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

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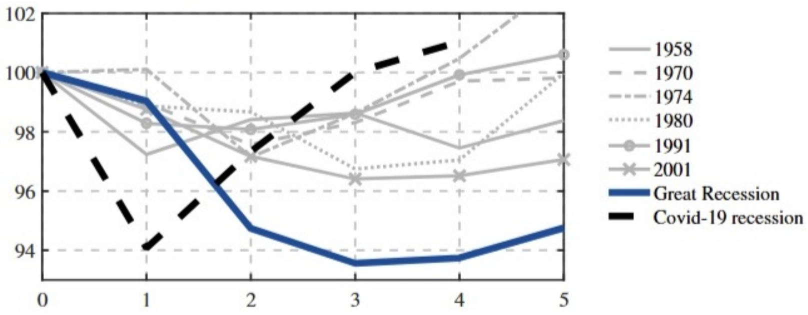
Introduction

- Jobless recoveries: Employment often recovers slowly after output contractions.
- But labor market dynamics highly heterogeneous following different recession episodes.
- Labor, either employment or wages, penalized during 'financial recessions'.
- Striking difference between dynamics after the global financial crisis and other episodes, including the adjustment post-pandemic.

US experience

Figure: Employment Recovery for U.S. recessions



What we do

- We examine the role of financial market conditions in shaping labor market recovery.
- First, we analyze a sample of 23 developed-market economies since the 1950s,
- Second, we study the role of inflation in shaping labor market recovery in a sample of 35 emerging-market economies, which exhibit significantly larger heterogeneity in inflation rates during recession episodes relative to the developed-market sample.

What we find

- First, 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.
- Second, we document that emerging-market financial crises that feature moderate levels of inflation exhibit patterns broadly aligned with those observed in developed economies, with jobless recoveries but no declines in real wages.
- But emerging market financial crises with higher levels of inflation exhibit a remarkably different pattern: strong employment recovery but 'wageless recoveries', that is, persistent declines in real wages that do not recover along with economic activity.

Methodology

$$y_t = A_t k^{\alpha} (\gamma^t l_t)^{1-\alpha}$$

- Define the peak (p), contraction (c) and recovery points (R)
- $d = t_R - t_p$
- jobless recovery if $l_{t_R} < l_{t_p}$

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

Mechanisms

- Financial component in labor input cost: for instance labor contracts require payment in advance.
- Credit market disruptions persistently increase the financial component of labor input costs.
- Downward nominal wage rigidity: in a low-inflation context, prevents higher labor input costs from translating into lower real wages and instead result in lower employment.
- In a high inflation environment (typical of emerging market recoveries) we do not observe *jobless* but rather *wageless* recoveries.

Empirical analysis

- Contrast financial from non-financial recessions.
- Role of inflation dynamics.
- Results for developed economies and for emerging economies.

Recovery from Financial Crises

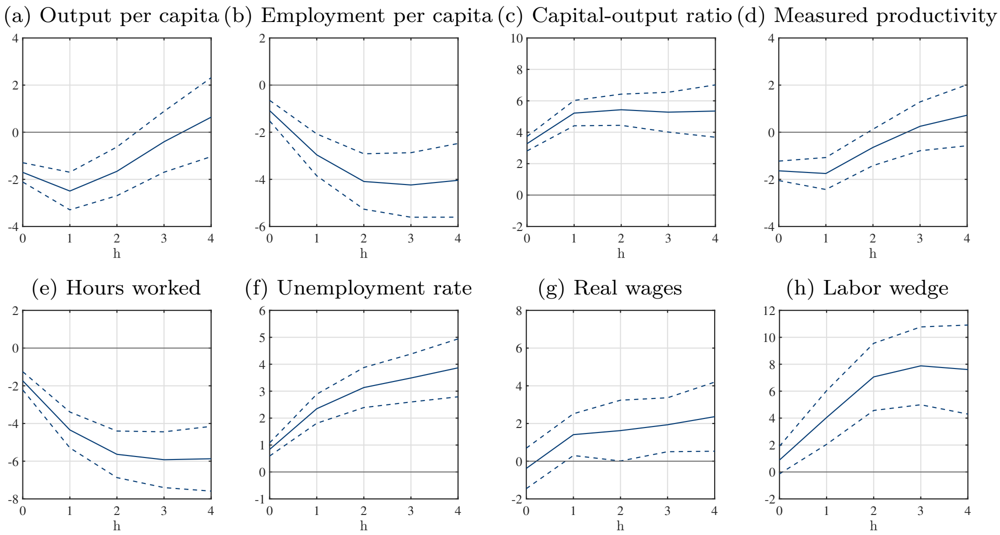
	Developed Markets (DM)	Emerging Markets (EM)	
		With inflation surge	Without inflation surge
(a) Accounting			
Output	0.004	-0.022*	-0.002
	[0.006]	[0.011]	[0.007]
Employment	-0.034***	0.006	-0.013**
	[0.007]	[0.007]	[0.006]
Capital	0.043***	0.030**	0.010
	[0.008]	[0.014]	[0.009]
Measured productivity	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]

Developed economies

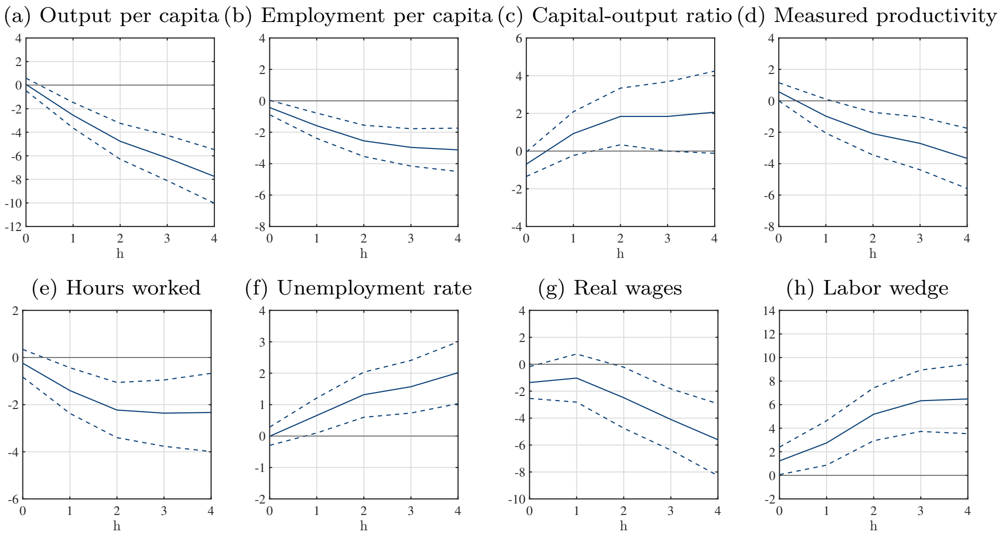
Summary statistics of Recession Episodes in Developed Markets

	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

Recovery from Financial Crises in Developed-Market Economies

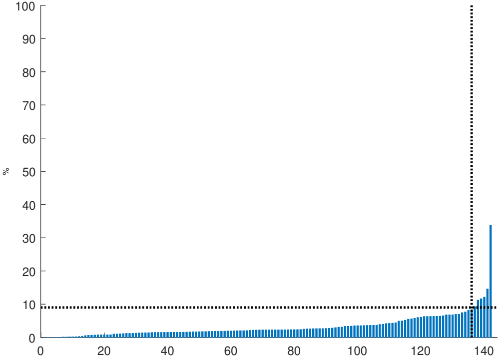


Difference in Recovery from Financial Crises vs other recessions in Devel

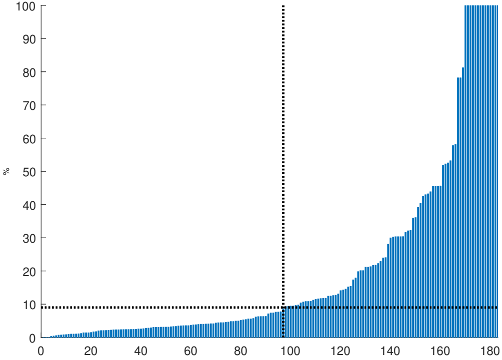


Inflation during recession episodes

(a) Developed-market Economies



(b) Emerging-market Economies



Emerging economies

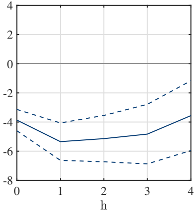
Summary statistics of Recession Episodes in Emerging Markets

	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

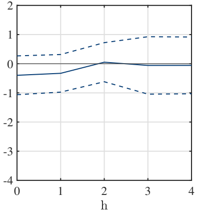
Recovery from Financial Crises in Emerging Markets

Episodes with large inflation surges

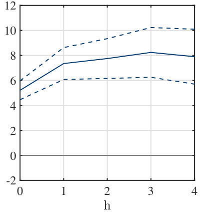
(a) Output per capita



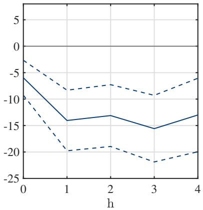
(b) Employment per capita



(c) Capital-output ratio

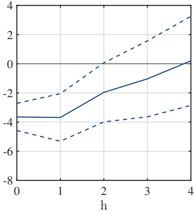


(d) Real wages

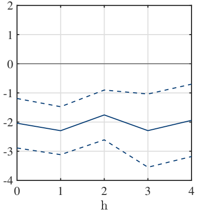


Episodes without large inflation surges

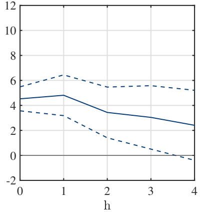
(a) Output per capita



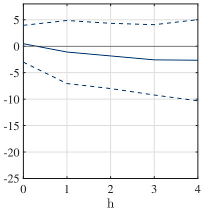
(b) Employment per capita



(c) Capital-output ratio



(d) Real wages



Conclusions

- We uncovered two key facts about labor market recovery from economic crises.
- First, disruptions in credit markets tend to have persistent effects on the labor market, manifesting in either low employment or low real wages.
- Second, the type of adjustment depends on the level of inflation, with low-inflation financial crises being followed by jobless recoveries and high-inflation episodes by wageless recoveries.
- Macrofinance models usually 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.