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Labor Markets, Financial Crises, and Inflation: Jobless and Wageless Recoveries*

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Abstract

We document the macroeconomic patterns that characterize labor market recovery from financial crises. Using a sample of postwar recession episodes from around the world, we show that financial crises are typically followed by jobless recoveries, with a sluggish recovery in employment relative to output. A departure from this empirical regularity occurs in emerging-market crises with high inflation, which feature strong employment recoveries but persistent declines in real wages and result in "wageless recoveries." Our findings highlight the central role of financial components in labor input costs and nominal wage rigidities in shaping labor market dynamics following economic crises.

Keywords: Jobless recoveries, financial crises, inflation, wage rigidities

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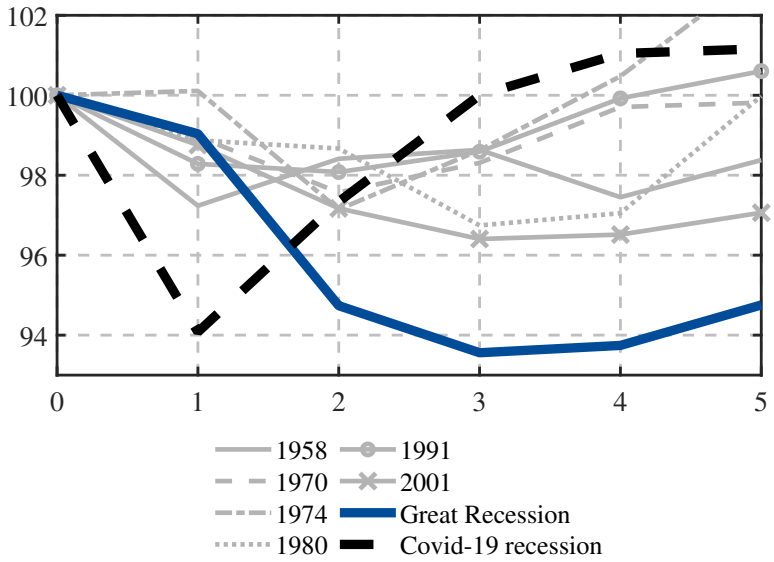
1. Introduction

The decline in employment that accompanies economic contractions is a defining characteristic of economic crises. In recent decades, concern over labor market dynamics following recession episodes has been heightened by the occurrence of "jobless recoveries," which involve a slow recovery of employment (see, for example, Gordon and Baily, 1993; Bernanke, 2009; Jaimovich and Siu, 2020). In this context, Figure 1 shows that the two most recent U.S. recessions exhibit substantially different patterns. The Great Recession stands out as the crisis with the most prolonged effects on employment, with per capita employment remaining more than 5% below its pre-crisis level 5 years after the crisis began. In contrast, the recent pandemic recession is notable for its faster employment recovery, despite the sizable initial contraction.

Figure 1: Employment Recovery for U.S. recessions



Notes: This figure shows the dynamics of employment in the United States for postwar recession episodes (NBER dates). Employment is expressed in per capita terms and normalized to 100 in the year before the recession begins. Data source: Federal Reserve Bank of St. Louis.

Motivated by these patterns, we conduct an empirical investigation that characterizes labor market recovery following recession episodes across the globe over the last eight decades. We focus on two central dimensions of these episodes. First, guided by the role of credit

market disruptions during the Great Recession (see, for example, Chodorow-Reich, 2014; Christiano, Eichenbaum and Trabandt, 2015; Gertler and Gilchrist, 2018), we examine the role of financial market conditions in shaping labor market recovery. Using a sample of 23 developed-market economies since the 1950s, we document that recessions associated with financial crises (i.e., banking or debt crises) are followed by jobless recoveries: per-capita output returns to its pre-crisis level, but per capita employment does not. We also observe persistent declines in other labor market indicators, such as hours worked, participation rates, and the labor wedge. However, real wages tend to increase throughout financial crises. The capital-output ratio, in turn, exhibits relative resilience and remains above its pre-crisis level at the output recovery point. These jobless recoveries are larger than in other recessions of similar magnitude.

Second, motivated by the inflation surge following the pandemic recession, we study the role of inflation in shaping labor market recovery. To this end, we extend our empirical analysis to a sample of 35 emerging-market economies, which exhibit significantly larger heterogeneity in inflation rates during recession episodes relative to the developed-market sample. We first document that emerging-market financial crises that feature large inflation surges (defined as episodes in the 90th percentile of emerging-market inflation changes, with increases in annual inflation above 9 p.p.) exhibit a remarkably different pattern from those in developed countries: strong recovery of employment alongside persistent declines in real wages that do not recover with economic activity, a pattern we refer to as "wageless recoveries." In contrast, emerging-market episodes that do not experience large inflation surges exhibit patterns closer to those observed in developed economies, with jobless recoveries but less significant declines in real wages.

While our evidence is descriptive, it is consistent with two key economic forces operating during jobless recoveries. First, a significant financial component in labor input costs. This can arise, for example, if labor contracts require payment in advance (see, for example, Christiano and Eichenbaum, 1992; Neumeyer and Perri, 2005; Jermann and Quadrini, 2012; Bigio, 2015) or substantial upfront costs that must be financed (see, for example, Petrosky-Nadeau, 2014). Under these conditions, the sluggish labor market recovery observed during

financial crises can result from credit market disruptions, which persistently increase the financial component of labor input costs. Second, our findings are consistent with the presence of downward nominal wage rigidities, which, in a low-inflation context, prevent higher labor input costs from translating into lower real wages and instead result in lower employment (see, for example, Akerlof et al., 1996; Schmitt-Grohé and Uribe, 2016; Chodorow-Reich and Wieland, 2020; Dupraz, Nakamura and Steinsson, 2019, and references therein). These forces could also explain why financial crises in high-inflation environments feature a recovery of employment at the expense of lower real wages. From a policy perspective, these findings suggest that credit market stability and inflation dynamics can play an important role in shaping labor market recovery from economic crises.

Related literature. Our paper contributes to several strands of the literature. First, it contributes to the literature on jobless recoveries. A rich body of work has studied the role of long-run trends in driving this type of recovery, including structural change (e.g., Groshen and Potter, 2003; Jaimovich and Siu, 2020; Restrepo, 2015); gender convergence (e.g., Albanesi, 2019; Fukui, Nakamura and Steinsson, 2023; Olsson et al., 2019); labor mobility; workforce aging; and cultural norms (Coibion, Gorodnichenko and Koustas, 2013). We contribute to this literature by showing that jobless recoveries are more pronounced in the presence of credit market disruptions and low levels of inflation. This finding aligns with the role of wage rigidities in jobless recoveries, as studied by Shimer (2012) in the context of frictional labor markets and Schmitt-Grohé and Uribe (2017) in the presence of nominal wage rigidities.

Our paper also contributes to the extensive body of work that studies the effects of financial crises. At the macro level, this literature has documented that financial crises are associated with particularly large and persistent contractions in economic activity (see, for example, Cerra and Saxena, 2008; Reinhart and Rogoff, 2009, 2014; Jordà, Schularick and Taylor, 2011; Schularick and Taylor, 2012). Using time-series, cross-sectional, regional data, the literature has identified a credit-supply channel that affects employment and investment, which helps to rationalize the aggregate dynamics observed during these episodes (see, for

example, Gilchrist and Zakrajšek, 2012; Chodorow-Reich, 2014; Huber, 2018; Ottonello and Song, 2022). Using microdata from labor force surveys, Donovan et al. (2024) study the distributive implications of financial crises and demonstrate that they tend to have a greater impact on workers who are less able to self-insure against idiosyncratic earnings risk, such as young and less-educated workers. Our contribution to this literature is twofold. First, we document that credit market disruptions are associated with a weaker recovery of labor input relative to capital. Second, we show that the level of inflation is associated with the form of aggregate adjustment following credit market disruptions, with the adjustment reflected either in employment or in real wages.

Finally, our paper relates to the literature on the costs of inflation (see, for example, Lucas, 2000; Burstein and Hellwig, 2008, and references therein). Our findings on wageless recoveries align with survey evidence from Stantcheva (2024), which shows that households dislike inflation mainly because it erodes their purchasing power. In this sense, our results provide evidence consistent with theoretical models that link the welfare costs of inflation to real wage adjustments (for recent studies in this area, see Afrouzi et al., 2024; Guerreiro et al., 2024; Hajdini et al., 2025; Pilossoph and Ryngaert, 2024).[1]

The rest of the paper is organized as follows. Section 2 presents empirical evidence that characterizes the recovery from financial crises in developed-market economies. Section 3 introduces data on emerging-market economies to study the role of inflation in shaping the type of labor market recovery following financial crises. Section 4 concludes.

2. Recovery from Financial Crises

We document that financial crises in developed-market economies tend to be followed by jobless recoveries. Section 2.1 defines our measures of recession episodes, jobless recoveries, and financial crises, and describes the data used in the empirical analysis. Section 2.2 presents

[1]Our evidence also suggests that, during financial crises, the alternative to wageless recoveries might be jobless recoveries. This introduces a potentially interesting source of state dependency for the costs of inflation (i.e., depending on underlying financial conditions) that could be further explored using both survey evidence and theoretical models.

the results.

2.1. Methodology and data

An accounting framework for recession recoveries. We analyze the recovery from financial crises and other recession episodes using an accounting framework in the spirit of Solow (1957) and Kehoe and Prescott (2007). We consider a discrete-time economy in which aggregate output and inputs are linked through the production function

$$y_t \;=\; A_t\, k_t^{\alpha}\, (\Gamma_t\, l_t)^{1-\alpha}, \tag{1}$$

where y_t denotes per capita output, k_t and l_t denote per capita capital and labor inputs, $\alpha \in (0,1)$ is the capital share of output, A_t is a stationary total factor productivity process, and Γ_t is a non-stationary labor-augmenting productivity process. This type of technology has been considered, for example, by Aguiar and Gopinath (2007) to account for business cycle patterns in both developed and emerging market economies, and our sample includes countries from both groups.

Consider a path of output, productivity, and inputs, $\{y_t, A_t, \Gamma_t, k_t, l_t\}$, which features an output contraction in some period t_c and a recovery to its pre-contraction level in period t_R. We refer to the period from the output peak, $t_P \equiv t_c - 1$, to the recovery, t_R, in the empirical analysis as a "recession episode." We then ask: Given that the economy is again producing its pre-contraction level of output, how has the composition of production inputs changed between t_P and t_R? Using (1), the change in log output between these two dates can be decomposed into the contributions of three factors:

$$\Delta_d \log y_{t_R} = \underbrace{\Delta_d \log \Gamma_{t_R} + \frac{1}{1-\alpha}\,\Delta_d \log A_{t_R}}_{\text{productivity contribution}} + \underbrace{\frac{\alpha}{1-\alpha}\,\Delta_d \log\left(\frac{k_{t_R}}{y_{t_R}}\right)}_{\text{capital contribution}} + \underbrace{\Delta_d \log l_{t_R}}_{\text{labor contribution}} \;=\; 0,$$

where $d \equiv t_R - t_P$ is the duration of the recession episode and, for any variable x_t, $\Delta_d x_t \equiv x_t - x_{t-d}$. Since $y_{t_R} = y_{t_P}$, the contributions sum to zero, indicating which inputs increased and which decreased over the peak-to-recovery period. In this framework, we define a "jobless

recovery" as one in which labor's contribution is negative, i.e., $l_{t_R} < l_{t_P}$.

Two remarks are worth noting. First, our accounting can be reinterpreted as a decomposition of the output shortfall at the recovery date relative to a balanced growth path (BGP), in which labor-augmenting technology grows at a constant rate γ (i.e., $\Gamma_t = \Gamma_0 \gamma^t$), and A_t, k_t/y_t, and l_t remain constant so that output grows at the constant rate γ. To see this, subtract the cumulative output growth along the BGP, $d \log \gamma$, from the accounting identity to obtain a decomposition for the shortfall, $\Delta_d \log y_{t_R} - d \log \gamma$, in which the productivity contribution becomes $\Delta_d \log \Gamma_{t_R} - d \log \gamma + \frac{1}{1-\alpha} \Delta_d \log A_{t_R}$. Therefore, our notion of a jobless recovery implies a negative contribution of labor to the output shortfall relative to the BGP when output returns to its pre-contraction level.

Second, although our discussion so far has focused on recovery to the pre-crisis output level, the same accounting framework can be applied when recovery is defined relative to some measure of trend. In fact, in our empirical analysis, we extend the analysis to windows defined by recovery to either a Hodrick–Prescott (HP) trend or a linear trend, and find similar results to those obtained using windows defined by recovery to pre-contraction levels.[2]

Data. In this section, we provide a summary of the data used in our empirical analysis. For more detailed description of data sources, please refer to Appendix A. Our empirical analysis focuses on a sample of 23 high-income OECD economies: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States. We refer to this sample as the developed-market sample. In Section 3, we expand the analysis to include a sample of emerging-market economies.

We focus on data sources that have broad availability across countries and time. For real GDP, capital stock, employment, and hours worked, we use data from the Penn World Tables, which are available for our developed-market sample since the 1950s (and also for the

[2]We use the pre-crisis level as our baseline because, in emerging markets, shocks to trend growth play a central role in business cycles (Aguiar and Gopinath, 2007), making a precise measurement of the trend not straightforward.

emerging-market sample we analyze later in the paper). With this dataset, we also estimate α, computed as the average capital share of GDP, and measured productivity as the Solow residual. To express output, capital, and labor inputs in per capita terms, we use data for the working-age population. We construct this measure by combining the total population from the Penn World Tables with the working-age-to-population ratio, defined as the population aged 15–64 divided by the total population. The working-age-to-population ratio is obtained from the OECD and World Development Indicators (WDI) datasets.

Our empirical analysis also uses additional data to further characterize the dynamics during crisis recoveries across three labor market dimensions. First, we examine unemployment, which we measure using data from sources such as the WDI, World Economic Outlook (WEO), and national sources. Second, we analyze real wages, which we construct using nominal wage data from the Conference Board's International Labor Comparisons program (ILC), WEO, and national sources. These wages are then deflated using the Consumer Price Index (CPI). Third, we examine the labor wedge, defined as the ratio of the marginal rate of substitution between consumption and leisure to the marginal product of labor.[3] The labor wedge is a variable frequently used in macro and labor literature to measure distortions in the labor market relative to the neoclassical framework (see, for example, Shimer, 2009).

Definition of recession episodes and financial crises. In our empirical analysis, we define a recession episode as a time window that encompasses a contraction of annual per capita GDP followed by a recovery to pre-contraction levels. To determine the peak, trough, and recovery point of recession episodes, we identify recession episodes using the following algorithm:

1. For each country i, identify the first recession episode as the first period in which there

[3]Measuring the labor wedge requires specifying households' preferences over consumption and leisure. For this, we assume a period utility function for households, $\log(c_t) - \frac{\chi\eta}{1+\eta} h^{\frac{1+\eta}{\eta}}$, where η represents the Frisch elasticity of labor supply. With these preferences, we compute the evolution of the labor wedge from the recession's peak to recovery as $\Delta_d \log(1-\tau_{t_R}) = \Delta_d \log c_{t_R} - \Delta_d \log y_{t_R} + \frac{1+\eta}{\eta}\Delta_d \log h_{t_R}$ where τ_{t_R} is the labor wedge. For this computation, in addition to the output and employment variables described earlier, we use real consumption data from the Penn World Tables. We set $\eta = 1$ in our baseline computations and consider alternative parameterizations in the robustness analysis.

is a per capita output contraction, i.e., $t_c(i,1) \in [2, T_i]$ such that $y_{i,t_c(i,j)} < y_{i,t_c(i,j)-1}$ for $j = 1$, where T_i denotes the last year with available data for country i.

2. Define the *peak* of recession episode j as the period immediately preceding the output contraction that marks the beginning of the recession episode: $t_P(i,j) \equiv t_c(i,j) - 1$.

3. Define the *recovery point* of recession episode j as the period $t_R(i,j) > t_c(i,j)$ in which per capita output is at least equal to its peak level or to its HP-filtered trend (obtained with a smoothing parameter of 100).[4] If there is no recovery point within the available data, the recession is excluded from the analysis.

4. Define the *trough* of the recession episode as the period with the minimum level of per capita output between the peak and recovery points.

5. Repeat steps (1)-(3), identifying periods of output contraction after the previous recovery point. Specifically, for $j = 2, 3, \ldots$, identify $t_c(i,j) \in [t_R(i,j-1)+1, T_i]$, such that $y_{i,t_c(i,j)} < y_{i,t_c(i,j)-1}$, until there are no more output contractions in that country after the last recovery point.

Using our definition of recessions, we identify 143 recession episodes in developed countries, detailed in Appendix Table 3.[5] Appendix Table 2 provides summary statistics of our sample of recession episodes, which show an average per capita output contraction of 3%, an average duration of 1.6 years between peak and trough, and an average duration of 1.8 years

[4] We obtain similar results if we define the recovery point solely as the return to the pre-contraction level, since in 88% of episodes this occurs no later than the recovery to the HP trend. We include the additional condition (the minimum of the pre-contraction level and the HP trend) to limit the potential duration of recession episodes and keep the analysis closer to standard business cycle frequencies. For example, following the 2008 global financial crisis, Italy only regained its 2007 output level 17 years later (a period that also included the pandemic recession), while the HP filter, reflecting a decline in trend, identifies recovery in 2016. More broadly, in the 12% of episodes where recovery to the pre-contraction level occurs later than to the HP trend, recovery to the pre-contraction level takes on average 9.4 years, while recovery to the HP trend takes 5.3 years, making these episodes more comparable to the rest of the sample. More details on these robustness results are available upon request.

[5] In analyzing individual episodes, we note that our method often coincides with those frequently used by researchers in the field, such as NBER recession episodes for the U.S. and the ECRI for Europe. One notable difference is that our method bundles "double-dip" recessions, in which a second output contraction occurs before output reaches its recovery point, such as the 1980-81 recession in the U.S.

between the trough and recovery. This results in an average duration of 3.4 years between the peak and recovery.

Within our sample of recession episodes, we define a *financial crisis* as an episode that coincides with a banking crisis or a debt crisis event that occurs within a window from 1 year before the output peak to 1 year after the output recovery point. Data on banking and debt crises are obtained from Reinhart and Rogoff (2009). Based on this definition, we classify 46 recession episodes as financial crises, detailed in Appendix Table 3.

As shown in Appendix Table 2, the average output contraction in financial crises is larger than that in non-financial recessions, consistent with prior literature that characterizes these episodes. To create a group of non-financial recession episodes that are more comparable to financial crises in terms of economic contraction, we construct a category called "other large recessions" by excluding from non-financial recessions those episodes with output contractions below a certain cutoff value, denoted by $\underline{y}$. We set $\underline{y}$ to a value such that the average contraction in other large recessions matches that of financial crises. In our sample, we use $\underline{y} = -1.4\%$. Appendix Table 2 presents descriptive statistics for both the group of other large recessions and the group of "mild recessions," which consists of episodes in the other group with output contractions below $\underline{y}$, with Appendix Table 3 detailing the set of episodes in these two categories. It is worth noting that our conclusions regarding differences between recoveries from financial crises and other episodes are stronger when mild recessions are included in the comparison group of non-financial crises (the objective in constructing the comparison group with other large recessions is to ensure that the results are not driven solely by the magnitude of the output contraction).

2.2. Empirical Results

Recovery from financial crises. The first column of Table 1 presents the results of our accounting exercise for the recovery from financial crises. Specifically, it reports average changes in the log of output, employment, the capital-output ratio, and measured productivity from the episode peak to the recovery point. Complementing this, the top panels of Figure 2 characterize the recovery from financial crises using a more flexible approach, which

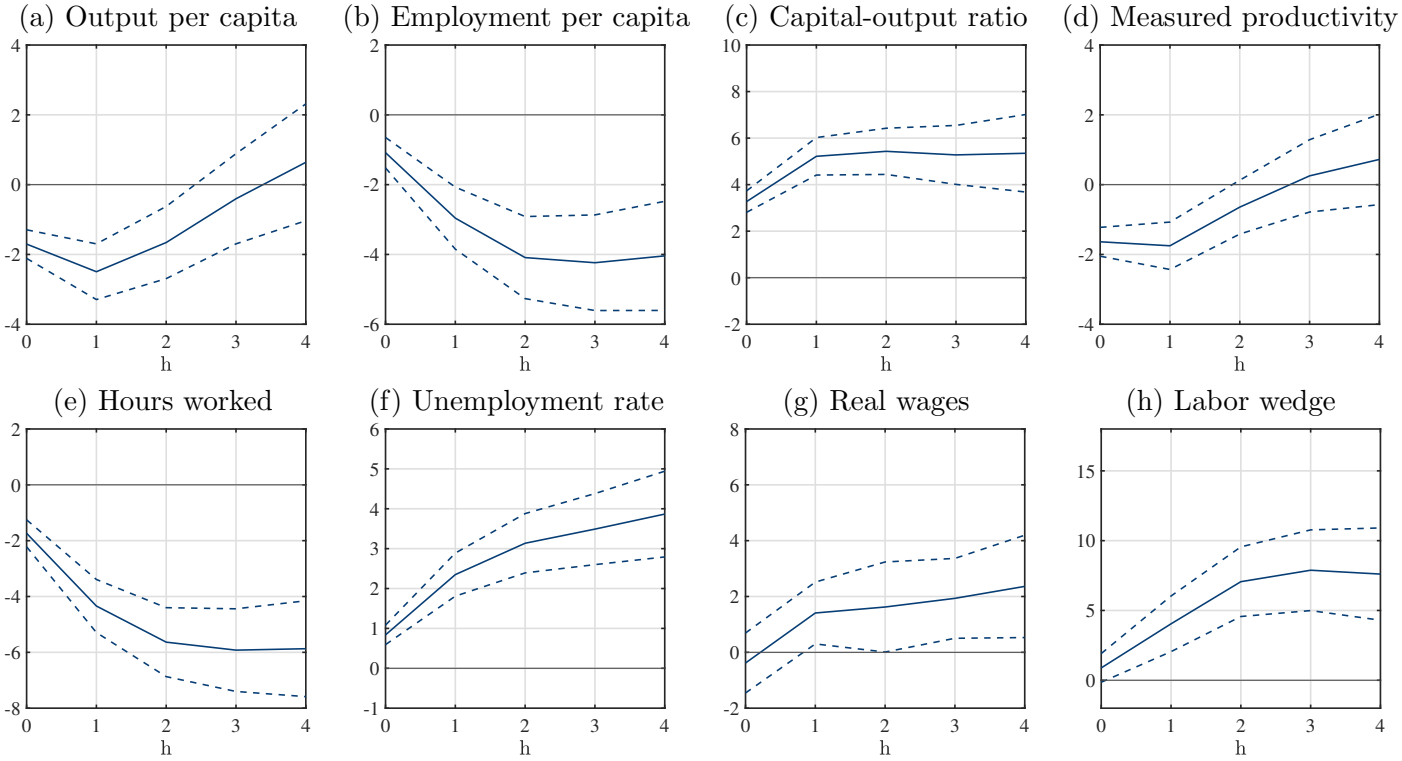
does not identify a specific year of recovery for each episode and instead traces the average dynamics of different variables in the years following the onset of financial crises by estimating the regression $z_{it+h} - z_{it-1} = \alpha_h + \varepsilon_{it+h}$, where z_{it} denotes a variable of interest in episode i starting in year t and h denotes the horizon. In the results that follow, we provide a range based on the changes in these variables obtained from these two alternative accounting methods.

Table 1: Recovery from Financial Crises

	Developed	Emerging Markets (EM)	
	Markets (DM)	With inflation surge	Without inflation surge
(a) Accounting			
Output	0.004	-0.022*	-0.002
	[0.006]	[0.011]	[0.007]
Employment	-0.034***	0.006	-0.013**
	[0.007]	[0.007]	[0.006]
Capital	0.043***	0.030**	0.010
	[0.008]	[0.014]	[0.009]
Measured productivity	0.006	-0.027**	0.003
	[0.007]	[0.012]	[0.006]
(b) Labor market dynamics			
Hours worked	-0.051***	-0.003	-0.022**
	[0.009]	[0.009]	[0.010]
Unemployment rate	0.026***	0.006	0.014***
	[0.005]	[0.004]	[0.003]
Labor force participation	-0.007	0.024***	0.011*
	[0.004]	[0.007]	[0.007]
Real wages	0.024**	-0.121**	0.010
	[0.011]	[0.051]	[0.025]
Labor wedge	0.067***	-0.013	0.015
	[0.017]	[0.019]	[0.014]

Notes: This table presents the results of estimating $\Delta_{t_R(i,j)-t_P(i,j)} Z_{i,t} = \alpha + \epsilon_{i,j}$ in a sample of financial crises, where $Z_{i,t}$ represents one of the following variables: the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over working-age population, unemployment rate, log of labor force participation over working-age population, log of real wages, or log of the labor wedge for episode j in country i. The terms $\{t_P(i,j), t_R(i,j)\}$ denote the output peak and recovery point of each episode j in country i. The table reports the estimated parameter α. For the definition of financial crises, see Section 2.1. The *With inflation surge* and *Without inflation surge* categories include episodes with maximum annual change in CPI inflation during a crisis below and above 9 p.p., respectively. $*$, $**$, and $***$ represent statistical significance at the 10%, 5%, and 1% level, respectively.

Figure 2: Recovery from Financial Crises in Developed-Market Economies



Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \varepsilon_{it+h}$, where z_{it} denotes either the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over the working-age population, unemployment rate, log of real wages, or log of the labor wedge for recession episode i, starting in year t. We include in the regression the set of financial crises detailed in Appendix Table 3. Panels (a)-(h) show the estimated dynamics for financial crises ($\hat{\alpha}$). Error bands represent 90% confidence intervals. Further details on the definitions of financial crises are provided in Section 2.1. For additional information on the variables and data sources, see Appendix A.

The first two rows of Table 1 and Panels (a) and (b) of Figure 2 show that financial crises tend to be followed by jobless recoveries: when output returns to its pre-crisis level, employment remains, on average, 3%–4% below its pre-crisis level. The third row of Table 1 and Panel (c) of Figure 2 indicate that the counterpart of jobless recoveries is the resilience of the capital-output ratio, which increases from peak to trough and remains 4%–5% above its pre-crisis level at the recovery point. Finally, the fourth row of Table 1 and Panel (d) of Figure 2 reveal that measured productivity, which is known to be procyclical, follows a pattern resembling that of output, with no significant changes observed from peak to recovery during financial crises.

To further analyze the jobless recoveries observed following financial crises, Panel (b) of Table 1 and the bottom panels of Figure 2 examine the recovery of additional labor market variables, which yields three key results. First, the phenomenon of jobless recoveries following financial crises is also observed in hours worked and the unemployment rate. Specifically, when output returns to its pre-crisis level, hours worked remain 5%–6% below their pre-crisis level and the unemployment rate is 3–4 percentage points above its pre-crisis level.[6] Second, despite the jobless recovery, real wages increase throughout the episode, ending 2% above their pre-crisis level at the recovery point. Third, there is a sizable increase in the labor wedge, which is 7%–8% above its pre-crisis level at the recovery point. Appendix Figure 6 shows that this result holds for alternative parameterizations of the Frisch elasticity of labor supply.

Appendix Table 6 shows that we reach similar conclusions regarding jobless recoveries and other labor market variables when defining the recovery window based on the return of output to its HP trend or to a linear trend, rather than its pre-crisis level. Appendix Figure 7 shows that, on average, the economy takes 14 years to restore its pre-crisis employment per capita, when output is 25 percent above its pre-crisis level. During this extended window, similarly sluggish dynamics are observed in hours worked, the unemployment rate, and the labor wedge, while real wages reach 20 percent above their pre-crisis levels.

[6]There is also a small decline in participation rates (depicted in Figure 5), although this difference is not statistically significant when measured at the recovery point.

Comparison with other recessions. To put the accounting exercise during financial crises into perspective, Appendix Table 7 and Appendix Figures 8–12 compare the dynamics during financial crises with those observed in other recession episodes across different specifications. The comparisons in Table 7 use a specific recovery date for each episode, as in the results presented in Table 1; Figures 8–12 follow the approach used in Figure 2, which does not rely on identifying a specific recovery year for each episode and instead estimates the differences between financial crises and other recession episodes across various horizons.

Panel (a) of Table 7 and panel (I) of Figure 8 report the results from comparing financial crises with all other recession episodes, while Panel (b) of Table 7 and panel (II) of Figure 8 compare financial crises with other large recession episodes, which are more comparable in terms of contraction size by construction. A key takeaway from these comparisons is that a distinguishing feature of recoveries from financial crises, relative to other recession episodes, is the behavior of labor input, which contracts more severely and remains lower throughout the recovery. The capital-output ratio is either similar or higher during the recovery from financial crises relative to other episodes, depending on the comparison method. In terms of other labor market variables, a significant difference appears in the labor wedge, which remains substantially high throughout the recovery from financial crises relative to other recession episodes. Also, real wage growth appears less pronounced in financial crises than in other recession episodes.

Panels (c) and (d) of Table 7 and Figure 9 show that the differences in the recoveries from financial crises we highlight are not driven by country-specific fixed characteristics, since the conclusions remain robust to the inclusion of country fixed effects.

Panels (e) and (f) of Table 7 and Figure 10 show that the conclusions are also robust to including time trends, which indicates that the differences between financial crises and other episodes are not driven by secular patterns associated with the timing of financial crises and jobless recoveries. Relatedly, Panels (g) and (h) of Table 7 and Figure 11 show that the conclusions are robust to including a dummy variable for post-1990 episodes, which marks the U.S. recession often identified in the literature as the point at which jobless recoveries became more pronounced (see, for example, Gordon and Baily, 1993; Bernanke, 2009; Jaimovich and

Siu, 2020).

Finally, Panels (i) and (j) of Table 7 and Figure 12 show that the conclusions also hold in the pre-2007 sample, indicating that the differences between financial crises and other episodes are not solely driven by the 2008 global financial crisis.

3. The Role of Inflation: Evidence From Emerging Markets

Emerging-market sample. In this section, we extend our analysis to include emerging-market economies. Our emerging-market sample consists of 35 middle-income economies: Algeria, Argentina, Brazil, Bulgaria, Chile, China, Colombia, Croatia, Czech Republic, Dominican Republic, Ecuador, Egypt, El Salvador, Hungary, Indonesia, Ivory Coast, Lebanon, Malaysia, Mexico, Morocco, Nigeria, Pakistan, Panama, Peru, Philippines, Poland, Russia, South Africa, South Korea, Thailand, Tunisia, Turkey, Ukraine, Uruguay, and Venezuela.[7]

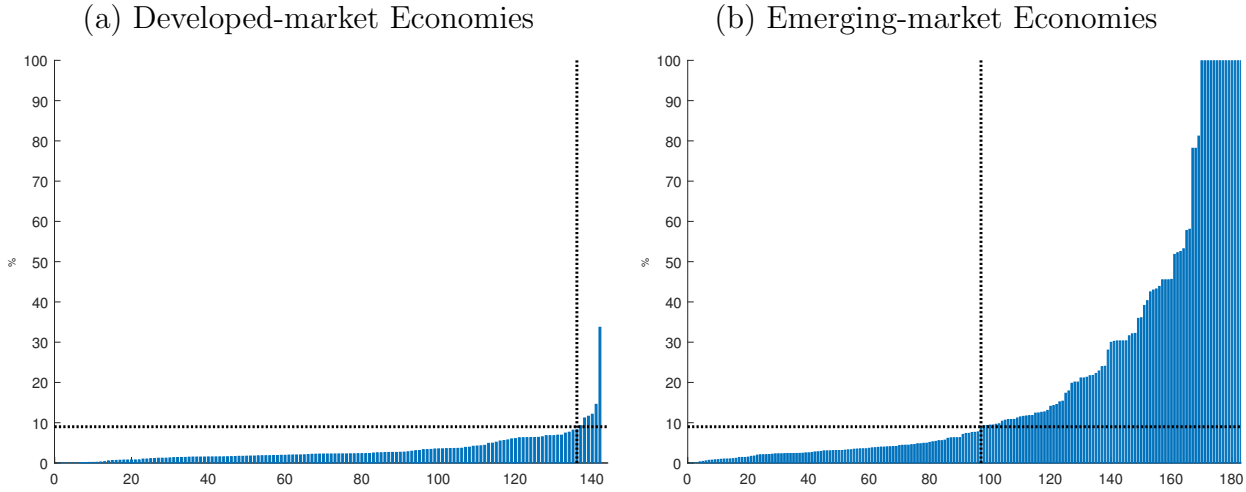
Using this sample of countries and the same procedure as in Section 2.1, we identify 196 recession episodes in emerging markets (detailed in Appendix Table 4), 53% of which are financial crises.[8] Appendix Table 5 provides summary statistics for these episodes. The average per capita output contraction in emerging markets is 7% – more than twice that observed in developed economies. The duration of these episodes is slightly longer than in developed economies, averaging 4 years from peak to recovery. As in developed economies, financial crises in emerging markets are associated with larger output contractions and longer durations, although the differences with non-financial recessions are smaller than those observed in their developed–economy counterparts.

[7]This selection of emerging-market economies follows the study by Calvo, Izquierdo and Talvi (2006), which focused on sudden-stop episodes and included economies integrated into international capital markets, as indicated by their inclusion in JPMorgan's EMBI.

[8]We exclude from the analysis the 12 episodes without available inflation data in our dataset: Algeria 1960, Algeria 1965, China 1960, China 1966, China 1971, China 1975, China 1980, Lebanon 1973, Tunisia 1966, Tunisia 1972, Venezuela 1965, and Venezuela 1970.

Episodes with and without inflation surges. It is well known that emerging economies tend to feature higher and more volatile inflation rates than developed economies (see, for example, Dornbusch and Fischer, 1993). Figure 3 illustrates this phenomenon in our sample of recession episodes, and shows the maximum annual increase in inflation observed during each episode (after winsorizing values above 100 p.p.). In developed-economy recession episodes, the average annual inflation increase is 3 p.p., with a standard deviation of 4 p.p. In emerging markets, this average is 21 p.p., with a standard deviation of 29 p.p.

Figure 3: Inflation during Recession Episodes



Notes: This figure illustrates the maximum change in the annual inflation rate observed between the peak and recovery years of each recession episode for developed-market economies (Panel (a)) and emerging-market economies (Panel (b)). The horizontal line marks a change in the inflation rate of 9 p.p, which defines the threshold used to classify episodes into moderate and high-inflation groups. In Panel (b), the vertical line separates emerging-market episodes into these two groups. Episodes included in the analysis are detailed in Appendix Tables 3 and 4.

The heterogeneity in inflation dynamics across emerging-market episodes allows us to examine how labor market recoveries vary with the magnitude of inflation increases experienced during the episode. To this end, and in the spirit of Blanco, Ottonello and Ranosova (2022), we define episodes with a large inflation surge as those in the 90th percentile of annual inflation increases in our emerging-market sample—that is, those with a maximum increase in inflation above 9 p.p. We explore alternative thresholds in additional analysis. Under our baseline classification, episodes with a large inflation surge (detailed in Appendix

Table 4) exhibit an average inflation increase of 64 p.p. (after winsorizing values above 100 p.p.), while episodes without such a surge (detailed in Appendix Table 4) exhibit an average increase of 7 p.p. Appendix Table 5 shows that 62% of financial crises in emerging markets fall into the large-inflation-surge category. These episodes tend to feature substantially larger output contractions (9.3% vs. 5.7%) and slightly longer durations than those without large inflation surges.

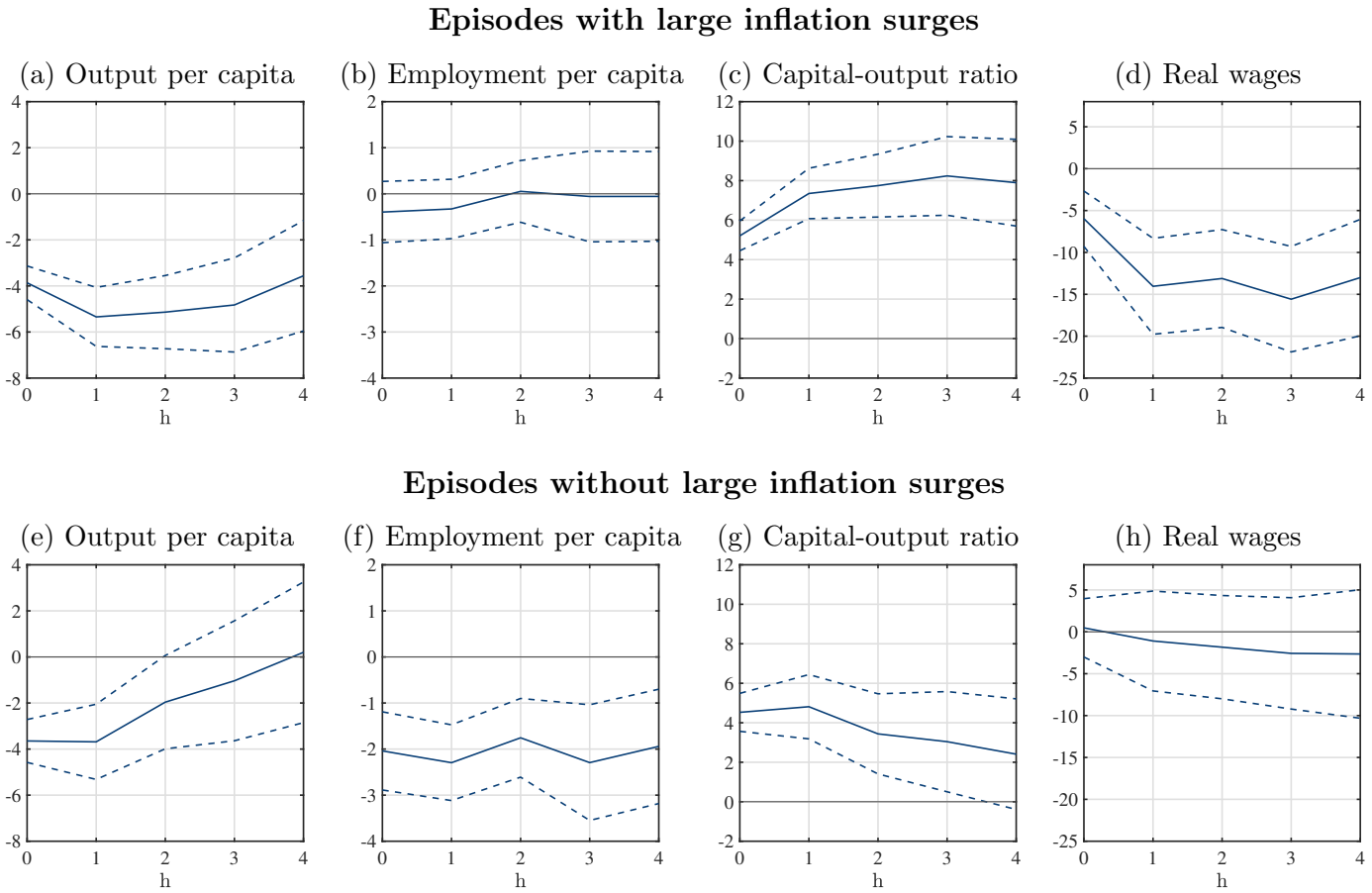
Empirical results. The second and third columns of Table 1 characterize the recovery from financial crises in emerging markets, and distinguishes between episodes with and without large inflation surges. Complementing this, Figure 4 and Appendix Figure 13 depict the average dynamics of the recovery for these two types of episodes using the approach from Figure 2, which does not rely on identifying a specific year of recovery for each episode.

From these exercises, we obtain two main results that characterize the recovery from financial crises. First, episodes with a large inflation surge tend to exhibit a markedly different pattern of labor market recovery relative to those observed in developed economies. On the one hand, they do not show signs of jobless recoveries, as employment exhibits mild initial declines and largely recovers its pre-crisis level once output returns to its pre-crisis level. On the other hand, they experience a sizable decline in real wages, which do not recover their pre-crisis level even after output has fully recovered. In this sense, these episodes feature a "wageless recovery." Second, episodes without a large inflation surge are characterized by recovery patterns more similar to those documented in developed markets. In particular, they exhibit jobless recoveries and less significant declines in real wages.[9]

[9]Quantitatively, Table 1 shows that the recovery from financial crises in emerging markets without a large inflation surge exhibits a smaller increase in unemployment and a milder decline in employment and hours worked compared with developed markets. Relatedly, these episodes feature significant increases in participation rates throughout the episode, in contrast to developed-market episodes. Participation increases are even stronger in emerging-market episodes with a large inflation surge.

It is also worth noting that, despite their jobless recoveries, emerging-market episodes without a large inflation surge exhibit a faster recovery in economic activity than those with a large inflation surge. From an accounting perspective, they display a less pronounced increase in the capital-output ratio but a stronger recovery in measured productivity. While the weaker productivity growth observed in episodes with a large inflation surge may help explain their lack of real wage recovery, it is more difficult to reconcile with their strong employment recovery observed in these episodes.

Figure 4: Recovery from Financial Crises in Emerging Markets, With and Without Inflation Surges



Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{inflation surge}_i + \varepsilon_{it+h}$, where z_{it} denotes either the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, or log of real wages for recession episode i, starting in year t. The variable inflation surge_i is a dummy variable that takes the value of one if the episode is classified as featuring a large inflation surge. We include in the regression the set of financial crisis episodes detailed in Appendix Table 4. Panels (a)-(d) show the estimated dynamics of these variables following financial crises with a large inflation surge ($\hat{\alpha} + \hat{\beta}$); panels (e)-(h) show the estimated dynamics for financial crises without a large inflation surge ($\hat{\alpha}$). Error bands represent 90% confidence intervals. For additional information on the variables and data sources, see Appendix A. For other variables, see Appendix Figure 13.

Appendix Figure 15 reports the estimates of the differences between these two types of episodes, and indicates that jobless recoveries are more pronounced in episodes without inflation surges, while wage recoveries are more pronounced in episodes with large inflation surges. Figures 16–17 report the same set of robustness checks as in the previous section, and show that these differences in recovery patterns are not driven by country fixed characteristics, secular trends, post-1990 patterns, or the 2008 global financial crisis. Appendix Figure 18 shows that the results are also robust to using lower and higher thresholds to define large inflation surge episodes (6 p.p. and 12 p.p., respectively).

Finally, it is worth noting that, as shown in Table 1, Appendix Figures 13, and Figure 14, the labor wedge does not exhibit increases as persistent as those observed in developed economies. This pattern is particularly salient in episodes with a large inflation surge, in which the labor wedge barely increases. These results suggest that the rise in labor market distortions during financial crises is less severe in emerging economies than in developed markets, particularly in the presence of large inflation surges.

4. Conclusion

In this paper, we documented two key facts about labor market recovery from economic crises. First, disruptions in credit markets tend to be followed by persistent labor market dynamics, manifesting in either low employment or low real wages. Second, the type of dynamics can be linked to the level of inflation, with low-inflation financial crises being followed by jobless recoveries and high-inflation episodes by wageless recoveries.

Our findings have two broader implications. From a positive perspective, they raise the question of why financial crises disproportionately affect labor relative to capital. Macro-finance models frequently focus on the impact of credit market disruptions on capital accumulation, which typically involves large initial investments and is directly tied to credit. However, labor – despite not requiring such large upfront credit needs – appears to be more affected by credit market disruptions than capital. Understanding this disproportionate impact represents a promising avenue for future research in this area.

From a policy perspective, our findings shed light on two key debates surrounding the pandemic global recession. First, policies aimed at stabilizing credit markets, which in the U.S. were swiftly implemented by the Federal Reserve at the beginning of the recession, may have played a critical role in supporting employment recovery by mitigating increases in labor input costs. Second, the inflation surge following the recession, while costly in several dimensions, might have contributed to a faster recovery in employment compared with previous recessions. Further research that combines our empirical findings with macroeconomic models could shed light on the role of these policies in shaping labor market recoveries from economic crises.

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A. Data description

Data sources. The data used in the empirical analysis of Section 2 were obtained from the following sources:

1. GDP: Measured at constant national prices, obtained from Penn World Tables, version 9.1 (henceforth PWT; variable name: *rgdpna*).

2. Total population: Obtained from PWT (variable name: *pop*).

3. Working-age population ratio: The ratio of the population aged 15–64 to the total population, obtained from the OECD and WDI.

4. Employment: Number of individuals engaged, obtained from PWT (variable name: *emp*).

5. Capital stock: Measured at constant national prices, obtained from PWT (variable name: *rnna*).

6. Labor share: Share of labor compensation in GDP at current national prices, obtained from PWT (variable name: *labsh*).

7. Average hours worked: Average annual hours worked by persons engaged, obtained from PWT (variable name: *avh*).

8. Real consumption: Real consumption at constant 2011 national prices, obtained from PWT (variable name: *rconna*).

9. Nominal wages: Obtained primarily from The Conference Board's International Labor Comparisons program (henceforth ILC, January 2020). Refers to labor cost per hour worked for all manufacturing, expressed in national currency. For recession episodes with no available data, data from the WEO were used.

10. Consumer Price Index: Obtained from the IMF using the IFS query tool.

11. Unemployment rate: Measured as the share of the labor force that is unemployed, obtained from WDI and WEO.

The data used in the empirical analysis of Section 3 were obtained, for most variables, from the same sources described previously for developed-market economies. One exception is nominal wages, which, for countries with no available data from the OECD or ILC, were sourced from national datasets. For the countries in our sample that were members of the Soviet Union (i.e., Bulgaria, Czech Republic, Croatia, Hungary, Poland, Russia, and Ukraine), data prior to 1994 were excluded to remove recession episodes associated with the transition from Soviet to market economies in the early 1990s, as well as any recessions occurring during their Soviet period.

Constructed Variables. Based on the raw data, we constructed the following variables for the empirical analysis:

i. Real GDP over working-age population (y_{it}): Constructed as (1)/((2)×(3)).

ii. Employment over working-age population (l_{it}): Constructed as (4)/((2)×(3)).

iii. Capital stock over working-age population (k_{it}): Constructed as (5)/((2)×(3)).

iv. Labor share ($1 - \alpha_i$): Constructed as the average of (6) over all years with available data.

v. Hours worked over working-age population: Constructed as (4)×(7)/((2)×(3)).

vi. Consumption over working-age population (h_{it}): Constructed as (8)/((2)×(3)).

vii. Measured productivity: Constructed as $y_{it}/(k_{it}^{\alpha_i} l_{it}^{1-\alpha_i})$.

viii. Real wages (w_{it}): Constructed as (9)/(10).

B. Additional figures and tables

Table 2: Summary Statistics of Recession Episodes in Developed-Market Economies

	All episodes	Financial crises	Other episodes	
			Large	Mild
(a) Output per capita contraction (%)				
Mean	3.0	4.1	4.1	0.7
Median	1.8	3.4	3.5	0.6
Std. dev.	3.3	4.3	2.6	0.4
Min	0.0	0.1	1.4	0.0
Max	25.3	25.3	11.4	1.3
(b) Duration from peak to recovery (years)				
Mean	3.4	4.3	3.6	2.2
Median	3.0	4.0	3.0	2.0
Std. dev.	1.9	2.2	1.9	0.6
Min	2.0	2.0	2.0	2.0
Max	10.0	9.0	10.0	5.0
(c) Duration from trough to recovery (years)				
Mean	1.8	2.3	1.9	1.1
Median	1.0	2.0	2.0	1.0
Std. dev.	1.2	1.4	1.1	0.3
Min	1.0	1.0	1.0	1.0
Max	6.0	6.0	5.0	2.0
Number of episodes	143	46	52	45

Notes: This table presents descriptive statistics of the recession episodes used in the empirical analysis for our sample of developed-market economies. Panel (a) reports descriptive statistics of the output contraction observed in each episode, measured in percent, from peak to trough. Panels (b) and (c) show the duration from peak to trough and from trough to recovery, respectively, measured in years. The column labeled *All* presents descriptive statistics for the entire set of recession episodes identified using the algorithm described in Section 2.1, and the column labeled *financial crises* represents statistics for the recession episodes classified as financial crises according to the definition provided in Section 2.1. The columns labeled *Other episodes* report statistics for recession episodes that are not classified as financial crises. The *Large* category includes episodes with an output peak-to-trough contraction above -1.4%, chosen to match the average contraction of financial crises. The *Mild* category encompasses the remaining episodes that do not meet the criteria for classification as large recessions. See Appendix A for further information on the definition of variables and data sources.

Table 3: Sample of Recession Episodes in Developed Market Economies

Country	Peak	Trough	FC	Other Large	Country	Peak	Trough	FC	Other Large	Country	Peak	Trough	FC	Other Large	Country	Peak	Trough	FC	Other Large
Australia	1951	1952	0	1	Denmark	2007	2009	1	-	Ireland	2007	2009	1	-	Portugal	1992	1993	0	1
Australia	1955	1956	0	1	Finland	1952	1953	0	0	Italy	1974	1975	0	1	Portugal	2002	2003	0	0
Australia	1960	1961	0	0	Finland	1956	1958	0	0	Italy	1980	1983	0	0	Portugal	2008	2009	1	-
Australia	1964	1965	0	0	Finland	1990	1993	1	-	Italy	1992	1993	1	-	Portugal	2010	2013	1	-
Australia	1973	1974	0	0	Finland	2008	2009	0	1	Italy	2002	2003	0	0	Portugal	2015	2016	1	-
Australia	1976	1977	0	0	Finland	2011	2014	0	0	Italy	2007	2013	1	-	Spain	1952	1953	0	1
Australia	1981	1982	0	1	France	1974	1975	0	1	Japan	1973	1974	0	1	Spain	1958	1959	0	1
Australia	1989	1991	1	-	France	1980	1981	0	0	Japan	1992	1993	1	-	Spain	1974	1975	1	-
Australia	2007	2008	0	0	France	1982	1983	0	0	Japan	1997	1999	1	-	Spain	1978	1981	1	-
Austria	1974	1975	0	0	France	1992	1993	1	-	Japan	2007	2009	0	1	Spain	1992	1993	0	1
Austria	1977	1978	0	0	France	2007	2009	1	-	Luxembourg	1950	1951	0	1	Spain	2007	2013	1	-
Austria	1980	1981	0	0	Germany	2002	2003	0	0	Luxembourg	1953	1954	0	0	Sweden	1976	1977	0	1
Austria	1983	1984	0	0	Germany	2008	2009	1	-	Luxembourg	1974	1975	0	1	Sweden	1990	1993	1	-
Austria	1992	1993	0	0	Greece	1951	1952	0	1	Luxembourg	1980	1981	0	0	Sweden	2007	2009	1	-
Austria	2008	2009	1	-	Greece	1961	1962	0	0	Luxembourg	2007	2012	0	1	Sweden	2011	2012	1	-
Austria	2012	2013	1	-	Greece	1973	1974	0	1	Netherlands	1957	1958	0	1	Switzerland	1951	1952	0	0
Belgium	1957	1958	0	0	Greece	1979	1987	0	1	Netherlands	1974	1975	0	1	Switzerland	1957	1958	0	1
Belgium	1974	1975	0	1	Greece	1989	1990	1	-	Netherlands	1980	1982	0	1	Switzerland	1974	1976	0	1
Belgium	1976	1977	0	0	Greece	1991	1993	1	-	Netherlands	2001	2003	0	0	Switzerland	1981	1983	0	1
Belgium	1980	1983	0	1	Greece	2007	2013	1	-	Netherlands	2008	2009	1	-	Switzerland	1990	1993	0	1
Belgium	1992	1993	0	0	Iceland	1950	1952	0	1	New Zealand	1950	1952	0	1	Switzerland	2001	2003	0	1
Belgium	2007	2009	1	-	Iceland	1956	1957	0	0	New Zealand	1955	1956	0	0	Switzerland	2008	2009	1	-
Belgium	2011	2012	1	-	Iceland	1960	1961	0	1	New Zealand	1957	1958	0	0	UK	1968	1969	0	0
Canada	1953	1954	0	1	Iceland	1966	1968	0	1	New Zealand	1961	1962	0	0	UK	1973	1975	1	-
Canada	1956	1958	0	0	Iceland	1974	1975	0	1	New Zealand	1966	1968	0	1	UK	1979	1981	1	-
Canada	1966	1967	0	0	Iceland	1982	1983	1	-	New Zealand	1969	1970	0	1	UK	1990	1991	1	-
Canada	1974	1975	0	0	Iceland	1987	1989	1	-	New Zealand	1974	1978	0	1	UK	2007	2009	1	-
Canada	1981	1982	1	-	Iceland	1990	1992	1	-	New Zealand	1986	1987	1	-	United States	1953	1954	0	0
Canada	1989	1992	0	1	Iceland	2001	2002	0	0	New Zealand	1988	1992	1	-	United States	1957	1958	0	1
Canada	2007	2009	0	1	Iceland	2007	2010	1	-	New Zealand	2007	2008	0	1	United States	1969	1970	0	1
Denmark	1950	1951	0	1	Ireland	1951	1952	0	0	Norway	1981	1982	0	0	United States	1973	1975	0	1
Denmark	1954	1955	0	0	Ireland	1955	1957	0	1	Norway	1987	1988	1	-	United States	1979	1982	1	-
Denmark	1973	1975	0	1	Ireland	1965	1965	0	0	Norway	2007	2011	0	1	United States	1990	1991	1	-
Denmark	1979	1981	0	1	Ireland	1975	1976	0	0	Norway	2015	2016	0	0	United States	2000	2001	0	0
Denmark	1986	1988	1	-	Ireland	1982	1983	0	1	Portugal	1973	1975	0	1	United States	2007	2009	1	-
Denmark	1992	1993	1	-	Ireland	1985	1986	0	0	Portugal	1982	1984	0	1					

Notes: This table reports the sample of developed-market recession episodes used in the empirical analysis in Section 2.1. FC is a dummy variable that takes the value of 1 if the identified recession coincides with a financial crisis and 0 otherwise. Other Large is a dummy variable that takes the sample of non-financial crises episodes and assigns the value of 1 if the identified recession coincides with a large recession and 0 otherwise.

Table 4: Sample of Recession Episodes in Emerging Markets Economies

Country	Peak	Trough	FC	IS	Country	Peak	Trough	FC	IS	Country	Peak	Trough	FC	IS	Country	Peak	Trough	FC	IS
Algeria	1970	1971	0	0	Côte d'Ivoire	1989	1994	1	1	Lebanon	1987	1989	0	1	Philippines	1982	1985	1	1
Algeria	1979	1981	0	0	Croatia	2008	2012	0	0	Malaysia	1974	1975	0	0	Rep. of Korea	1997	1998	1	0
Algeria	1985	1988	1	0	Czech Republic	1996	1998	0	0	Malaysia	1984	1986	1	0	Rep. of Korea	1961	1962	0	1
Algeria	2005	2006	0	0	Czech Republic	2008	2009	0	0	Malaysia	1997	1998	1	0	Rep. of Korea	1979	1980	1	1
Algeria	2008	2009	0	0	Czech Republic	1990	1993	0	1	Malaysia	2000	2001	1	0	Russia	2008	2009	1	0
Algeria	1989	1997	1	1	Dominican Rep.	1964	1965	0	0	Malaysia	2008	2009	0	0	Russia	2014	2015	0	0
Argentina	1994	1995	1	0	Dominican Rep.	1977	1978	1	0	Mexico	2000	2003	1	0	Russia	1997	1998	1	1
Argentina	1961	1963	1	1	Dominican Rep.	2008	2009	0	0	Mexico	2007	2009	0	0	South Africa	1971	1972	0	0
Argentina	1965	1966	1	1	Dominican Rep.	1960	1961	0	1	Mexico	1981	1983	1	1	South Africa	1974	1977	1	0
Argentina	1974	1976	0	1	Dominican Rep.	1981	1982	1	1	Mexico	1984	1988	1	1	South Africa	1981	1983	1	0
Argentina	1977	1978	1	1	Dominican Rep.	1983	1985	1	1	Mexico	1994	1995	1	1	South Africa	1984	1987	1	0
Argentina	1980	1982	1	1	Dominican Rep.	1987	1988	1	1	Morocco	1964	1966	0	0	South Africa	1988	1995	1	0
Argentina	1984	1985	1	1	Dominican Rep.	1989	1991	1	1	Morocco	1977	1978	0	0	South Africa	1996	1999	0	0
Argentina	1987	1990	1	1	Dominican Rep.	2000	2001	1	1	Morocco	1980	1981	1	0	South Africa	2008	2009	0	0
Argentina	1998	2002	1	1	Dominican Rep.	2002	2004	1	1	Morocco	1982	1983	1	0	Thailand	1996	1998	1	0
Argentina	2008	2009	1	1	Ecuador	1962	1963	0	0	Morocco	1986	1987	1	0	Thailand	2008	2009	0	0
Argentina	2011	2012	1	1	Ecuador	1965	1966	0	0	Morocco	1988	1988	1	0	Tunisia	1981	1982	1	0
Brazil	1997	1999	1	0	Ecuador	1968	1969	0	0	Morocco	1991	1993	1	0	Tunisia	1985	1986	1	0
Brazil	2008	2009	0	0	Ecuador	1976	1977	0	0	Morocco	1994	1995	0	0	Tunisia	1992	1995	1	0
Brazil	1980	1983	1	1	Ecuador	1991	1993	1	0	Morocco	1996	1997	0	0	Tunisia	2001	2002	0	0
Brazil	1987	1988	1	1	Ecuador	1994	1996	1	0	Morocco	1998	2000	0	0	Tunisia	2010	2011	0	0
Brazil	1989	1992	1	1	Ecuador	2008	2009	1	0	Nigeria	1960	1961	0	0	Turkey	1990	1991	1	0
Brazil	1995	1996	1	1	Ecuador	1981	1987	1	1	Nigeria	1964	1968	0	1	Turkey	1998	1999	1	0
Bulgaria	2008	2009	0	0	Ecuador	1998	2000	1	1	Nigeria	1974	1975	0	1	Turkey	2000	2001	1	0
Bulgaria	1995	1999	0	1	Egypt	1961	1962	0	0	Nigeria	1977	1984	1	1	Turkey	2007	2009	0	0
Chile	1998	1999	0	0	Egypt	1972	1973	0	0	Nigeria	1990	1999	1	1	Turkey	1960	1961	1	1
Chile	2008	2009	0	0	Egypt	2010	2011	0	0	Pakistan	1992	1993	0	0	Turkey	1977	1980	1	1
Chile	1964	1965	1	1	Egypt	1965	1967	0	1	Pakistan	1996	1998	0	0	Turkey	1987	1989	1	1
Chile	1969	1970	1	1	Egypt	1985	1986	1	1	Pakistan	1970	1972	0	1	Turkey	1993	1994	1	1
Chile	1971	1975	1	1	El Salvador	1960	1961	0	0	Pakistan	2007	2010	0	1	Ukraine	2008	2009	0	1
Chile	1981	1983	1	1	El Salvador	1967	1969	0	0	Panama	1982	1984	1	0	Uruguay	1994	1995	0	0
China	1988	1990	1	1	El Salvador	2008	2009	0	0	Panama	1987	1989	1	0	Uruguay	2014	2015	0	0
Colombia	1980	1983	1	0	El Salvador	1978	1989	1	1	Panama	1994	1995	1	0	Uruguay	1961	1963	1	1
Colombia	1990	1991	0	0	Hungary	2008	2009	1	0	Panama	2000	2002	0	0	Uruguay	1964	1965	1	1
Colombia	1997	1999	1	0	Hungary	1995	1995	1	1	Panama	2008	2009	0	0	Uruguay	1966	1967	1	1
Colombia	2008	2009	0	0	Indonesia	1981	1982	0	0	Panama	1973	1977	0	1	Uruguay	1970	1972	1	1
Colombia	1964	1965	0	1	Indonesia	1984	1985	0	0	Peru	1997	2001	1	0	Uruguay	1981	1984	1	1
Colombia	1974	1975	0	1	Indonesia	1961	1963	0	1	Peru	2008	2009	0	0	Uruguay	1987	1988	1	1
Côte d'Ivoire	1961	1962	0	0	Indonesia	1964	1965	1	1	Peru	1967	1968	1	1	Uruguay	1998	2002	1	1
Côte d'Ivoire	1964	1965	0	0	Indonesia	1966	1966	1	1	Peru	1975	1978	1	1	Venezuela	1977	1985	1	1
Côte d'Ivoire	1966	1967	0	0	Indonesia	1968	1969	1	1	Peru	1981	1985	1	1	Venezuela	1988	1989	1	1
Côte d'Ivoire	1998	2007	1	0	Indonesia	1997	1999	1	1	Peru	1987	1992	1	1	Venezuela	1992	1994	1	1
Côte d'Ivoire	2009	2011	1	0	Lebanon	1996	1997	0	0	Philippines	1990	1993	1	0	Venezuela	1995	1996	1	1
Côte d'Ivoire	1971	1972	0	1	Lebanon	1998	2006	0	0	Philippines	1997	1998	1	0	Venezuela	1997	1999	1	1
Côte d'Ivoire	1973	1974	0	1	Lebanon	1981	1982	0	1	Philippines	2008	2009	0	0	Venezuela	2001	2003	1	1
Côte d'Ivoire	1978	1988	1	1	Lebanon	1985	1986	0	1	Philippines	1969	1969	0	1	Venezuela	2008	2010	0	1

Notes: This table details the sample of emerging-market recession episodes with a large inflation surge used in the empirical analysis of Section 3. FC is a dummy variable that takes the value of 1 if the identified recession coincides with a financial crisis and 0 otherwise. IS is a dummy variable that takes the value of 1 if the identified recession coincides with a large inflation surge and 0 otherwise.

Table 5: Summary Statistics of Recession Episodes in Emerging Markets

	All episodes	Financial crises	Inflation surge	
			with	without
(a) Output per capita contraction				
Mean	7.0	8.0	9.3	5.7
Median	4.2	5.9	7.4	5.2
S.D.	9.5	7.6	9.0	3.7
Min	0.0	0.0	0.0	0.0
Max	71.2	36.2	36.2	13.9
(b) Duration from peak to recovery (years)				
Mean	3.9	4.6	4.8	4.2
Median	3.0	3.0	3.0	3.5
S.D.	2.5	2.9	3.3	2.1
Min	2.0	2.0	2.0	2.0
Max	15.0	15.0	15.0	11.0
(b) Duration from trough to recovery(years)				
Mean	1.9	2.2	2.2	2.2
Median	1.0	2.0	2.0	2.0
S.D.	1.3	1.4	1.4	1.4
Min	1.0	1.0	1.0	1.0
Max	7.0	6.0	6.0	6.0
Number of episodes	196	105	65	40

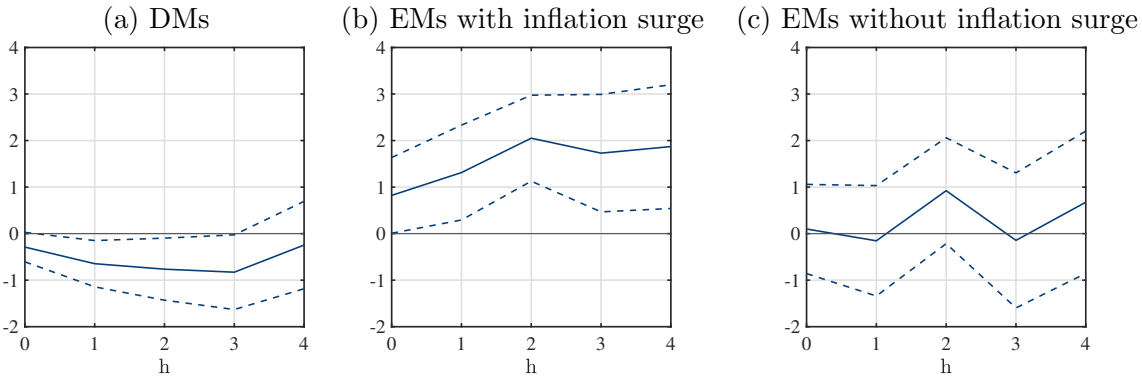
Notes: This table presents descriptive statistics of the recession episodes used in the empirical analysis for our sample of emerging-market economies. Panel (a) reports descriptive statistics of the output contraction observed in each episode, measured in percent, from peak to trough. Panels (b) and (c) show the duration from peak to trough and from trough to recovery, respectively, measured in years. The column labeled *All* presents descriptive statistics for the entire set of recession episodes identified using the algorithm described in Section 2.1, and the column labeled *financial crises* represents statistics for the recession episodes classified as financial crises according to the definition provided in Section 2.1. The *With inflation surge* and *Without inflation surge* categories include episodes with maximum annual change in CPI inflation during a crisis above and below 9 p.p., respectively. See Appendix A for further information on the definition of variables and data sources.

Table 6: Recovery from Financial Crises in Developed Markets (Alternative Recovery Point)

	(I) Baseline	(II) HP trend	(III) Linear trend
(a) Accounting			
Output	0.004	0.067***	0.067***
	[0.006]	[0.013]	[0.019]
Employment	-0.034***	-0.016**	-0.032***
	[0.007]	[0.007]	[0.009]
Capital	0.043***	0.015	0.014
	[0.008]	[0.011]	[0.011]
TFP	0.006	0.044***	0.054***
	[0.007]	[0.012]	[0.015]
(b) Labor market dynamics			
Hours worked	-0.051***	-0.033***	-0.046***
	[0.009]	[0.009]	[0.010]
Unemployment rate	0.026***	0.017***	0.022***
	[0.005]	[0.005]	[0.004]
Labor force participation	-0.007	0.000	-0.006
	[0.004]	[0.007]	[0.008]
Real wages	0.024**	0.057***	0.038**
	[0.011]	[0.013]	[0.017]
Labor wedge	0.067***	0.044**	0.080***
	[0.017]	[0.019]	[0.027]

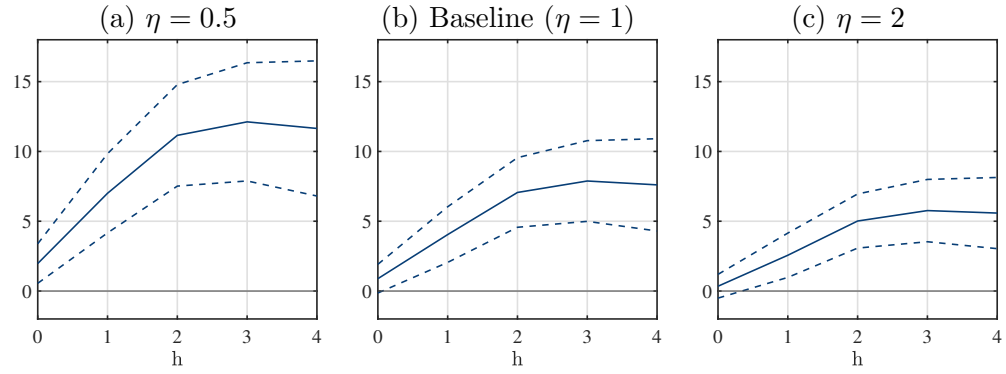
Notes: This table presents the results of estimating $\Delta_{t_R(i,j)-t_P(i,j)} Z_{i,t} = \alpha + \epsilon_{i,j}$ in a sample of financial crises for alternative definitions of the recovery point. $Z_{i,t}$ represents one of the following variables: log of GDP per working-age population, log of employment per working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked per working-age population, unemployment rate, log of labor force participation per working-age population, log of real wages, or log of the labor wedge. $\{t_P(i,j), t_R(i,j)\}$ denotes the output peak and recovery point of each episode j in country i. The column *Baseline* uses the algorithm described in Section 2.1 to identify the recovery point; the columns *HP trend* and *Linear trend* identify the recovery point only as the time when output returns to its trend, where the trend is computed using the HP filter or a linear trend, respectively. $*$, $**$, and $***$ denote significance at 10%, 5%, and 1%.

Figure 5: Dynamics of Labor Force Participation Following Financial Crises



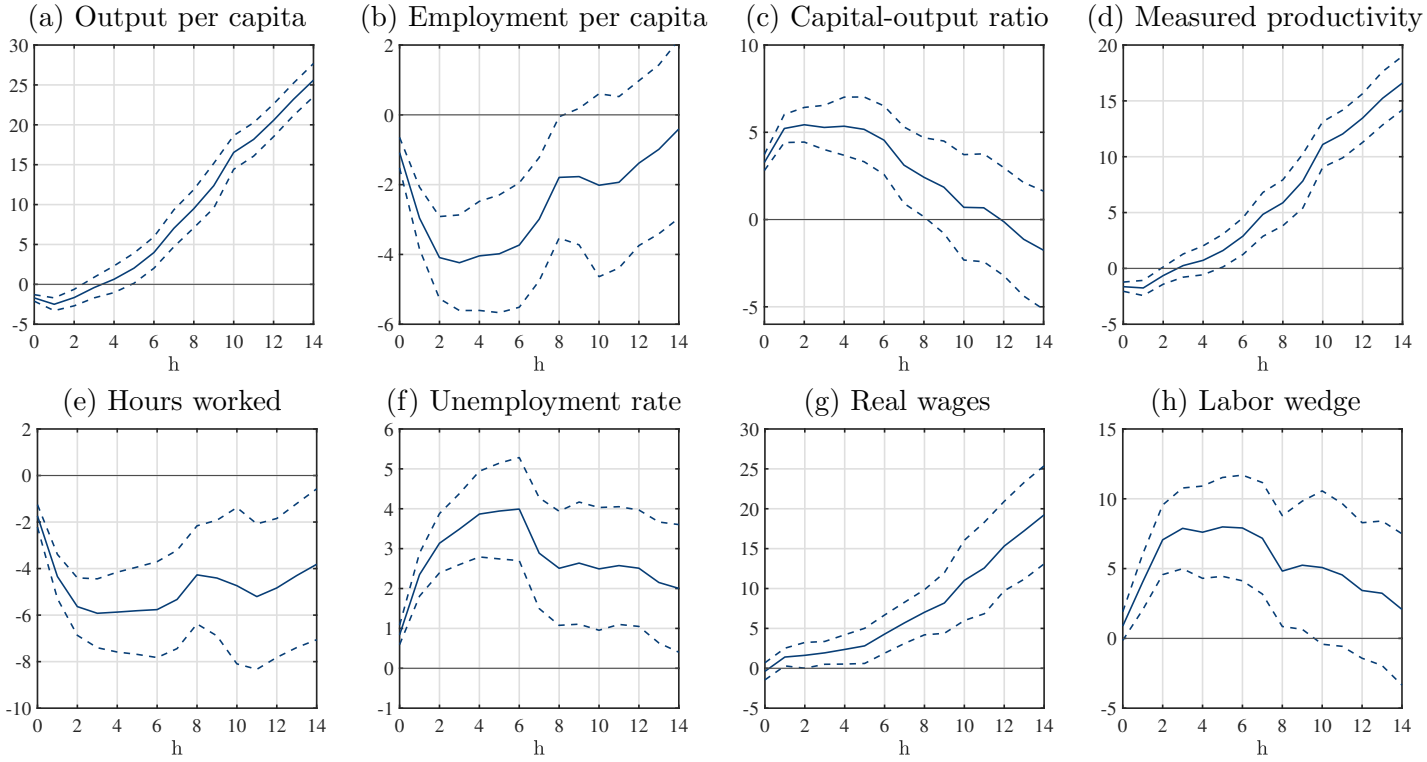
Notes: This figure shows the evolution of labor force participation in developed (DM) and emerging-market (EM) economies. In the case of DMs, we estimate the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \varepsilon_{it+h}$, where z_{it} denotes the log of labor force participation for recession episode i starting in year t. We include in the regression the set of financial crises detailed in Appendix Table 3. Panel (a) shows the estimated dynamics for financial crises ($\hat{\alpha}_h$). In the case of EMs, we estimate the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{inflation surge}_i + \varepsilon_{it+h}$, where inflation surge_i is a dummy variable that takes the value of one if the episode is classified as featuring a large inflation surge. We include in the regression the set of financial crisis episodes detailed in Appendix Table 4. Panel (b) shows the estimated dynamics following financial crises with a large inflation surge ($\hat{\alpha}_h + \hat{\beta}_h$); Panel (c) shows the estimated dynamics for financial crises without a large inflation surge ($\hat{\alpha}_h$). Error bands represent 90% confidence intervals.

Figure 6: Dynamics of the Labor Wedge Following Financial Crises in Developed Markets (Under Alternative Parameterizations)



Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \varepsilon_{it+h}$, where z_{it} denotes the log of the labor wedge for recession episode i, starting in year t. The different panels depict $\hat{\alpha}_h$ for different values of the Frisch elasticity of labor supply (η). See Footnote 3 for details on construction of the labor wedge. We include in the regression the set of financial crises detailed in Appendix Table 3. Error bands represent 90% confidence intervals.

Figure 7: Recovery from Financial Crises in Developed-Market Economies (Longer horizon)



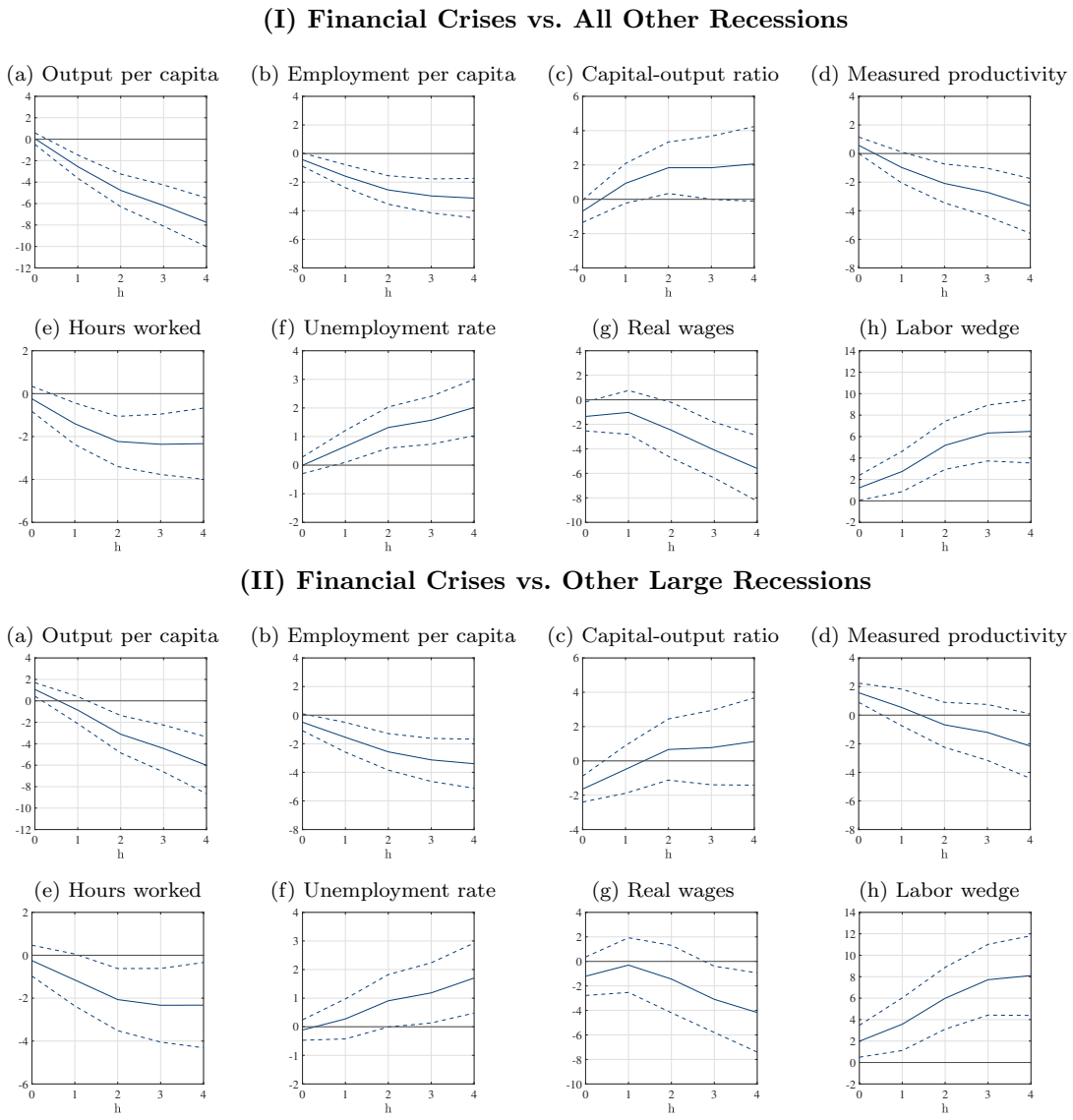
Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \varepsilon_{it+h}$, where z_{it} denotes either the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over the working-age population, unemployment rate, log of real wages, or log of the labor wedge for recession episode i, starting in year t. We include in the regression the set of financial crises detailed in Appendix Table 3. Panels (a)-(h) show the estimated dynamics for financial crises ($\hat{\alpha}$). Error bands represent 90% confidence intervals. Further details on the definitions of financial crises are provided in Section 2.1. For additional information on the variables and data sources, see Appendix A.

Table 7: Recovery from Financial Crises: Comparison with Other Recession Episodes

	Comparison group	Output	Employment	Capital/ output	Productivity	Hours worked	Unemployment rate	Real wages	Labor wedge
(a) Baseline	All recessions	-0.017***	-0.020***	0.006	-0.001	-0.019**	0.007*	-0.009	0.050***
		[0.006]	[0.006]	[0.008]	[0.007]	[0.008]	[0.004]	[0.013]	[0.015]
(b) Baseline	Other large recessions	-0.014*	-0.020**	-0.004	0.005	-0.017*	0.003	-0.008	0.057***
		[0.007]	[0.008]	[0.011]	[0.009]	[0.010]	[0.006]	[0.017]	[0.019]
(c) Country fixed effects	All recessions	-0.021***	-0.022***	0.007	-0.003	-0.022***	0.006	-0.007	0.054***
		[0.006]	[0.006]	[0.009]	[0.007]	[0.008]	[0.004]	[0.011]	[0.015]
(d) Country fixed effects	Other large recessions	-0.022***	-0.027***	0.002	0.002	-0.026**	0.004	-0.015	0.068***
		[0.008]	[0.008]	[0.012]	[0.009]	[0.011]	[0.006]	[0.015]	[0.020]
(e) Time quadratic trend	All recessions	-0.007	-0.019***	0.003	0.005	-0.017**	0.007	-0.003	0.048***
		[0.006]	[0.007]	[0.009]	[0.007]	[0.009]	[0.005]	[0.015]	[0.016]
(f) Time quadratic trend	Other large recessions	-0.002	-0.020**	-0.012	0.014	-0.013	0.003	-0.000	0.054**
		[0.008]	[0.009]	[0.012]	[0.010]	[0.011]	[0.006]	[0.019]	[0.022]
(g) Post-1990 fixed effects	All recessions	-0.010	-0.025***	0.007	0.006	-0.027***	0.009**	0.001	0.066***
		[0.006]	[0.007]	[0.009]	[0.008]	[0.008]	[0.005]	[0.015]	[0.016]
(h) Post-1990 fixed effects	Other large recessions	-0.008	-0.028***	-0.003	0.013	-0.027**	0.006	-0.000	0.077***
		[0.008]	[0.009]	[0.012]	[0.010]	[0.011]	[0.006]	[0.020]	[0.022]
(i) Pre-2007 sample	All recessions	-0.013**	-0.033***	0.003	0.011	-0.030***	0.012**	-0.014	0.073***
		[0.005]	[0.007]	[0.009]	[0.007]	[0.009]	[0.005]	[0.017]	[0.017]
(j) Pre-2007 sample	Other large recessions	-0.011*	-0.034***	-0.006	0.016*	-0.028**	0.007	-0.014	0.079***
		[0.006]	[0.009]	[0.011]	[0.009]	[0.012]	[0.007]	[0.022]	[0.022]

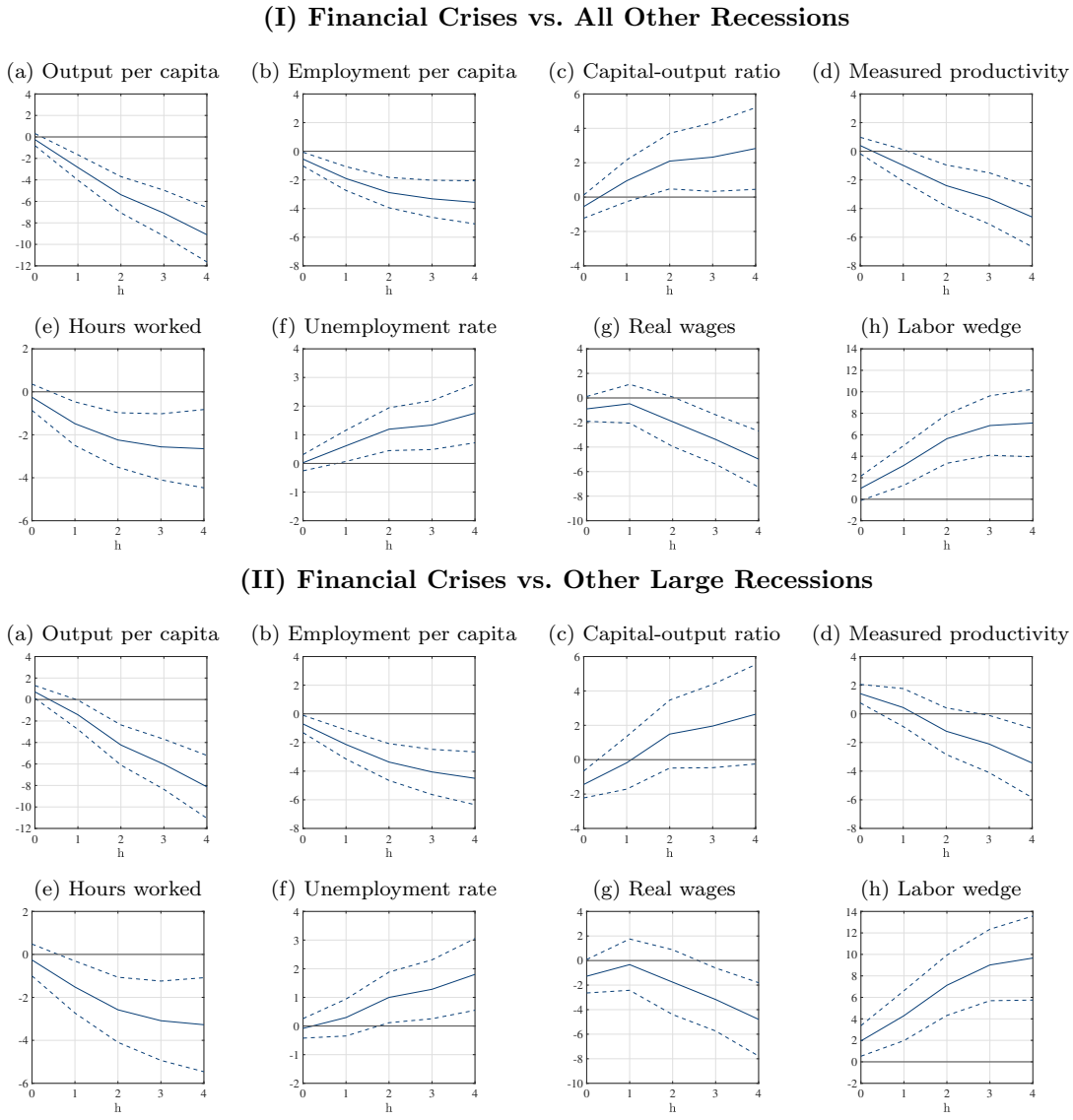
Notes: This table presents the results of estimating $\Delta_{t_R(i,j)-t_P(i,j)} Z_{i,t} = \alpha + \beta \text{financial}_{i,j} + \gamma' X_{i,t_P(i,j)} + \epsilon_{i,j}$ in a sample of recession episodes, where $Z_{i,t}$ represents one of the following variables: the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over working-age population, unemployment rate, log of real wages, or log of the labor wedge for episode j in country i. The terms $\{t_P(i,j), t_R(i,j)\}$ denote the output peak and recovery point of each episode j in country i; $\text{financial}_{i,j}$ is a dummy variable indicating whether the episode is classified as a financial crisis; and $X_{i,t_P(i,j)}$ is a vector of controls linked to the country and the period in which the episode occurs. We present the results in two alternative formats: one compares financial crises with all other recessions, and another compares them with other large recession episodes. Panels (a)-(b) show the baseline regression, with no controls. Panels (c)-(d) include country fixed effects α_i. Panels (e)-(f) include a quadratic time trend (i.e., $\theta_1 t_P(i,j) + \theta_2 t_P(i,j)^2$). Panels (g)-(h) include a dummy variable equal to one if the recession peak occurs in 1990 or later (i.e., $\mathbb{I}\{t_P(i,j) \geq 1990\}$). Panels (i)-(j) estimate the baseline specification excluding episodes with a peak in 2007 or later. Episodes included in the analysis are detailed in Appendix Table 3, and specify whether each episode is a financial crisis. For the definition of financial crises and other episodes, see Section 2.1. $*$, $**$, and $***$ represent statistical significance at the 10%, 5%, and 1% level, respectively.

Figure 8: Differences in Recovery Between Financial Crises and Other Recession Episodes in Developed-Market Economies



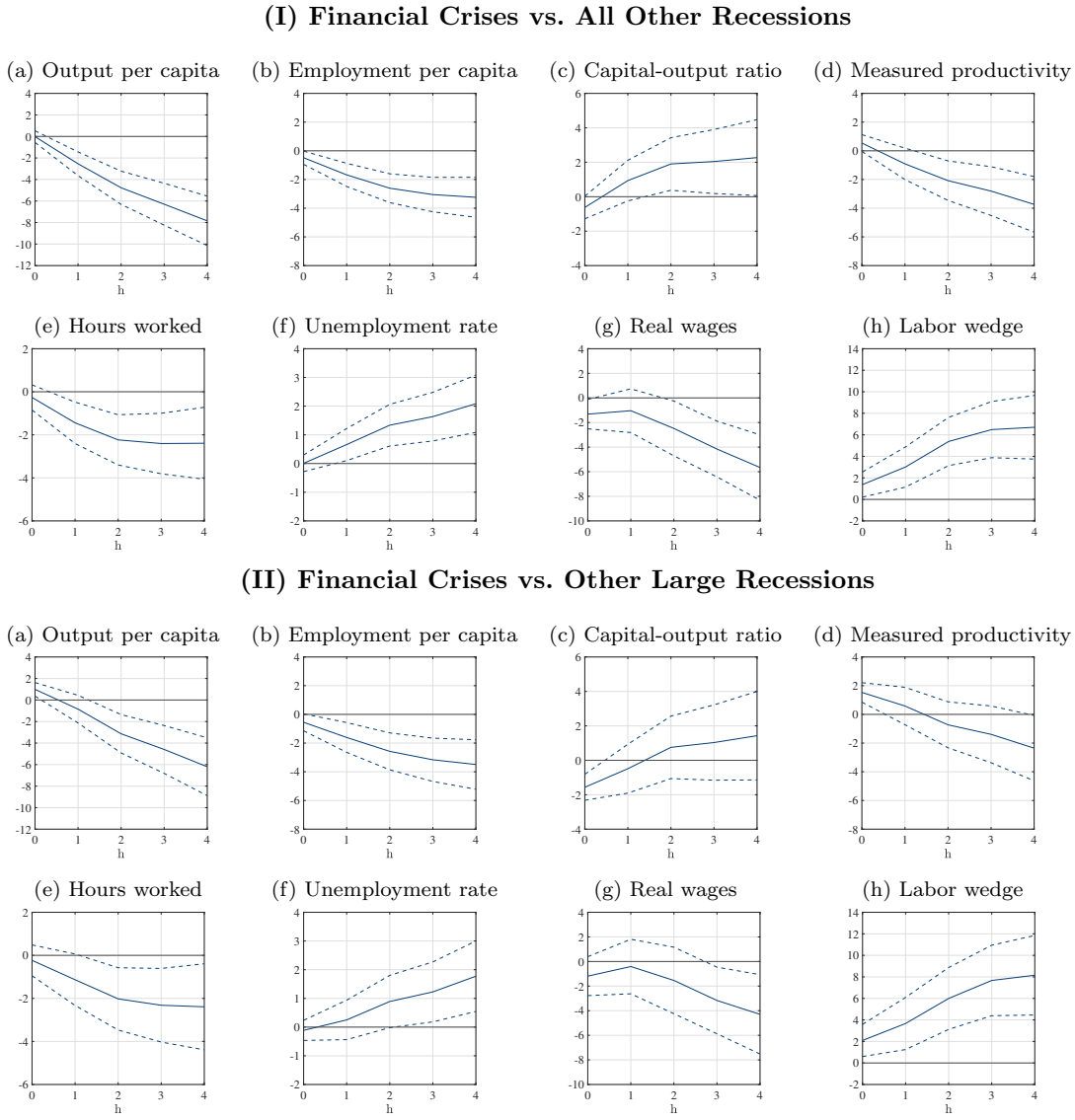
Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{financial}_i + \varepsilon_{it+h}$, where z_{it} denotes either the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over the working-age population, unemployment rate, log of real wages, or log of the labor wedge for recession episode i, starting in year t. The variable financial_i is a dummy variable that takes the value of one if the episode is classified as a financial crisis. Panel (I) includes the sample of financial crises together with all other recession episodes, while Panel (II) includes the sample of financial crises and other large recession episodes; see Appendix Table 3 for details on these episodes. Panels (a)-(h) in both panels show the estimated difference in the dynamics between these two types of episodes ($\hat{\beta}$). Error bands represent 90% confidence intervals.

Figure 9: Differences in Recovery Between Financial Crises and Other Recession Episodes (Including Country Fixed Effects)



Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_{hj} + \beta_h \times \text{financial}_i + \varepsilon_{it+h}$, where z_{it} denotes either the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over the working-age population, unemployment rate, log of real wages, or log of the labor wedge for recession episode i, starting in year t. The variable financial_i is a dummy variable that takes the value of one if the episode is classified as a financial crisis and α_j are country-fixed effects. Panel (I) includes the sample of financial crises together with all other recession episodes, while Panel (II) includes the sample of financial crises and other large recession episodes; see Appendix Table 3 for details on these episodes. Panels (a)-(h) in both panels show the estimated difference in the dynamics between these two types of episodes ($\hat{\beta}$). Error bands represent 90% confidence intervals.

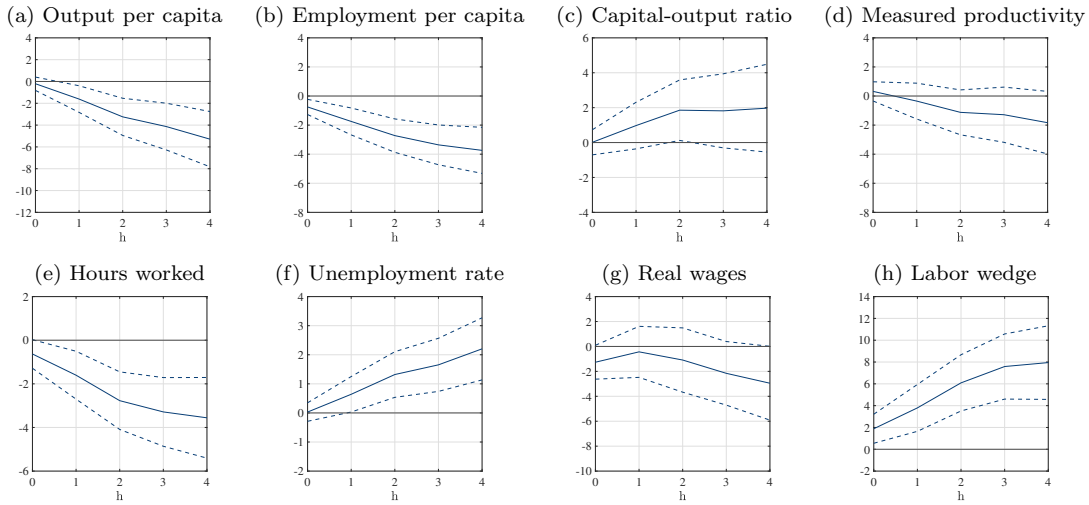
Figure 10: Differences in Recovery Between Financial Crises and Other Recession Episodes (Including Quadratic Time Trends)



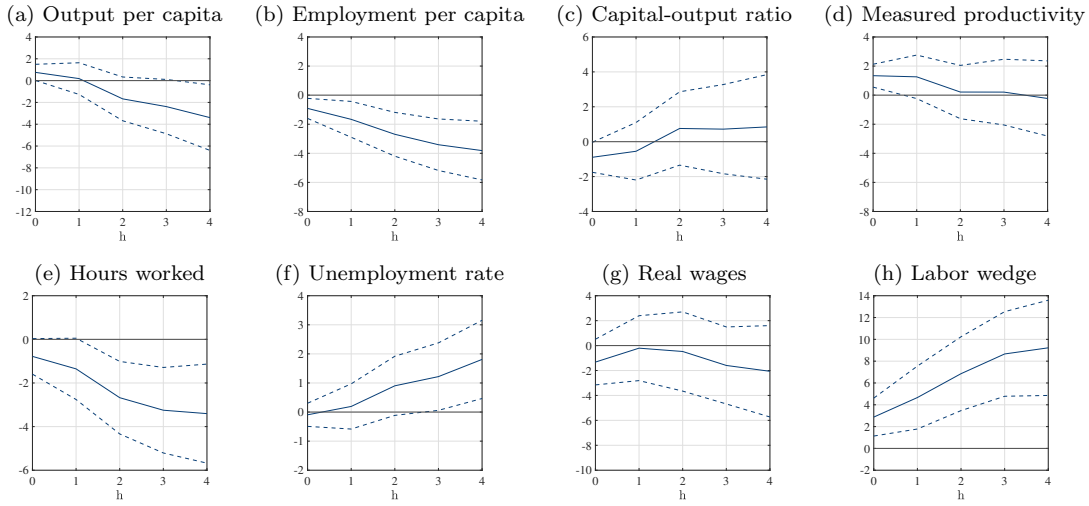
Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{financial}_i + \theta_1 \times t + \theta_2 \times t^2 + \varepsilon_{it+h}$, where z_{it} denotes either the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over the working-age population, unemployment rate, log of real wages, or log of the labor wedge for recession episode i, starting in year t. The variable financial_i is a dummy variable that takes the value of one if the episode is classified as a financial crisis. The term $\theta_1 \times t + \theta_2 \times t^2$ captures a quadratic time trend. Panel (I) includes the sample of financial crises together with all other recession episodes, while Panel (II) includes the sample of financial crises and other large recession episodes; see Appendix Table 3 for details on these episodes. Panels (a)-(h) in both panels show the estimated difference in the dynamics between these two types of episodes ($\hat{\beta}$). Error bands represent 90% confidence intervals.

Figure 11: Differences in Recovery Between Financial Crises and Other Recession Episodes (Including Post-1990 Dummy)

(I) Financial Crises vs. All Other Recessions



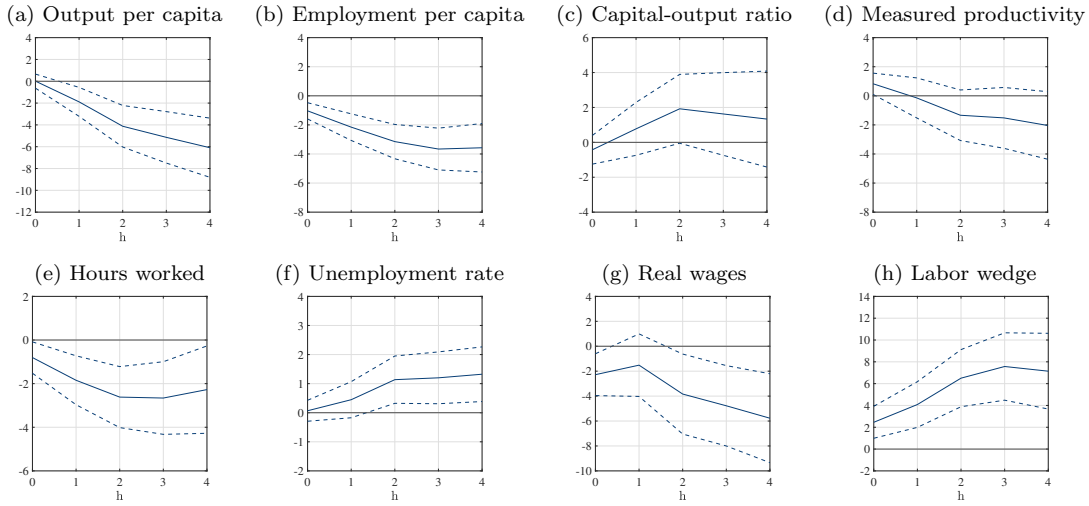
(II) Financial Crises vs. Other Large Recessions



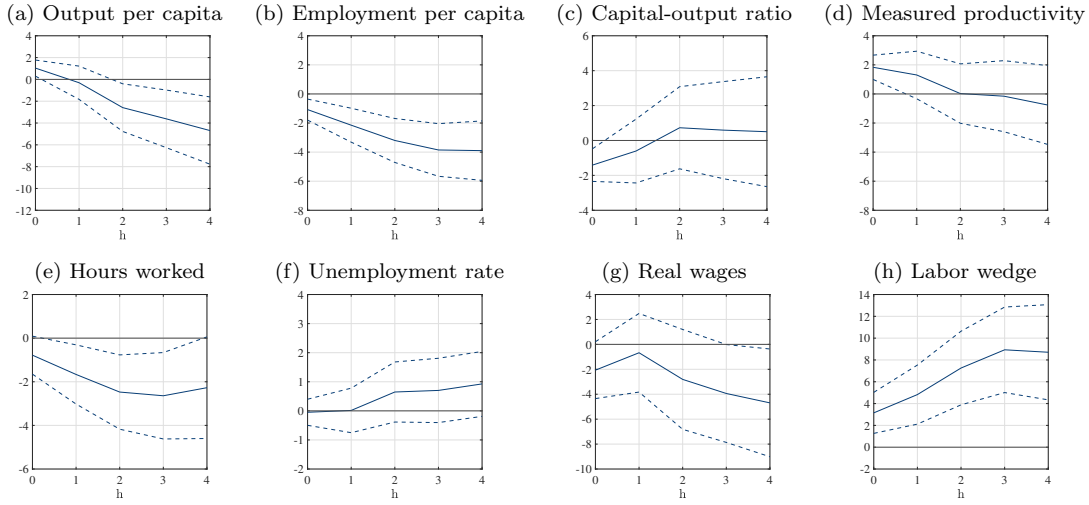
Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{financial}_i + \theta \times \text{post1990}_i + \varepsilon_{it+h}$, where z_{it} denotes either the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over the working-age population, unemployment rate, log of real wages, or log of the labor wedge for recession episode i, starting in year t. The variable financial_i is a dummy variable that takes the value of one if the episode is classified as a financial crisis. The variable post1990_i is a dummy variable that takes the value of one if the recession peak occurs in 1990 or later. Panel (I) includes the sample of financial crises together with all other recession episodes, while Panel (II) includes the sample of financial crises and other large recession episodes; see Appendix Table 3 for details on these episodes. Panels (a)-(h) in both panels show the estimated difference in the dynamics between these two types of episodes ($\hat{\beta}$). Error bands represent 90% confidence intervals.

Figure 12: Differences in Recovery Between Financial Crises and Other Recession Episodes in Developed-Market Economies (Pre–2007 Sample)

(I) Financial Crises vs. All Other Recessions

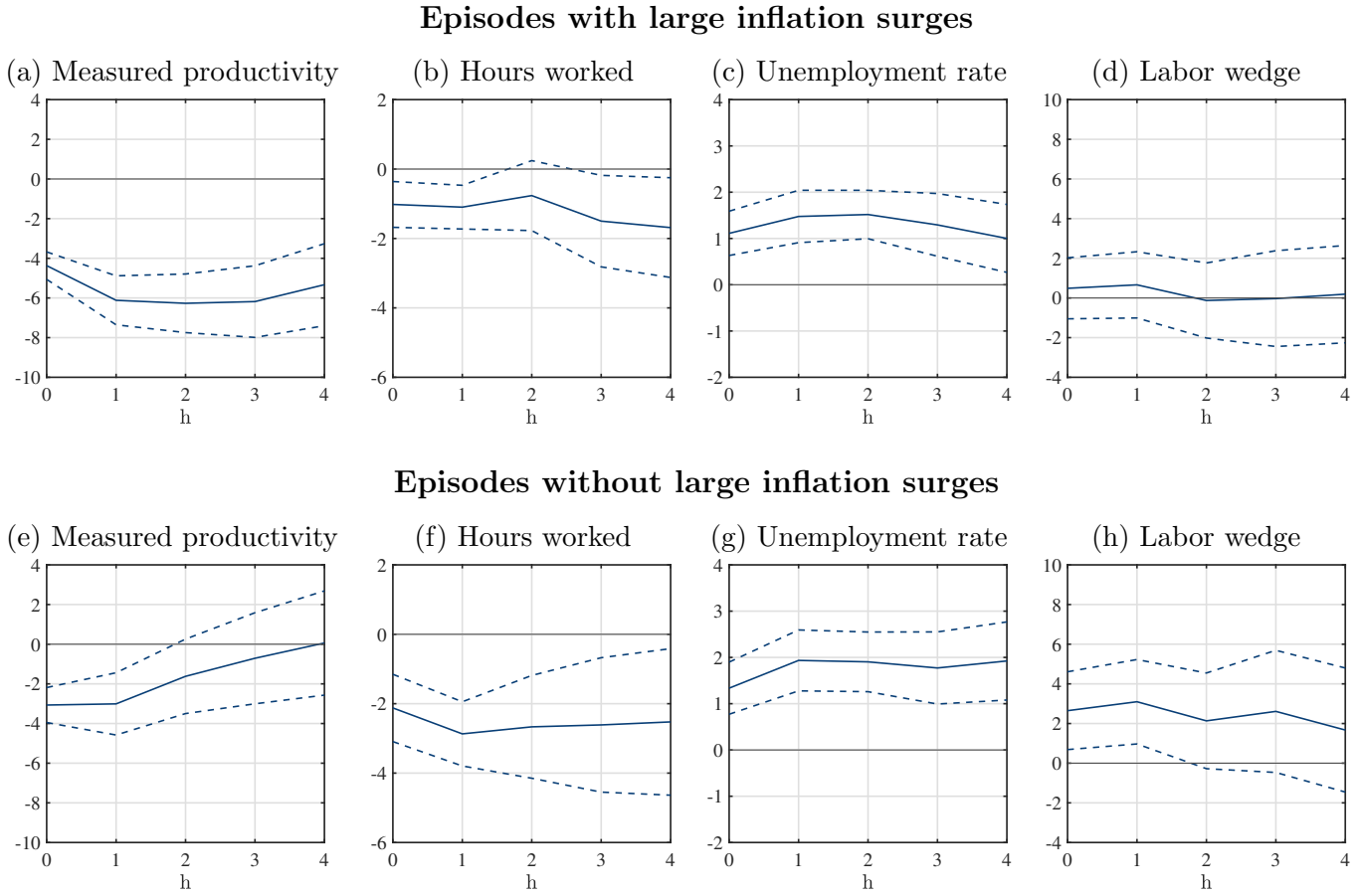


(II) Financial Crises vs. Other Large Recessions



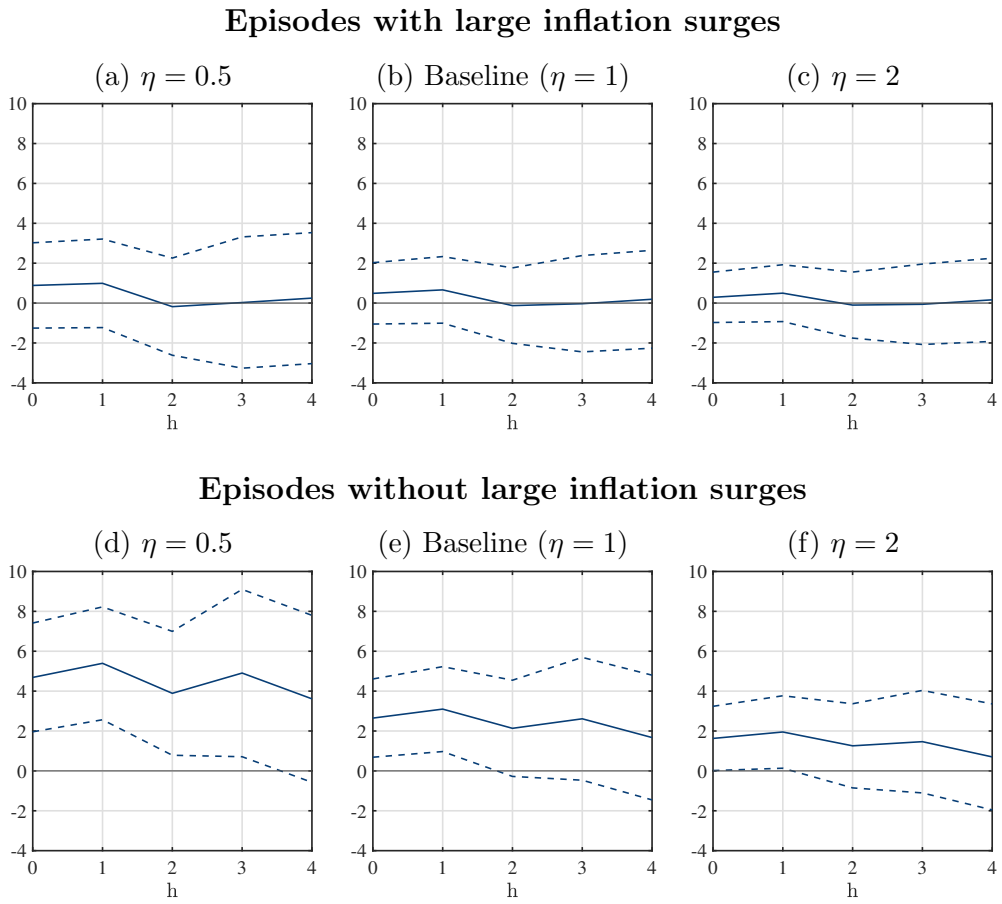
Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{financial}_i + \varepsilon_{it+h}$, where z_{it} denotes either the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over the working-age population, unemployment rate, log of real wages, or log of the labor wedge for recession episode i, starting in year t. The variable financial_i is a dummy variable that takes the value of one if the episode is classified as a financial crisis. Panel (I) includes the sample of financial crises together with all other recession episodes, while Panel (II) includes the sample of financial crises and other large recession episodes; see Appendix Table 3 for details on these episodes. We exclude episodes with a peak in 2007 or later. Panels (a)-(h) in both panels show the estimated difference in the dynamics between these two types of episodes ($\hat{\beta}$). Error bands represent 90% confidence intervals.

Figure 13: Recovery from Financial Crises in Emerging Markets, With and Without Inflation Surges: Additional Variables



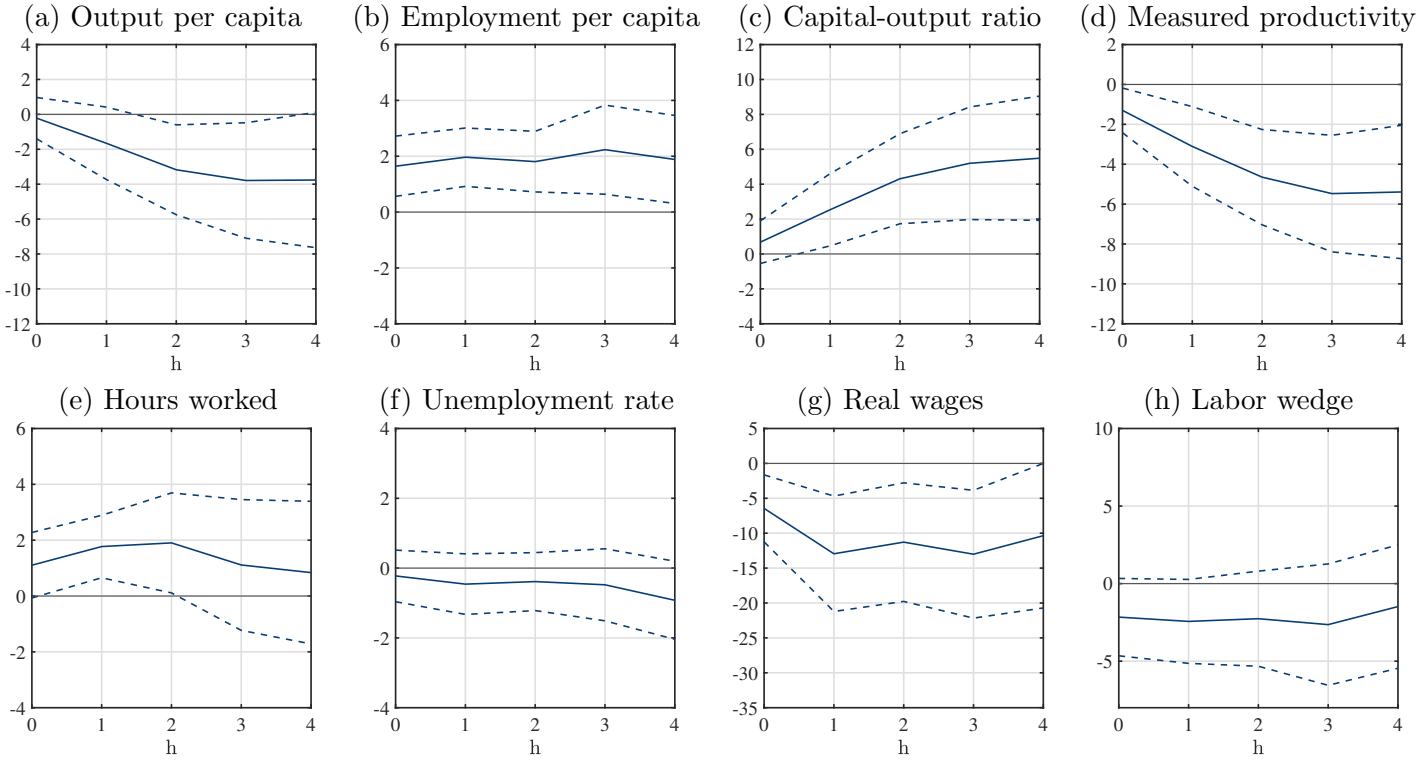
Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{inflation surge}_i + \varepsilon_{it+h}$, where z_{it} denotes either log of measured productivity, log of hours-worked over the working-age population, unemployment rate, or log of the labor wedge for recession episode i, starting in year t. The variable inflation surge$_i$ is a dummy variable that takes the value of one if the episode is classified as featuring a large inflation surge. We include in the regression the set of financial crisis episodes detailed in Appendix Table 4. Panels (a)-(d) show the estimated dynamics of these variables following financial crises with a large inflation surge ($\hat{\alpha} + \hat{\beta}$); panels (e)-(h) show the estimated dynamics for financial crises without a large inflation surge ($\hat{\alpha}$). Error bands represent 90% confidence intervals.

Figure 14: Dynamics of the Labor Wedge Following Financial Crises in Emerging Markets (Under Alternative Parameterizations)



Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{inflation surge}_i + \varepsilon_{it+h}$, where z_{it} denotes the log of the labor wedge for recession episode i, starting in year t for different values of η, the Frisch elasticity of labor supply. The variable inflation surge_i is a dummy variable that takes the value of one if the episode is classified as featuring a large inflation surge. We include in the regression the set of financial crisis episodes detailed in Appendix Table 4. Panels (a)-(c) show the estimated dynamics of these variables following financial crises with a large inflation surge ($\hat{\alpha} + \hat{\beta}$); panels (d)-(f) show the estimated dynamics for financial crises without a large inflation surge ($\hat{\alpha}$). Error bands represent 90% confidence intervals.

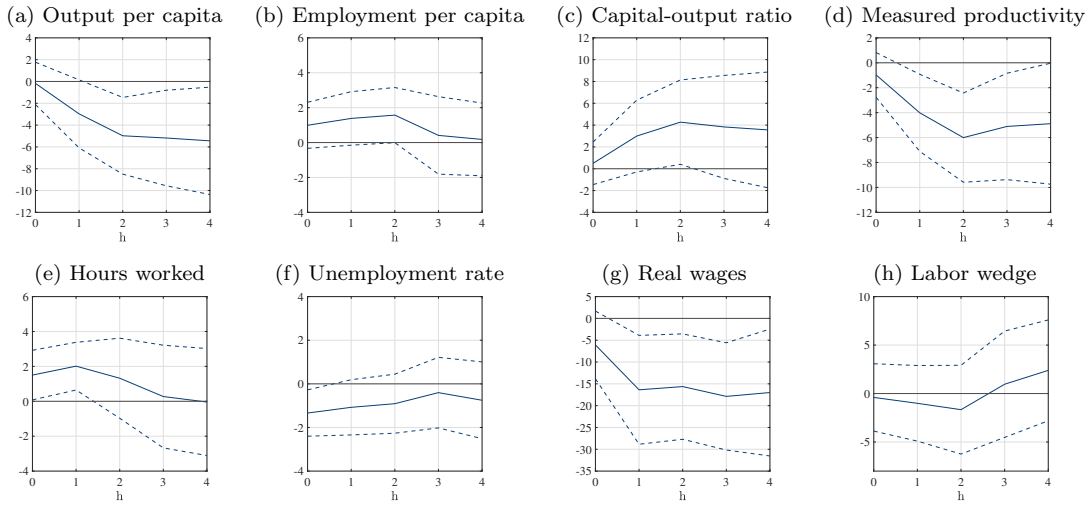
Figure 15: Differences in Recovery Between Financial Crises With and Without Large Inflation Surges in Emerging-Market Economies



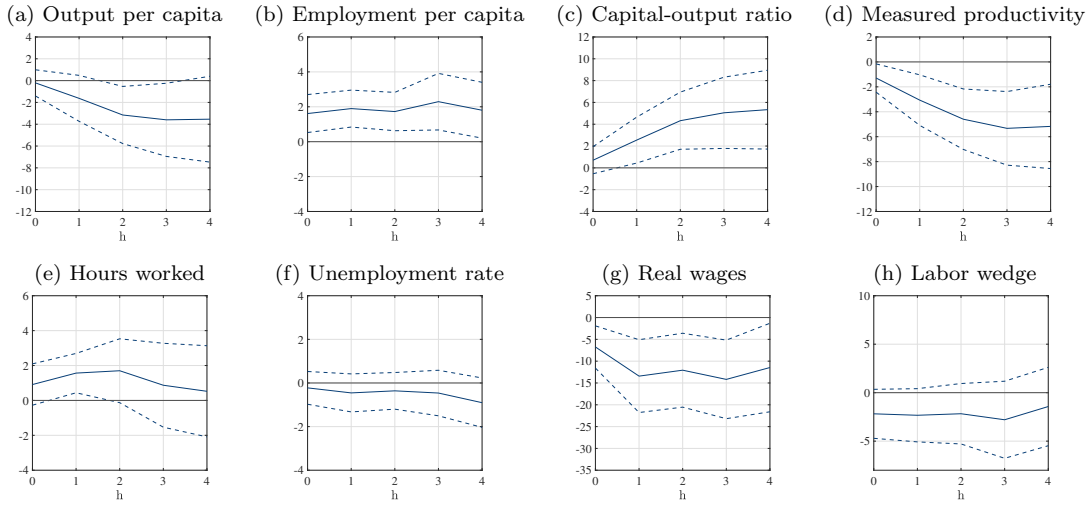
Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{inflation surge}_i + \varepsilon_{it+h}$, where z_{it} denotes either the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over the working-age population, unemployment rate, log of real wages, or log of the labor wedge for recession episode i, starting in year t. The variable inflation surge_i is a dummy variable that takes the value of one if the episode is classified as featuring a large inflation surge. We include in the regression the set of financial crisis episodes detailed in Appendix Table 4. Panels (a)-(h) show the estimated difference in the dynamics between these episodes with and without large inflation surges ($\hat{\beta}$). Error bands represent 90% confidence intervals.

Figure 16: Differences in Recovery Between Financial Crises With and Without Large Inflation Surges in Emerging-Market Economies

(I) Including country fixed effects

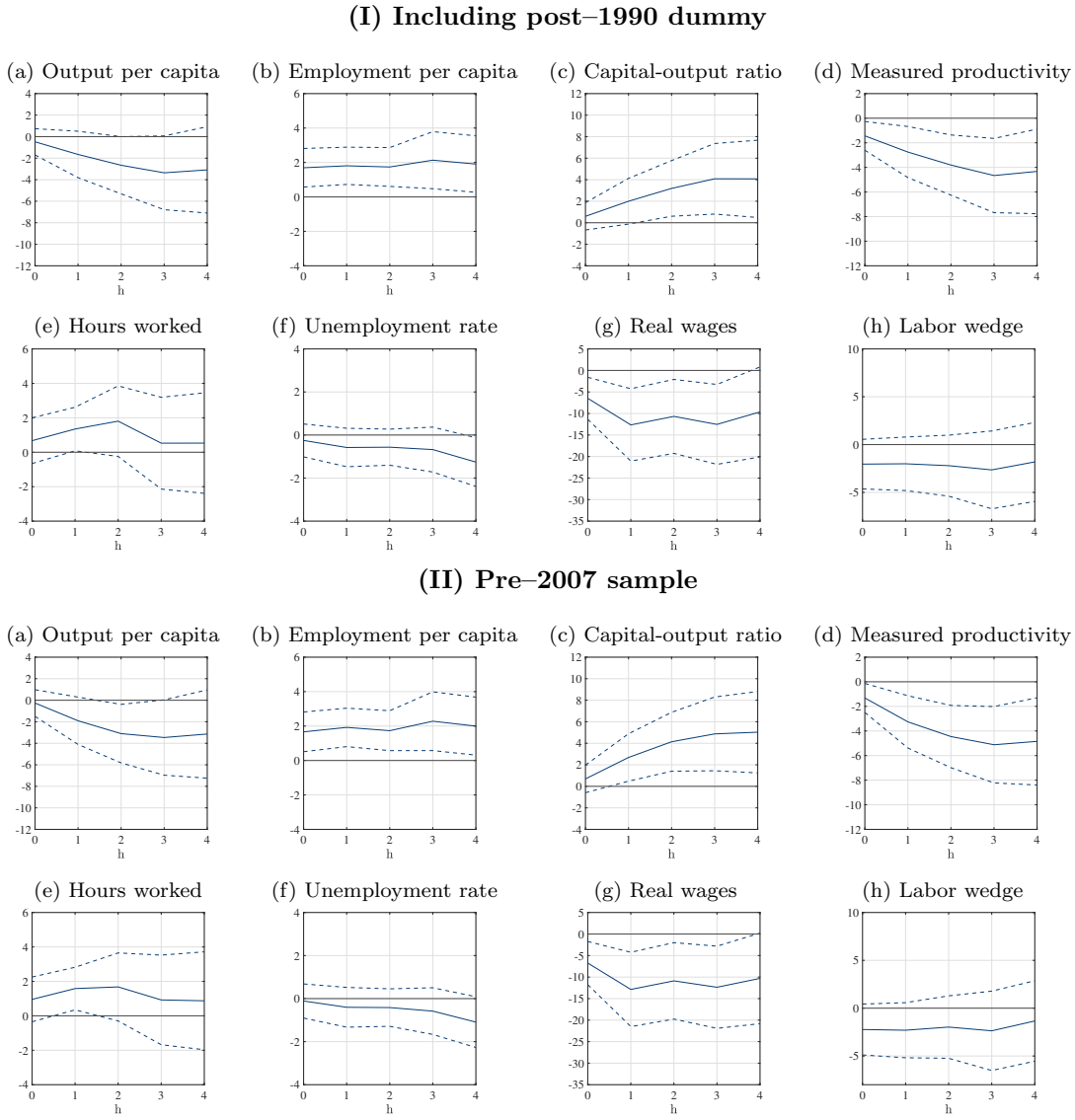


(II) Including quadratic-time trends



Notes: Panel I shows the results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_{hj} + \beta_h \times \text{inflation surge}_i + \varepsilon_{it+h}$, where z_{it} denotes either the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over the working-age population, unemployment rate, log of real wages, or log of the labor wedge for recession episode i, starting in year t. The variable inflation surge$_i$ is a dummy variable that takes the value of one if the episode is classified as featuring a large inflation surge and α_j are country fixed effects. Panel II shows the results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{inflation surge}_i + \theta_1 \times t + \theta_2 \times t^2 + \varepsilon_{it+h}$ where the term $\theta_1 \times t + \theta_2 \times t^2$ captures a quadratic time trend. We include in the regression the set of financial crisis episodes detailed in Appendix Table 4. Panels (a)-(h) in both panels show the estimated difference in the dynamics between these episodes with and without large inflation surges ($\hat{\beta}$). Error bands represent 90% confidence intervals.

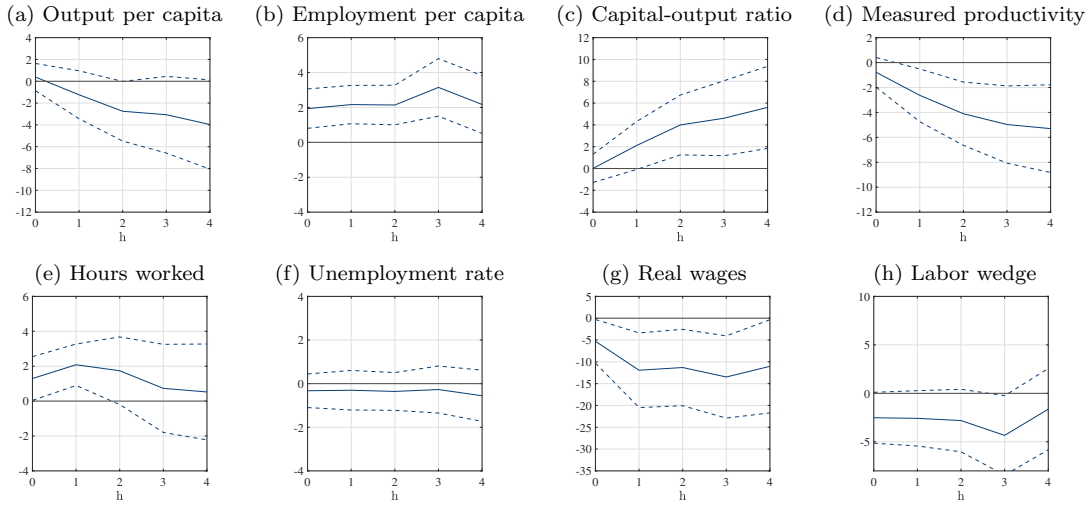
Figure 17: Differences in Recovery Between Financial Crises With and Without Large Inflation Surges in Emerging-Market Economies



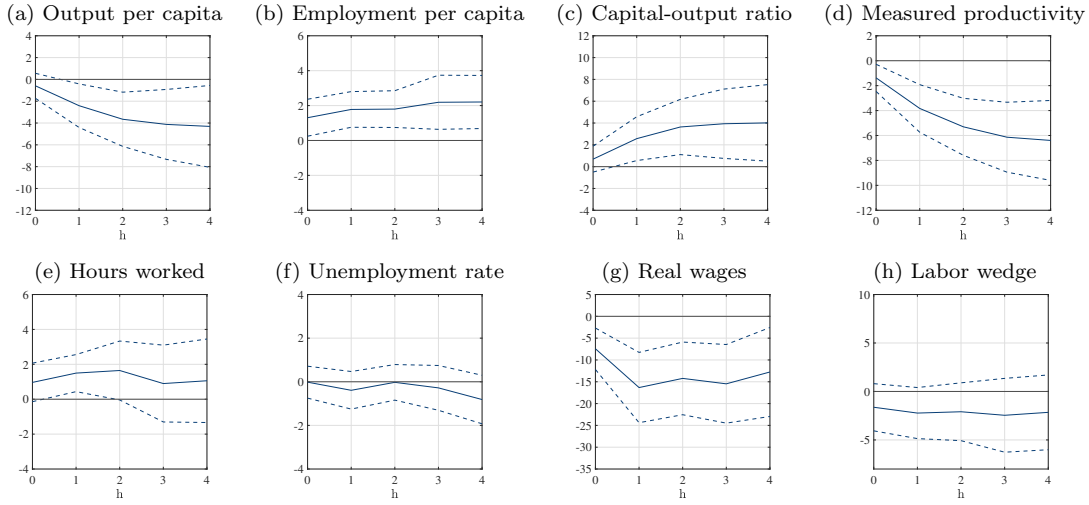
Notes: Panel I shows the results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{inflation surge}_i + \theta \times \text{post1990}_i + \varepsilon_{it+h}$, where z_{it} denotes either the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over the working-age population, unemployment rate, log of real wages, or log of the labor wedge for recession episode i, starting in year t. The variable inflation surge$_i$ is a dummy variable that takes the value of one if the episode is classified as featuring a large inflation surge. The variable post1990$_i$ is a dummy that takes the value of one if the recession peak occurs in 1990 or later. Panel II shows the results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{inflation surge}_i + \varepsilon_{it+h}$. In both panels, the regression includes the set of financial crisis episodes detailed in Appendix Table 4, but Panel II excludes those with a peak in 2007 or later. Panels (a)-(h) in both panels show the estimated difference in the dynamics between these episodes with and without large inflation surges ($\hat{\beta}$). Error bands represent 90% confidence intervals.

Figure 18: Differences in Recovery Between Financial Crises With and Without Large Inflation Surges in Emerging-Market Economies

(I) Lower Threshold to Define a Large Inflation Surge Episode



(II) Upper Threshold to Define a Large Inflation Surge Episode



Notes: This figure shows results from estimating the following regression for different horizons h: $z_{it+h} - z_{it-1} = \alpha_h + \beta_h \times \text{inflation surge}_i + \varepsilon_{it+h}$, where z_{it} denotes either the log of GDP over working-age population, log of employment over working-age population, log of the capital-output ratio, log of measured productivity, log of hours worked over the working-age population, unemployment rate, log of real wages or, log of the labor wedge for recession episode i, starting in year t. The variable inflation surge$_i$ is a dummy variable that takes the value of one if the episode is classified as featuring a large inflation surge. In Panel (I), we define episodes with a large inflation surge as those with a maximum increase in inflation above 6 p.p. while in Panel (II) we use a threshold of 12 p.p to define a large inflation surge. We include in the regression the set of financial crisis episodes detailed in Appendix Table 4. Panels (a)-(h) in both panels show the estimated difference in the dynamics between these episodes with and without large inflation surges ($\hat{\beta}$). Error bands represent 90% confidence intervals.