

As already mentioned, the development strategy of Chile has given high priority to increase the aggregate GDP. Nevertheless, important issues of composition have been largely neglected such as the importance of the mining sector in GDP and in exports and the fact that the share of the manufacturing sector has been declining in the last three to four decades.

Of special significance is the *declining importance* of the manufacturing sector in the Chilean economic structure, a steady process of *de-industrialization* noticeable since the 1970s. The paradoxical result is that while GDP has been in a steady, medium term, upward trend, albeit punctuated by some large contractions in economic activity in 1975, 1982-83 and milder ones in 1999 and 2009, the share of manufacturing has been in an overall declining trend. In fact, by 2012 the share of manufacturing reached a historical low of 10 percent, a level similar to that registered some 70 years ago in 1940s. The peak was 17 percent in 1970 (see figure 3.1).

Figure 3.1 Chile. The Evolution of the Manufacturing Sector, 1930-2012.

(Percent of GDP)



Source: Sanhueza, Bello and Rosenberg (2013).

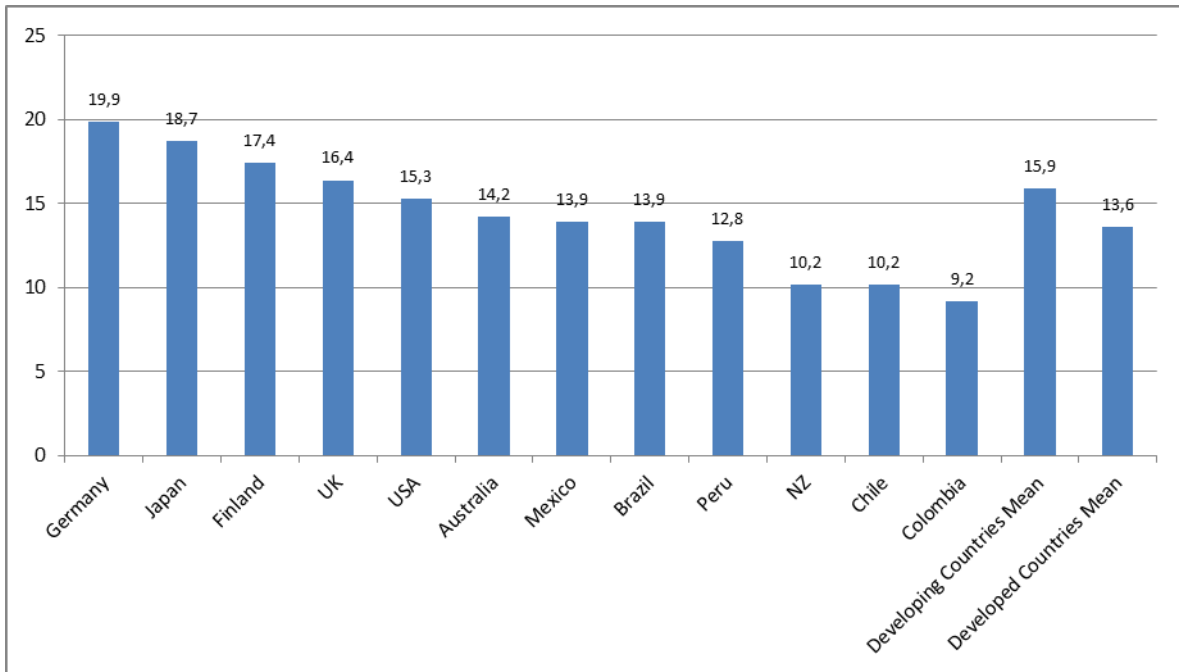
This is a worrisome trend for various reasons: manufacturing is the sector *per excellence* where technological change and innovation takes place. In addition, the good jobs, the development of local skills, engineering capacities and other forms of value added value

often develop in manufacturing. Historically, virtually all countries that have developed and enjoy high per capita incomes and superior living standards have passed through a phase of industrialization; albeit this trend has been partially reversed since the 1970s in advanced economies of North America and Europe, due to the rise of low wage manufacturing in Asia, mainly China. The new productive platform of low wage nations induced outsourcing and redeployment of operations by western multinationals to these countries with adverse consequences for output and employment generation in the manufacturing sector of advanced capitalist countries and developing countries with mid-level to high-level wages.

It is interesting to note that as of 2012 the average share of the manufacturing sector in GDP in developing countries (16 percent) is *higher* than the corresponding share for developed capitalist economies (13.6 percent), confirming the trend just discussed. In turn, as shown in figure 3.2 among developed countries Germany, Japan, Finland, the USA have a share of manufacturing that stand above the average share of developed countries. In the developing world most of the rapid growth of manufacturing, as said before, has concentrated in Asia in countries such as China, Korea, Taiwan, Singapore and others, (see Baldwin, 2012).

Figure 3.2

Manufacturing sector's contribution to GDP, Selected Countries c. 2012(percent)



Source: Sanhueza, Bello and Rosenberg (2013).

The Composition of Exports

The strong reliance on natural resources of the economic structure is best portrayed in the composition of exports. The dominance of mining in the export bundle is clear. As shown in table 3.2 the share of mining exports in total exports is 63 percent (2011) with the bulk of it corresponding to copper. The share of exports of other primary products such as agriculture, forestry and fish is small, close to 6 percent, and has been declining the last 10 to 15 years. Another sector that has been experiencing decline is manufacturing, down from near 30 percent of total exports in the mid to late 1990s to less than 20 percent in 2006-2011. These trends in exports are worrisome if we want to revert the de-industrialization process, increase their intensity in value-added and reduce the dependence of the economy to often volatile international commodity prices.

Table 3.2
Chile Export by Sector (percent)

Year	1) Export of goods			2) Others	3) TOTAL
	1a) Mining	1b) Agriculture forestry and fisheries	1c) Manufacturing		
1996	45.8%	9.9%	29.3%	15.0%	100%
1997	46.6%	9.3%	29.0%	15.1%	100%
1998	41.6%	10.8%	30.6%	17.0%	100%
1999	43.0%	10.0%	31.0%	16.0%	100%
2000	45.2%	8.7%	31.1%	15.0%	100%
2001	42.6%	9.4%	31.8%	16.2%	100%
2002	41.5%	9.8%	33.2%	15.5%	100%
2003	43.0%	9.7%	31.3%	16.0%	100%
2004	54.2%	7.1%	25.7%	13.0%	100%
2005	58.4%	5.9%	22.5%	13.2%	100%
2006	64.9%	4.6%	18.7%	11.8%	100%
2007	65.9%	4.6%	18.5%	11.0%	100%
2008	59.8%	5.9%	21.0%	13.3%	100%
2009	59.6%	6.6%	21.2%	12.6%	100%
2010	65.0%	6.0%	17.8%	11.2%	100%
2011	62.8%	5.9%	19.3%	12.0%	100%
Average					
1996-2000	44.4%	9.7%	30.3%	15.6%	100%
2001-2005	47.9%	8.4%	28.9%	14.8%	100%
2006-2011	63.0%	5.6%	19.4%	12.0%	100%
Source: Central Bank of Chile					

4. The sustainability risks

So long as cheap and abundant natural resources provided the basis for economic growth and environmental considerations played a minor role, development strategies could afford to neglect environmental considerations. This is no longer the case for the twenty-first century, and in order to be considered sustainable, growth strategies should respect the natural limits of environmental resources on which countries rely.

As described in previous sections, Chile has experienced a rapid export-led economic growth, which resulted in significant reductions in poverty but also put considerable pressure on natural resources and the environment.. Therefore, environmental conditions in Chile should be understood not only as a consequence of its fast pace of development but mainly in the context of a development strategy favoring the rapid expansion of natural resource and pollution intensive industries.

The increasing share of mining in the economy is a case in point with important implications for sustainable development, as it is considered to be particularly environmentally and socially sensitive. The copper industry not only competes for energy and water with other industries and surrounding populations, but it is also responsible for large amounts of SO_x and arsenic emissions. As previously mentioned, copper mining is a major contributor to Chile's GDP, but it requires large volumes of water, thus creating contentions between domestic uses for water and the needs to meet export demands of copper and fruit products such as grapes, apricot, oranges, kiwis and other ,which are relevant in total agricultural exports. Copper is also a particularly energy intensive activity, in a country relying mostly on fossil fuel imports.

During the 1980s, the mining code and the water code was changed to attract foreign investment, a policy that contributed to give away natural resource rents and promote traditional sectors to the detriment of knowledge and human capital intensive sectors. One of these changes, Decree Law 600, stimulated large investments and allowed companies to obtain water rights. In forestry, and to promote exports, a piece of legislation was introduced (Decree 701) which subsidized around two thirds of forest company costs, encouraging companies to substitute native forests with pine and eucalyptus plantations. As a result of these policies, forestry is one of Chile's most rapidly growing economic sectors, only second in export value after mining. Similar policies to encourage increased exports and fuel economic growth were implemented for the aquaculture and agricultural sectors, and given the lack of environmental concerns, even less so for environmental taxes this led to high pressures on the environment⁷.

⁷Larrain(2000) in "Views from the South: The effects of globalization and the WTO on the Third World"

According to Lopez and Figueroa⁸, the absence of royalties for the use of natural resources (with the exception of a specific tax on mining established in 2005), and the lack of environmental taxes targeting the most environmentally harmful activities, has important consequences in terms of economic structure.

First of all, it constitutes an implicit transfer of wealth from the average citizen paying for most of the pollution (air, water, health) to large companies that have access to the natural resources and use of the environment for free. This not only prevents the government from raising taxes for funding other urgent development needs (such as education and health), but it also keeps returns to physical capital in natural resource and environment intensive activities artificially high relative to human capital. This implies not only an incentive to environmental degradation, but also a negative incentive to investing in human capital, perpetuating both low returns to human capital and high social inequality.

Second, the fact that natural resource-dependent activities enjoy free access to environmental inputs, or only pay partially for environmental damages entails an implicit discrimination against other emerging activities, such as knowledge based and human capital intensive sectors that are not environment dependent, but have to pay market prices for all their inputs.

Thus, a policy of taxing polluters and natural resource rents would not only increase government resources, but it would also raise the relative advantage of emerging high tech and knowledge intensive activities, that may have important positive spillovers and externalities on the economy, the society and the environment.

It is quite evident in the Chilean case that the artificial incentives that the environmentally sensitive industries enjoy, allows them to pay higher wages to high skilled workforce, than what knowledge-intensive emerging industries can afford. This makes it even more difficult for non-traditional sectors with more linkages to the overall economy to emerge.

⁸ Lopez and Figueroa (2011), "Fiscal Policy in Chile: Hindering Sustainable Development by favoring Myopic Growth". FEN, U. de Chile.

In addition, the bonanza of high commodity prices and the related exchange rate appreciation tends to reinforce this tendency, breeding a certain degree of complacency and discouraging innovation as well, becoming an additional factor that contributes to crowding out knowledge intensive and clean sectors.

Up to now, mining has been a highly profitable activity measured by private rates of return. However, social costs (including negative externalities and depletion of natural resources) in terms of depletion of natural resources and environmental degradation are higher than private costs for companies and thus, social profitability is bound to be lower than private profitability. In addition, the considerable profit potential for private investors in accelerated mineral development of the country seems to be increasingly threatened by the high cost of energy, the water scarcity, the rights of indigenous people and the willingness of the civil society to tolerate the environmental and health impacts of this kind of development. Being an energy and water intensive activity, mining also competes with other industries and the needs of populations for their supply, leading to frequent water shortages for them.

Guaranteeing sustainable mining, implementing a modern industrial policy and adequate taxes to ensure that natural resource rents are invested into new dynamic and clean productive assets, as well as putting in place royalty schemes to raise funds for science; technology and innovation are highly desirable strategies that would contribute to the diversification of the economy and to sustainable development objectives.

Although factors such as the country's accession to the OECD, higher public expectations, international pressures and local environmental awareness are leading to important changes in Chile's environmental institutions, managing the present bonanza of high commodity prices and channeling the increasing available resources towards the investments needed to diversify and green the economic structure, will remain a serious challenge for public policy.

5. Concluding Remarks.

The Chilean development strategy of the last three to four decades has given priority to aggregate economic growth, orthodox macroeconomic management and to providing

exceptionally good commercial conditions to foreign direct investment and domestic big business. Growth and macroeconomic indicators show the numbers of a strong economy but once social reality and sustainability considerations are properly considered a more nuanced evaluation of Chilean economic development emerges. Along with rapid aggregate GDP growth we observe a tendency towards steady de-industrialization, with the share of industry in GDP reaching a historically low 10 percent and well below current international standards of countries of comparable development levels. Moreover, this growth is reliant on mining and services as the main sources of expansion of economic activity. Social indicators also display paradoxes: while income-based poverty has been steadily declining since the early 1990s, inequality remains stubborn at a high plateau and income and wealth are heavily concentrated at the very top of the distribution. In addition, the strong reliance on copper leads to high use of water in short supply and has given rise to enclave activities with low backward and forward linkages to the rest of the economy. Moreover, the privatization of water rights and mining rights is a permanent source of controversy in Chilean society.

A more balanced development strategy for Chile would require significant changes in its production structure away from an intensive use of natural resources and more towards knowledge-intensive sectors and clean production lines helped by a more environmentally conscious tax-system. In turn, the reduction of high inequality and de-concentration of wealth would need important reforms in the tax system, the structure of markets, effective anti-trust legislation and the rebalancing of bargaining capacities between labor and capital to allow a more fair distribution of the productive gains and the enormous economic surplus currently appropriated by very small wealthy elites.

References

Atkinson. A. B., T. Piketty, and E. Saez (2011). “Top Incomes in the Long Run of History.” *Journal of Economic Literature*, 49 (1); 3-71.

Baldwin, R. (2012) “Global Supply Chains: Why They Emerged, Why they Matter, and Where They are Going”. Center for Trade and Economic Integration, *CTEI Working Paper*, Geneva.

Bull, Benedicte (2014a) “The rise of the rest and the revenge of “development”:
the impact of the emerging economies on development theory”, mimeo University of Oslo.

--- (2014b) “Latin America” mimeo, University of Oslo.

Larraín, S. (2000) in “Views from the South: The effects of globalization and the WTO on the Third World”

Lopez, R. and E. Figueroa (2011),”Fiscal Policy in Chile: Hindering Sustainable Development by favoring Myopic Growth”. FEN, U. de Chile.

López, R. Figueroa, E. and P. Gutiérrez (2012) “La “Parte del León”: Nuevas Estimaciones de la Participación de los Súper- Ricos en el Ingreso Nacional de Chile” SDT 379, FEN, Universidad de Chile.

OECD (2013) *Pensions at a Glance*, Paris.

Sanhueza, G. Bello, J. and K. Rosenberg (2013) “Propuestas para el Desarrollo de la Industria Metalúrgica-Metal-mecánica en Chile” ASIMET.

Solimano, A. (2012) *Chile and the Neoliberal Trap. The Post-Pinochet Era*. Cambridge University Press, Cambridge UK and New York.

---- (2014) *Economic Elites, Crises and Economic Democracy*. Oxford University Press. Oxford and New York.

ⁱ These calculations include retained profits and correct for tax evasion. In addition, the Lopez, Figueroa and Gutierrez's study show that in the period 2005-2010 the income Gini using data obtained from the tax office is 0.63 compared to 0.55 when income is calculated using the household survey, CASEN.

ⁱⁱ The expensive student loan system is a heritage of the "socialist" Presidents Ricardo Lagos and Michelle Bachelet that ruled the country in the 2000s. The situation started to change, in some respects, after massive student protests in 2011 and compelled the center-right government of President Piñera to reduce the interest rate charged for student loans from 6 to 2 percent and moving to reduce the role of commercial banks in managing the system.