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The impact of the Covid public policies on the Chilean households*

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Abstract

This work uses survey data to study the immediate impact of the public policies implemented during the Covid crisis on the Chilean households. I show debt deferral initiatives only reach a few highly indebted agents, especially concentrated on richer families. Tax relief measures had a broad reach across the population, but with little financial impact. However, income and expenses support had both a wide reach and a strong impact on households, especially for poorer families. A broadening and scaling up of policy e¤orts should therefore focus on direct income support for families.

Resumen

Este estudio utiliza la Encuesta Financiera de Hogares (EFH) para estimar el impacto de las políticas públicas implementadas durante la pandemia Covid en los hogares chilenos. Las medidas de postergación de deuda tienen beneficios especialmente concentrados en algunos hogares muy endeudados y en familias ricas. Políticas de alivio fiscal tuvieron un alcance extendido en la población, pero con valores promedios bajos por familia. Las medidas de apoyo directo a los ingresos y gastos de los hogares tuvieron un impacto extendido al nivel de la mayoría de las familias y con valores elevados relativamente a su ingreso, sobre todo entre los hogares más pobres. Una intensificación o prolongación de los esfuerzos públicos durante esta crisis económica-sanitaria debería por lo tanto considerar especialmente apoyos directos a los ingresos y gastos de los hogares.

* Central Bank of Chile, carlosmadeira2009@u.northwestern.edu. All errors are my own. I would like to thank comments from seminar participants at the Central Bank of Chile, Solange Berstein, Rodrigo Alfaro, the editor David Peel and two anonymous reviewers.

1 Introduction

This article estimates the impact of the different Covid public policies on the household sector in Chile, using the Chilean Household Finance Survey (*Encuesta Financiera de Hogares*, in Spanish, hence on, EFH). As a developing economy, Chile has a significant amount of socioeconomic inequality (Madeira 2015) and a large fraction of informal workers with no access to official unemployment insurance, therefore it is important to analyze the policy impact across different families. This study is related to the current economic analysis of the Covid pandemic (IMF 2020), which is still understudied in the social sciences (Aristovnik et al. 2020).

2 Policy measures during the pandemic

Chile implemented a package of fiscal measures, plus a monetary policy rate cut, bank credit lines and liquidity measures (IMF 2020). The household measures can be grouped in three categories: i) income and expenses support, ii) tax relief and lower interest rates through monetary policy, and iii) debt deferral by financial institutions.

The income and expenses support include:

i) a Covid voucher announced in March targeted at poor families with no formal income (50,000 pesos for each child, with a minimum of 50,000 pesos per family in case of no children)[1];

[1] By May the government announced a larger Family Emergency Income (*Ingreso Familiar de Emergencia*, IFE, in Spanish). The first payment of the IFE in May was targeted at families within the first three income quintiles and with an estimated value of more than half of their income coming from informal labor. For the two lower income quintiles, the program gave 65, 130, 195, 260, 304, 345, 385, 422, 459, 494 thousand monthly pesos for households with a respective size of 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 or more members. In the third income quintile the program gave 43, 86, 130, 173, 203, 230, 257, 281, 306, 330 thousand monthly pesos for households with a respective size of 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 or more members. In June, July and August, the IFE payments were expanded to the lowest 4 income quintiles, giving 100, 200, 300, 400, 467, 531, 592, 649, 705, 759 thousand monthly pesos for households with a respective size of 1, 2, 3, 4, 5, 6, 7, 8, 9 and 10 or more members.

A Middle Class bonus was announced in August with a single payment (not to be repeated) for workers that lost at least 30% of their income relative to the previous year, giving 500, 400, 300, 200 and 100 thousand pesos for workers with a prior monthly income, respectively, between 400 thousand and 1.5 million, 1.5 and 1.6 million, 1.6 and 1.7 million, 1.7 and 1.8 million, and between 1.8 and 2 million pesos.

ii) the Employment Protection Law, which allows companies to give workers access to income through the public unemployment insurance system while temporarily suspending their activity or retaining the workers on a 50% labor schedule;

iii) a deferral of the public utilities' payments.

The tax relief and monetary policy measures include:

i) a deferral of the real estate tax for properties appraised below 133 million pesos;

ii) a temporary reduction of the stamp tax on revolving debt and new loans with a maturity of 6 months or less to 0%;

iii) a deferral of the tax debts targeted at lower income citizens and small companies;

iv) a reduction in the monetary policy rate of 125 basis points.

The debt relief measures include:

i) a deferral implemented voluntarily by commercial banks and credit unions allowing the next 3 installment payments (or 6 payments at some banks) on mortgages and commercial loans to be paid at the end of the credit maturity[2];

ii) a flexible payment scheme for credit cards and lines of credit, allowing one payment deferral.

3 Quantitative evaluation

To evaluate the policies I use the recent EFH 2017 survey, with exhaustive information on the income, assets and debts of a representative sample of 4,549 households. Household i's permanent income is obtained as the sum of its non-labor income (a_i) plus the labor earnings of each member k: $P_{i,t} = a_i + \sum_k P_{k(i),t} = a_i + \sum_k (Y_{k,i}(1 - u_{k,i,t}) + Y_{k,i} RR_{k,i} u_{k,i,t})$, where $Y_{k,i}$ is k's earnings when employed, $u_{k,i,t} = u(x_{k(i)}, t)$ its probability of being unemployed, and $RR_{k,i} = RR(x_{k(i)})$ its income replacement ratio during unemployment (Madeira 2015, 2018). The unemployment risk

[2] This debt deferral started in late March of 2020 as a special scheme from a few banks, but it was quickly copied by all the banks and major credit unions within a few weeks. Banks selected only customers that had no arrears prior to March. During the first 3 weeks of the program (April 1 to April 24) the banks had deferred payments for around 12% of their loan portfolio, according to data from the Chilean Banking Authority. According to a BIS note (Coelho and Zamil 2020) this voluntary debt deferral follows adequate policy standards, since compulsory debt deferral schemes can hinder credit risk assessment and the solvency of the financial system.

($u_{k,i,t}$) and replacement ratio ($RR_{k,i}$) of the EFH workers are based on the mean statistics for 504 worker types (given by a vector $x_{k(i)}$ of their education, age, industry, income quintile and region) from the quarterly Chilean Employment Survey (ENE).

The income and expenses support for each household i includes the $Voucher_{i,t}(x_i)$ (which changes over time t as the government increases the benefits) plus a median estimate of the expenses in utilities $MExp(x_i)$ from the Chilean Family Expenditure Survey of 2017, based on families with similar characteristics (x_i includes income, number of members and children). Based on numbers from the Chilean Unemployment Insurance by June of 2020, for the Employment Protection Law I consider that 7% of the workers have their contract frozen and receive 40% of their income from unemployment benefits, while 3% are on reduced work hours and receive 30% of their income through unemployment benefits: $EmpProLaw_i = \sum_k 0.40 \times 1(\eta_{i,k} \leq 0.07) Y_{k,i} FE_{k,i} + 0.30 \times 1(\zeta_{i,k} \leq 0.03) Y_{k,i} FE_{k,i}$, with $\eta_{i,k}$ and $\zeta_{i,k}$ being pseudo-uniform random-numbers and $FE_{k,i}$ is a dummy denoting whether worker k has a formal employment contract. The Income and Expenses support is therefore given by $IncExp_{i,t} = Voucher_{i,t}(x_i) + MExp(x_i) + EmpProLaw_i$.

The real estate tax deferral for each household i is given as $RETD_i = \frac{0.00025}{3}(\sum_{v=0}^{3} V_{i,v} 1(V_{i,v} \leq 133,000,000))$, with $V_{i,v}$ denoting the survey reported property appraisal value and $v = 0, 1, 2, 3$ being the main family home and up to 3 other properties that may be owned by the family. The tax rate 0.025% is applied to properties every quarter, but it is divided by three to be measured monthly. The benefit obtained from the lower stamp tax (a reduction from a monthly rate of 0.033% to 0%) and monetary policy rate is given as $B\_ST\_MPR_i = (0.00033 + \frac{0.0125}{12}) \sum_{rt=1}^{3} \sum_{l=1}^{3} L_{i,rt,l}$, where rt denotes the debt type (1 bank credit card, 2 retail credit card, 3 bank credit line) and $l = 1, 2, 3$ denotes up to 3 loans reported by the household in each debt type, assuming that households keep similar amounts of revolving loans as in 2017. The Monetary Policy Rate of 1.25% is divided by 12 to be measured in monthly terms. Other loan categories reported in the EFH, such as banking consumer installment loans, retail installment loans, educational, automobile and credit union debt, typically have maturities of 12 months or more and at a fixed interest rate, therefore these do not apply for lower stamp tax and interest rate. Also, since some households may become more indebted, while other households may lose access to debt during the pandemic, I do not include new loan creation to compute these benefits. The deferral of tax debts is taken to be the VAT rate (19%) for the monthly income reported by households from their micro businesses

Table 1: Benefits as a fraction of the household monthly permanent income (in %)

EFH 2017	Income / expenses support							
	April 2020				August 2020			
	Pc25	Pc50	Pc75	Mean	Pc25	Pc50	Pc75	Mean
All households	4.9	9.2	17.5	13.6	5.6	11.8	29.2	21.0
Strata 1 (pc 1-50)	11.8	16.7	24.1	19.4	12.7	18.7	47.3	31.2
Strata 2 (pc 51-80)	5.4	6.8	9.1	10.2	6.2	9.1	27.1	18.4
Strata 3 (pc 81-100)	2.0	3.2	4.1	6.7	2.1	3.2	4.2	6.8
	Tax relief, monetary rate				Debt deferral			
	Pc25	Pc50	Pc75	Mean	Pc25	Pc50	Pc75	Mean
All households	0.1	0.4	1.4	2.2	0.0	0.0	10.4	7.6
Strata 1 (pc 1-50)	0.2	0.5	1.8	3.0	0.0	0.0	2.1	4.3
Strata 2 (pc 51-80)	0.2	0.4	1.4	2.0	0.0	0.0	12.7	8.8
Strata 3 (pc 81-100)	0.1	0.3	0.9	0.9	0.0	7.8	17.8	12.5

or self-employment: $TDD_i = 0.19 \sum_k Y_{k,i} SE_{k,i}$, with $SE_{k,i}$ being a dummy variable for whether worker k is a micro-entrepreneur or in formal self-employment. The total Tax and Monetary Policy support is given by $TaxMPR_i = RETD_i + B\_ST\_MPR_i + TDD_i$.

The flexible credit card scheme and the debt deferral for non-defaulting customers ($Df_i = 0$) is measured as $DebtD_i = (1 - Df_i)(\frac{1}{3} \sum_{rt=1}^{2} \sum_{l=1}^{3} L_{i,rt,l} + \sum_{rt=4}^{5} \sum_{l=1}^{3} DS_{i,rt,l} + \sum_{v=0}^{3} MDS_{i,v})$, being equivalent to one third of the monthly bank and retail credit card bills ($rt = 1, 2$) plus the debt service of banks and credit unions consumer installment loans and the mortgage debt service for the main home and up to three other properties.

Table 1 shows the mean plus the percentiles 25, 50 and 75 of these benefits across the households in each income strata, from the poorest (strata 1: the lowest 50 percentiles of household income as reported in the survey, $Y_{i,t} = a_i + \sum_k Y_{k,i}$) to the richest (strata 3: the top 20 percentiles of household income). Since the Income and Expenses support changed over time, I summarize its impact both at the beginning (April) and at the end of the period (August). The income and expenses support is quite significant, representing 13.6% of the average household's permanent income in April and a higher value of 21.0% in August. Relative to April, the additional measures in August were of great benefit to both the poor and middle class, with benefits increasing from 19.4% to 31.2% of average income for strata 1 and from 10.2% to 18.4% for strata 2. The tax relief and interest rate reduction are less important, representing only 2.2% of the average household income. The "debt deferral" represents 7.6% of the average income, but is more important for the richer families (strata 3), representing 12.5% of its mean income, while the "income and expenses

support" represents just 6.7%. Overall, it is relevant to note that the "income and expenses" and the "tax relief" support policies are much more equally distributed, since these policies reach many beneficiaries across all income levels (strata 1, 2 and 3). The "debt deferral" has a high impact on a few highly indebted agents (the percentile 75) and zero impact on the median and below. Furthermore, this policy has little impact on the poor and middles class (strata 1 and 2).

4 Conclusions

During this pandemic in Chile, income and expenses support were the most important policy for households, while tax relief had a relatively small impact and debt deferral benefits were concentrated on a few highly indebted agents (Madeira 2018).

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