

World Bank Group Data Dive

Toward Pro-Jobs Business Environments Barriers to Growth: A Global Firm-Level Analysis

Category I

**Question 1: How does the business environment shape firm dynamics and
Job Outcome**

Barriers to Growth: A Global Firm-Level Analysis

Category I



Team 1: The Workforce Architects

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Research Questions

- How do **firm characteristics** and **business environments** shape **job creation across regions**?
- What factors – such as **firm size, maturity, access to credit, interest rates, and quality certification** – best predict employment growth?
- How do **corruption, infrastructure quality, and managerial experience** influence firms' ability to expand?
- Are firms in regions with stronger institutions and better infrastructure more likely to create jobs?

DATA

- World Bank Enterprise Surveys (firm-level dataset)
- Covers 250,000+ firms across 7 world regions
- Micro-level data on:
 - Jobs created
 - Access to finance and interest rates
 - Infrastructure quality
 - Manager characteristics
 - Firm size, age, and certifications
 - Business environment constraints

Isolating the Signal from the Noise

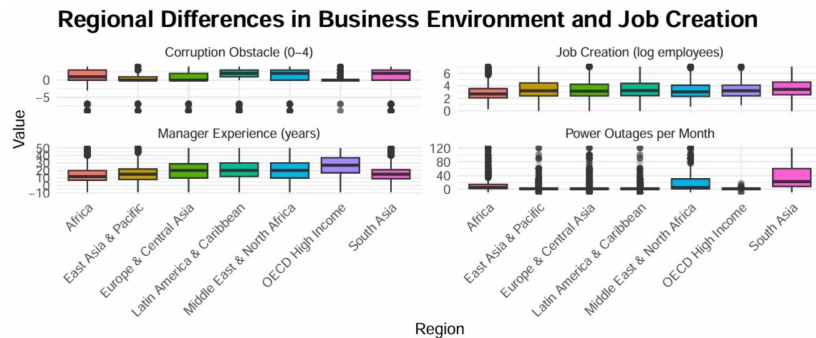
Multivariate Regression Framework

We employed a rigorous multivariate regression model to control for firm heterogeneity and isolate the true drivers of job creation from confounding variables.

The Core Equation

$$\text{Job Creation} = \beta_0 + \beta_1(\text{Size}) + \beta_2(\text{Credit}) + \beta_3(\text{Certification}) + \beta_4(\text{Gender}) + \varepsilon$$

This specification allows us to estimate the marginal effect of each policy-relevant variable while holding others constant.



Data Foundation

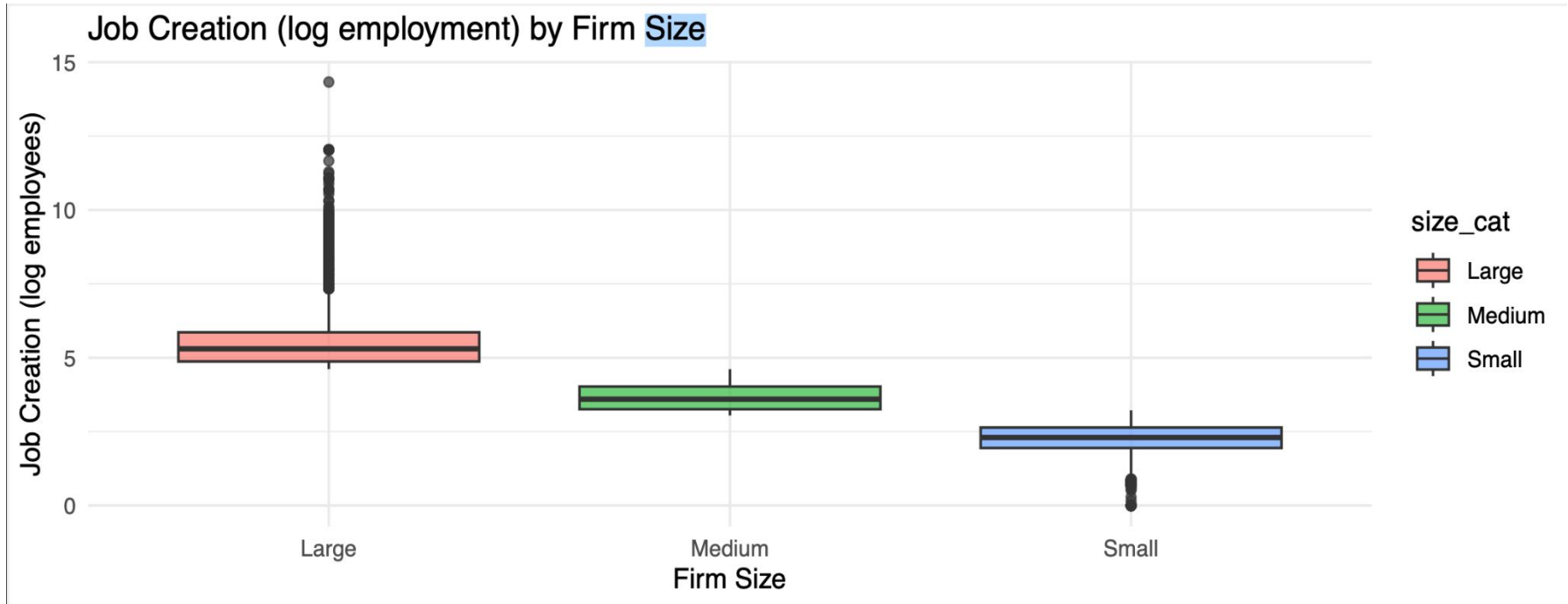
Source: Enterprise Surveys database, incorporating B-READY 2025 indicators

Sample: Cross-sectional firm-level data across multiple economies

Controls: Sector, geography, market conditions, and regulatory environment

Company size

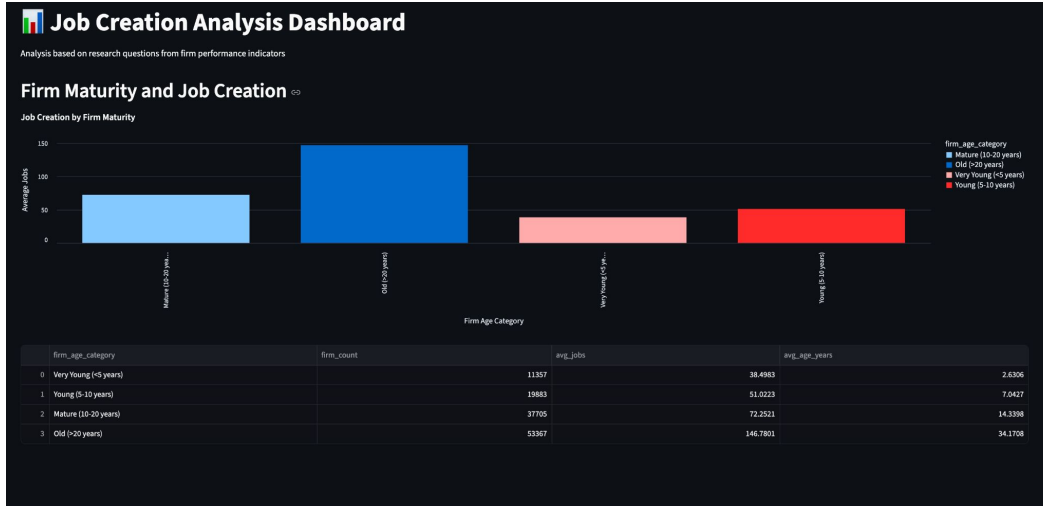
- On absolute terms: large companies create the most job; regardless of country larger companies would naturally create more job
- On a size adjusted terms: medium companies create the most jobs relative to their size



Maturity of Firms

How does the maturity of firms affect jobs, even if other indicators are positive?

- There is a correlation with the maturity of the firm
- More established firms created more jobs (not always size adjusted)



Access to Credit Drives Growth; Interest Rates Less Important

The Barrier

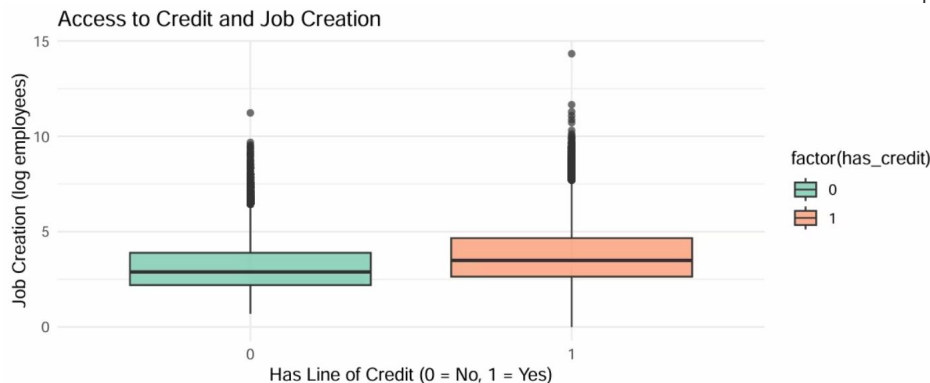
Getting the loan is the fundamental constraint, not the price of borrowing

Firms citing favorable interest rates show no statistically significant difference in job creation compared to those paying market rates

The Solution

Access to a line of credit demonstrates strong positive correlation with employment growth

Credit lines function as operational buffers, enabling confident hiring during expansion

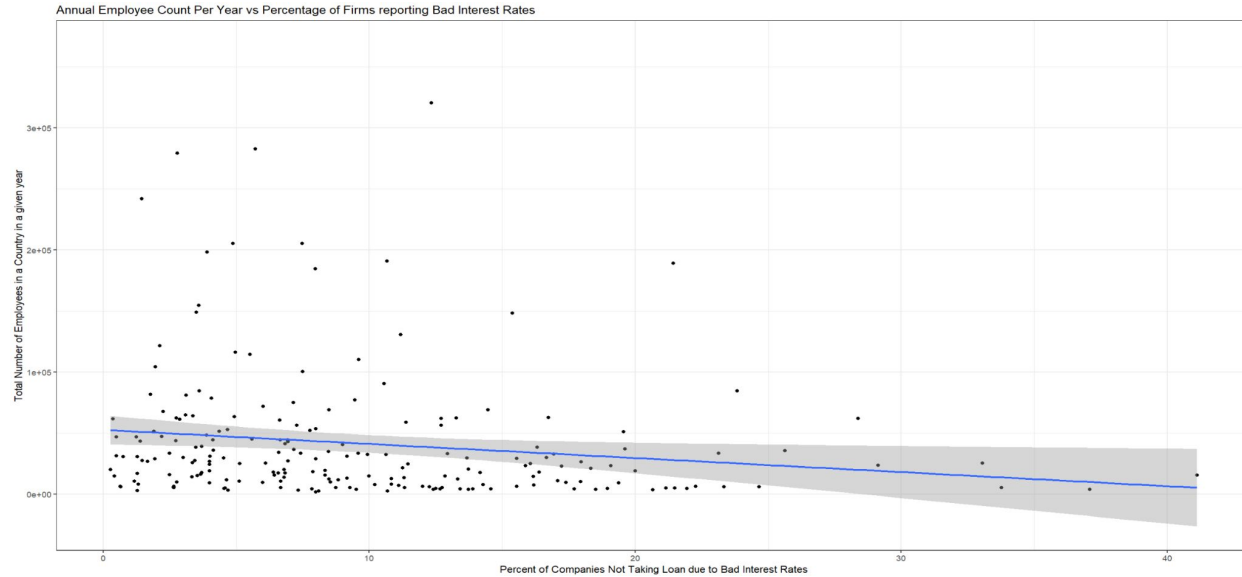


Our regression analysis reveals a critical distinction that challenges conventional policy wisdom. Subsidizing interest rates—a popular intervention—produces minimal employment impact. The true constraint is collateral requirements, information asymmetries, and institutional barriers that prevent SMEs from accessing formal credit markets entirely. A firm with a credit line at 12% APR consistently outperforms a firm with no access at any rate.

Interest Rates

How does favorable interest rates (as indicated by the firm) affect job creation?

Countries where a higher percentage of firms indicated unfavorable interest rates saw lower employment numbers



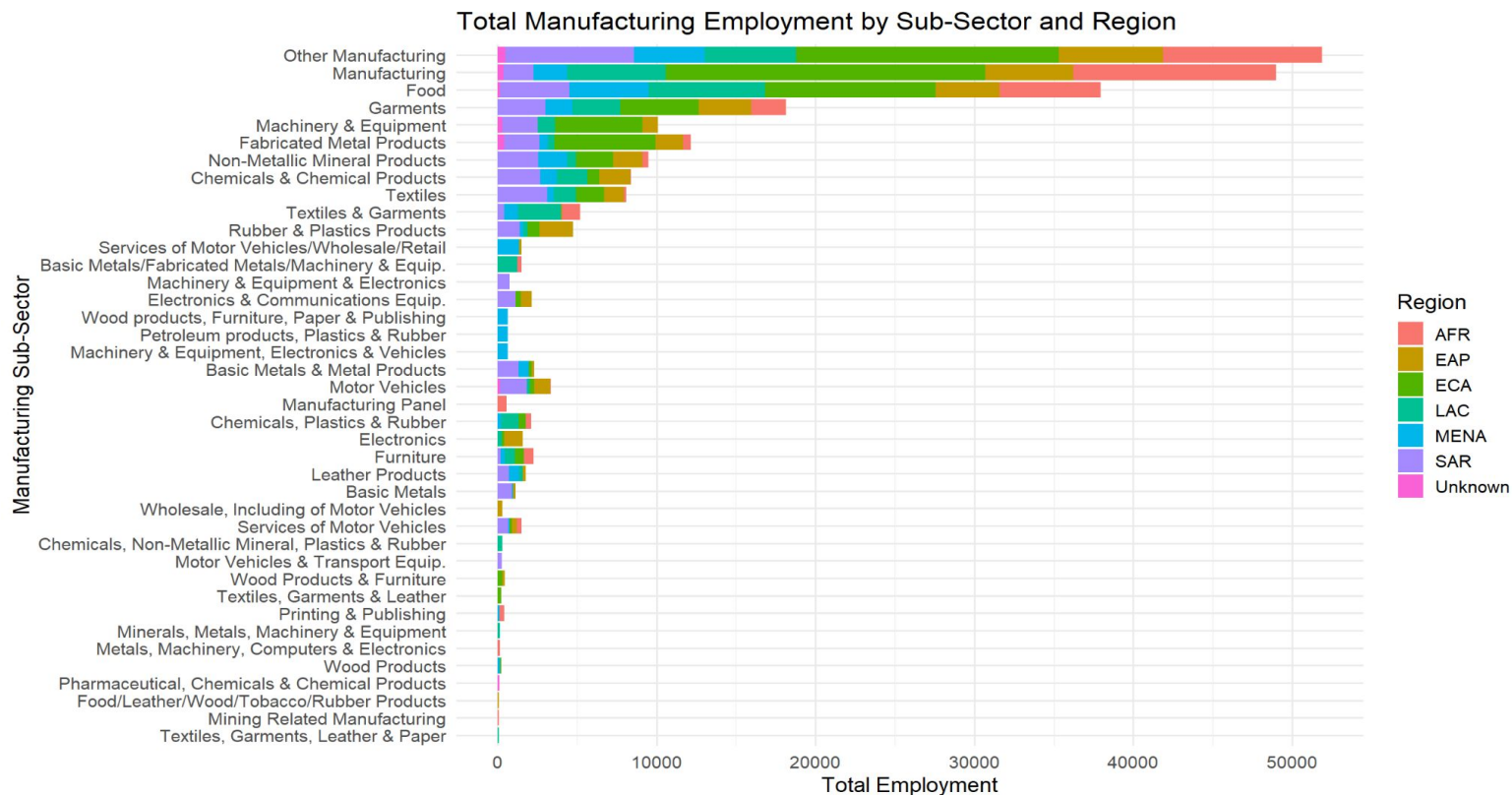
Regional Differences in Business Environment & Job Creation

- **Corruption constraints** are highest in *Latin America & Caribbean, MENA, and South Asia*; lowest in *OECD and Europe & Central Asia*.
- **Job creation (log employment)** is strongest in *South Asia and Latin America*, and lowest in *Africa*.
- **Manager experience** is highest in *OECD and MENA*; lowest in *Africa* and parts of *South Asia*.
- **Power outages** are severe and frequent in *South Asia, MENA, and Africa*, but minimal in *OECD and Europe & Central Asia*.
- Clear pattern: **better institutions and infrastructure align with higher job stability**, while developing regions face larger business environment obstacles.

Industry Employment – Manufacturing

- Regions with stronger business environments (EAP, LAC, ECA) create more jobs in high-productivity manufacturing sub-sectors, while weaker environments push firms into lower-value activities, showing that the business environment shapes both *how many* jobs are created and *what kinds* of jobs emerge.
- Regions with better business environments (EAP, SAR) show larger job concentrations in labor-intensive and diversified manufacturing sectors.
- Fragmented employment patterns in AFR and MENA signal how weak infrastructure, higher uncertainty, and regulatory burdens limit firm growth.
- LAC and ECA's balanced

Industry Employment – Manufacturing



Most Prevalent Biggest Obstacle by World Region

Region full:

Full written name of that region (e.g., “East Asia & Pacific”).

Most prevalent obstacle

Business environment issue cited most often as the firm’s single biggest obstacle in that region.

Share of firms (%):

Weighted percentage of firms in the region that chose that obstacle as their biggest constraint.

	Region full	Most prevalent obstacle	Share of firms (%)
0	Africa	8-Electricity	24.9
1	East Asia & Pacific	1-Access To Finance	6.2
2	Europe & Central Asia	14-Tax Rates	12.3
3	High income: OECD	9-Inadequately Educated Workforce	27.0
4	Latin America & Caribbean	4-Corruption	14.7
5	Middle East & North Africa	11-Political instability	9.8
6	North America	9-Inadequately educated workforce	27.0
7	South Asia	4-Corruption	9.7

Bureaucracy is a Discriminatory Tax on Female Leaders

The Hypothesis

Does regulatory burden affect female-led firms disproportionately?

The Finding

Yes. Time spent with officials shows a steeper negative coefficient for female managers.

Each additional hour of compliance time reduces employment growth more significantly in female-led enterprises.

The Mechanism

Discretionary interactions create opportunities for harassment, unofficial payments, and gender bias

The Solution

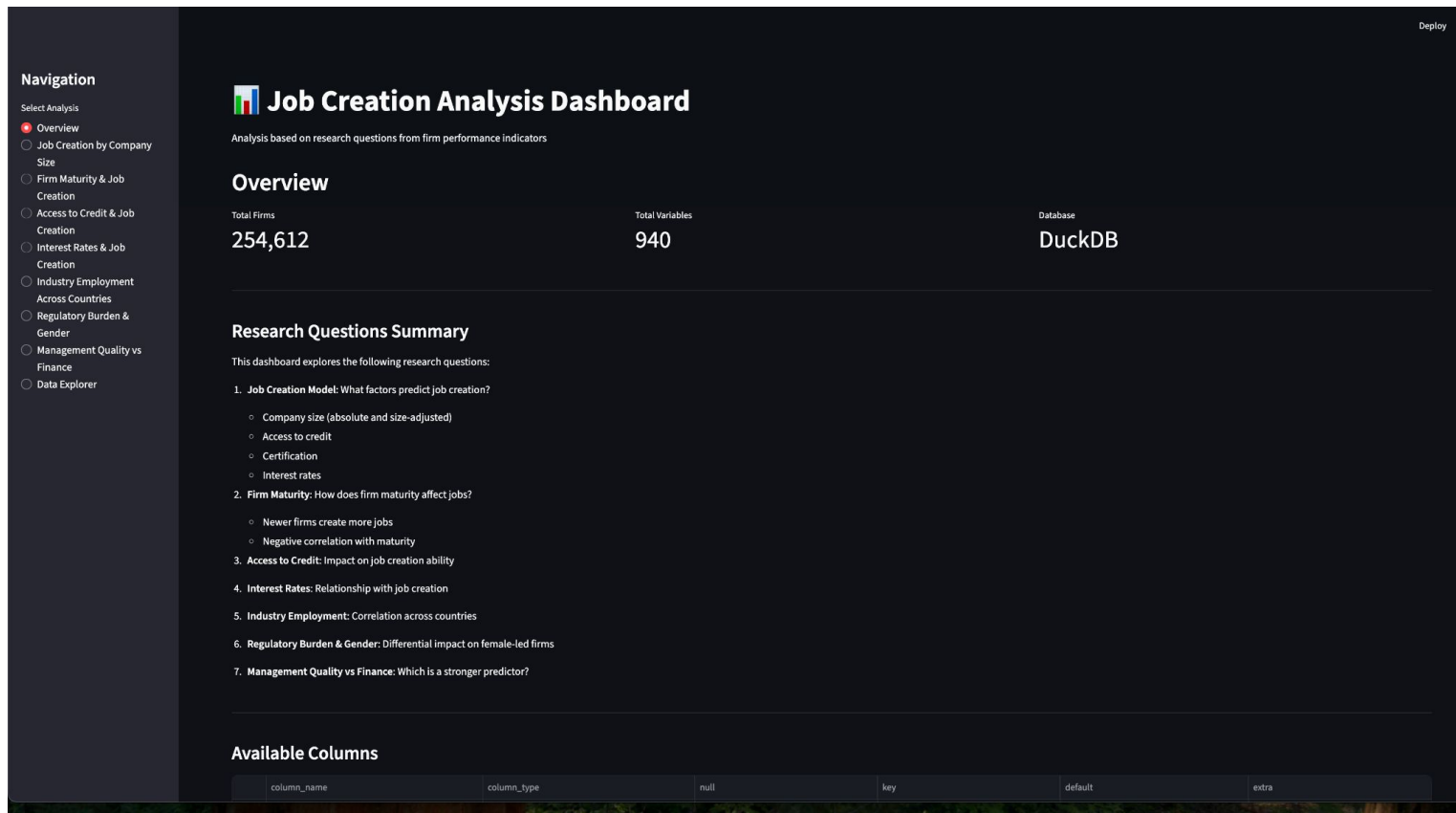
Digital compliance systems remove discretion and create audit trails

The Impact

Digitization is not just efficiency—it's a gender equity intervention that levels the playing field

Bureaucracy is not gender-neutral. Our data demonstrates that the "time tax" of regulatory compliance extracts a disproportionate penalty from female entrepreneurs, who face both the direct cost of time and the indirect cost of navigating systems designed with male business owners as the default user.

What We Created: Dashboard



Dashboard



Job Creation Analysis Dashboard

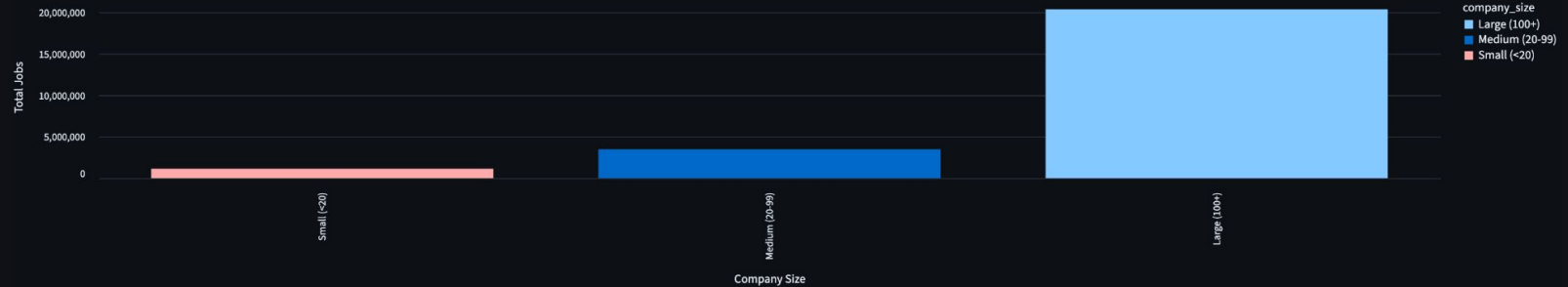
Analysis based on research questions from firm performance indicators

Job Creation by Company Size

Using I1 for company size and I1 for employment

Absolute Job Creation by Company Size

Total Jobs by Company Size (Absolute)



	company_size	firm_count	total_jobs	avg_jobs_per_firm
0	Small (<20)	122771	1145705	9.332
1	Medium (20-99)	82848	3482110	42.0301
2	Large (100+)	47567	20385024	428.5539

Dashboard

Size-Adjusted Job Creation (Average Jobs per Firm)

Average Jobs per Firm by Company Size



	company_size	firm_count	avg_jobs_per_firm	avg_firm_size
0	Small (<20)	122771	9.332	9.332
1	Medium (20-99)	82848	42.0301	42.0301
2	Large (100+)	47567	428.5539	428.5539

Dashboard



Job Creation Analysis Dashboard

Analysis based on research questions from firm performance indicators

Access to Credit and Job Creation

Using k8 for credit access and l1 for employment

Job Creation by Credit Access



	credit_access	firm_count	avg_jobs	total_jobs
0	Has Credit/Line	88968	145.9471	12984620
1	Unknown	163878	71.1586	11661325
2	No Credit/Line	2	30	60

Dashboard



Job Creation Analysis Dashboard

Analysis based on research questions from firm performance indicators

Interest Rates and Job Creation

Using k30 (Access to Finance Obstacle) as proxy for interest rate conditions

Job Creation by Finance Obstacle (Interest Rate Proxy)



	finance_obstacle	firm_count	avg_jobs	total_jobs
0	No Obstacle	94065	105.5128	9925061
1	Minor Obstacle	48936	99.5363	4870908
2	Moderate Obstacle	51108	121.9585	6233053
3	Major Obstacle	34622	71.219	2465743
4	Very Severe Obstacle	18978	57.7297	1095594
5	Unknown	4883	76.2464	372311

THANK YOU!