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## THE WEALTH DISTRIBUTION IN DEVELOPED AND DEVELOPING ECONOMIES: COMPARING THE UNITED STATES TO CHILE USING SURVEY DATA FROM 2007

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### I. INTRODUCTION

In this study we report and analyze the differences in the distributions of wealth, income, assets, and debt between a developing economy, Chile, and a developed economy, the United States. For Chile, we use the 2007 Household Financial Survey (*Encuesta Financiera de Hogares*, EFH), while for comparison purposes we use the 2007 Survey of Consumer Finances (SCF) of the United States. We then extend our empirical results to discuss the causes of financial inequality in each country.

Both data sources are comparable in that they are similarly-designed surveys intended to provide a detailed picture of households' financial status. The SCF is widely used for academic as well as policy work. It has been used to analyze life-cycle savings and consumption (Huggett, 1996), intergenerational transmission of earnings (Quadrini 2000), inequality (Heathcote et al., 2010) and other applications. The EFH, on the contrary, is a relatively new data source that has not yet been extensively employed. Our main objective is to characterize and compare the distribution of wealth, income, assets, and debt using data sources from two countries that differ in many aspects, particularly their level of economic development.

At an aggregate level, the U.S. is noticeably richer than Chile in terms of income and assets. The U.S. population does carry more debt, but remains much wealthier in terms of net assets. The inequality of how these are distributed across the respective populations, however, is not quite so clear cut. We find that the U.S. has more inequality than Chile in terms of assets (Chilean Gini: 0.70, U.S. Gini: 0.76) and net wealth (Chile: 0.74, U.S.: 0.82), but Chile has more inequality in terms of income (Chile: 0.57, U.S.: 0.53) and debt (Chile: 0.85, U.S.: 0.70). These distributions are plotted in figures 1, 2, 3, and 4.

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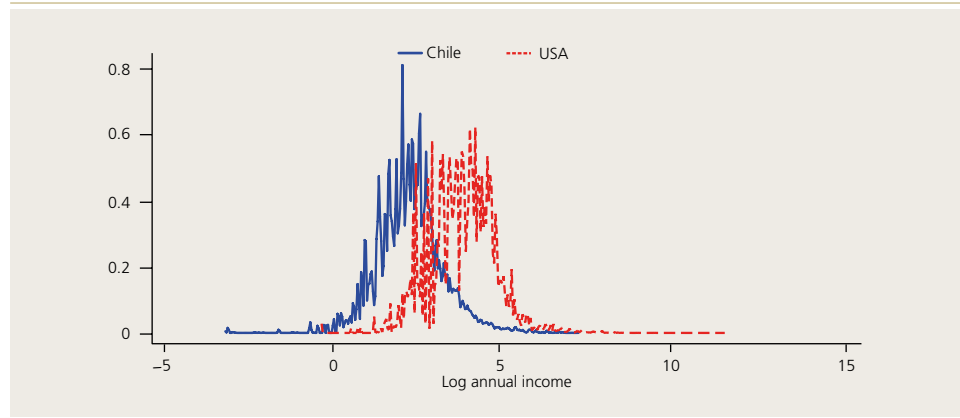
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Figure 1

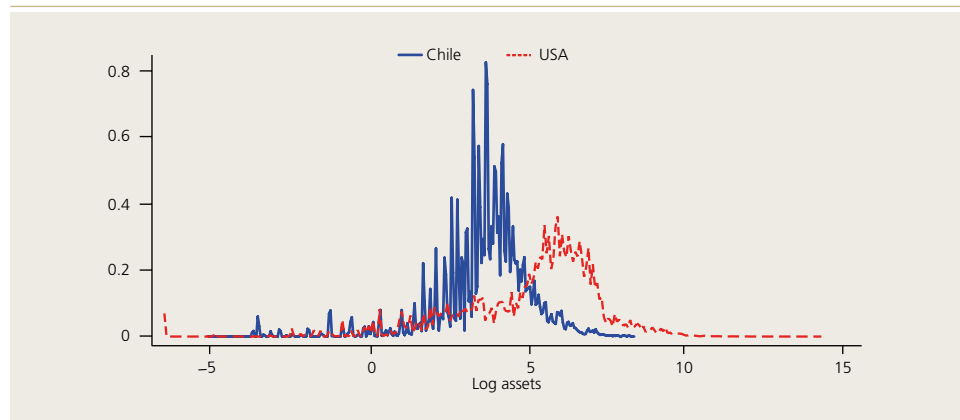
Income distribution



Source: Authors' calculations.

Figure 2

Asset distribution

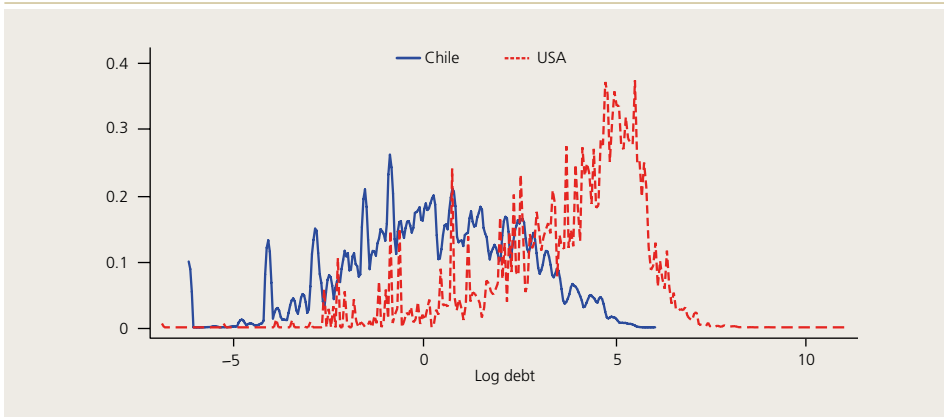


Source: Authors' calculations.

We apply our data findings to understanding the root causes of inequality in Chile and the U.S. We take several prominent theories on the source of inequality from the existing literature and see which are consistent with the data. Our results suggest that earnings risk is not a very plausible channel to explain inequality, given the observed differences between the two countries. Driving inequality through bequest motives also runs into some conflicts with the data. However, explaining inequality through access and returns to entrepreneurship is entirely consistent with our detailed data findings.

Figure 3

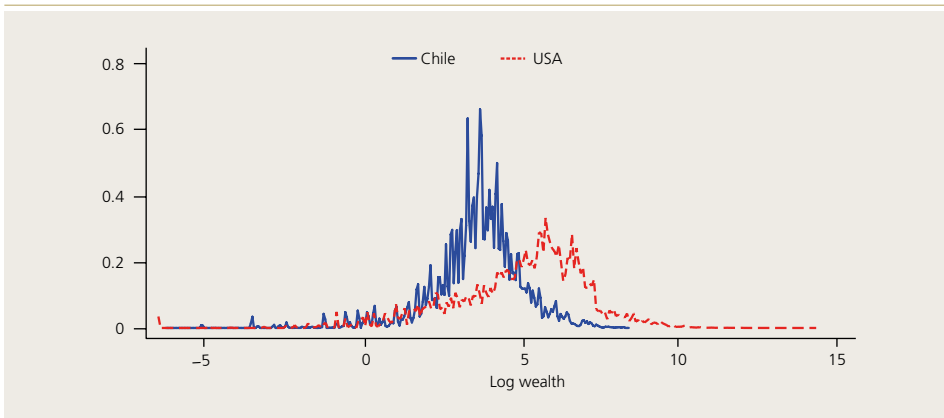
### Debt distribution



Source: Authors' calculations.

Figure 4

### Wealth distribution



Source: Authors' calculations.

As a way to examine the consistency of this hypothesis, we conduct an empirical exercise where we recompute inequality measures for Chile after imposing American payoffs to entrepreneurship and find that this channel is strong enough to fully explain the observed difference in wealth inequality, lending further support to our analysis of the data.

We conduct our analysis at the aggregate level but also examine the data in more detail along several dimensions. We dissect the income, asset, debt, and wealth distributions by income level and also by personal demographic characteristics of the head of household: age, gender, household type, employment type,

and educational attainment. Our results on each of these fronts are briefly summarized below.<sup>1</sup>

**Age:** Financially, age has less meaning in Chile. American income and wealth is more stratified across different age groups than in Chile. Chilean households of all working ages report roughly the same earnings—within 10% of USD 15,000, while American households steadily earn more as they age. Correspondingly, Americans accumulate much more wealth as they age relative to Chileans, except in retirement, where Americans spend down wealth and Chilean households do not. This is potentially a key issue in our analysis of inequality being generated through bequests.

**Gender of head of household:** Based on the self-identified ‘head of household’, we find that male-led households earn more, and hold more assets, debt, and wealth. The gender gap is larger in the U.S. than in Chile: relative to the population as a whole, male households are richer with higher incomes in the U.S. than in Chile. In both countries, there is marginally less inequality among women across the board, particularly in the incomes of American women, except that debt is very unequal among women in both Chile and the U.S.

**Marital status:** Married households hold more assets, more debt, more wealth, and have higher incomes in both Chile and the U.S. In terms of inequality, inequality within married households (as measured by the Gini coefficient) is generally similar in all four dimensions to the aggregate statistics—within a few percentage points—with the exception of debt, where U.S. married households display significantly less inequality than the U.S. population as a whole.

**Employment status:** Self-employment is common in Chile relative to in the U.S., but in Chile it is more likely to be present among secondary household members. The U.S. sees less self-employment, but has a larger fraction of self-employed household heads. Across the board—income, assets, debt, wealth—we see more inequality among self-employed households than traditionally employed households, and in particular the income Gini among American self-employed households is 9 points higher than the population, while for Chile self-employed households have the same Gini as the population as a whole. Aside from inequality, American self-employed households accumulate far more wealth as well: they have 30 times as much as their Chilean counterparts, compared to only 8.5 times as much for employed workers. This stark difference among entrepreneurs mirrors the observed differences in inequality between the U.S. and Chile and seems the most plausible channel to explain the observed inequality.

**Educational attainment:** Chilean households are consistently less educated than American households: approximately half as many heads of household

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<sup>1</sup> Our measure of wealth for the Chilean economy does not include expected wealth due to future social transfers from social retirement schemes.



have a university degree. College education is more of a guarantee of a high-percentile income in Chile, but lack of education is more of a guarantee of low income in the U.S. Wealth inequality is particularly high in both countries among college dropouts, but education is not a strong predictor of inequality, as American college graduates and high school dropouts have almost identical degrees of wealth inequality.

We characterize the Chilean distributions of income, wealth, assets, and debt in aggregate form and across all these discussed subgroups in considerable detail in sections II and III, respectively.

There is not a well-established literature on inequality in Chile. The only other literature making use of our data source, the Household Financial Survey (*Encuesta Financiera de Hogares*, EFH) is, to the best of our knowledge, Uribe and Martínez (2016), which characterizes some determinants of wealth in Chile, for example age and bequests. Beyond this, Fairfield and Jorratt De Luis (2015) access Chilean tax return data, but are limited in that they only examine the very top of the income and wealth distributions, reporting no information on any segment of the population not in the top 10% of either distribution. Sanhueza and Mayer (2011) characterize the evolution of top incomes as well, but rely on survey data that is likely not nationally representative. To this end, our basic analysis of the Household Financial Survey is a significant improvement on the existing literature.

In terms of characterizing the American distributions of income and wealth, there is a vast literature on this topic. Two recent and influential papers dealing with it in considerable detail are Heathcote et al. (2010) and Saez and Zucman (2014). We do not aim to contribute to this literature, but rather are interested in the comparison between the United States and Chile, and seeing whether or not any differences might potentially cast light on the causes of inequality more broadly.

The second part of our paper attempts to draw inference on the nature and drivers of inequality based upon the differences between the U.S. and Chile. There is a large body of literature that has attempted to explain the observed inequality in the wealth distribution of the U.S. For an overview, Cagetti and de Nardi (2008) provide a comprehensive survey of the main empirical results regarding wealth inequality and the most relevant explanations that have been explored in the literature for this phenomenon.

One mechanism that has been evaluated as an explanation for inequality is the existence of uninsurable earnings shocks. Quadrini and Ríos-Rull (1997) argue that models with just income risk are unlikely to provide good matches for the observed wealth distribution, though Domeij and Heathcote (2004) later managed to construct an earnings process for individuals that generates a wealth distribution inside an Aiyagari-style model that closely resembles the one in the U.S., where labor income uncertainty is still consistent with empirical

estimates from microdata.<sup>2</sup> Cordoba (2008) shows that between the two financial frictions of uninsurable risks and a borrowing constraint often found in such models, the incomplete markets with respect to income are the key factor.

Entrepreneurship is another potential explanation for wealth inequality in the U.S. Quadrini (2000) introduces entrepreneurial choice in an Aiyagari model, where the opportunity to start a business may influence saving behavior and entrepreneurship generates different returns than employment. He finds that a calibrated version of his model can generate wealth concentration that is largely consistent with the observed data. Cagetti and de Nardi (2006) assume that the amount entrepreneurs can borrow is a function of their own wealth, which acts as collateral. This allows them to obtain a somewhat better fit of the upper tail of the wealth distribution.

Another strand of literature has analyzed the importance of introducing bequests, both involuntary and voluntary, to explain the high saving rates of the richest fractions of populations. Huggett (1996) formulates a benchmark OLG model in which people save to insure against earning risks, both for retirement and in case they outlive their life expectancy. In this setup, people that die prematurely leave accidental bequests. While Huggett (1996) succeeds in matching the Gini coefficient of the wealth distribution in the U.S., the model generates too little wealth in the upper tail of the wealth distribution. Voluntary bequests and human capital are then introduced by de Nardi (2004). She finds that voluntary bequests can help explain the upper tail of the wealth distribution.

The facts presented in this paper shed light over the plausibility of some of these proposed mechanisms for inequality. As mentioned, while income is more unequal in Chile than in the U.S., wealth is more unequal in the U.S. than in Chile. This may be due to higher earnings risk in Chile, or to higher inequality within, for example, the college premium. However, our results indicate that the college premium in the U.S. is higher than in Chile. Moreover, it is hard to imagine that markets to insure against idiosyncratic earnings risk are more incomplete in the U.S. than in Chile, given that Chile is a developing economy and financial markets in general are less developed than in the U.S.<sup>3</sup> Our results on the debt distributions in Chile and the U.S. seem to corroborate this idea: debt is much more unequally distributed in Chile than in the U.S., and in Chile those households who hold debt are the relatively wealthy. These findings pose serious doubts about the validity of earnings risks to explain inequality in the U.S., since the apparently higher earnings risk in Chile should indicate higher wealth inequality in Chile, which contradicts what we observe in the data.

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<sup>2</sup> In particular, they match estimates from the Panel Study of Income Dynamics (PSID), a widely-used data source to estimate earnings processes.

<sup>3</sup> Other alternative explanations for the high wealth inequality observed in the U.S., such as heterogeneity in preferences and progressive taxation, can be ruled out by similar reasoning.



Second, we also find evidence that the bequest motive is larger in Chile than in the U.S., as the wealth of individuals over 65 years old is larger on average than the wealth of any other age group, while in the U.S. the richest age group is the 55-64 age cohort. U.S. households, on average, spend down assets in retirement, while Chilean households do not. This fact also casts doubts on the plausibility of the bequest motive to explain the high wealth inequality present in the U.S. These results lead us to conclude that entrepreneurship is probably the most reasonable argument to explain wealth inequality in the U.S.<sup>4</sup>

This paper proceeds as follows. Section II reports the data sources used in the analysis and briefly examines the aggregate distributions of income, assets, debt, and wealth. Section III then considers each of these distributions by age, gender, marital status, employment type, and educational attainment. Section IV ties these results together to hypothesize about the causes of inequality in Chile and the U.S. Section V concludes the paper.

## II. DATA AND AGGREGATE DISTRIBUTIONS

Our primary data source is the Chilean 2007 Household Financial Survey (EFH).<sup>5</sup> For comparison purposes with the United States, we also employ the familiar Survey of Consumer Finances.

The aforesaid survey was developed and carried out for the first time in 2007. The survey was again collected in 2008, 2009, 2011, and 2014, though the 2014 results are not available as of this writing. The 2007 EFH collects information on 4,021 households. It is representative at the national level and surveying was completed between November 2007 and January 2008 (we consider the values reported to be expressed in December 2007 prices). The survey collects basic information at the household level, including demographic characteristics, educational attainment, and employment status. More importantly, the EFH also collects extensive information on the household's financial situation, including income, assets, and liabilities.

The American SCF is a cross-sectional triennial survey developed for the first time in 1983 that collects information on assets, liabilities, income, and demographic characteristics of U.S. households. The 2007 survey collected information on 5001 households and was carried out between May 2007 and March 2008. We consider values to be expressed in 2007 prices for our analysis (more than 90% of all interviews were conducted before December 2007). We do not exploit more recent versions of the EFH and SCF due to concerns over the financial crisis in the U.S., and because other SCF years (2010, 2013) do not line up with EFH years.

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<sup>4</sup> In this respect, the group of self-employed households, which is the group to which entrepreneurs belong in the U.S., in Chile is mostly constituted of informal workers. Therefore, comparability between this group of households in Chile and the U.S. can be very misleading.

<sup>5</sup> Translated from Spanish. In the original, *Encuesta Financiera de Hogares*. We abbreviate it as EFH throughout the paper.

Both surveys are cross-sectional surveys that provide detailed information on the finances of households. In each country, these surveys provide unique information that is not collected by any other available study. The SCF for the U.S. is widely used for academic as well as policy work. The EFH, on the contrary, is a relatively new data source that has not yet been extensively employed.<sup>6</sup>

The main variables of interest for this analysis are income, assets, liabilities, and wealth. We provide detailed information on the precise data definitions of each variable of interest as they are introduced. Distributions for each variable are plotted as figures 1, 2, 3, 4. For all monetary figures, we use annual income denominated in 2007 U.S. dollars. Values in the EFH have been transformed into December 2007 dollars to achieve comparability with the U.S. data. In addition, we follow Guner et al. (2014) to transform pre-tax income reported in the SCF into after-tax income as it is reported in the EFH.

### 1. Income distribution

Table 1 shows a variety of statistics characterizing the annual income distributions for Chile (upper panel) and the U.S. (lower panel). In the case of Chile, we use the monthly after-tax income variable, which is directly reported on the EFH survey, and transform it to annual terms by multiplying the reported value by 12. The upper panel in table 1 shows that average annual after-tax income in Chile is USD 15,375.<sup>7</sup> The average income level in the U.S. was USD 71,000.<sup>8</sup> Thus, average income in the U.S. is around 4.5 times higher than in Chile.

The income distributions in Chile and United States differ in many respects. The income Gini coefficient for Chile is 0.57 whereas for the United States it is 0.53. The coefficient reflects a somewhat more unequal distribution in Chile. This finding is mirrored in other commonly used measures of inequality. The top 1% to 40% ratio for Chile is 69 (61 in the U.S.), the mean to median ratio for Chile is 1.78 while it is 1.62 for the U.S., and the location of the mean is the 76th percentile in Chile but the 72nd percentile in the U.S. All these statistics consistently point toward Chile having a somewhat more unequal income distribution than the United States.

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<sup>6</sup> Some exceptions are Madeira (2011) and Alfaro et al. (2010), among others.

<sup>7</sup> This figure is obtained using a CLP/US\$ exchange rate of 485.92 reported as of December 31st, 2007.

<sup>8</sup> To make reported income in the U.S. comparable to reported income in Chile, we transformed pre-tax U.S. income to after-tax income using the methodology described in Guner et al. (2014).



**Table 1****Income distribution in Chile and the United States**

	Income quintiles					Total
	1st	2nd	3rd	4th	5th	
<b>Chile</b>						
Minimum	0.000	3.872	7.115	10.668	17.186	0.000
Maximum	3.848	7.084	10.668	17.184	1,258.522	1,258.522
Median	2.420	5.246	8.640	13.311	29.043	8.640
Mean	2.172	5.370	8.684	13.528	47.050	15.375
Std	1.237	0.910	1.069	1.853	63.351	32.674
<b>United States</b>						
Minimum	0.677	20.002	34.860	54.748	87.657	0.677
Maximum	19.822	34.754	54.708	87.530	91,575.730	91,575.730
Median	12.283	27.159	44.028	68.504	122.472	44.028
Mean	12.416	27.192	44.273	69.671	201.542	71.199
Std	4.391	4.279	5.785	9.548	429.950	204.621

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile. Values in thousands dollars of 2007.

**Table 2****Asset distribution in Chile and the United States**

	Income quintiles					Total
	1st	2nd	3rd	4th	5th	
<b>Chile</b>						
Minimum	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	1,206	2,091	1,206	1,524	3,486	3,486
Median	18	16	22	30	68	24
Mean	33	29	34	43	145	57
Std	56	65	60	75	254	135
<b>United States</b>						
Minimum	0.0	0.0	0.0	0.7	0.1	0.0
Maximum	6,477	14,209	40,120	20,568	1,411,730	1,411,730
Median	14	80	184	337	791	213
Mean	89	171	277	507	2,184	654
Std	179	346	641	674	7,240	3,396

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile. Values in thousands of dollar of 2007.

**2. Asset distribution**

The aggregate statistics for the asset distribution are displayed in table 2, calculated by income quintiles and on aggregate. The average asset level in the U.S. is around 11 times larger than in Chile. Assets are more equally distributed in Chile; the Gini coefficient for the U.S. is 0.76 while in Chile it is 0.70. Other inequality measures, such as the coefficient of variation, top 1% to bottom 40% ratio, location of the mean (percentile) and mean to median ratio, all consistently point towards the same pattern of relative inequality.

Unsurprisingly, income is strongly correlated with assets, and the extra inequality in the U.S. relative to Chile is driven entirely through the uppermost income percentiles. Moving from the 4th to the 5th income quintile in Chile increases the standard deviation of assets by a factor of approximately 3, but by a factor of more than 10 in the United States.

### 3. Debt distribution

Table 3 portrays the aggregate debt distribution for both countries and also by income quintile. The mean debt level of the U.S. is around 16 times higher than in Chile, and the median is 91 times higher in the U.S. While Chileans in the lowest two quintiles hold a lot of debt for their income relative to the U.S., and Chileans in the third and fourth hold little, the difference in the aggregate populations again comes from the top quintile, as top quintile earners dominate debt holdings.

Debt is remarkably unequally distributed in Chile, much more so than in the U.S. The Gini coefficient of the debt distribution in Chile is 0.85, compared to 0.70 in the U.S. All other measures of dispersion we compute point in the same direction. The mean is located in the 78th percentile in Chile, which is an indication of a distribution very skewed to the right. In the U.S. the distribution is less skewed, with the mean located in the 68th percentile. The significantly lower average debt holdings relative to income in Chile are consistent with the idea of less complete financial markets in Chile, such as reduced ability to borrow against future income.

**Table 3**

#### Debt distribution in Chile and the United States

	Income quintiles					Total
	1st	2nd	3rd	4th	5th	
<b>Chile</b>						
Minimum	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	232.677	78.001	246.723	243.980	407.660	407.660
Median	0.002	0.151	0.383	0.726	2.319	0.303
Mean	1.429	1.586	3.508	5.324	17.069	5.782
Std	6.093	5.082	10.319	11.246	31.648	17.119
<b>United States</b>						
Minimum	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	934.200	1,037.000	960.000	1,200.000	59,150.000	59,150.000
Median	0.035	6.300	35.900	101.000	173.400	27.500
Mean	13.301	29.603	67.529	126.164	234.977	94.985
Std	37.607	59.778	85.663	135.631	316.572	181.929

Source: Encuesta Financiera de Hogares and Survey of Consumer Finance. Values in thousands of dollars of 2007.

#### 4. Wealth distribution

Table 4 shows the general statistics of both wealth distributions. With wealth being the sum of assets net of debt, the wealth distribution can almost be inferred from the prior discussion. Mean wealth in the U.S. is 11 times higher than in Chile, but the median is only six times higher in the U.S.

Wealth is very unequally distributed in both countries but, in contrast to the debt distribution, it is more unequally distributed in the U.S. than in Chile. The Gini coefficient of the wealth distribution in Chile is 0.74, while the Gini coefficient of the U.S. wealth distribution is 0.82. Since assets are much larger than debt, wealth largely reflects assets. All other measures of dispersion show a similar pattern, and the mean is located in the 77th percentile of the distribution in Chile and in the 82nd percentile in the U.S., indicating the additional right-skewness in the U.S. distribution.

The means of the extreme income quintiles are the ones that differ the most among the U.S. and Chile: the mean of the fifth income quintile is 15.3 times higher in the U.S. than in Chile. Notably, the median of the first income quintile actually indicates higher wealth in Chile, reflecting the much greater holding of debt in the U.S.

Given that asset and debt holdings are dominated by the high-income, so is wealth. But why the additional inequality in the U.S. over Chile? We first examine some breakdowns of inequality by a variety of subgroups, and then move to tackle this question in the subsequent section.

**Table 4**

#### Wealth distribution in Chile and the United States

	Income quintiles					Total
	1st	2nd	3rd	4th	5th	
<b>Chile</b>						
Minimum	-158.964	-37.059	-198.319	-214.906	-211.219	-214.906
Maximum	1,206.083	2,087.187	1,206.083	1,511.174	3,486.144	3,486.144
Median	16.135	13.086	19.120	23.597	51.430	20.169
Mean	31.369	27.373	30.302	37.598	127.519	50.786
Std	55.564	65.431	58.661	74.530	250.304	131.450
<b>United States</b>						
Minimum	-162.720	-473.700	-238.900	-84.380	-251.650	-473.700
Maximum	6,006.500	14,209.370	40,119.500	20,368.000	1,411,730.000	1,411,730.000
Median	8.100	39.550	87.950	200.900	594.930	121.000
Mean	76.004	141.222	209.805	380.884	1,948.790	558.791
Std	166.765	341.236	628.564	662.267	7,171.825	3,348.326

Source: Encuesta Financiera de Hogares and Survey of Consumer Finance. Values in thousands of dollars of 2007.

### III. SUBGROUP BREAKDOWNS

We now analyze the distributions of income, assets, debt, and wealth in the context of several demographic characteristics: age, marital status, gender of household head, employment status, and educational attainment. These results provide further insight into the full nature of Chilean inequality, but also will connect with our discussion on the causes and nature of inequality in the next section.

#### 1. Age

We first focus on looking at differences in the populations by age. In general, Chile sees more within-age-group inequality relative to the population as a whole compared to the U.S. That is, age is less informative of financial status—there is more noise in each age group—in Chile than in the U.S.

Table 5 reports the income distribution for Chile and the U.S. by age group of the head of household. We see immediately that in Chile most households in the lowest income quintile are 65 years or older (37%), while only 10% are younger than 35, i.e. the ranks of the low income are dominated by older households. In the U.S. it is still the case that a large fraction of individuals aged 65 or older belong to the lowest income quintile (36%), but 25% of households that are younger than 35 belong to this quintile too. Low-income households in Chile are relatively older.

In the case of the highest income quintile, in Chile 29% of such households heads are between 45 and 54 years old. Only 14% belong to the youngest group (less than 35 years old) and 13% belong to the oldest group (more than 65 years old). Middle-aged households dominate the highest income group in Chile. The U.S. is similar: 31% of households in the highest income quintile are between 45 and 54 years old, 12% of households are below 35 years old, and 12% are over 65. These highest incomes are consistent with the normal life-cycle pattern of earnings.

The oldest age group presents very similar patterns in both countries in terms of composition. A large fraction of this group belongs to the first income quintile: 33% in both countries, and 12% belong to the last income quintile, again in both countries. Conversely, younger Chilean households are relatively high earners, with almost twice as many (20% to 11%) in the top quintile.

When analyzing the asset distribution by age, as displayed in table 6, we see that the asset distribution for households between 35 and 44 years old is more unequal in Chile than in the U.S., unlike all other age groups. The average asset level in the U.S. for individuals up to 44 years old is eight times higher than for Chilean households, and this ratio increases to 14 for households between 45 and 64 years old. Within each age bracket, we also—unsurprisingly—observe a higher asset level as income increases. Assets held by the youngest Chilean households in the fifth income quintile are seven times larger than the youngest households in the first income quintile.



Table 5

Income distribution by age bracket

Age of household head	Chile						United States					
	Income quintiles						Income quintiles					
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>34 and under</b>												
% of households per Income group	10	14	15	15	14	13	25	27	25	19	12	22
% of households per category	14	21	22	23	20	100	23	25	23	18	11	100
Median	2.904	5.325	8.546	13.311	25.412	9.681	11.762	28.046	43.757	68.261	108.453	35.896
Mean	2.627	5.504	8.715	13.677	38.998	14.463	11.849	27.621	43.965	69.291	136.283	47.165
Std	1.144	0.904	1.093	1.772	58.470	29.284	4.622	4.325	5.619	9.532	90.108	47.616
Gini						0.49						0.42
Coef. Variation						2.02						1.01
Top 1% to bottom 40% ratio						46						20
Location of mean (percentile)						71						64
Mean to median ratio						1.49						1.31
<b>35-44</b>												
% of households per Income group	13	23	23	21	22	21	14	15	21	25	23	20
% of households per category	12	23	23	21	21	100	14	16	21	25	24	100
Median	2.904	5.365	8.728	13.311	31.100	9.354	13.170	28.046	44.195	70.335	116.564	53.116
Mean	2.761	5.417	8.691	13.368	47.629	16.544	12.928	27.983	44.390	70.915	168.724	72.879
Std	1.007	0.911	1.075	1.851	61.900	33.148	4.316	4.072	5.861	9.471	273.220	143.164
Gini						0.54						0.45
Coef. Variation						2.00						1.96
Top 1% to bottom 40% ratio						55						36
Location of mean (percentile)						77						66
Mean to median ratio						1.77						1.37
<b>45-54</b>												
% of households per Income group	18	24	30	27	29	26	13	14	20	26	31	21
% of households per category	13	19	24	21	23	100	13	13	19	24	30	100
Median	12.202	12.425	12.706	13.109	14.429	12.807	12.691	27.631	46.339	68.261	126.886	58.279
Mean	12.190	12.441	12.718	13.128	16.055	13.448	12.338	27.543	46.066	69.543	206.025	92.967
Std	12.104	12.076	12.093	12.152	17.528	15.019	4.906	4.314	5.578	9.815	401.199	232.388
Gini						0.56						0.52
Coef. Variation						2.09						2.50
Top 1% to bottom 40% ratio						63						54
Location of mean (percentile)						77						73
Mean to median ratio						1.79						1.60
<b>55-64</b>												
% of households per Income group	23	15	16	16	22	18	12	16	16	17	23	17
% of households per category	24	17	18	17	24	100	14	20	19	20	28	100
Median	12.202	12.424	12.715	13.150	14.763	12.715	11.762	26.271	42.962	67.852	130.476	50.385
Mean	12.167	12.435	12.721	13.134	16.374	13.478	12.060	26.410	43.630	69.715	229.243	91.228
Std	12.109	12.070	12.085	12.166	17.933	15.328	3.878	4.280	5.537	9.399	515.479	281.409
Gini						0.63						0.57
Coef. Variation						2.25						3.08
Top 1% to bottom 40% ratio						97						74
Location of mean (percentile)						77						74
Mean to median ratio						2.07						1.81
<b>Over 65</b>												
% of households per Income group	37	25	16	20	13	22	36	28	17	13	12	21
% of households per category	33	23	14	18	12	100	33	27	16	12	12	100
Median	2.170	5.421	8.664	13.251	26.276	6.293	12.451	26.271	42.894	66.982	132.957	28.046
Mean	1.904	5.418	8.791	13.500	41.825	10.568	12.758	26.633	43.066	68.067	263.425	57.095
Std	1.168	0.929	0.980	1.832	46.695	20.276	4.159	4.188	5.925	9.110	679.542	243.282
Gini						0.56						0.59
Coef. Variation						1.92						4.26
Top 1% to bottom 40% ratio						69						95
Location of mean (percentile)						69						77
Mean to median ratio						1.68						2.04

Source: Survey of Consumer Finance 2007 for the U.S. and Encuesta Financiera de Hogares for Chile. Values in thousands of dollars of 2007.

Table 6

## Asset distribution by age

Age of household head	Chile						United States						
	Income quintiles						Income quintiles						
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total	
<b>34 and under</b>													
% of households per Income group	10	14	15	15	14	13	25	27	25	19	12	22	
% of households per category	14	21	22	23	20	100	23	25	23	18	11	100	
Median	0.202	0.403	3.227	8.067	31.261	6.051	5.230	15.000	81.860	233.900	412.600	35.100	
Mean	8.924	7.404	17.933	19.932	59.574	23.354	25.042	47.314	132.474	318.502	769.089	190.180	
Std	12.764	12.300	29.361	24.967	149.077	72.352	71.198	86.132	169.671	613.278	1,536.347	624.584	
Gini						0.73						0.75	
Coef. Variation						3.10						3.28	
Top 1% to bottom 40% ratio						5518						641	
Location of mean (percentile)						71						70	
Mean to median ratio						3.86						5.42	
<b>35-44</b>													
% of households per Income group	13	23	23	21	22	21	14	15	21	25	23	20	
% of households per category	12	23	23	21	21	100	14	16	21	25	24	100	
Median	10.084	16.135	20.169	24.202	65.548	20.189	4.800	31.640	163.600	295.070	625.600	207.720	
Mean	15.760	21.740	40.191	32.288	140.942	52.990	32.516	74.324	196.214	385.993	1,264.913	453.994	
Std	20.108	33.721	77.475	48.281	293.344	151.031	93.003	103.293	263.104	366.302	4,036.982	2,029.288	
Gini						0.73						0.70	
Coef. Variation						2.85						4.47	
Top 1% to bottom 40% ratio						391						320	
Location of mean (percentile)						77						75	
Mean to median ratio						2.62						2.19	
<b>45-54</b>													
% of households per Income group	18	24	30	27	29	26	13	14	20	26	31	21	
% of households per category	13	19	24	21	23	100	13	13	19	24	30	100	
Median	12.101	12.101	24.202	28.236	73.615	24.202	9.000	115.100	188.300	365.350	754.500	295.800	
Mean	16.979	22.021	32.706	39.314	140.254	54.645	87.232	152.413	264.556	479.918	1,956.152	792.298	
Std	19.916	36.056	69.896	49.860	245.681	134.293	275.686	173.649	365.084	504.093	5,850.780	3,328.086	
Gini						0.70						0.72	
Coef. Variation						2.46						4.20	
Top 1% to bottom 40% ratio						268						291	
Location of mean (percentile)						76						80	
Mean to median ratio						2.26						2.68	
<b>55-64</b>													
% of households per Income group	23	15	16	16	22	18	12	16	16	17	23	17	
% of households per category	24	17	18	17	24	100	14	20	19	20	28	100	
Median	31.261	20.169	26.219	33.682	81.481	34.287	40.000	123.080	275.650	401.000	1,057.400	346.630	
Mean	50.610	42.723	33.081	53.750	162.220	73.219	122.453	191.107	414.881	603.884	2,862.597	1,042.952	
Std	72.901	113.211	37.515	65.207	227.029	138.585	207.539	280.494	850.158	867.187	8,232.607	4,502.238	
Gini						0.66						0.75	
Coef. Variation						1.89						4.32	
Top 1% to bottom 40% ratio						119						314	
Location of mean (percentile)						77						83	
Mean to median ratio						2.14						3.01	
<b>Over 65</b>													
% of households per Income group	37	25	16	20	13	22	36	28	17	13	12	21	
% of households per category	33	23	14	18	12	100	33	27	16	12	12	100	
Median	30.253	26.219	31.261	37.110	106.894	31.261	89.500	230.450	331.700	706.400	1,596.100	251.000	
Mean	41.356	45.782	42.008	68.126	218.592	68.509	146.683	339.080	477.466	941.312	4,592.829	867.585	
Std	65.113	79.181	47.047	130.247	299.987	141.873	179.285	553.471	1,159.034	953.409	13,282.550	4,783.226	
Gini						0.64						0.76	
Coef. Variation						2.07						5.51	
Top 1% to bottom 40% ratio						103						341	
Location of mean (percentile)						77						83	
Mean to median ratio						2.19						3.46	

Source: Survey of Consumer Finance 2007 for the U.S. and Encuesta Financiera de Hogares for Chile. Values in thousands of dollars of 2007.



Table 7

## Debt distribution by age

Age of household head	Chile						United States					
	Income quintiles					Total	Income quintiles					Total
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>34 and under</b>												
% of households per Income group	10	14	15	15	14	13	25	27	25	19	12	22
% of households per category	14	21	22	23	20	100	23	25	23	18	11	100
Median	0.111	0.403	0.524	2.138	4.034	0.605	0.500	9.400	36.300	139.990	230.000	20.200
Mean	1.231	3.442	3.486	6.577	18.185	6.848	12.968	28.837	77.726	155.058	252.473	83.759
Std	3.955	11.239	7.920	11.235	30.823	17.285	31.872	54.752	95.690	163.265	223.017	138.921
Gini						0.82						0.71
Coef. Variation						2.52						1.66
Top 1% to bottom 40% ratio						3533						417
Location of mean (percentile)						78						69
Mean to median ratio						11.32						4.15
<b>35-44</b>												
% of households per Income group	13	23	23	21	22	21	14	15	21	25	23	20
% of households per category	12	23	23	21	21	100	14	16	21	25	24	100
Median	0.061	0.262	0.605	3.630	5.723	0.740	0.700	9.000	65.300	130.100	220.100	75.800
Mean	3.865	1.354	5.266	8.371	23.953	8.843	20.142	32.402	83.869	147.769	261.221	124.687
Std	13.449	2.801	15.400	12.463	38.497	22.262	66.804	52.697	90.092	124.321	286.972	184.153
Gini						0.82						0.61
Coef. Variation						2.52						1.48
Top 1% to bottom 40% ratio						3018						153
Location of mean (percentile)						78						62
Mean to median ratio						11.95						1.64
<b>45-54</b>												
% of households per Income group	18	24	30	27	29	26	13	14	20	26	31	21
% of households per category	13	19	24	21	23	100	13	13	19	24	30	100
Median	0.121	0.202	0.750	0.910	4.192	0.504	1.700	19.500	45.000	105.100	169.000	73.860
Mean	1.156	1.982	4.440	5.438	18.534	6.981	19.396	50.715	67.157	131.617	238.898	126.710
Std	3.664	4.253	10.706	12.893	32.166	18.615	39.101	66.314	72.761	139.652	300.753	201.684
Gini						0.83						0.62
Coef. Variation						2.67						1.59
Top 1% to bottom 40% ratio						3295						126
Location of mean (percentile)						79						66
Mean to median ratio						13.85						1.72
<b>55-64</b>												
% of households per Income group	23	15	16	16	22	18	12	16	16	17	23	17
% of households per category	24	17	18	17	24	100	14	20	19	20	28	100
Median	0.061	0.030	0.121	0.645	2.168	0.202	1.500	11.000	28.910	68.000	162.500	31.500
Mean	1.941	1.255	1.874	5.386	14.910	5.492	14.025	34.503	57.249	105.463	232.051	104.594
Std	5.215	3.054	4.531	11.602	28.027	15.849	25.981	84.629	79.871	116.276	355.944	217.504
Gini						0.86						0.71
Coef. Variation						2.89						2.08
Top 1% to bottom 40% ratio						70142						455
Location of mean (percentile)						81						70
Mean to median ratio						27.23						3.32
<b>Over 65</b>												
% of households per Income group	37	25	16	20	13	22	36	28	17	13	12	21
% of households per category	33	23	14	18	12	100	33	27	16	12	12	100
Median	0.000	0.020	0.016	0.020	0.070	0.000	0.000	0.000	1.800	4.190	30.000	0.000
Mean	0.464	0.605	0.773	0.948	4.700	1.134	8.328	15.637	42.444	58.839	164.129	40.125
Std	2.768	1.273	2.789	2.309	16.936	6.400	25.248	40.789	76.508	94.203	389.653	150.723
Gini						0.90						0.86
Coef. Variation						5.64						3.76
Top 1% to bottom 40% ratio						-						-
Location of mean (percentile)						84						80
Mean to median ratio						-						-

Source: Survey of Consumer Finance 2007 for the U.S. and Encuesta Financiera de Hogares for Chile. Values in thousands of dollars of 2007.

Comparing the debt distributions by age (table 7), we observe that in the U.S., debt is more equally distributed within each age group than as a whole, except in the last age group (over 65 years old). In the case of Chile, debt is less equally distributed within each age group. On average, households less than 35 years old have 12 times more debt in the U.S. than in Chile. This number increases for each age group, and households over 65 years old in the U.S. have 35 times, on average, more debt than in Chile.

The households that hold on average the largest levels of debt, both in the U.S. and in Chile, are households between the ages of 35 and 44. Peculiarly, households in this age group in Chile, in the first quintile of income, are more indebted on average than households in the second quintile. This is also the case for households older than 55 years old, while senior households (65+) are less indebted in both Chile and the U.S.

Considering wealth by age (table 8), wealth is very unequally distributed in the first age group, both in the U.S. and in Chile: the Gini coefficients are 0.9 in both cases. For the rest of the age groups, in the U.S. the distributions are more equal than the whole population, while in Chile they are as unequally distributed as the whole population. It is worth noting that for households whose head is 65 years old or more, the Gini coefficient in Chile is 0.64, considerably lower than the Gini of the overall population. On the contrary, in the U.S. the Gini is 0.78, which is in line with the U.S. population's Gini coefficient.

On average, households 34 years old and less have 6.4 times more wealth in the U.S. than in Chile. This figure increases as the age of the household increases: households that are 65 years old and more hold, on average, 12.3 times more wealth in the U.S. than in Chile.

Finally, while in Chile, households in the 55-64 age group and the 65+ age group hold almost exactly the same average wealth, in the U.S. the 55-64 households hold about 12% more wealth than senior households. This may be an indication that the bequest motive is stronger in Chile than in the U.S., to which we will return later.

## 2. Marital status

Our second dimension of interest is marital status. Unsurprisingly, married households are much better off financially, though more so in the U.S. than in Chile. Marital status does not make much difference in terms of inequality measures for the U.S., though in Chile married households display somewhat less inequality.

The income distribution of each country by marital status is presented in table 9. We observe a higher average income for married households for both the Chilean and the U.S. economy. Married Chilean households report an average annual income of USD 18,079, much lower than married households in the U.S., whose average annual income is USD 95,101. The income drop for singles is stronger in the U.S., with single households earning 61% less, compared to 41% in Chile, relative to married household heads.





Table 8

## Wealth distribution by age

Age of household head	Chile						United States					
	Income quintiles						Income quintiles					
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>34 and under</b>												
% of households per Income group	10	14	15	15	14	13	25	27	25	19	12	22
% of households per category	14	21	22	23	20	100	23	25	23	18	11	100
Median	0.202	0.000	2.703	2.420	13.992	2.158	2.000	6.700	16.260	63.970	214.400	11.750
Mean	7.693	3.961	14.447	13.355	41.389	16.505	12.074	18.478	54.747	163.445	516.616	106.421
Std	12.860	11.759	28.760	22.097	144.177	68.694	61.107	58.265	116.505	587.072	1,505.484	583.848
Gini						0.90						0.90
Coef. Variation						4.16						5.40
Top 1% to bottom 40% ratio						-115						-591
Location of mean (percentile)						70						80
Mean to median ratio						7.65						9.09
<b>35-44</b>												
% of households per Income group	13	23	23	21	22	21	14	15	21	25	23	20
% of households per category	12	23	23	21	21	100	14	16	21	25	24	100
Median	10.084	13.977	11.889	16.135	42.511	15.721	2.501	14.750	54.300	143.060	411.000	88.650
Mean	11.895	20.387	34.925	23.917	116.989	44.147	12.374	41.921	112.345	238.223	1,003.692	329.307
Std	19.664	33.720	71.271	45.120	283.499	143.658	35.658	73.236	224.823	319.334	3,980.983	1,981.481
Gini						0.78						0.78
Coef. Variation						3.25						6.02
Top 1% to bottom 40% ratio						12751						1225
Location of mean (percentile)						79						79
Mean to median ratio						2.81						3.72
<b>45-54</b>												
% of households per Income group	18	24	30	27	29	26	13	14	20	26	31	21
% of households per category	13	19	24	21	23	100	13	13	19	24	30	100
Median	10.084	9.076	21.521	20.442	53.999	19.985	5.000	57.600	106.660	234.240	578.730	185.500
Mean	15.822	20.039	28.266	33.876	121.721	47.664	67.836	101.699	197.399	348.301	1,717.254	665.587
Std	19.704	35.968	70.688	49.626	242.636	130.941	249.705	147.056	349.085	436.974	5,756.855	3,257.240
Gini						0.76						0.78
Coef. Variation						2.75						4.89
Top 1% to bottom 40% ratio						4226						593
Location of mean (percentile)						76						82
Mean to median ratio						2.39						3.59
<b>55-64</b>												
% of households per Income group	23	15	16	16	22	18	12	16	16	17	23	17
% of households per category	24	17	18	17	24	100	14	20	19	20	28	100
Median	24.200	18.282	25.856	30.253	66.758	29.648	35.500	88.300	210.200	313.800	863.430	254.150
Mean	48.669	41.467	31.207	48.363	147.310	67.727	108.428	156.604	357.632	498.421	2,630.546	938.358
Std	73.074	113.307	36.454	63.111	222.562	134.815	195.838	258.464	813.905	865.630	8,126.509	4,426.996
Gini						0.69						0.78
Coef. Variation						1.99						4.72
Top 1% to bottom 40% ratio						161						519
Location of mean (percentile)						76						83
Mean to median ratio						2.28						3.69
<b>Over 65</b>												
% of households per Income group	37	25	16	20	13	22	36	28	17	13	12	21
% of households per category	33	23	14	18	12	100	33	27	16	12	12	100
Median	30.061	26.189	31.261	34.387	104.534	31.261	81.690	219.550	262.900	660.300	1,427.400	220.800
Mean	40.892	45.178	41.236	67.177	213.892	67.375	138.355	323.443	435.021	882.473	4,428.700	827.460
Std	63.242	79.269	46.917	130.345	299.958	141.093	174.045	554.026	1,159.894	959.921	13,219.550	4,749.559
Gini						0.65						0.78
Coef. Variation						2.09						5.74
Top 1% to bottom 40% ratio						108						434
Location of mean (percentile)						77						83
Mean to median ratio						2.16						3.75

Source: Survey of Consumer Finance 2007 for the U.S. and Encuesta Financiera de Hogares for Chile. Values in thousands of dollars of 2007.

Table 9

## Income distribution by marital status

Marital status of household head	Chile						United States					
	Income quintiles					Total	Income quintiles					Total
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Married</b>												
% of households per Income group	43	63	69	66	74	63	23	44	60	79	87	59
% of households per category	13	21	22	21	23	100	8	15	20	26	30	100
Median	2.666	5.246	8.640	13.311	30.808	9.681	14.396	27.764	44.924	69.590	124.146	61.744
Mean	2.328	5.399	8.684	13.591	50.931	18.079	14.195	27.735	44.778	70.341	206.557	95.101
Std	1.246	0.904	1.073	1.849	70.323	38.737	3.950	4.342	5.876	9.504	431.851	248.187
Gini						0.57						0.50
Coef. Variation						2.14						2.61
Top 1% to bottom 40% ratio						68						50
Location of mean (percentile)						78						74
Mean to median ratio						1.87						1.54
<b>Single</b>												
% of households per Income group	57	37	31	34	26	37	77	56	40	21	13	41
% of households per category	30	21	17	18	14	100	37	28	19	10	6	100
Median	2.251	5.240	8.640	13.069	25.654	6.922	11.762	27.027	43.329	65.874	114.539	26.271
Mean	2.052	5.322	8.683	13.407	36.018	10.740	11.875	26.761	43.519	67.184	165.606	37.003
Std	1.217	0.917	1.061	1.855	34.637	17.072	4.377	4.179	5.563	9.303	414.510	107.996
Gini						0.53						0.46
Coef. Variation						1.59						2.92
Top 1% to bottom 40% ratio						50						32
Location of mean (percentile)						68						68
Mean to median ratio						1.55						1.41

Source: Survey of Consumer Finance 2007 for the U.S. and Encuesta Financiera de Hogares for Chile.

In both countries, the majority of households are married: in Chile 63% of households are married, as are 59% in the U.S. Given that singles earn less, it is unsurprising that marriage predicts income quintile: 57% of Chilean households in the first income quintile are single, and considerably higher in the U.S. at 77%. Conversely, households in the highest income quintile are mainly married: 74% in Chile and 87% in the U.S. All the dispersion measures are higher for the Chilean economy and larger for single households.

Table 10 breaks down asset holdings by marital status. Married households in Chile hold about USD 63,271 in assets, while the figure is 14 times larger in the U.S., at USD 893,744. Asset holdings for singles in Chile are lower than for the married group, just as in the U.S., consistent with the general married-single dynamics. Single households in Chile hold on average about USD 45,000, and about seven times more in the U.S. at roughly USD 311,000. As income increases the asset level also increases for both married and single households. Chilean households in the fifth income quintile hold about four times more assets than households in the first income quintile, compared to a ratio of 22 in the U.S.



Table 10

## Asset distribution by marital status

Marital status of household head	Chile						United States					
	Income quintiles					Total	Income quintiles					Total
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Married</b>												
% of households per Income group	43	63	69	66	74	63	23	44	60	79	87	59
% of households per category	13	21	22	21	23	100	8	15	20	26	30	100
Median	20.169	14.118	20.572	29.446	72.204	26.219	27.000	84.400	187.200	318.200	778.800	304.000
Mean	41.206	27.199	30.969	41.382	157.192	63.271	103.467	171.311	285.756	486.504	2,227.407	893.744
Std	62.280	63.174	56.820	71.009	277.581	154.435	179.967	430.098	772.713	641.524	7,491.945	4,242.612
Gini						0.70						0.74
Coef. Variation						2.44						4.75
Top 1% to bottom 40% ratio						246						291
Location of mean (percentile)						78						82
Mean to median ratio						2.41						2.94
<b>Single</b>												
% of households per Income group	57	37	31	34	26	37	77	56	40	21	13	41
% of households per category	30	21	17	18	14	100	37	28	19	10	6	100
Median	16.135	18.152	24.202	30.253	54.455	24.202	11.500	77.850	174.350	404.860	900.600	97.000
Mean	26.366	31.924	40.157	45.906	108.761	45.080	84.997	170.439	264.753	583.410	1,893.764	311.273
Std	50.204	68.475	67.056	81.822	166.275	91.316	177.957	260.650	364.765	780.465	5,262.423	1,451.790
Gini						0.67						0.75
Coef. Variation						2.03						4.66
Top 1% to bottom 40% ratio						207						792
Location of mean (percentile)						74						76
Mean to median ratio						1.86						3.21

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile.

Asset inequality in Chile is higher for married households, while in the U.S. it is marginally higher for single households. Numerically, the Gini coefficient for married households in Chile is 0.7 (0.74 in the U.S.), while it is 0.67 for single households (0.75 in the U.S.).

Moving to debt, table 11 shows that, in the U.S., debt is more equally distributed for married households than for single households. In Chile, debt is very unequally distributed in both groups. There are large differences in mean debt levels held by different income quintiles of married and single households, both in Chile and in the U.S. Married households hold more debt on average than single households: in Chile, married households hold about 2 times more debt than single households, while in the U.S. they hold 3 times more debt. Married households in the first quintile of income in Chile are very indebted: they hold more debt, on average, than married households in the second quintile.

Finally, table 12 shows the wealth distribution by marital status of the head of household. There are some remarkable similarities between the U.S. and Chilean

wealth distributions by marital status. In the U.S., the Gini coefficient for both married and single households is 0.80. Nevertheless, the distribution seems to be more skewed to the right for married households, as the mean is located in the 84<sup>th</sup> percentile for marrieds, while it is located in the 78<sup>th</sup> percentile in the case of single households. In Chile, we see more inequality among married households, who have a Gini coefficient of 0.75 versus 0.7 for singles. However, the right-skew for married households remains, with the location of the mean being in the 78<sup>th</sup> percentile, while it is in the 74<sup>th</sup> percentile for singles.

Another similarity between the U.S. in Chile is that married households hold, on average, more wealth than single households, just as per assets: in the U.S. they hold 2.9 times more wealth than single households, and in Chile this number is 1.4. The differences in wealth levels between the countries are more noticeable in the case of married households, as married U.S. households hold 13.6 times more wealth, on average, than married Chilean households. For single households this difference falls to 6.4 times more wealth in the U.S. than in Chile.

Table 11

## Debt distribution by marital status

Marital status of household head	Chile						United States					
	Income quintiles					Total	Income quintiles					Total
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Married</b>												
% of households per Income group	43	63	69	66	74	63	23	44	60	79	87	59
% of households per category	13	21	22	21	23	100	8	15	20	26	30	100
Median	0.054	0.236	0.524	1.065	3.771	0.504	0.500	6.000	39.750	105.100	189.000	70.000
Mean	2.163	1.687	3.436	5.740	19.160	7.070	19.702	35.791	70.249	130.004	245.402	129.773
Std	8.385	5.829	8.297	11.621	33.641	19.263	46.041	74.359	88.180	139.637	322.174	214.819
Gini						0.84						0.64
Coef. Variation						2.72						1.66
Top 1% to bottom 40% ratio						6,067						204
Location of mean (percentile)						79						65
Mean to median ratio						14.02						1.85
<b>Single</b>												
% of households per Income group	57	37	31	34	26	37	77	56	40	21	13	41
% of households per category	30	21	17	18	14	100	37	28	19	10	6	100
Median	0.000	0.061	0.121	0.305	0.905	0.101	0.005	6.800	33.150	77.480	90.000	6.300
Mean	0.868	1.416	3.669	4.516	11.127	3.575	11.354	24.690	63.465	111.892	165.705	45.332
Std	3.319	3.473	13.802	10.434	24.166	12.315	34.413	44.363	81.624	118.571	266.435	101.406
Gini						0.88						0.78
Coef. Variation						3.45						2.24
Top 1% to bottom 40% ratio						-						12,074
Location of mean (percentile)						84						74
Mean to median ratio						35.45						7.20

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile. Values in thousands of dollars of 2007.



Table 12

## Wealth distribution by marital status

Marital status of household head	Chile						United States					
	Income quintiles					Total	Income quintiles					Total
	1st	2nd	3rd	4th	5th		1st	2nd	3rd	4th	5th	Total
<b>Married</b>												
% of households per Income group	43	63	69	66	74	63	23	44	60	79	87	59
% of households per category	13	21	22	21	23	100	8	15	20	26	30	100
Median	19.316	12.424	18.172	22.286	55.060	21.601	16.300	37.600	88.280	183.470	576.600	180.700
Mean	39.043	25.512	27.533	35.643	138.032	56.201	83.765	135.520	215.507	356.500	1,982.006	763.971
Std	62.737	63.385	57.155	70.943	273.335	150.550	162.210	422.591	758.248	624.509	7,421.790	4,187.726
Gini						0.71						0.83
Coef. Variation						2.68						5.48
Top 1% to bottom 40% ratio						839						766
Location of mean (percentile)						78						84
Mean to median ratio						2.60						4.23
<b>Single</b>												
% of households per Income group	57	37	31	34	26	37	77	56	40	21	13	41
% of households per category	30	21	17	18	14	100	37	28	19	10	6	100
Median	16.135	13.553	21.782	26.219	39.355	20.068	7.060	39.620	86.600	258.670	696.400	52.280
Mean	25.498	30.508	36.488	41.391	97.634	41.506	73.643	145.749	201.289	471.518	1,728.060	265.941
Std	48.568	68.627	61.442	80.901	164.821	88.947	168.089	259.085	355.742	780.701	5,212.067	1,427.414
Gini						0.71						0.80
Coef. Variation						2.14						5.37
Top 1% to bottom 40% ratio						453						12,467
Location of mean (percentile)						74						78
Mean to median ratio						2.07						5.09

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile. Values in thousands of dollars of 2007.

### 3. Gender

We now consider households by the self-reported gender of the head of household. Table 13 gives details on income by gender and shows that in Chile, 65% of household heads are male, compared to 72% in the U.S. Lower-income household heads in both countries are more likely to be women. Households in the first income quintile in Chile are evenly distributed between male and female heads, while in the U.S. we observe even fewer male households in the lowest income quintile (43%). As income rises, the fraction of male households increases, reaching 72% in Chile and 93% in the U.S. in the highest income quintile.

In both countries, average income for female households is lower compared to male. The gender gap is larger in the U.S., where male households earn 165% more. In Chile the average gender income gap is much smaller at 49%. In both countries this income differential is being driven by households in the fifth quintile, with minimal differences in the first four quintiles between genders. Turning to assets, Chilean female households hold on average about USD 50,000

in assets while male households own about 20% more. In the U.S., males also save more than female households, but the ratio is more dramatic. Females have assets of USD 270,000 on average, while males have close to three times more with approximately USD 800,000. The gender pattern of inequality is quite similar between Chile and the U.S. American male households exhibit marginally more asset inequality (Gini: 0.75) than female ones (Gini: 0.73), and similarly for Chile, 0.70 for male households versus 0.69 for female.

Looking at the gradient in assets with respect to income, average assets for female Chilean households increase from USD 26,000 in the first income quintile to USD 140,000 (increasing by a factor of 5.4) for the highest income group (table 14). The increase for male households is less dramatic in percentages, moving from USD 40,000 in the first quintile to USD 146,000 for the fifth quintile (increasing by a factor of 3.65). However, in the U.S., this dynamic is reversed and more pronounced: male households see larger increases in assets with income, increasing by a factor of 13.3 from lowest to highest income quintile (USD 60k to USD 800k), while female households, moving from average assets of USD 93,833 to USD 269,727, slightly less than tripling.

Table 13

## Income distribution by gender

Gender	Chile						United States					
	Income quintiles						Income quintiles					
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Female</b>												
% of households per Income group	50	35	32	30	28	35	57	38	24	13	7	28
% of households per category	28	21	18	17	16	100	40	28	17	9	5	100
Median	2.360	5.325	8.778	13.311	26.808	7.261	11.762	26.271	43.239	66.715	107.218	23.597
Mean	2.116	5.378	8.784	13.458	38.102	11.645	12.192	26.412	43.410	67.591	137.508	32.451
Std	1.201	0.945	1.134	1.872	32.390	17.701	4.199	4.193	5.505	9.361	169.198	46.184
Gini						0.54						0.42
Coef. Variation						1.52						1.42
Top 1% to bottom 40% ratio						49						21
Location of mean (percentile)						71						66
Mean to median ratio						1.60						1.38
<b>Male</b>												
% of households per Income group	50	65	68	70	72	65	43	62	76	87	93	72
% of households per category	15	21	21	22	22	100	12	17	21	24	26	100
Median	2.662	5.204	8.582	13.311	29.527	9.411	12.691	27.764	44.619	69.140	124.671	54.708
Mean	2.228	5.366	8.637	13.558	50.451	17.369	12.713	27.668	44.549	69.979	205.782	85.951
Std	1.270	0.890	1.035	1.844	71.402	38.201	4.618	4.262	5.846	9.539	441.494	237.086
Gini						0.57						0.51
Coef. Variation						2.20						2.76
Top 1% to bottom 40% ratio						71						54
Location of mean (percentile)						78						73
Mean to median ratio						1.85						1.57

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile.



Table 14

## Asset distribution by gender

Gender	Chile						United States					
	Income quintiles					Total	Income quintiles					Total
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Female</b>												
% of households per Income group	50	35	32	30	28	35	57	38	24	13	7	28
% of households per category	28	21	18	17	16	100	40	28	17	9	5	100
Median	16.135	20.169	21.177	30.253	62.119	24.202	11.060	84.000	187.800	439.300	934.500	94.140
Mean	26.007	32.749	32.312	48.273	139.622	50.337	93.833	174.773	257.092	599.156	1,633.465	269.727
Std	50.436	70.247	47.823	82.489	255.134	123.119	191.787	270.590	379.896	845.838	3,879.454	1,005.496
Gini						0.69						0.73
Coef. Variation						2.45						3.73
Top 1% to bottom 40% ratio						263						776
Location of mean (percentile)						75						73
Mean to median ratio						2.08						2.87
<b>Male</b>												
% of households per Income group	50	65	68	70	72	65	43	62	76	87	93	72
% of households per category	15	21	21	22	22	100	12	17	21	24	26	100
Median	20.169	14.118	22.185	28.236	70.590	26.219	16.300	78.630	181.600	328.600	787.900	270.500
Mean	39.668	26.897	34.506	40.641	146.476	59.899	83.313	168.422	283.809	493.453	2,224.475	800.393
Std	60.796	62.248	65.306	71.290	253.894	140.753	159.276	384.753	704.454	644.336	7,427.089	3,933.736
Gini						0.70						0.75
Coef. Variation						2.35						4.91
Top 1% to bottom 40% ratio						233						368
Location of mean (percentile)						76						81
Mean to median ratio						2.28						2.96

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile.

Table 15 breaks down debt holdings by gender, which broadly follow the same patterns. The Gini coefficient for Chilean female households is 0.88 but somewhat less at 0.84 for males. Similarly, the debt of American female households is also distributed more unequally than the debt of male households, with respective Gini coefficients of 0.77 and 0.67. Female households in Chile and in the U.S. hold less debt than male households: in Chile, male households hold 1.4 times more debt than female households. In the U.S., this number rises to 2.8 times as much debt. Overall, U.S. female households hold nine times more debt than their Chilean peers, while male households in the U.S. hold 18 times more debt than in Chile. Again looking at the income gradient, the mean debt level in Chile by income quintile is similar among female and male households, and also in the U.S. as well, i.e. no clear pattern of more debt conditional on income for either gender. The difference in mean debt levels arises from composition: there are many more female households in the lowest income quintiles than there are male households.

Table 15

## Debt distribution by gender

Gender	Chile						United States					
	Income quintiles						Income quintiles					
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Female</b>												
% of households per Income group	50	35	32	30	28	35	57	38	24	13	7	28
% of households per category	28	21	18	17	16	100	40	28	17	9	5	100
Median	0.002	0.061	0.343	0.323	1.498	0.161	0.010	6.600	44.000	98.700	69.600	5.200
Mean	1.239	0.897	3.763	4.684	16.225	4.587	12.740	26.064	65.098	126.062	126.711	41.801
Std	6.525	2.013	13.444	9.655	32.015	15.845	38.522	46.656	68.802	132.024	203.090	85.159
Gini						0.88						0.77
Coef. Variation						3.45						2.04
Top 1% to bottom 40% ratio						78,402						13,365
Location of mean (percentile)						84						74
Mean to median ratio						28.43						8.04
<b>Male</b>												
% of households per Income group	50	65	68	70	72	65	43	62	76	87	93	72
% of households per category	15	21	21	22	22	100	12	17	21	24	26	100
Median	0.000	0.202	0.403	1.008	3.025	0.403	0.110	6.300	34.000	102.200	181.900	50.300
Mean	1.622	1.961	3.389	5.596	17.390	6.421	14.043	31.758	68.306	126.180	242.986	115.288
Std	5.616	6.106	8.482	11.849	31.501	17.730	36.363	66.430	90.394	136.176	321.957	203.652
Gini						0.84						0.67
Coef. Variation						2.76						1.77
Top 1% to bottom 40% ratio						11,071						351
Location of mean (percentile)						80						66
Mean to median ratio						15.92						2.29

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile.

For wealth, table 16 reports the Gini coefficient among male households in Chile is 0.72, while that of female households is slightly higher, 0.74. In the U.S., both Gini coefficients are higher with again a marginal gender difference (0.79 and 0.81, respectively), reflecting the higher overall inequality in wealth in the U.S.. The skewness of the distributions of male and female households are similar in Chile, but in the U.S. the distribution of males is more skewed to the right than the distribution of females: the location of the mean for males is the 84th percentile and the one for females is the 75<sup>th</sup> percentile.

Male households in Chile and the U.S. hold more wealth than female households, but this difference is even wider in the U.S.: in Chile, males hold, on average, 1.17 times more wealth than female households. This figure rises to 3 in the U.S. Wealth held by different income quintiles also differs between Chile and the U.S. along gender lines. In Chile, males in the first quintile are the ones holding larger amounts of wealth than females in the same quintile, while in the U.S. the last quintile is the one that sees the largest difference between males and females, since in this quintile males hold 1.3 times more wealth, on average, than females. Finally, female households in Chile and the U.S. are





relatively close in terms of wealth holdings: females in the U.S. hold only five times more debt than females in Chile. However, this difference broadens in the case of males, as males in the U.S. hold almost 13 times more wealth than males in Chile. U.S. inequality is thus particularly driven by inequality among males relative to Chile, with more inequality among male households, and with male households making up a larger fraction of the population.

Table 16

## Wealth distribution by gender

Gender	Chile						United States					
	Income quintiles					Total	Income quintiles					Total
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Female</b>												
% of households per Income group	50	35	32	30	28	35	57	38	24	13	7	28
% of households per category	28	21	18	17	16	100	40	28	17	9	5	100
Median	16.034	15.899	20.112	29.413	47.366	20.169	6.840	48.230	79.000	271.630	660.200	48.390
Mean	24.768	31.852	28.549	43.589	123.397	45.750	81.093	148.709	191.994	473.093	1,506.754	227.925
Std	48.742	70.344	40.209	81.573	251.052	119.420	181.255	267.306	374.115	841.293	3,841.181	986.007
Gini						0.72						0.79
Coef. Variation						2.61						4.33
Top 1% to bottom 40% ratio						575						-6811
Location of mean (percentile)						76						75
Mean to median ratio						2.27						4.71
<b>Male</b>												
% of households per Income group	50	65	68	70	72	65	43	62	76	87	93	72
% of households per category	15	21	21	22	22	100	12	17	21	24	26	100
Median	20.058	12.101	19.120	21.802	53.104	20.259	12.300	36.500	88.400	187.300	587.800	155.600
Mean	38.046	24.936	31.117	35.045	129.085	53.478	69.270	136.664	215.503	367.273	1,981.489	685.105
Std	60.981	62.462	65.470	71.165	250.002	137.374	145.181	379.243	690.409	630.588	7,357.688	3,881.071
Gini						0.74						0.81
Coef. Variation						2.57						5.67
Top 1% to bottom 40% ratio						817						24
Location of mean (percentile)						77						84
Mean to median ratio						2.64						4.40

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile.

#### 4. Employment status

One important determinant of financial status is employment, and some forms of employment, particularly entrepreneurship, have been linked to inequality in the literature, as mentioned. Overall, we see stark differences in the financial status of employed versus self-employed, potentially indicating a role for entrepreneurship in explaining inequality.

Table 17 shows the income distribution for Chile and the U.S. by employment status of the head of household. We partition employment status into five groups: employed workers, self-employed, unemployed, retired, and other labor force inactives, with the first two groups being of primary interest. In both countries, employed workers form the plurality: 47% in Chile and 61% in the U.S.. Average income for Chilean employed households is about USD 17,809, around one fourth the corresponding average income in the U.S., and income inequality for employed workers is higher in Chile than in the U.S. The Gini coefficient for this subpopulation is 0.53 in Chile but only 0.44 in the USA, and the rest of our income inequality measures are also consistent with this.

Chile's low share of employed workers is mirrored in a correspondingly high share of self-employed households: 10% of household heads are self-employed in the U.S. compared to 24% in Chile. The difference in average income is in this case about eight times larger in the U.S.—double relative to the employed workers. Further, the direction of inequality is flipped: the population of Chilean self-employed workers have a Gini coefficient of 0.57 compared to 0.63 for the U.S.. More strikingly, self-employment in Chile is much less likely to put a household in the top income quintile: 24% of self-employed Chilean households are in the top income quintile, compared to 14% in the lowest. In the U.S., only 9% of self-employed households belong to the lowest quintile and 40% belong to the highest quintile. This highlights the differential nature of self-employment between these countries. In the U.S. most self-employed households are entrepreneurs, while in Chile a significant fraction of self-employed households perform informal low-productivity tasks or are small farmers or fishermen.

Chilean employed households also accumulate fewer assets than American households, on average about USD 50k, compared to more than USD 450k in the U.S. Despite this large difference in asset owned, we observe a very similar degree of dispersion across countries (details in table 18). The Gini coefficient for assets is 0.70 in both countries, with the mean located in the 76th percentile for Chile and the 75th percentile for the U.S. Despite this similarity, Chilean households “sort” much less by income: the asset gap between the lowest and highest income quintiles is a factor of six, compared to a factor of 36 in the U.S.

For self-employed households, the data follow a similar pattern. While employed households have nine times more assets in the U.S., self-employed American households have over twenty times the assets. Moving from the lowest income quintile to the highest income quintile sees average assets increasing by a factor of 7 in Chile (similar to employed households), but by a factor of 31 in the U.S., with the highest income quintile in the U.S. averaging over 4.5 million in assets.



Table 17

## Income distribution by employment status

Employment status	Chile						United States					
	Income quintiles					Total	Income quintiles					Total
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Employed</b>												
% of households per Income group	22	49	52	56	56	47	33	58	71	73	68	61
% of households per category	9	21	22	24	24	100	11	20	23	24	23	100
Median	3.098	5.325	8.664	13.114	28.559	10.178	13.315	28.046	44.195	68.774	114.539	51.498
Mean	2.902	5.437	8.740	13.430	46.437	17.609	13.015	27.855	44.468	70.054	163.949	71.244
Std	0.820	0.921	1.067	1.840	66.898	36.607	4.440	4.163	5.745	9.579	315.432	160.009
Gini						0.53						0.44
Coef. Variation						2.08						2.25
Top 1% to bottom 40% ratio						56						33
Location of mean (percentile)						77						67
Mean to median ratio						1.73						1.38
<b>Self-employed</b>												
% of households per Income group	18	22	27	25	29	24	5	7	8	12	21	10
% of households per category	14	19	22	20	24	100	9	14	15	22	40	100
Median	3.033	5.082	8.471	13.694	32.170	9.681	12.691	25.169	44.028	69.590	166.992	70.019
Mean	2.878	5.296	8.521	13.697	51.895	18.705	12.573	26.176	44.643	69.872	315.367	150.764
Std	0.796	0.842	1.037	1.761	65.601	37.574	4.754	4.354	6.073	9.532	657.153	432.163
Gini						0.57						0.62
Coef. Variation						2.01						2.87
Top 1% to bottom 40% ratio						64						85
Location of mean (percentile)						78						78
Mean to median ratio						1.93						2.15
<b>Unemployed</b>												
% of households per Income group	8	3	2	0	1	3	6	3	2	1	1	3
% of households per category	57	22	12	3	6	100	44	26	11	11	8	100
Median	1.694	5.402	8.783	14.521	31.301	3.429	10.820	24.235	45.820	66.111	120.035	21.415
Mean	1.708	5.441	8.650	15.309	50.997	6.552	10.958	25.177	44.830	68.529	163.048	32.921
Std	1.282	1.012	1.114	1.352	50.923	16.513	4.790	3.834	5.324	8.914	139.096	47.964
Gini						0.64						0.49
Coef. Variation						2.52						1.46
Top 1% to bottom 40% ratio						141						37
Location of mean (percentile)						73						72
Mean to median ratio						1.91						1.54

Table 17 (continued)

## Income distribution by employment status

Employment status	Chile						United States					
	Income quintiles						Income quintiles					
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Retired</b>												
% of households per Income group	17	12	9	12	8	12	31	24	14	12	9	18
% of households per category	29	22	15	20	15	100	34	27	16	13	10	100
Median	2.178	5.550	9.391	13.251	25.124	7.001	12.691	26.271	43.130	65.996	130.182	27.909
Mean	2.209	5.442	8.992	13.589	37.526	11.362	12.834	26.669	42.961	67.669	240.965	51.303
Std	0.893	0.959	1.100	1.948	33.034	17.109	4.134	4.245	5.597	9.167	522.486	177.971
Gini						0.53						0.56
Coef. Variation						1.51						3.47
Top 1% to bottom 40% ratio						48						77
Location of mean (percentile)						68						76
Mean to median ratio						1.62						1.84
<b>Inactive (non-retired)</b>												
% of households per Income group	35	14	10	7	5	14	24	6	4	2	1	8
% of households per category	48	21	15	10	7	100	62	17	11	6	4	100
Median	1.331	5.082	8.471	13.069	24.422	4.284	10.829	24.216	45.479	62.619	129.185	14.830
Mean	1.431	5.182	8.566	13.504	38.703	6.934	11.424	25.412	44.723	67.379	165.163	24.737
Std	1.294	0.874	1.073	2.022	41.269	14.074	4.229	4.152	6.201	9.534	213.956	44.308
Gini						0.60						0.47
Coef. Variation						2.03						1.79
Top 1% to bottom 40% ratio						112						30
Location of mean (percentile)						67						72
Mean to median ratio						1.62						1.67

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile.



Table 18

## Asset distribution by employment status

Employment status	Chile						United States					
	Income quintiles					{Total}	Income quintiles					{Total}
	1st	2nd	3rd	4th	5th		{1st}	{2nd}	{3rd}	{4th}	{5th}	
<b>Employed</b>												
% of households per Income group	22	49	52	56	56	47	33	58	71	73	68	61
% of households per category	9	21	22	24	24	100	11	20	23	24	23	100
Median	10.508	11.899	16.135	25.816	60.506	20.471	5.950	27.700	153.200	299.100	642.500	202.400
Mean	20.025	21.945	29.748	33.782	113.538	48.148	36.052	85.913	204.651	380.257	1304.804	456.667
Std	40.422	40.093	65.483	45.916	207.028	116.294	84.794	127.138	240.931	368.228	3895.261	1934.444
Gini						0.70						0.70
Coef. Variation						2.42						4.24
Top 1% to bottom 40% ratio						311						337
Location of mean (percentile)						76						75
Mean to median ratio						2.35						2.26
<b>Self-employed</b>												
% of households per Income group	18	22	27	25	29	24	5	7	8	12	21	10
% of households per category	14	19	22	20	24	100	9	14	15	22	40	100
Median	20.169	12.101	27.228	30.253	86.501	30.253	20.400	153.800	344.300	497.200	1899.100	543.400
Mean	28.161	28.380	37.754	45.265	192.360	73.713	143.791	336.811	567.698	834.061	4526.776	2151.035
Std	30.845	89.607	58.672	62.458	326.939	183.670	431.268	923.230	1236.299	1251.785	12505.310	8217.110
Gini						0.72						0.75
Coef. Variation						2.49						3.82
Top 1% to bottom 40% ratio						284						302
Location of mean (percentile)						80						78
Mean to median ratio						2.44						3.96
<b>Unemployed</b>												
% of households per Income group	8	3	2	0	1	3	6	3	2	1	1	3
% of households per category	57	22	12	3	6	100	44	26	11	11	8	100
Median	12.101	10.084	5.244	22.185	55.464	16.135	3.000	33.810	58.600	251.000	462.150	35.500
Mean	25.894	19.481	28.405	36.796	101.370	29.337	50.762	139.999	103.264	287.526	788.035	165.012
Std	33.455	16.647	53.677	36.063	95.093	43.672	103.390	240.914	172.734	378.729	1,228.639	445.855
Gini						0.64						0.76
Coef. Variation						1.49						2.70
Top 1% to bottom 40% ratio						153						1,418
Location of mean (percentile)						70						73
Mean to median ratio						1.82						4.65

Table 18 (continued)

## Asset distribution by employment status

Employment status	Chile						United States					
	Income quintiles						Income quintiles					
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Retired</b>												
% of households per Income group	17	12	9	12	8	12	31	24	14	12	9	18
% of households per category	29	22	15	20	15	100	34	27	16	13	10	100
Median	28.735	36.304	31.261	40.337	100.843	32.270	107.500	239.200	332.200	701.100	1267.400	251.000
Mean	38.995	46.270	48.733	78.658	191.114	72.176	166.485	331.749	513.950	989.414	3,777.121	734.502
Std	83.467	51.177	53.366	157.157	247.886	139.730	203.050	360.361	1,250.230	994.458	9,231.807	3,171.859
Gini						0.62						0.72
Coef. Variation						1.94						4.32
Top 1% to bottom 40% ratio						78						237
Location of mean (percentile)						75						79
Mean to median ratio						2.24						2.93
<b>Inactive (non-retired)</b>												
% of households per Income group	35	14	10	7	5	14	24	6	4	2	1	8
% of households per category	48	21	15	10	7	100	62	17	11	6	4	100
Median	24.202	16.135	24.202	31.288	53.447	24.202	7.801	121.950	119.500	328.220	410.700	27.500
Mean	41.898	40.953	32.108	47.961	135.918	47.009	63.412	178.764	209.095	575.710	1,184.994	170.629
Std	60.469	95.095	37.074	71.739	201.466	86.956	127.877	278.808	214.739	439.426	3,329.308	717.375
Gini						0.66						0.77
Coef. Variation						1.85						4.20
Top 1% to bottom 40% ratio						139						1700
Location of mean (percentile)						71						73
Mean to median ratio						1.94						6.20

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile.

Turning to debt, Chilean debt is very unequally distributed within the different labor force types, mimicking the extreme dispersion in the aggregate Chilean population. Details are reported in table 19. In the U.S., debt is more evenly distributed among the employed and self-employed than in the population as a whole. In the U.S., the self-employed hold more debt on average than the employed, which is potentially a reflection of debt taken on to develop entrepreneurial activities. On the contrary, in Chile employed and self-employed households hold similar levels of debt. U.S. employed households hold, on average, 14 times more debt than Chilean employed households, while self-employed households in the U.S. hold 26 times more debt than in Chile.

As with debt, wealth is very unequally distributed for different categories of employment status, both in Chile and in the U.S., as per table 20. In both countries, wealth is more unequal among the employed and self-employed relative to the population. The largest differences between the U.S. and Chile are with the self-employed, who on average in the U.S. hold almost 30 times more wealth than in Chile. Employed households have only eight times more wealth in the U.S. than in Chile.



Table 19

## Debt distribution by employment status

Employment status	Chile						United States						
	Income quintiles						Income quintiles						
	1st	2nd	3rd	4th	5th	cTotal	1st	2nd	3rd	4th	5th	Total	
<b>Employed</b>													
% of households per Income group	22	49	52	56	56	47	33	58	71	73	68	61	
% of households per category	9	21	22	24	24	100	11	20	23	24	23	100	
Median	0.121	0.303	0.565	1.207	4.034	0.706	1.200	9.150	48.000	111.000	183.600	57.800	
Mean	1.944	2.176	4.249	6.369	17.911	7.360	18.501	30.051	73.082	132.083	225.520	107.734	
Std	6.914	6.660	12.502	12.123	31.012	18.705	48.941	50.724	80.390	128.256	227.597	153.650	
Gini						0.82						0.63	
Coef. Variation						2.54						1.43	
Top 1% to bottom 40% ratio						2297						169	
Location of mean (percentile)						78						63	
Mean to median ratio						10.43						1.88	
<b>Self-employed</b>													
% of households per Income group	18	22	27	25	29	24	5	7	8	12	21	10	
% of households per category	14	19	22	20	24	100	9	14	15	22	40	100	
Median	0.061	0.016	0.242	0.726	2.380	0.262	0.300	20.000	51.300	117.930	189.340	90.600	
Mean	2.061	1.078	3.669	5.236	19.448	7.104	16.344	71.150	107.291	159.509	314.139	188.986	
Std	5.067	3.366	8.739	11.961	34.565	19.825	50.816	118.749	146.855	175.107	506.003	356.797	
Gini						0.85						0.66	
Coef. Variation						2.79						1.89	
Top 1% to bottom 40% ratio						82594						199	
Location of mean (percentile)						80						69	
Mean to median ratio						27.10						2.09	
<b>Unemployed</b>													
% of households per Income group	8	3	2	0	1	3	6	3	2	1	1	3	
% of households per category	57	22	12	3	6	100	44	26	11	11	8	100	
Median	0.256	0.202	2.195	0.121	17.555	0.403	0.000	10.400	23.000	113.300	40.000	8.000	
Mean	3.395	1.618	2.267	1.383	30.701	4.323	12.116	34.817	37.376	101.162	278.498	52.015	
Std	7.337	3.791	4.065	6.665	38.380	12.693	44.863	60.742	38.548	55.840	432.181	150.106	
Gini						0.83						0.80	
Coef. Variation						2.94						2.89	
Top 1% to bottom 40% ratio						4530						18,184	
Location of mean (percentile)						83						76	
Mean to median ratio						10.72						6.50	

Table 19 (continued)

## Debt distribution by employment status

Employment status	Chile						United States					
	Income quintiles						Income quintiles					
	1st	2nd	3rd	4th	5th	cTotal	1st	2nd	3rd	4th	5th	{Total}
<b>Retired</b>												
% of households per Income group	17	12	9	12	8	12	31	24	14	12	9	18
% of households per category	29	22	15	20	15	100	34	27	16	13	10	100
Median	0.002	0.038	0.046	0.037	0.343	0.030	0.000	0.000	0.400	16.000	5.000	0.000
Mean	0.832	0.706	0.525	2.337	5.023	1.673	9.248	13.429	28.476	51.128	141.480	32.087
Std	4.160	1.548	0.945	5.410	16.168	7.199	23.823	29.017	54.755	81.551	293.266	109.029
Gini						0.89						0.86
Coef. Variation						4.30						3.40
Top 1% to bottom 40% ratio						-						-
Location of mean (percentile)						83						79
Mean to median ratio						55.31						-
<b>Inactive (non-retired)</b>												
% of households per Income group	35	14	10	7	5	14	24	6	4	2	1	8
% of households per category	48	21	15	10	7	100	62	17	11	6	4	100
Median	0.000	0.030	0.146	0.215	0.121	0.000	0.390	11.000	20.000	111.000	18.800	3.000
Mean	0.620	1.114	2.091	2.648	9.030	1.696	11.614	39.434	46.954	172.290	94.378	32.388
Std	6.317	2.274	5.311	6.583	31.296	9.837	27.973	93.640	56.836	232.510	119.900	85.800
Gini						0.91						0.82
Coef. Variation						5.80						2.65
Top 1% to bottom 40% ratio						-						41,356
Location of mean (percentile)						84						81
Mean to median ratio						-						10.80

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile. Values in thousands of dollars of 2007.





Table 20

## Wealth distribution by employment status

Employment status	Chile						United States					
	Income quintiles					Total	Income quintiles					Total
	1st	2nd	3rd	4th	5th		1st	2nd	3rd	4th	5th	Total
<b>Employed</b>												
% of households per Income group	22	49	52	56	56	47	33	58	71	73	68	61
% of households per category	9	21	22	24	24	100	11	20	23	24	23	100
Median	10.084	8.277	13.553	19.985	40.337	16.135	3.300	15.260	56.150	150.500	434.000	91.030
Mean	18.081	19.769	25.499	27.413	95.627	40.788	17.552	55.861	131.569	248.173	1,079.284	348.933
Std	40.869	40.209	63.065	45.020	202.463	112.188	59.881	113.386	220.850	338.898	3,845.853	1,893.189
Gini						0.77						0.79
Coef. Variation						2.75						5.43
Top 1% to bottom 40% ratio						-1292						1507
Location of mean (percentile)						77						79
Mean to median ratio						2.53						3.83
<b>Self-employed</b>												
% of households per Income group	18	22	27	25	29	24	5	7	8	12	21	10
% of households per category	14	19	22	20	24	100	9	14	15	22	40	100
Median	20.058	10.780	23.462	27.606	68.573	24.202	19.940	77.050	209.200	378.960	1723.550	390.360
Mean	26.100	27.302	34.086	40.029	172.912	66.609	127.447	265.661	460.407	674.552	4,212.637	1,962.049
Std	29.923	89.737	57.554	60.641	323.366	179.406	394.133	909.953	1,182.032	1,219.702	12,389.700	8,118.780
Gini						0.76						0.78
Coef. Variation						2.69						4.14
Top 1% to bottom 40% ratio						822						554
Location of mean (percentile)						78						79
Mean to median ratio						2.75						5.03
<b>Unemployed</b>												
% of households per Income group	8	3	2	0	1	3	6	3	2	1	1	3
% of households per category	57	22	12	3	6	100	44	26	11	11	8	100
Median	10.084	10.084	3.049	22.131	48.806	10.084	2.600	10.300	11.300	162.610	238.180	10.300
Mean	22.499	17.863	26.137	35.413	70.669	25.014	38.646	105.182	65.888	186.364	509.537	112.997
Std	31.303	17.340	52.849	35.842	79.149	38.504	81.625	190.101	156.516	378.607	936.345	341.223
Gini						0.69						0.81
Coef. Variation						1.54						3.02
Top 1% to bottom 40% ratio						925						-530
Location of mean (percentile)						69						75
Mean to median ratio						2.48						10.97

Table 20 (continued)

## Wealth distribution by employment status

Employment status	Chile						United States					
	Income quintiles						Income quintiles					
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Retired</b>												
% of households per Income group	17	12	9	12	8	12	31	24	14	12	9	18
% of households per category	29	22	15	20	15	100	34	27	16	13	10	100
Median	24.200	36.304	31.261	36.354	90.759	31.261	100.080	229.400	329.200	634.120	1,260.300	233.000
Mean	38.162	45.564	48.208	76.321	186.091	70.503	157.238	318.320	485.473	938.286	3,635.642	702.414
Std	80.451	51.297	53.110	157.441	245.299	138.076	195.987	360.852	1,249.985	998.435	9,194.972	3,148.511
Gini						0.63						0.73
Coef. Variation						1.96						4.48
Top 1% to bottom 40% ratio						83						287
Location of mean (percentile)						74						80
Mean to median ratio						2.26						3.02
<b>Inactive (non-retired)</b>												
% of households per Income group	35	14	10	7	5	14	24	6	4	2	1	8
% of households per category	48	21	15	10	7	100	62	17	11	6	4	100
Median	24.200	16.135	22.907	31.286	43.236	21.972	4.415	71.000	72.900	188.400	181.700	14.200
Mean	41.278	39.839	30.017	45.313	126.889	45.313	51.798	139.330	162.141	403.420	1,090.617	138.241
Std	60.652	95.234	35.990	71.395	189.008	84.606	116.865	292.867	202.575	415.502	3,311.311	704.038
Gini						0.67						0.85
Coef. Variation						1.87						5.09
Top 1% to bottom 40% ratio						172						-601
Location of mean (percentile)						72						77
Mean to median ratio						2.06						9.74

Source: Survey of Consumer Finance 2007 for the U.S. and *Encuesta Financiera de Hogares* for Chile.

In terms of income, assets, debt, and wealth, we thus see a story that points towards the self-employed behaving differently in the U.S. than in Chile, in a manner consistent with a different model of entrepreneurship. We return to this in the next section.

Turning to non-employed households, the fraction of unemployed workers is similar between the two countries, around 3%. The average income for unemployed workers is about five times larger in the U.S., and the unemployed are much less unequal in the U.S. than Chile. This difference may stem from the characteristics of unemployment benefit programs in each country. While in Chile the replacement ratio declines from 50% in the first month to 20% at the sixth month, in the U.S. the replacement ratio is 60% for nine months.<sup>9</sup> The U.S. economy also has a larger fraction of retired households, 18% compared to 12% in Chile. Income inequality for retired households is lower in Chile (Gini coefficient is 0.53 compared to 0.56 in the U.S.), but the average income is about 4.5 times higher in the U.S.

<sup>9</sup> For details of the unemployment system in Chile see Berstein (2010).



Not surprisingly, the majority of unemployed households, both in Chile and the U.S., belong to the first income quintile (57% and 44%, respectively). This is also true for retired and inactive households. In Chile, 29% of retired households and 48% of inactive households are in the lowest income quintile. In the U.S., 34% of retired households and 62% of inactive households belong to the first income quintile.

While U.S. unemployed households see considerably more asset inequality and hold five times as many assets as Chilean unemployed households—very similar to income—they do not consist of a sufficiently large share of the population to move the needle on aggregate statistics. The more numerous retired households hold more assets than unemployed ones in both countries. Average asset holdings for Chilean retired households are USD 72,176. This number is ten times bigger for the U.S., where inequality is also higher.

For debt, the retired and inactive groups are quite similar in the aggregate, both in Chile and in the U.S. However, in Chile inactive households in the fifth income quintile hold much more debt than retired households in the same quintile. This relation is reversed in the U.S.: high-income retired households hold more debt than inactive ones. For retired and inactive households, U.S. households hold 19 times more debt than Chilean households.

In Chile, the group that holds the largest level of wealth is the retired subpopulation, while in the U.S. it is the self-employed. Unemployed households hold four times more wealth in the U.S. than in Chile, three times as much for inactive households, and 10 times as much for retired households (relative to 11 times for the population). This serves as some evidence that the bequest motive is marginally stronger in Chile.

## 5. Educational attainment

Breaking down household financial status by education shows that inequality increases consistently with education.

In general, Chilean households are less educated than U.S. households (see table 21). About one third of heads of household in Chile have less than 12 years of education compared to only 14% for the U.S. Mean income in Chile for less educated households (did not complete high school) is USD 7,325, while in the U.S. it is four times as much: almost USD 30k. Income inequality among these households is similar across countries, though much lower than the aggregate population in either country.

Households with a high-school education comprise 46% of the Chilean economy, which is a higher percentage compared to the U.S. (33%). Average income for the high-school educated households is also four times higher in the U.S. compared to Chile and again income inequality is much lower within this group compared to the population at large in both countries. In Chile, income inequality for high-school educated households is higher (Gini of 0.47) compared to those without high school (0.41), while in the U.S. we observe the same inequality measure (0.42) within each of these groups.

Table 21

## Income distribution by educational level

Education level	Chile						United States					
	Income quintiles						Income quintiles					
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Less than high school</b>												
% of households per Income group	44	41	27	21	7	28	31	18	11	6	2	14
% of households per category	30	30	19	15	5	100	45	27	16	8	3	100
Median	2.420	5.090	8.471	13.311	21.914	5.639	11.749	26.703	41.228	66.079	116.737	22.058
Mean	2.281	5.255	8.500	13.385	26.395	7.325	11.871	26.850	42.215	69.509	135.626	29.589
Std	1.065	0.896	1.078	1.882	12.785	6.633	4.186	4.282	5.350	9.985	125.160	34.387
Gini						0.41						0.42
Coef. Variation						0.91						1.16
Top 1% to bottom 40% ratio						17						18
Location of mean (percentile)						64						64
Mean to median ratio						1.30						1.34
<b>High school</b>												
% of households per Income group	45	50	54	51	31	46	39	42	39	28	16	33
% of households per category	19	22	23	22	13	100	24	26	24	17	10	100
Median	2.420	5.522	8.713	13.251	24.574	8.350	12.691	27.027	44.028	66.982	112.161	34.985
Mean	2.110	5.502	8.755	13.453	36.286	11.485	12.685	27.114	44.151	69.005	149.023	46.371
Std	1.317	0.916	1.035	1.825	46.884	20.132	4.271	4.347	5.779	9.755	332.433	108.749
Gini						0.47						0.42
Coef. Variation						1.75						2.35
Top 1% to bottom 40% ratio						41						23
Location of mean (percentile)						68						65
Mean to median ratio						1.38						1.33
<b>Some college</b>												
% of households per Income group	3	3	7	8	9	6	17	20	20	19	15	18
% of households per category	11	9	24	26	30	100	18	23	22	20	17	100
Median	3.509	5.210	8.471	13.367	27.591	12.101	12.691	27.159	44.028	68.721	110.260	42.440
Mean	2.951	5.539	8.614	13.686	47.450	20.527	12.903	27.087	44.718	69.155	163.130	59.318
Std	1.144	0.860	1.098	1.882	70.561	42.387	4.605	4.259	5.824	9.167	466.482	195.954
Gini						0.54						0.46
Coef. Variation						2.06						3.30
Top 1% to bottom 40% ratio						63						41
Location of mean (percentile)						76						67
Mean to median ratio						1.70						1.40
<b>College</b>												
% of households per Income group	5	6	11	20	53	19	12	20	30	47	67	35
% of households per category	5	6	12	21	56	100	7	11	17	26	39	100
Median	2.178	4.961	8.955	13.594	35.577	20.011	11.762	28.046	45.279	69.232	131.512	71.773
Mean	1.767	5.133	8.936	13.790	56.355	35.772	12.249	27.783	44.880	70.296	224.091	116.474
Std	1.382	0.810	1.101	1.849	72.605	58.976	4.817	4.099	5.747	9.485	445.256	289.697
Gini						0.55						0.52
Coef. Variation						1.65						2.49
Top 1% to bottom 40% ratio						50						54
Location of mean (percentile)						72						77
Mean to median ratio						1.79						1.62

Source: Survey of Consumer Finance 2007 for the U.S. and Encuesta Financiera de Hogares for Chile.



The college dropout rate is lower in Chile than in the U.S.: only 6% of households have some college education (but not a completed degree) in Chile, compared to 18% in the U.S. A college dropout in the U.S. earns about three times more than a college dropout in Chile. Income inequality for this group is higher in Chile. The Gini coefficient is about 0.54 while in the U.S. it is only 0.46.

The U.S. has almost twice as many college-educated households as Chile: 35% to 19%, and they earn more than three times as much as their Chilean counterparts. According to the Gini coefficient, these highly educated households face marginally more inequality in Chile than in the U.S. (0.55 vs 0.52, respectively).

As expected, income is highly correlated with the educational attainment of the head of household. In Chile, 60% of no-high-school households are in the bottom two quintiles, but only 20% in the top two. Conversely, among those with college degrees, 83% are in the top two quintiles. In the U.S., 72% of those without high school are in the bottom two quintiles, compared to only 11% in the top two, and 65% with a college education are in the top two income quintiles. In Chile, with less education overall, having little education does not stand out as much relative to the population, but having a degree does, and vice versa in the U.S.: those without high school dominate the lower quintiles, but with more education a degree is less of a guarantee of high income.

Assets largely mirror income when considered by educational status of household head as well (table 22). Average asset holdings for households with no high-school education in Chile are USD 32,735 while in the U.S. this figure is more than five times larger, reaching almost USD 175,000. The higher U.S. asset holdings are accompanied by more inequality. The Gini coefficient for the U.S. is 0.74 but only 0.62 for Chile.

Households with a high-school education hold more assets. Chilean households with high-school education possess on average USD 46,696 (40% more than the least educated group). The gap between Chile and the U.S. widens, however, with corresponding U.S. households holding 6.8 times as much: USD 316,516 on average. Both groups report a Gini of 0.67, but this is a considerable step down in inequality from those without high school in the U.S., but more inequality for Chile.

Assets continue to increase with education and so does the gap; 7.5 times as many assets for U.S. households with some college education, and ten times as many for U.S. households who have completed college relative to Chile. However, inequality does not rise in step. The college dropouts have the highest inequality (Gini of 0.75 in Chile and 0.74 in the U.S.), but the Gini among those with a full degree is 0.67 in Chile and 0.72 in the U.S. Asset inequality overall varies considerably more by educational level in Chile than in the United States.

Table 22

## Asset distribution by educational level

Education level	Chile						United States					
	Income quintiles						Income quintiles					
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Less than high school</b>												
% of households per Income group	44	41	27	21	7	28	31	18	11	6	2	14
% of households per category	30	30	19	15	5	100	45	27	16	8	3	100
Median	14.118	16.437	20.774	30.253	36.304	20.169	7.600	51.900	123.170	301.000	538.200	49.500
Mean	23.317	31.539	28.495	41.205	84.883	32.735	54.206	149.453	183.406	431.403	1,277.581	174.588
Std	34.433	77.242	34.316	54.254	151.642	64.914	86.791	241.972	208.748	497.781	2,979.443	636.332
Gini						0.62						0.74
Coef. Variation						1.98						3.64
Top 1% to bottom 40% ratio						123						972
Location of mean (percentile)						73						72
Mean to median ratio						1.62						3.53
<b>High school</b>												
% of households per Income group	45	50	54	51	31	46	39	42	39	28	16	33
% of households per category	19	22	23	22	13	100	24	26	24	17	10	100
Median	22.185	16.135	20.975	27.268	54.657	24.202	16.300	98.070	175.700	304.300	618.950	156.200
Mean	38.567	29.329	31.098	44.526	117.923	46.696	92.719	160.152	264.958	425.507	1,207.561	316.516
Std	56.068	59.054	49.428	84.344	238.608	109.288	169.891	204.647	776.844	476.116	3,830.660	1,314.217
Gini						0.67						0.67
Coef. Variation						2.34						4.15
Top 1% to bottom 40% ratio						225						270
Location of mean (percentile)						72						72
Mean to median ratio						1.93						2.03
<b>Some college</b>												
% of households per Income group	3	3	7	8	9	6	17	20	20	19	15	18
% of households per category	11	9	24	26	30	100	18	23	22	20	17	100
Median	24.202	0.000	4.639	11.617	57.481	24.202	9.700	49.100	187.710	303.500	558.200	181.600
Mean	34.877	8.155	48.392	29.175	123.820	60.497	84.885	111.397	265.041	444.729	1,568.862	453.565
Std	36.917	16.873	140.270	35.283	254.475	161.805	163.799	183.346	407.464	481.987	6,245.899	2,636.202
Gini						0.75						0.74
Coef. Variation						2.67						5.81
Top 1% to bottom 40% ratio						1735						543
Location of mean (percentile)						73						79
Mean to median ratio						2.50						2.50
<b>College</b>												
% of households per Income group	5	6	11	20	53	19	12	20	30	47	67	35
% of households per category	5	6	12	21	56	100	7	11	17	26	39	100
Median	20.169	5.042	32.270	36.304	90.658	51.430	39.120	117.600	202.280	383.800	922.700	435.300
Mean	55.475	15.944	51.554	45.876	172.636	115.781	173.294	274.692	336.479	589.931	2,582.758	1,255.909
Std	143.353	30.218	72.805	78.762	271.231	219.477	316.875	644.614	670.198	832.342	8,081.028	5,171.976
Gini						0.67						0.72
Coef. Variation						1.90						4.12
Top 1% to bottom 40% ratio						157						227
Location of mean (percentile)						74						83
Mean to median ratio						2.25						2.89

Source: Survey of Consumer Finance 2007 for the U.S. and Encuesta Financiera de Hogares for Chile.



Debt immediately becomes interesting due to the linkage between obtaining college education and the potential accumulation of debt. Details are displayed in table 23. The more educated the head of household, the larger the average level of debt of the household, but perhaps surprisingly debt is more equally distributed among these more educated households.

Chilean households differ in their debt holdings more markedly among educational levels than U.S. households. Chilean households with a college education hold 2.4 times more debt on average than households with some college, 3.9 times more than households with a high-school education, and 9.7 times more debt than households without high school. More importantly, debt relative to income is increasing as well, from debt being 22% of average income for those without a high-school education, to 44.8% among those with degrees. While debt increases with education as well in the U.S., the level is completely different: debt to income is 103% for American households with no high school, and 132% for households with a degree, much less of an increase in relative terms. Notably, debt of American dropouts is particularly burdensome: 144% of income.

Putting assets and debt together for net wealth, the lowest debt inequality is among those with no high school in both countries, with Gini coefficients of 0.64 and 0.74 for Chile and the U.S., respectively. The most wealth inequality is among college dropouts, again in both countries with a Gini of 0.80 in Chile and 0.81 in the U.S. (table 24).

As established, wealth is increasing with education, but wealth scales with education more aggressively in the U.S. In Chile, household heads with a degree hold only 2.3 times as much wealth as those with just high school, compared to 4.4 times as much in the U.S. This is also true between countries: the high-school households hold six times as much wealth in the U.S., but the college educated hold 11 times more wealth.

Table 23

## Debt distribution by educational level

Education level	Chile						United States					
	Income quintiles						Income quintiles					
	1st	2nd	3rd	4th	5th	Total	1st	2nd	3rd	4th	5th	Total
<b>Less than high school</b>												
% of households per Income group	44	41	27	21	7	28	31	18	11	6	2	14
% of households per category	30	30	19	15	5	100	45	27	16	8	3	100
Median	0.000	0.031	0.161	0.262	0.383	0.054	0.000	4.530	10.300	55.000	120.000	1.000
Mean	0.707	1.421	1.564	2.051	7.377	1.641	7.785	20.589	37.629	114.938	165.580	30.474
Std	1.870	6.616	4.041	6.946	20.774	7.028	24.164	47.794	51.587	175.528	155.642	78.890
Gini						0.87						0.83
Coef. Variation						4.28						2.59
Top 1% to bottom 40% ratio						-						-
Location of mean (percentile)						82						79
Mean to median ratio						30.31						30.47
<b>High school</b>												
% of households per Income group	45	50	54	51	31	46	39	42	39	28	16	33
% of households per category	19	22	23	22	13	100	24	26	24	17	10	100
Median	0.002	0.222	0.605	0.807	1.412	0.363	0.010	4.030	34.460	103.000	149.000	15.000
Mean	1.718	1.684	3.690	5.541	10.114	4.136	9.723	25.249	68.493	124.596	181.744	64.071
Std	7.318	3.708	8.906	10.806	20.960	11.135	24.693	50.662	89.132	139.503	196.419	113.265
Gini						0.83						0.72
Coef. Variation						2.69						1.77
Top 1% to bottom 40% ratio						5658						1202
Location of mean (percentile)						79						68
Mean to median ratio						11.39						4.27
<b>Some college</b>												
% of households per Income group	3	3	7	8	9	6	17	20	20	19	15	18
% of households per category	11	9	24	26	30	100	18	23	22	20	17	100
Median	0.202	0.000	0.121	0.605	2.319	0.403	2.000	10.350	50.080	67.600	166.200	25.000
Mean	0.862	0.812	2.601	6.056	14.126	6.554	16.699	35.908	69.118	108.137	220.307	85.359
Std	5.512	1.529	5.185	13.725	25.982	16.939	34.355	67.902	70.406	134.572	300.475	160.897
Gini						0.83						0.69
Coef. Variation						2.58						1.89
Top 1% to bottom 40% ratio						10425						459
Location of mean (percentile)						78						68
Mean to median ratio						16.25						3.41
<b>College</b>												
% of households per Income group	5	6	11	20	53	19	12	20	30	47	67	35
% of households per category	5	6	12	21	56	100	7	11	17	26	39	100
Median	0.871	1.052	0.565	1.714	5.042	2.017	2.350	15.000	41.100	114.500	184.000	90.000
Mean	5.967	2.545	8.274	8.058	23.099	16.009	33.985	40.606	76.014	135.632	253.138	153.532
Std	13.135	4.074	22.171	13.905	37.296	30.785	76.717	74.566	97.368	127.099	343.987	245.123
Gini						0.77						0.62
Coef. Variation						1.92						1.60
Top 1% to bottom 40% ratio						1501						137
Location of mean (percentile)						75						65
Mean to median ratio						7.94						1.71

Source: Survey of Consumer Finance 2007 for the U.S. and Encuesta Financiera de Hogares for Chile.





Table 24

## Wealth distribution by educational level

Education level	Chile						United States					
	Income quintiles					Total	Income quintiles					Total
	1st	2nd	3rd	4th	5th		1st	2nd	3rd	4th	5th	Total
<b>Less than high school</b>												
% of households per Income group	44	41	27	21	7	28	31	18	11	6	2	14
% of households per category	30	30	19	15	5	100	45	27	16	8	3	100
Median	14.118	15.570	20.169	28.740	30.253	19.382	4.600	36.800	79.860	157.800	308.630	33.100
Mean	22.610	30.118	26.931	39.154	77.506	31.094	46.421	128.863	145.778	316.464	1,112.001	144.113
Std	34.121	77.423	34.211	52.649	142.021	63.271	79.886	238.142	197.030	464.042	2,949.062	615.799
Gini						0.64						0.78
Coef. Variation						2.04						4.27
Top 1% to bottom 40% ratio						164						24882
Location of mean (percentile)						71						75
Mean to median ratio						1.60						4.35
<b>High school</b>												
% of households per Income group	45	50	54	51	31	46	39	42	39	28	16	33
% of households per category	19	22	23	22	13	100	24	26	24	17	10	100
Median	20.169	13.086	15.577	20.197	44.371	20.027	12.500	49.800	81.700	181.360	441.800	80.500
Mean	36.849	27.645	27.409	38.985	107.809	42.561	82.997	134.903	196.464	300.910	1,025.817	252.444
Std	56.469	59.223	49.257	84.192	238.147	108.552	164.721	202.618	774.066	459.176	3,780.709	1,287.409
Gini						0.72						0.74
Coef. Variation						2.55						5.10
Top 1% to bottom 40% ratio						791						736
Location of mean (percentile)						73						74
Mean to median ratio						2.13						3.14
<b>Some college</b>												
% of households per Income group	3	3	7	8	9	6	17	20	20	19	15	18
% of households per category	11	9	24	26	30	100	18	23	22	20	17	100
Median	23.906	0.000	4.034	8.067	34.287	18.172	4.900	18.070	85.030	169.130	355.500	84.600
Mean	34.016	7.343	45.791	23.119	109.694	53.943	68.185	75.488	195.923	336.593	1,348.555	368.205
Std	37.021	16.793	140.440	35.521	243.816	155.701	154.758	176.648	400.192	451.509	6,189.333	2,599.677
Gini						0.80						0.81
Coef. Variation						2.89						7.06
Top 1% to bottom 40% ratio						-583						3989
Location of mean (percentile)						76						81
Mean to median ratio						2.97						4.35
<b>College</b>												
% of households per Income group	5	6	11	20	53	19	12	20	30	47	67	35
% of households per category	5	6	12	21	56	100	7	11	17	26	39	100
Median	13.311	5.026	23.799	27.525	63.852	36.304	25.200	71.700	107.900	238.000	701.700	285.400
Mean	49.508	13.399	43.280	37.819	149.537	99.772	139.309	234.085	260.465	454.299	2,329.619	1,102.377
Std	138.383	31.018	61.022	78.594	268.056	214.458	288.851	637.727	639.746	828.048	8,008.294	5,110.498
Gini						0.74						0.78
Coef. Variation						2.15						4.64
Top 1% to bottom 40% ratio						784						522
Location of mean (percentile)						75						83
Mean to median ratio						2.75						3.86

Source: Survey of Consumer Finance 2007 for the U.S. and Encuesta Financiera de Hogares for Chile.

#### IV. ASSESSING CAUSES OF INEQUALITY

We now briefly recap some of our findings from our analysis of the income, asset, debt, and wealth distributions in Chile and the U.S. in order to try and speak to the causes and nature of financial inequality in both these countries. We touch on a few of the prominent explanations for American inequality advanced in the literature and see if they are consistent with our data.

##### 1. Earnings risk

As discussed in the context of the literature earlier, one hypothesized cause of wealth inequality is earnings risk. If earnings are a volatile process, that would impart a degree of inequality to the distribution of income and consequently of assets, especially if the process is persistent. Furthermore, if some jobs require extra compensation due to earnings volatility, that provides a second channel for earnings risk inequality.

Within our dataset, however, we established that Chile displays marginally more income inequality than the United States. Conditioning on age, all pre-retirement age groups also exhibit more income inequality in Chile than in the U.S., and employed workers are more unequal in terms of income as well, though in the U.S. self-employed workers face more inequality, a point we will return to momentarily when discussing entrepreneurship and inequality. There is also more income inequality by educational type in Chile.

We earlier asserted that financial markets to insure against these risks are almost certainly more complete in the U.S. relative to Chile. In our debt discussion, we pointed out that Americans, regardless of income, carry much more debt as a percentage of income relative to Chileans. This provides support to this hypothesis, and if financial markets are more complete in the U.S., the compensation for earnings risk should be lower.

Consequently, if earnings risk was really driving inequality in wealth in the United States, we should expect to see more inequality in wealth in Chile, with Chile having more variance in income across the board regardless of how the working age population is sliced. However, wealth is more equally distributed in Chile than the United States by a nontrivial margin—Ginis of 0.74 and 0.82, respectively—so we conclude that either inequality is being driven by very different processes in these countries or that earnings risk is not a compelling explanation for the observed inequality.<sup>10</sup>

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<sup>10</sup> Moreover, research on earnings risk dynamics using one-year income changes from the National Employment Survey (ENE) finds that earnings risk in Chile is more or less similar to that of the United States, (Madeira, 2015). This makes the hypothesis that earnings risk is driving the results more implausible.



## 2. Bequest motive

Another briefly mentioned potential driver of financial inequality is the existence of a strong bequest motive. Bequests provide an impetus for asset accumulation and hence asset and wealth inequality if the bequest motive is not homogeneous across actors. If lifespan cannot be perfectly predicted, even with homogeneous bequest motives, realized bequests would end up being quite different and correspondingly generating inequality, though accidental bequests have not been found to be a plausible explanation in the inequality literature.

A strong bequest motive implies a strong desire to hold onto wealth towards the end of the life cycle. American households hold roughly 11 times as much wealth, on average, than Chilean households. However, American households actually draw down their wealth in retirement - average wealth decreases by 12% from the 55-64 cohort to the 65+ cohort. Conversely, Chilean households do not - average Chilean wealth decreases by only 0.5% moving from the 55-64 age group to the 65+ group. Overall, Chilean households seem to have much stronger bequest motives.

That said, wealth inequality among senior American households is much higher than in Chile, with Gini coefficients of 0.78 and 0.65, respectively. This indicates that there is more potential for inequality in bequests in America than in Chile. Wealth inequality is very similar in Chile and the U.S. for age groups under 55, at which point inequality decreases significantly in Chile and does not decrease in the U.S.

So, whereas there seems to be a stronger bequest motive in Chile in that households of all types generally try to hold more wealth through retirement, there seems to be a potential for more inequality in bequests in the United States, where despite a general drawdown of wealth, among seniors wealth is distributed much more unevenly. This leaves mixed messages for the bequest motive, which we now attempt to reconcile.

## 3. Entrepreneurial choice

A third factor considered by the literature to explain the high degree of observed inequality revolves around entrepreneurship, and there are significant differences in traditionally employed and self-employed households in the data. American entrepreneurs exhibit more income inequality than any other labor force group in either country despite lower income inequality on aggregate in the U.S.

The American self-employed also display significant disparity in terms of wealth. Chilean entrepreneurs hold 63.3% more wealth than the Chilean employed, but American entrepreneurs hold on average 462% more wealth than American employed workers. This difference is driven by the top end of the distribution. 24.3% of Chilean self-employed households are in the top income quintile—barely more than if the distribution was uniform—but 40.3%

of American entrepreneurs are, and while there is minimal income premium to entrepreneurship in Chile (6.2%), there is a 112% premium in the United States.

While wealth is dominated by assets, the debt dynamics surrounding entrepreneurship are also notable. Chilean traditionally employed households actually hold more debt than their self-employed counterparts (3.5% more), but American entrepreneurs hold 75% more debt than employed households. This debt possibly reflects greater opportunity for American entrepreneurs to grow their businesses with help from financial markets, and also possibly greater inequality in outcomes among American entrepreneurs.

In addition to this, despite the financial outcomes of entrepreneurship in the United States, fewer households are self-employed. In Chile, 47.2% of households are traditionally employed, compared to 24.2% self-employed. The corresponding percentages for the U.S. are 60.8% and 10.5%. Since fewer American households are engaged in entrepreneurship, the outsize earnings and wealth of those who do create significant inequality in the aggregate distribution.

Returning to the bequest motive, it may be tougher to draw down wealth generated by self-employment than from traditional employment, if much of the wealth is tied up in a business or some other entrepreneurial activity. Consequently, entrepreneurship may be driving the difference in life-cycle profiles of inequality between the U.S. and Chile, and thus the potential for unequal bequests as well.

Overall, our data is entirely consistent with greater and possibly more unequal access and returns to self-employment in the U.S. generating greater wealth inequality in the U.S. than in Chile.

To further analyze the self-employment role in explaining the differences in assets and wealth distributions across Chile and the U.S., we carry out a computational exercise that asks ‘if we imposed American returns to self-employment on Chile, what would wealth inequality look like in Chile?’ To do this, we adjust the Chilean income distribution to mimic the one observed in the U.S. in terms of employed versus self-employed, as described below. We use the new income distribution to project assets and wealth in Chile using the covariates obtained for the U.S., which lets us create hypothetical inequality measures.

We carry out this exercise by first computing self-employment relative income for each country by dividing the income of each self-employed worker by the average income of the entire economy. This standardizes away the level differences in all types of income between the two countries. Second, we adjust the weights for this new Chilean relative income distribution to mimic the relative income distribution observed in the U.S.

To construct the weights, we follow the methodology developed in DiNardo et al. x (1996). We pool data from both surveys and use probit models to estimate

the probability that an observation of a certain income, age, and educational attainment is in the Chilean data. The estimated probabilities are used to construct the weights  $\psi(Z) = P(dchile | Z) / [1 - P(dchile | Z)]$ , where  $Z$  is the vector of these variables,  $dchile = 0, 1$  equals 1 when an observation is taken from the Chilean data and 0 otherwise, and  $P(dchile | Z)$  is the conditional probability of appearing in the Chilean data conditional on observable characteristics  $Z$ . The weight function,  $\psi(Z)$ , is used to reweight the observations in the Chilean data to obtain nearly equal distributions of the variables of interest across the two countries.

Once we obtain the new set of weights, we estimate the relationship between relative income and assets and between relative income and wealth as described by equation (1) (only for self-employed workers):

$$y_i = \beta_0 + \beta_1 income_i + \beta_2 income_{2i} + \beta_3 age_i + \varepsilon_i \quad (1)$$

where  $y_i$  is either assets or wealth and income is relative income. We estimate equation (1) for both Chile and the U.S. Estimates are reported in table 25. All the coefficients are significant at the 1% level.

We use these estimates to carry out two projection exercises. First, we use  $\beta_{chile}$  to project assets and wealth for Chile. These projected measures for assets and wealth capture the effect of the updated relative income distribution that imposes that Chilean entrepreneurs have the same income distribution relative to average income as American entrepreneurs. Using the generated series we compute the Gini coefficients for assets and wealth. The updated Gini coefficient for assets is 0.856 and for wealth it is 0.930, both higher than the observed U.S. measures.

Then, we go one step further and we project assets and wealth for Chile but using the  $\beta_{US}$  (estimated covariates using the U.S. data). This exercise captures the effect of giving the Chilean self-employed the same relative income, and in addition giving them the American relationship between self-employed income and self-employed wealth. Once again we compute the Gini coefficients for assets and wealth. The resulting Gini coefficient for assets is 0.624 and for wealth it is 0.654.

**Table 25**

### Income effect on assets and wealth

	Constant	Income	Income2	Age
Assets U.S.	-1,659.3	1,040.8	-0.613	32.66
Assets Chile	-43.11	54.85	-1.599	1.119
Wealth U.S.	-1,821,803	1,021,604	-591.4	32,926
Wealth Chile	-45.12	47.90	-1.364	1.162

Source: Authors' calculations.

We take from this exercise that the returns to entrepreneurship in the U.S. are a huge factor, more than sufficient to explain the difference in assets and wealth inequality between Chile and the U.S. Currently, Chile's relative income between employed and self-employed is almost 1:1, in part because the Chilean self-employed income is being dragged down by low-income low-education service providers. Conversely, U.S. self-employed income is more than twice U.S. mean employed income (table 17). Giving these returns to Chilean entrepreneurs then creates a much fatter tail in the Chilean distribution, generating much more inequality than we observe in either country.

This implies that there may be other factors besides returns to entrepreneurial services that contribute to the differences in inequality between Chile and the U.S. As discussed, these include earnings shocks and bequest motives. What we take away from this exercise and our prior discussion, however, is that the magnitude of the change in Chilean assets and wealth distributions is substantial, implying that returns to entrepreneurship seems much more plausible as a major factor relative to these other hypotheses.

Note that when we also impose the U.S. link between entrepreneurial income and entrepreneurial wealth, the estimated Chilean inequality drops dramatically, below the levels of either country. Chilean entrepreneurs save considerably more than American entrepreneurs of comparable relative income. This enforces that it is not the saving behavior of U.S. entrepreneurs that is generating the wealth inequality, but rather just their much higher incomes that matter—the payoffs to entrepreneurship.

One possibility is that the lack of a well developed financial system may induce Chilean entrepreneurs to self insure via asset accumulation, as discussed when dissecting the debt distribution. Other possible contributors to this relationship include the lack of social mobility in Chile, compared to the U.S., and the seemingly stronger bequest motive observed in Chile.

#### 4. Other

There are a variety of other explanations for the observed degree of financial inequality that we could consider. One possible explanation is that Chile may be an economy that has not reached its steady-state level but is instead converging towards it. If this is the case, as the economy converges to its steady state, the wealth distribution may change and start to exhibit characteristics more similar to the observed U.S. distributions. Demographic characteristics may also explain the differences across countries (see, for example, Bover (2010) for a comparison of wealth between the U.S. and Spain). We do not, however, have the data to tackle either of these hypotheses seriously in this paper.

An additional explanation for the lesser inequality observed in Chile may be due to the fact that the household groups that belong to the first income quintile in Chile are benefiting from significant housing subsidies. Since real estate is the main wealth source for the low-income groups in Chile, and is financed to



some extent by the government, this may explain in part our previous results in terms of inequality among lower financial quintiles being generally lower in Chile than in the U.S. However, given that inequality is largely driven by the very upper financial echelons in both countries, this cannot explain much of the aggregate inequality observed.

Finally, our ability to make comparisons across countries is limited by the repeated cross-sectional nature of these datasets. Even with further collections of the EFH and SCF in the same year, the inability to link households across these surveys will likely limit how much can be said in other studies.

## V. CONCLUSIONS

In this paper we analyze the income, asset, debt, and wealth distributions in Chile and the U.S. as reported by the Chilean Household Financial Survey and the American Survey of Consumer Finances, respectively. While Chile reports significantly less financial capability across the board, the results are not as black and white in terms of the inequality embedded in these distributions. We find that the U.S. sees more inequality than Chile in terms of assets (Chilean Gini: 0.70, U.S. Gini: 0.76) and net wealth (Chile: 0.74, U.S.: 0.82), but Chile sees more inequality in terms of income (Chile: 0.57, U.S.: 0.53) and debt (Chile: 0.85, U.S.: 0.70).

We extend our analysis of these distributions to a variety of demographic subgroups. In particular, we consider breakdowns by age, marital status, gender of household head, employment status, and educational attainment. We use these quantitative findings to shed light on the plausibility of different mechanisms proposed in the literature to explain the high level of inequality in the U.S.

We argue that arguments based on earnings risk seem unrealistic because the income process in Chile seems to be more risky than in the U.S., as the income distribution in Chile is more unequal. Moreover, it seems reasonable to assume that financial markets to insure against these risks are less developed in Chile than in the U.S., a claim that seems to be validated by our results on the debt distribution in both countries.

Another well-known explanation for the observed extreme upper tail of the wealth distribution is based on bequests, both accidental and voluntary. However, we find indication that the bequest motive is, if anything, stronger in Chile than in the U.S., which raises doubts about the significance of this channel in explaining observed inequality.

Conversely, our data suggests that we cannot discard the idea that entrepreneurial choice can account for the wealth inequality observed in the U.S. In both countries, self-employed households are considerably richer. Relative to the U.S., traditionally employed Chilean workers hold approximately 8.5 times less wealth. But self-employed American households hold roughly 30 times the

wealth of their Chilean counterparts. We carry out a quantitative exercise that increases the returns to entrepreneurship in Chile to American levels to show that it is a plausible mechanism that can fully explain the observed difference in wealth inequality. We consequently believe it is important to analyze in more detail the savings behavior of the entrepreneurial sector in Chile and in the U.S. We leave this for future research.





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