Essays on macroeconomic policies after the crisis

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Chapter 1

Introduction

The Global Financial Crisis (GFC) of 2007-2009 and the ensuing recession marked the deepest downturn in economic history since the Great Depression. Although the response of governments was different across countries, at least in advanced economies, macroeconomic policy evolved around some common lines. This dissertation identifies three areas of intervention — (i) quantitative easing and forward guidance, (ii) fiscal austerity, and (iii) labor market deregulation — and studies the effects that each of them might have had on selected economic and financial variables.

Chapter 2 focuses on the unconventional monetary policies undertaken by the U.S. Federal Reserve (Fed) in response to the GFC. In November 2008 the Fed lowered the short-term interest rate to zero and began buying financial assets to provide liquidity to the markets (quantitative easing policy). The Fed also changed its communication, as it sought to indicate that monetary accommodation was there to stay (forward guidance policy). In a world in which capital flows across borders and where the dollar is the international reserve currency, these policies carried global spillovers. Chapter 2 studies how the Fed's 'unconventional' policies affected agents' international investment decisions in response to domestic macroeconomic news. Such news are important because they inform agents about the state of the economy and may send signals about likely future changes in monetary policy. The chapter shows that the strength of the latter crucially depends on the Fed's guidance.

While the Fed was conveying the idea that its zero-rate policy would have lasted for a long time, positive news about the U.S. labor market induced U.S. investors to seek financial exposures in emerging market economies. Conversely, when the Fed started hinting at a progressive 'normalization' of policy, the same news led investors to move capital away from emerging markets. These non-linearities are evidence of the Fed's role in shaping investors' expectations. Its reliance on time-based guidance deprived macroeconomic releases of any information about future policy. Positive news then boosted the domestic stock market and depressed risk aversion, two effects that partly explain the flow of investments towards emerging markets. By contrast, in the lead-up to policy normalization, the Fed put increased emphasis on incoming data to decide the timing of normalization. Positive news fueled expectations of firmer policy and led to a tightening of financial conditions, inducing U.S. investors to repatriate capital. The findings of Chapter 2 point to a large role of unconventional monetary policies in shaping investors' expectations.

The dissertation then moves on to fiscal policy. Fiscal policy contributed to dampening the immediate recessionary effects of the GFC. However, in later years many governments in advanced economies started to adjust their policy stance, due to increasing investors' concerns about the stability of public finances (Greece, Ireland, Italy, Portugal, and Spain) or the need to adhere to international obligations (e.g., Germany, and the Netherlands). Many commentators linked fiscal austerity to increasing economic inequality. However, the effects are not theoretically clear. As an example, a reduction in government social spending might have negative direct effects on the least well-off. On the other hand, the effects of raising taxes should depend on which groups of agents are targeted by the new policy. Indeed, while the literature seems to agree that 'spending-based' consolidations have adverse effects on income distribution, the evidence on the effects of 'tax-based' consolidations is more mixed.

Chapter 3 sheds light on these issues. It uses a multi-equation set-up to investigate the medium-term effects of tax-based consolidations (meaning episodes in which tax hikes are larger than spending cuts) on income disparity. This empirical framework allows exploring the response of potential inequality drivers, such as economic conditions and labor market outcomes. The results point to a positive effect of tax-based consolidations in improving income distribution. An analysis by the components of taxation suggests that indirect taxes are mostly responsible for this result. The estimates also show that higher indirect taxes lead to a substantial contraction in economic activity, suggesting that part of their positive effects on income distribution may be ascribed to the business cycle. However, the response of labor market variables also points to a positive labor supply channel of indirect taxes. These raise the price of the consumption basket and induce middle-aged women — who are typically more sensitive to changes in economic incentives — to increase their labor force participation.

The analysis carried out in Chapter 3 thus suggests that increases in tax revenues in the aftermath of the GFC most likely did not contribute to increasing inequality. On the contrary, they might have lowered it. Still, in designing future consolidations, policymakers should consider the equity-efficiency trade-offs of different tax instruments. Raising indirect taxes does have positive effects on income equality but also induces larger economic contractions than direct taxes.

Chapter 4 turns the focus on labor market regulation. Administrative requirements, monetary costs and other impediments on the hiring, firing and managing of workers are often cited as factors both preventing an efficient re-allocation of resources and holding up new investments. To boost productivity and regain competitiveness in the aftermath of the Crisis, many governments of Euro Area countries (e.g., France, Greece, Italy, the Netherlands, Portugal, Spain) lifted some of the restrictions faced by employers when adjusting the labor input. However, these interventions might have other unintended effects. The chapter investigates whether episodes of employment protection deregulation have had detrimental effects on the distribution of income between labor and capital.

By reducing the costs of dismissal, deregulation affects the bargaining power between workers and employers in favor of the latter. The chapter starts with two very stylized bargaining models. In the first, employers and workers bargain over the wage and employers then set the employment level taking the wage as given. Deregulation lowers wage rents and — if the implied substitution of labor for capital is not large enough (that is, the elasticity of substitution is lower than one) — leads to a decrease in the labor share of income. Under the second model, bargaining takes place over both wage and employment. The employment level is pinned down by the workers' reservation wage (e.g., the unemployment benefit). Deregulation then lowers wage rents and unambiguously decreases the labor share of income. The rest of the chapter takes these insights to the data.

The analysis uses a 'narrative' dataset of job protection deregulation episodes in a panel of advanced economies and relies upon two databases to measure labor shares, at both the country-time and the country-industry-time level. Since labor market reforms are done at the country-level, the industry-level analysis relies upon two identification strategies based on theory. Namely, it is assumed that job protection legislation reforms should have larger effects on the labor share in industries where it is more binding (that is, where employers need to adjust the workforce more frequently) and where the elasticity of substitution is lower than one. The results show that deregulation indeed had negative effects on the labor share. Using aggregate data, the adverse effect of a major liberalizing reform is found to stabilize at about half of a percentage point after five years. The industry-level analysis confirms that deregulation had larger negative effects on the labor share in industries with a lower elasticity of substitution between labor and capital and a higher 'natural' layoff rate. This chapter also contributes to the existing literature by highlighting another factor that might have contributed to the decline in labor shares observed across a broad range of advanced and emerging market economies in recent decades.

Chapter 5 takes a somewhat different perspective from the other ones. It is motivated by one of the effects of the GFC, namely the great rise in youth unemployment. Youth unemployment rates have increased to unprecedented levels — sometimes to more than fifty percent (e.g., Greece and Spain) — in the early 2010s. Although such increase mostly characterized advanced economies, high youth unemployment rates are also an issue in several emerging market economies. The chapter revisits the Okun's Law, which posits that there exists a negative relationship between a country's aggregate demand conditions and its unemployment rate, by testing its validity across different demographic groups and over two panels of countries, one of advanced and the other of emerging market and developing economies.

The analysis uncovers a large degree of heterogeneity in the strength of the Okun's Law. The difference between the unemployment rate and its equilibrium rate (the unemployment gap) for young workers is generally twice as sensitive to the cycle as it is for adults. Women's unemployment gap is significantly less sensitive to demand conditions than men's in advanced economies. The cyclical variation in the unemployment rate is also more sensitive to the cycle in advanced economies, possibly owing to a larger prominence of informal labor markets in emerging market and developing economies, which gives workers the possibility to also transition between formal and informal employment rather than just between formal employment and unemployment.

The chapter also considers some extensions to these core results. Procyclicality of labor force participation generally leads to an unemployment rate gap response that is smaller, in absolute value, than that of the employment gap (defined as the cyclical component of the employment level). Moreover, the magnitudes of labor force participation and employment sensitivities to the cycle differ widely across demographic groups, revealing even greater heterogeneity than for the unemployment gap. For example, the cyclical sensitivity of employment is about five times larger for young men than for adult women in advanced economies. The analysis also covers differences in unemployment gap sensitivities over different stages of the business cycle, with periods of negative output gaps driving stronger responses in the unemployment gap than periods of positive output gap. All in all, the results of this chapter point to the importance of demographic compositional differences across countries that may underlie aggregate cyclical sensitivities.