"Financial Reforms and Income Inequality"

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ABSTRACT

Using a panel of 62 countries for 1973-2005, we assess the impact of financial reforms on income inequality. We find that removal of policies towards directed credit and excessively high reserve requirements, and improvements in the securities market reduce inequality.

Keywords: Financial reforms, income inequality.
JEL classification: D31, E44.

1. Introduction

A large body of empirical literature has established the existence of a strong relationship between financial development and economic growth, showing that 1) countries with more developed financial sectors typically grow faster, and 2) financial development helps improve the allocation of capital (Arestis and Demetriades, 1997; Levine, 2005). While much of the focus has been on the importance of financial development for economic growth, some recent studies have started to address how finance can have an effect on income inequality. For instance, Rajan and Ramcharan (2011) argue that financial development can be hold back not only in countries with weak political institutions, but also where democracies are well developed. In particular, powerful interest groups can restrict the access to credit and make it costlier. Similarly, Haber and Perotti (2007) attribute to democratic corporatism, oligopolistic capture and state opportunism as the main political constraints on the development of financial system. In the same vein, Benmelech and Moskowitz (2010) highlight that financial regulation has been typically led by private interests of wealthy incumbents in the form of rents from others. These have, in turn, outweighed the public interests in protecting the poor. Rajan (2010) highlights that the stagnant incomes of the middle class have built pressure on politicians to expand credit and to make housing more affordable. While helping to maintain the path of consumption, the fact that household incomes did not respond in the same manner has ultimately led to the financial crisis, a conclusion that is shared by Hubbard (2010), who looks at the linkages between income inequality, household debt leverage and financial crises. Agnello and Sousa (2012a) show that banking crises substantially raise income inequality, widening the income inequality gap before the event emerges and sharply reducing it afterwards. Besides, fiscal austerity can also increase inequality particularly when it is driven by spending cuts rather than tax hikes.[1]

Financial reforms can therefore influence the distribution of income, as rising inequality generally reflects an unequal access to productive opportunities. First, financial reforms can improve the efficiency of the domestic financial systems (Abiad and Mody, 2005). Second, they can lead to a better allocation of risk and socialization of costs, which is particularly relevant during financial crises (Claessens and Perotti, 2007). Third, they can have a "quality effect" on allocative efficiency by equalizing access to credit and

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[1] Agnello and Sousa (2012b) find that fiscal adjustments are more prone towards reducing inequality when they succeed in achieving long-term public debt sustainability. However, Agnello and Sousa (2012c) also emphasize that income inequality tends to rise significantly both during periods of fiscal consolidation and in the aftermath of such adjustments.

reducing variation in expected marginal returns (Abiad et al., 2008). These outcomes, in turn, can help mitigate income inequality.

In this article, we show that financial reforms help reduce income inequality. Removal of policies towards directed credit and elimination of high reserve requirements seem to be particularly effective in bringing inequality down at the low-end of the income distribution. Similarly, policies that improve the functioning of the equity markets and ease the openness of securities markets to foreign investors can help guarantee equal opportunities for low- and middle-income households.

2. Econometric Methodology

We start by considering a baseline model that does not take into account the impact of financial reforms on income inequality. More specifically, we estimate the following model for a panel of N countries, indexed by i = 1, ..., N:

$$\ln(I_{i(t+j,t+4)\{j=0,5,...\}}) = \alpha_i + \beta_{1i}\ln(y_{it+j}^p) + \beta_{2i}\ln(y_{it+j}^p)^2 + \beta_{3i}\ln(g_{it+j}) + \beta_{4i}\ln(T_{it+j}) + \varepsilon_{it+j}, \quad (1)$$

where I is the average of the net income Gini inequality index over 5-year non-overlapping windows, y denotes the per capita income (in levels and squared terms), g is the government size and T is the degree of openness. All control variables are observed at the beginning of each time window. Finally, α_i indicates the individual effects.

Second, we augment model (1) in order to include the effect of financial reforms, that is:

$$\ln(I_{i(t+j,t+4)\{j=0,5,...\}}) = \alpha_i + \beta_{1i}\ln(y_{it+j}^p) + \beta_{2i}\ln(y_{it+j}^p)^2 + \beta_{3i}\ln(g_{it+j}) + \beta_{4i}\ln(T_{it+j}) + \gamma_i\Delta D_{t+j}^{ref} + \varepsilon_{it+j}$$

$$(2)$$

where D_{t+j}^{ref} denotes the liberalization-related policy change occurred at the beginning of each observational window and measured as the difference between the level of financial liberalization index at time t+j and the level at time t+j-1.

For robustness check, we also estimate models (1)-(2) where inequality is expressed as the average net income inequality index over 5-year rolling windows, i.e. $I_{i(t+j,t+4)\{\forall j\geq 0\}}$ or simply the level of the net income inequality index, i.e. I_{it}.

3. Data and Empirical Results

We use annual data and an unbalanced panel of 62 countries over the period 1973-2005.[2] Net income Gini inequality index data comes from the Standardized World Income Inequality Database (SWIID). Per capita GDP and degree of openness are taken from the World Development Indicators of the World Bank and the Penn World Table (PWT) Version 7.0, respectively. Finally, data on financial reforms is based on the works of Abiad and Mody (2005) and Abiad et al. (2010). In particular, we consider the aggregate index of financial reform, which measures the removal of government control and direction of the financial sector. In addition, we also look at nine dimensions of financial reforms, such as credit controls, (aggregate) credit ceilings, directed credit/reserve requirements, interest rate controls, security markets, privatization, international capital flows, entry barriers/pro-competition measures and banking supervision. Thereby, model (2) is estimated for each dimension of financial liberalization.

Tables 1 summarizes the results for the baseline models (1)-(2), while estimates reported in Table 2 and 3 refer to model specifications where the net income Gini inequality index is computed as either the average over 5-year rolling windows or expressed in levels, respectively.

In column (1), we present the evidence for the baseline model (i.e. without accounting for the effects of financial reforms); Column (2) adds the aggregate index of financial reform to the set of explanatory variables; and, in Columns (3)-(11), we look at different typologies of financial reforms. The empirical evidence shows that financial reforms promote a more equal distribution of income. In fact, the coefficient associated with the financial reform index is negative and statistically significant.

Moreover, the results suggest that directed credit and removal of excessively high reserve requirements are especially important in reducing income inequality: the sign of the coefficient associated with this type of financial reform is always negative and statistically significant (-0.017, -0.007 and -0.008 in Tables 1, 2 and 3, respectively). This result corroborates the findings of the political economy literature, which emphasizes that access to credit reduces inequality (Haber and Perotti, 2007; Benmelech and Moskowitz, 2010; Rajan and Ramcharan, 2011). It is also similar in spirit to the finding of Agnello and

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[2] Algeria, Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Denmark, Dominican Republic, Ecuador, Egypt, Finland, France, Germany, Ghana, Greece, Guatemala, Honduras, Hungary, India, Indonesia, Ireland, Italy, Ivory Coast, Japan, Kenya, Morocco, Mexico, Malaysia, New Zealand, Nicaragua, Nigeria, Netherlands, Norway, Peru, Philippines, Poland, Portugal, Paraguay, Republic of Korea, Romania, Russia, Singapore, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Thailand, Tunisia, Turkey, Uruguay, UK, USA, Venezuela and Zimbabwe.

Sousa (2012a), who show that a better access to credit from the banking sector promotes income equalization. Similarly, easiness of expansion of bank branches, wider banking services and lower regulation in more democratic societies can increase access to credit and, thereby, contribute to a fall in inequality. In contrast, the existence of a minimum amount of bank lending to certain "priority" sectors in the context of targeted policies designed to help development is detrimental to the income inequality gap. Moreover, when reserve requirements are excessive – for instance, because legislation forces banks to deposit a large share of financial savings with the central bank - it is likely that inequality will rise. In this respect, it corroborates the work of Demetriades and Luintel (1996), who highlight that, in poor countries, frictions encountered by small businesses in their activities and high barriers to entry are very frequent.

We also find that reforms in the securities market contribute to a more even income distribution. Tables 1, 2 and 3 all show that this financial reform has a negative effect on the net income Gini inequality index (with the coefficients being -0.023, -0.011 and -0.012, respectively). Therefore, policies that promote the securities markets (such as the development of depository and settlement systems, the openness of securities markets to foreign investors or tax incentives) help narrowing the income inequality gap. This finding gives rise to the idea that financial constraints can be seen as a "special large barrier" (Claessens and Perotti, 2007). Putting it differently, a proper functioning of the credit and equity markets should guarantee equal opportunities for both the less wealthy and the more talented individuals and, consequently, financial reforms should help the diffusion of economic opportunities and reduce inequality.

In line with the work of Barro (2008), the results support the existence of the Kuznets curve, i.e., an inverse U-shape curve between income inequality and per capita GDP: the coefficient associated with per capita GDP is statistically significant and has a positive sign, while per capita GDP squared has a negative sign.

Additionally, the government size can be thought as a buffer against disparities in the distribution of income. In fact, the coefficient associated with this variable is negative and statistically significant, thereby suggesting that governments can play a major role in reducing inequality. In contrast, trade openness seems to exacerbate income inequality as

in Barro (2008), because the expansion of traded goods sector due to greater openness of a country could lead to a rise in wage inequality through the employment channel.[3]

[Table 1]

[Table 2]

[Table 3]

4. Conclusion

This paper shows that financial reforms reduce income inequality. We find that financial reforms, in general, and removal of subsidized directed credit and excessively high reserve requirements and improvements in the securities market policy help promote a more equal distribution of income.

We also show that: (i) there is a nonlinear relationship between per capita income and income inequality (the so called "Kuznets" curve); (ii) the size of the government helps reduce the income inequality gap; but (iii) trade leads to more disparity in the distribution of income.

From a policy perspective, the research presented in this paper casts some concerns about the impact of some recent (unconventional) policies adopted in several industrialized countries - such as, quantitative easing - on inequality. In fact, by helping governments finance their budget deficits, reallocating wealth towards banks and negatively impacting on the return of pension funds (which typically invest more on government bonds and are, consequently, more vulnerable to the decline in long-term yields), economic policies can affect the composition of households' portfolio (Poterba and Samwick, 1995, 2003) and may amplify income inequality.

While assessing the impact of financial reforms on income inequality, this paper opens new avenues of investigation. It is possible to have a bi-directional relationship between financial development and economic growth (Demetriades and Hussein, 1996). In addition, Abiad and Mody (2005) show that discrete event or "shocks", "learning" and structural features (such as the legal system or the political institutions) can be important drivers of financial reforms. This raises a question as to whether inequality can foster the likelihood of financial reforms. Inequality may create pressures and incentives in a society towards a change of the policy regime. On the other hand, it may prevent a genuine

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[3] Although the evolution of inequality could be influenced by many factors aside from openness, it is worth mentioning that previous research provides conflicting theoretical explanations for the effects of trade openness on income inequality and the empirical evidence is also inconclusive.

financial reform, because incumbents either block it or reap the benefits of the change (Claessens and Perotti, 2007). We leave these open questions for future research.

References

Abiad, A., Detragiache, E., and T. Tressel, 2010. A new database of financial reforms. IMF Staff Papers, 57 (2), 281–302.

Abiad, A., and A. Mody, 2005. Financial reform: What shakes it? What shapes it? The American Economic Review, 95(1), 66-88.

Abiad, A., Oomes, N., and K. Ueda, 2008. The quality effect: Does financial liberalization improve the allocation of capital? Journal of Development Economics, 87(2), 270-282.

Agnello, L., and R. M. Sousa, 2012a. How do banking crises impact on income inequality? Applied Economics Letters, 19(15), 1425-1429.

Agnello, L., and R. M. Sousa, 2012b. Fiscal adjustments and income inequality: A first assessment. Applied Economics Letters, 19(16), 1627-1632.

Agnello, L., and R. M. Sousa, 2012c. Fiscal consolidation and income inequality. University of Minho, NIPE Working Paper No. 34.

Arestis, P., and P. Demetriades, 1997. Financial development and economic growth: Assessing the evidence. Economic Journal, 107, 783-799.

Barro, R., 2008. Inequality and growth revisited. ADB Working Paper No. 11, Asian Development Bank: Manila.

Benmelech, E., and T. Moskowitz, 2010, The political economy of financial regulation: Evidence from U.S State Usury Laws in the 19th century. Journal of Finance, 65(3), 1029-1073.

Claessens, S., and E. Perotti, 2007. Finance and inequality: Channels and evidence. Journal of Comparative Economics, 35(4), 748-773.

Demetriades, P., and K. Hussein, 1996. Does financial development cause economic growth? Time series evidence from sixteen countries. Journal of Development Economics, 51, 387-411.

Demetriades, P., and K. B. Luintel, 1996. Financial development, economic growth and banking sector controls: Evidence from India. Economic Journal, 106, 359-374.

Haber, S., and E. Perotti, 2007. The political economy of finance. Stanford University, Working Paper.

Hubbard, G., 2010. Income inequality and financial crises. The New York Times, August 22nd, WK5.

Levine, R., 2005. Finance and growth: Theory and evidence. In: Aghion, P., and S. Durlauf (Eds.). Handbook of Economic Growth, 1, Elsevier Science: Amsterdam.

Poterba, J., and A. Samwick, 1995. Stock ownership patterns, stock market fluctuations, and consumption. In: Brainard, W. C., and G. L. Perry (Eds.). Brookings Papers on Economic Activity, 2, 295-372.

Poterba, J., and A. Samwick, 2003. Taxation and household portfolio composition: U.S. evidence from the 1980s and 1990s. Journal of Public Economics, 87, 5-38.

Rajan, R. G., 2010. Fault lines: How hidden fractures still threaten the world economy. Princeton University Press.

Rajan, R. G., and R. Ramcharan, 2011. Land and credit: A study of the political economy of banking in the United States in the early 20th Century. Journal of Finance, 66(6), 1895-1931.

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Table 1: Financial reforms and income inequality (5-year non-overlapping windows).

	Baseline model	Including Financial Reform Index	Different typologies of Financial Reform								
Income	0.211***	0.167**	0.174**	0.028	0.178**	0.170**	0.154*	0.176**	0.174**	0.181**	0.171**
	[0.081]	[0.088]	[0.088]	[0.171]	[0.088]	[0.088]	[0.089]	[0.089]	[0.089]	[0.089]	[0.089]
Income squared	-0.008**	-0.007*	-0.007**	0.002	-0.007**	-0.007**	-0.006*	-0.007**	-0.007**	-0.007**	-0.007**
	[0.003]	[0.004]	[0.004]	[0.008]	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]	[0.004]
Government size	-0.011	-0.034	-0.028	-0.043	-0.028	-0.036	-0.034	-0.03	-0.032	-0.029	-0.031
	[0.031]	[0.034]	[0.034]	[0.048]	[0.034]	[0.035]	[0.034]	[0.034]	[0.035]	[0.035]	[0.034]
Degree of openness	0.039*	0.040*	0.041*	0.052*	0.041*	0.039	0.038	0.039	0.04	0.038	0.040
	[0.023]	[0.024]	[0.024]	[0.032]	[0.024]	[0.024]	[0.024]	[0.024]	[0.024]	[0.024]	[0.024]
Financial Reform Index		**-0.115***									
		[0.068]									
Credit controls			-0.015								
			[0.010]								
Credit ceilings				0.003							
				[0.019]							
Directed credit					**-0.017***						
					[0.010]						
Interest rate controls						-0.009					
						[0.007]					
Security markets							**-0.023***				
							[0.013]				
Privatization								0.001			
								[0.014]			
International capital flows									-0.006		
									[0.010]		
Entry barriers										-0.010	
										[0.014]	
Banking supervision											0.014
											[0.016]
Constant	2.148***	2.569***	2.504***	2.997***	2.477***	2.555***	2.648***	2.499***	2.512***	2.475***	2.523***
	[0.459]	[0.521]	[0.520]	[0.878]	[0.520]	[0.523]	[0.526]	[0.523]	[0.523]	[0.523]	[0.522]
Observations	335	308	308	169	308	308	308	308	308	308	308
# of groups	66	61	61	36	61	61	61	61	61	61	61
R-squared	0.08	0.06	0.06	0.14	0.06	0.06	0.06	0.05	0.05	0.05	0.05

Note: Fixed effects estimator. Standard errors appear in square brackets. ***, **, * - statistically significant at 1%, 5% and 10% level, respectively.

Table 2: Financial reforms and income inequality (5-year overlapping windows).

	Baseline model	Including Financial Reform Index	Different typologies of Financial Reform								
Income	0.146*** [0.025]	0.244*** [0.034]	0.245*** [0.034]	0.168** [0.065]	0.245*** [0.034]	0.243*** [0.034]	0.241*** [0.034]	0.244*** [0.034]	0.244*** [0.034]	0.244*** [0.034]	0.244*** [0.034]
Income squared	-0.006*** [0.001]	-0.009*** [0.001]	-0.009*** [0.001]	-0.004 [0.003]	-0.009*** [0.001]	-0.009*** [0.001]	-0.009*** [0.001]	-0.009*** [0.001]	-0.009*** [0.001]	-0.009*** [0.001]	-0.009*** [0.001]
Government size	-0.080*** [0.010]	-0.053*** [0.013]	-0.053*** [0.013]	-0.045** [0.018]	-0.053*** [0.013]	-0.054*** [0.013]	-0.052*** [0.013]	-0.053*** [0.013]	-0.053*** [0.013]	-0.053*** [0.013]	-0.053*** [0.013]
Degree of openness	0.004 [0.008]	0.017* [0.009]	0.017* [0.009]	0.014 [0.012]	0.017* [0.009]	0.017* [0.009]	0.017* [0.009]	0.017* [0.009]	0.017* [0.009]	0.017* [0.009]	0.017* [0.009]
Financial Reform Index		-0.042 [0.029]									
Credit controls			-0.007 [0.004]								
Credit ceilings				0.003 [0.009]							
Directed credit					**-0.007* [0.004]**						
Interest rate controls						-0.004 [0.003]					
Security markets							**-0.011* [0.006]**				
Privatization								0.002 [0.005]			
International capital flows									-0.002 [0.004]		
Entry barriers										0.002 [0.005]	
Banking supervision											0.001 [0.005]
Constant	2.916*** [0.137]	2.185*** [0.198]	2.180*** [0.198]	2.336*** [0.328]	2.179*** [0.198]	2.191*** [0.198]	2.203*** [0.198]	2.184*** [0.198]	2.185*** [0.198]	2.184*** [0.198]	2.186*** [0.198]
Observations	2007	1543	1543	839	1543	1543	1543	1543	1543	1543	1543
# of groups	67	61	61	36	61	61	61	61	61	61	61
R-squared	0.05	0.08	0.08	0.14	0.08	0.08	0.08	0.07	0.07	0.07	0.07

Note: Fixed effects estimator. Standard errors appear in square brackets. ***, **, * - statistically significant at 1%, 5% and 10% level, respectively.

Table 3: Financial reforms and income inequality (levels).

	Baseline model	Including Financial Reform Index	Different typologies of Financial Reform								
Income	0.118*** [0.025]	0.221*** [0.036]	0.221*** [0.036]	0.243*** [0.068]	0.221*** [0.036]	0.221*** [0.036]	0.219*** [0.036]	0.221*** [0.036]	0.220*** [0.036]	0.222*** [0.036]	0.221*** [0.036]
Income squared	-0.005*** [0.001]	-0.008*** [0.002]	-0.008*** [0.002]	-0.008** [0.003]	-0.008*** [0.002]	-0.008*** [0.002]	-0.008*** [0.002]	-0.008*** [0.002]	-0.008*** [0.002]	-0.008*** [0.002]	-0.008*** [0.002]
Government size	-0.092*** [0.010]	-0.049*** [0.014]	-0.050*** [0.014]	-0.036** [0.018]	-0.050*** [0.014]	-0.051*** [0.014]	-0.049*** [0.014]	-0.050*** [0.014]	-0.050*** [0.014]	-0.050*** [0.014]	-0.050*** [0.014]
Degree of openness	0.008 [0.008]	0.017* [0.010]	0.017* [0.010]	0.018 [0.013]	0.017* [0.010]	0.017* [0.010]	0.017* [0.010]	0.017* [0.010]	0.017* [0.010]	0.017* [0.010]	0.017* [0.010]
Financial Reform Index		**-0.076** [0.034]**									
Credit controls			-0.008 [0.005]								
Credit ceilings				0.000 [0.011]							
Directed credit					**-0.008* [0.005]**						
Interest rate controls						-0.005 [0.004]					
Security markets							**-0.012* [0.007]**				
Privatization								0.000 [0.006]			
International capital flows									-0.004 [0.004]		
Entry barriers										-0.008 [0.006]	
Banking supervision											-0.001 [0.006]
Constant		3.153*** [0.139]	2.332*** [0.209]	2.329*** [0.209]	1.986*** [0.340]	2.329*** [0.209]	2.332*** [0.209]	2.338*** [0.209]	2.327*** [0.209]	2.331*** [0.209]	2.326*** [0.209]
Observations	2343	1684	1684	928	1684	1684	1684	1684	1684	1684	1684
# of groups	68	61	61	36	61	61	61	61	61	61	61
R-squared	0.04	0.06	0.05	0.11	0.05	0.05	0.05	0.05	0.05	0.05	0.05

Note: Fixed effects estimator. Standard errors appear in square brackets. ***, **, * - statistically significant at 1%, 5% and 10% level, respectively.

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