Labor Finance

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Why Labor?

Two essential inputs: capital and labor

Labor is of variety: gender, color, visa, education, skill, …
Labor can do things that capital cannot: unstructured task, creation, …
Labor cannot be owned and can act strategically: negotiations, labor union, strikes, whether to quit, …
Labor market frictions: minimum wage, employment protection, pensions, …

Financing labor is different than financing capital
Studying labor finance can help firms account for the needs and management of their workforce when making financing decisions

The Burning Questions of Labor Finance

Labor and corporate finance/governance

Matsa, D. A. (2018). Capital structure and a firm's workforce. *Annual Review of Financial Economics*, *10*, 387-412.
How do labor market frictions shape firms' financial/capital structures?

Donangelo, A. (2014). Labor mobility: Implications for asset pricing. *The Journal of Finance*, *69*(3), 1321-1346.
Are firms in industries employing workers whose labor skills are portable to other industries more exposed to systematic risk than those in industries where workers have less portable skills?

Kim, H. (2020). How does labor market size affect firm capital structure? Evidence from large plant openings. *Journal of Financial Economics*, *138*(1), 277-294.
How does labor market size affect firm capital structure?

The Burning Questions of Labor Finance

Finance and firm's labor employment decisions

Caggese, A., Cuñat, V., & Metzger, D. (2019). Firing the wrong workers: Financing constraints and labor misallocation. *Journal of Financial Economics*, *133*(3), 589-607.
Which workers do the firm fire when facing financing constraints?

Fonseca, J., & Van Doornik, B. (2022). Financial development and labor market outcomes: Evidence from Brazil. *Journal of Financial Economics*, *143*(1), 550-568.
How does increased access to bank credit affect the employment and wages of high- and low-skilled workers?

Bai, J., Carvalho, D., & Phillips, G. M. (2018). The impact of bank credit on labor reallocation and aggregate industry productivity. *The Journal of Finance*, *73*(6), 2787-2836.
How do local U.S. banking markets shift the allocation of labor and capital within local industries toward firms with higher productivity?

The Burning Questions of Labor Finance

Finance and individual labor supply/Entrepreneurship

Babina, T. (2020). Destructive creation at work: How financial distress spurs entrepreneurship. *The review of financial studies*, *33*(9), 4061-4101. (2016 UNC Job Market Paper, Placed to Columbia Business school)
How incumbent firms' financial inability to pursue productive opportunities affects employee reallocation to entrepreneurship?

Catherine, S. (2022). Keeping options open: What motivates entrepreneurs?. *Journal of Financial Economics*, *144*(1), 1-21.
How does the option to return drive individuals to leave paid employment and strike out on their own?

Field, E., Pande, R., Rigol, N., Schaner, S., & Troyer Moore, C. (2021). On her own account: How strengthening women's financial control impacts labor supply and gender norms. *American Economic Review*, *111*(7), 2342-75.
Can greater control over earned income incentivize women to work and influence gender norms?

Benmelch et al. 2019—Financial frictions and employment during the great depression

This paper finds the causal effect of financial frictions on firm employment.

Identification strategy: exploiting preexisting variation in the need to raise external funds.

Assumptions: the value of long-term bonds maturing from 1930 to 1940 was exogenous.

Benmelch et al. 2019 —Financial frictions and employment during the great depression

Concern: firms with maturing long-term debt may have anticipated the great depression, optimizing both their leverage and their employment levels accordingly before the crisis.

Data: one thousand largest industrial firms during the 1930s (hand-collected)

Benmelch et al. 2019 —Financial frictions and employment during the great depression

$\log E_{1933} - \log E_{1928}$	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
BankFail	−0.018	−0.024	−0.050	−0.046	−0.044	−0.041	−0.058	−0.069	0.007	−0.001
	(0.052)	(0.037)	(0.042)	(0.043)	(0.043)	(0.044)	(0.040)	(0.069)	(0.054)	(0.054)
$\text{BondsDue}_{1930-34}$	0.632	0.725	0.427	0.832	0.802	0.836	0.979	0.721	0.926	0.941
	(0.884)	(0.683)	(0.709)	(0.713)	(0.709)	(0.650)	(0.756)	(0.845)	(0.824)	(0.785)
$\text{BankFail} \times \text{BondsDue}_{1930-34}$	−2.998***	−2.874***	−2.745***	−2.844***	−2.870***	−2.957***	−3.083***	−2.673**	−3.159***	−3.080***
	(0.955)	(0.814)	(0.839)	(0.807)	(0.780)	(0.729)	(0.826)	(1.001)	(1.030)	(0.984)
Leverage_{1928}				−0.337**	−0.343**	−0.391**	−0.404**	−0.202	−0.098	−0.135
				(0.161)	(0.159)	(0.177)	(0.191)	(0.175)	(0.162)	(0.156)
$\log E_{1928}$					−0.033*	−0.137***	−0.139***	−0.182***	−0.155***	−0.152***
					(0.016)	(0.036)	(0.040)	(0.045)	(0.045)	(0.044)
$\log \text{Assets}_{1928}$						0.132***	0.129***	0.172***	0.130***	0.126**
						(0.034)	(0.037)	(0.045)	(0.045)	(0.046)
$\text{Profitability}_{1928}$								1.728***	1.038**	0.953**
								(0.435)	(0.447)	(0.409)
$\text{Profitability}_{1933}$									2.715***	2.714***
									(0.415)	(0.417)
$\log AGE$										−0.036
										(0.032)
Number of observations	1026	1026	1026	1026	1026	1026	1026	840	804	801
R^2	0.016	0.141	0.181	0.186	0.191	0.211	0.260	0.325	0.404	0.404
Fixed effects	–	S	S, I	S, I	S, I	S, I	S, I × R	S, I × R	S, I × R	S, I × R

Caggese et al. 2019 —Firing the wrong worker

Which workers do the firm fire when facing financing constraints.

Data: Swedish employer-employee data from 2000 to 2010
use credit ratings to identify financing constraints
use exchange rates and trade data to identify demand shocks.

Caggese et al. 2019 —Firing the wrong worker

Identification strategy: RDD since the discrete credit ratings are based on the continuous risk forecast.

Two assumptions:
1, the only source of heterogeneity is the running variable.

2, the continuous risk forecast affects the availability or cost of credit.

Caggese et al. 2019 —Firing the wrong worker

	Fired next year					
	Short-tenured			Long-tenured		
	(1)	(2)	(3)	(4)	(5)	(6)
High wage growth	0.050***	0.040***	0.038***	0.008***	0.008***	0.008***
	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)
High wage growth X Shock (large)	−0.030***	−0.024***	−0.014***	0.000	−0.002*	−0.002**
	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)
High wage growth X constrained	0.006***	0.004***	0.004***	0.004***	0.003***	0.003***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
High wage growth X Shock (large) X constrained	0.010***	0.009***	0.004***	−0.001	0.001	0.001*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Shock (large) = 1	−0.004***	0.020***	–	−0.000	0.005***	–
	(0.002)	(0.002)	–	(0.001)	(0.001)	–
Constrained	0.004***	−0.004***	–	−0.002***	−0.003***	–
	(0.001)	(0.001)	–	(0.001)	(0.001)	–
Shock (large) X constrained	−0.001	−0.008***	–	0.001*	−0.002***	–
	(0.001)	(0.001)	–	(0.001)	(0.001)	–
Observations	3,142,867	3,142,867	3,142,867	3,744,672	3,744,672	3,744,672
Polynomials	Yes	Yes	No	Yes	Yes	No
Industry-year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effects	No	Firm	Firm-year	No	Firm	Firm-year

Baghai et al. 2021—Talent in distressed firms

Burning Question:
Can distressed firms keep their skilled labor?

Baghai et al. 2021 —Talent in distressed firms

Three challenges:

First, lack of detailed, microlevel data on employees.
Solutions: microlevel data for Sweden from 1990 to 2011

Second: define and measure talent.
Solutions: a set of cognitive and noncognitive abilities that are applicable across tasks and jobs.

Baghai et al. 2021 —Talent in distressed firms

Third: economic and financial distress?

Solutions:
Document the likelihood of a firm going bankrupt following a negative FX rate shock if the firm is highly leveraged.

Baghai et al. 2021 —Talent in distressed firms

	Leave			
	(1)	(2)	(3)	(4)
Top talent × Exchange rate shock × High leverage	0.014**	0.013**	0.015**	0.014**
	(0.006)	(0.006)	(0.007)	(0.006)
Top talent × Exchange rate shock	0.000	–0.003	0.001	–0.002
	(0.004)	(0.003)	(0.004)	(0.004)
Top talent × High leverage	–0.000	–0.001	–0.000	–0.001
	(0.002)	(0.002)	(0.002)	(0.002)
Top talent	0.036***	0.029***	0.036***	0.029***
	(0.001)	(0.001)	(0.001)	(0.001)
Top talent × F1(Exchange rate shock) × High leverage			–0.003	–0.000
			(0.007)	(0.007)
Top talent × F1(Exchange rate shock)			–0.001	–0.003
			(0.003)	(0.003)
Firm × year F.E.	Yes	Yes	Yes	Yes
Enrollment period F.E.	Yes	Yes	Yes	Yes
Hierarchy F.E.		Yes		Yes
Observations	4,094,587	3,872,270	4,094,587	3,872,270
Adjusted R^2	0.205	0.211	0.205	0.211

Brown and Matsa. 2021—Boarding a sinking ship?

Burning question:
What is the impact of financial distress on a firm's hiring ability?

Brown and Matsa. 2021 —Boarding a sinking ship?

It is challenging to separately identify the effects of corporate distress on demand and supply in the labor market.

Solution: using data (2008-2010) from a leading online job search platform to hold demand fixed.

Brown and Matsa. 2021 —Boarding a sinking ship?

	ln(Number of Applications)				Number of Applications
	(1)	(2)	(3)	(4)	(5)
Average financial score	0.843*				
	(0.434)				
ln(Stock price)		0.198***			
		(0.045)			
CDS price 25th–50th percentile			–0.047		
			(0.070)		
CDS price 50th–75th percentile			–0.090		
			(0.116)		
CDS price 75th–95th percentile			–0.259*		
			(0.146)		
CDS price ≥ 95th percentile			–0.499***		
			(0.177)		
CDS price				–2.380**	–56.089*
				(1.147)	(31.519)
Fixed effects					
Firm		X	X	X	X
Detailed job type-state-month	X	X	X		X
Detailed job type-MSA-month				X	
R^2	0.67	0.64	0.63	0.74	0.63
N	8,872	84,763	96,065	94,771	96,065

Future Research

We have seen research using French, Swedish, German, and Danish data and believe that the understanding about labor finance may have been limited to few countries by far. Now that we have big/alternative data about labor from various sources such as LinkedIn and Glassdoor, more research spaces are open

Does ESG/CSR affect labor employment and labor composition, and hence financing decisions? Does ESG/CSR serve as a device for labor to negotiate with employers? The effects of ESG/CSR on workforce considerations and financing are interesting

The development of technologies is astonishing in recent years. Technologies like AI may help employers to monitor or replace labor, and can be a game changer of labor finance. How tech changes the interactions between labor and finance is worth being looked at

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THANK YOU

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