Business Expectations & Uncertainty in Developing & Emerging Economies*

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*The views expressed in this paper and presentation are solely those of the authors and do not necessarily reflect the views of the World Bank, its Executive Directors, or the countries they represent.
We study the properties of business expectations and uncertainty in 27 developing and emerging economies. Our evidence comes from 14,000 businesses responding to the World Bank Group Business Pulse and Enterprise Surveys. Each survey elicits three-point subjective probability distributions about future own-firm sales. We measure expectations and uncertainty using the first and second moments of those distributions and verify they predict future sales growth outcomes and absolute forecast errors. Our analysis reveals two new facts about business uncertainty across countries. (1) Uncertainty is higher in our sample than in advanced economies, and it declines with GDP per capita even after accounting for firm size, sector, and other firm- and country-level predictors of uncertainty. (2) Absolute forecast errors are larger than our survey-based measures of business uncertainty imply; namely, managerial beliefs are overprecise (understate sales volatility) and particularly so in lower-income countries.
What do business expectations and uncertainty look like in developing and emerging economies?

Do they resemble those of businesses in advanced economies?

Are there systematic differences in the properties of expectations and uncertainty with a country’s level of development?
MOTIVATION

Business dynamics are central to developing/emerging economies’ lack of “convergence” with advanced economies:

▶ Lower growth rates and stagnation (e.g., Hsieh & Klenow, 2014)
▶ Underinvestment in managerial capital (Akcigit, Alp, & Peters, 2021)
▶ Volatility ⇒ static misallocation (Asker, Collard-Wexler, & De Loecker, 2014)
▶ Risky capital (David, Henriksen, & Simonovska 2016)

Q: What role do business expectations & uncertainty play?
▶ Do they reflect some of these facts?
▶ Could they themselves contribute to stagnation/failure to “converge”?
This Paper

We examine the properties of business expectations & uncertainty among 14,000 businesses in 27 developing and emerging economies

1. 2020–2021 World Bank Business Pulse & Enterprise Surveys
   3-point subjective probability distributions for future sales at a 6-month look-ahead horizon (cf. Altig et al., 2020)

2. Measures of business expectations and uncertainty
   First and second moments of those subjective distributions

3. New facts about business expectations and uncertainty in developing/emerging economies
   Two dimensions of heterogeneity: across firms vs. across countries
KEY TAKEAWAYS

1. It’s feasible and informative to elicit subjective probability distributions from businesses in developing/emerging economies
   72% of firms provide usable distributions vs. \( \sim 85\% \) in US Census surveys

2. Business expectations and uncertainty have “nice” properties
   Predict future sales & absolute forecast errors,
   Reflect shifts in macroeconomic environment, idiosyncratic shocks

3. NEW FACT: Businesses in poorer countries (GDP/person) are more uncertain than businesses in richer countries
   Even controlling for industry, firm size, idiosyncratic conditions...
   Implications for static misallocation, efficiency, nature of macro policy
Notes: This figure plots employment-weighted subjective uncertainty in each country averaging across waves of the World Bank Business Pulse and Enterprise Surveys against the country’s 2019 GDP per capita on the horizontal axis. We weight firms by employment within each country. UK and US values for second quarter of 2020.
OUTLINE

Data & methodology

Features of expectations & uncertainty
  ▶ Firm level
  ▶ Across countries

Role of policy support
Data & methodology

Features of expectations & uncertainty
  ▶ Firm level
  ▶ Across countries

Role of policy support
Goal: Information about firm operations, sales, employment, plus quantitative data on expectations and uncertainty about 6-months-ahead sales

Survey coverage: 60+ countries since COVID onset

- This paper: 27 countries from all WB lending regions, Apr. 2020–Mar. 2021
- Registered firms identified from Census listings, business registers
  Should include informal employment at these businesses
- Small (5 to 10 employees) to large (100+ employees) firms
- Multiple waves per country ⇒ panel dimension
Survey Design & Collection

Survey design: Uniform by World Bank

Collection methodology: Phone interviews with an enumerator

Implementation: collaboration with statistical agencies, govt. departments, or business associations in each country

- In practice, implementation varies modestly across countries
- Note: During COVID, so not seamless
The Expectations & Uncertainty Module

Looking ahead to the next 6 months, do you expect that your sales will increase, decrease, or remain the same, compared to the same period last year [in 2019]?

▶ Increase [decrease] by how much?

On a scale of 0 to 100, what is the chance (probability) you believe this will happen?
As you know, sometimes businesses don’t go as we expect, given that businesses can go better or worse, let us talk about these possible alternative situations.

In a more optimistic (better) scenario, do you expect that your sales for the next 6 months will increase, decrease, or remain the same, compared to the same period last year?

- Increase [decrease] by how much?

- On a scale of 0 to 100, what is the chance (probability) you believe this will happen?

Similar question for a pessimistic (worse) scenario
3-POINT SUBJECTIVE PROBABILITY DISTRIBUTIONS

For each firm $j$ and scenario $i$: \{g_{ij}, p_{ij}\}_{i=1}^3

- $g_{ij} =$ 6-months-ahead sales in scenario $i$ (% relative to 2019)
- $p_{ij} =$ probability of scenario $i$ occurring
- Version of the methodology developed by Altig et al. (2020)

Sales expectation (1st moment) $\text{Mean}_j = \sum_{i=1}^3 g_{ij} p_{ij}$

Sales uncertainty (2nd moment): $\text{Uncertainty}_j = \left[ \sum_{i=1}^3 p_{ij} (g_{ij} - \text{Mean}_j)^2 \right]^{1/2}$
**HOW FEASIBLE IS IT TO ELICIT PROBABILITY DISTRIBUTIONS IN DEVELOPING & EMERGING ECONOMIES?**

72% of firms provide usable distributions
- 41% of distributions add to 100% and have Uncertainty > 0
- 31% have 2+ scenarios and we impute or rescale missing probabilities
  - Altig et al. (2020): support points matter most for 1st & 2nd moments

For comparison: ~85% of usable distributions in Bloom et al. (2021)
- Similar module from the 2015/2020 Annual Survey of Manufacturers in the US
Larger Firms Are Less Likely to Provide Unusable Distributions

Notes: This figure plots the predicted likelihood of providing a distribution that does not have two or three support points. Each bar reports the average predicted probability across firms in a given quintile of the country-wave-sector size distribution. Our estimates come from a regression of an indicator variable for providing an unusable distribution that includes country, size, and quarter fixed effects. Size is measured using the number of workers at the end of December 2019 (the pre-pandemic baseline).
Data & methodology

Features of expectations & uncertainty
  ➤ Firm level
  ➤ Across countries

Role of policy support
Data & methodology

Features of expectations & uncertainty
  ▶ Firm level
  ▶ Across countries

Role of policy support
Facts About Business Expectations & Uncertainty

1. Predictive power for future outcomes & absolute errors
   (Altig et al., 2020; Bloom et al., 2020; Barrero, 2021; )
Expectations Predict Future Sales Growth

Notes: The figure shows a binned scatter plots of realized sales in the 30 days prior to the second-wave interview on the vertical-axis against sales expectations for the next six months on the horizontal axis. Both realized sales and future expected sales are expressed relative to the same periods of 2019. The sample includes only the firm-level balanced panel for the first two waves of the survey. See Table A4 in the appendix for a list of countries where a panel is available. We weight firms by employment within each country. The reported statistics below the figure correspond to the least squares regression in the underlying micro data and the corresponding robust standard error.
Uncertainty Predicts Abs. Forecast Errors

Notes: The figure shows a binned scatter plot of the absolute value of the error (difference) between six-months-ahead sales forecasts (expectations) elicited in wave 1 and realized sales in the 30 days leading to the wave 2 interview on the vertical-axis against subjective uncertainty about six-months-ahead sales elicited in wave 1 on the horizontal-axis. Sales expectations and realizations are all expressed relative to the same period in 2019. The sample includes only the firm-level balanced panel for the first two waves of the survey. We weight firms by employment in each country. The reported statistics below each figure correspond to the least squares regression in the underlying micro data and the corresponding robust standard error.
Facts About Business Expectations & Uncertainty

1. Predictive power for future outcomes & absolute errors (Barrero, 2021; Altig et al., 2020)

2. Higher uncertainty in volatile and changing environments (Altig et al. 2020; Bloom et al., 2021; Bachmann et al., 2021)
Subjective uncertainty is V-shaped in expectations.

Notes: The figure shows an employment-weighted binned scatter plot of firm-level subjective uncertainty against sales expectations pooling the different country-wave cross-sections. Sales expectations and uncertainty concern the next 6 months relative to the same period of 2019. The reported statistics below the figure in panel b correspond to the least squares regression in the underlying micro data and the corresponding robust standard error. The sample includes businesses from all countries and waves.
Uncertainty is V-shaped in Sales Shifts

Subjective uncertainty for the coming six months

Realized sales growth the 30 days prior to the interview

Coefficient of the left-side: -0.13 with standard error of 0.006.
Coefficient of the right-side: 0.26 with standard error of 0.062.

Notes: The figure shows an employment-weighted binned scatter plot of subjective uncertainty about six-months-ahead sales on the vertical axis against realized sales the 30 days prior to the interview on the horizontal axis. The reported statistics below each figure correspond to the least squares regression in the underlying micro data and the corresponding robust standard error. Both realized sales growth and future expected sales growth are expressed relative to the same periods of 2019. The sample includes businesses from all countries and waves.
Subjective uncertainty for the coming six months in wave 2

Change in six-months-ahead expectations between waves 1 and 2

Coefficient of the left-side: -0.33 with standard error of 0.049.
Coefficient of the right-side: 0.05 with standard error of 0.019.

Notes: The figure shows an employment-weighted binned scatter plot of subjective uncertainty about six-months-ahead sales in wave 2 on the vertical axis against the change in expected sales growth between waves 1 and 2 on the horizontal axis. The sample includes only the firm-level balanced panel for the first two waves of the survey. The reported statistics below the figure correspond to the least squares regression in the underlying micro data and the corresponding robust standard error. Six-months-ahead sales are expressed in relation to the same period of 2019.
Subjective uncertainty for the coming six months in wave 2

Absolute forecast error between waves 1 and 2

Coefficient: 0.08 with standard error of 0.033.

Notes: The figure shows a binned scatter plot of subjective uncertainty about six-months-ahead sales as expressed in wave 2 on the vertical axis against the absolute error (i.e. difference) between forecast six-months-ahead sales from wave 1 and realized sales in the 30 days prior to the wave 2 interview. The sample includes only the firm-level balanced panel for the first two waves of the survey. The reported statistics below the figure correspond to the least squares regression in the underlying micro data and the corresponding robust standard error. Both realized sales and future expected sales are expressed relative to the same periods of 2019.
OUTLINE

Data & methodology

Features of expectations & uncertainty
  ► Firm level
  ► Across countries

Role of policy support
Facts About Business Expectations & Uncertainty

1. Predictive power for future outcomes & absolute errors (Barrero, 2021; Altig et al., 2020)

2. Higher uncertainty in volatile and changing environments (Altig et al. 2020; Bloom et al., 2021; Bachmann et al., 2021)

3. Uncertainty decreases with GDP/person
   Forecast accuracy increases with GDP/person
   (NEW FACT)

Raw Cross-Country Relationship

Firm Size, Sector, Time Controls

Subjective uncertainty vs. GDP per capita

Notes: The left figure plots employment-weighted subjective uncertainty in each country-wave of the World Bank Business Pulse and Enterprise Surveys against the country’s 2019 GDP per capita on the horizontal axis. The right figure shows the employment-weighted relationship across firms, controlling for firm size (log(employment)), sector fixed effects, and calendar quarter fixed effects.
## Business Uncertainty vs. GDP/person

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<tbody>
<tr>
<td><strong>Subjective Uncertainty</strong></td>
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<tr>
<td>GDP per capita (log)</td>
<td>-0.068***</td>
<td>-0.052***</td>
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<td></td>
<td>(0.009)</td>
<td>(0.008)</td>
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<tr>
<td><strong>Transit mobility</strong></td>
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<td>-0.003***</td>
<td>-0.002***</td>
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<td>(0.001)</td>
<td>(0.001)</td>
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<td><strong>Absolute change in sales</strong></td>
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<td>0.089***</td>
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<td>(0.012)</td>
<td>(0.010)</td>
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<td><strong>Size</strong></td>
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<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>Quarter dummies</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td><strong>Observations</strong></td>
<td>8958</td>
<td>8958</td>
<td>8548</td>
<td>8548</td>
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<tr>
<td><strong>Within R²</strong></td>
<td>0.105</td>
<td>0.073</td>
<td>0.138</td>
<td>0.195</td>
</tr>
<tr>
<td><strong>No. of clusters</strong></td>
<td>94</td>
<td>94</td>
<td>94</td>
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</tbody>
</table>

**Notes:** Linear regressions with subjective uncertainty about six-months-ahead sales (relative to the same period in 2019) as dependent variable. *Transit mobility* is the level of mobility around transit stations in the 30 days before the interview according to Google Mobility Trends. *Change in sales* is the arc change in sales in the 30 days before the interview. Heteroskedasticity-robust standard errors are clustered at the country-sector level. *p < 0.10, **p < 0.05, ***p < 0.01
MAGNITUDE: $3–6 \times \text{UK or US Uncertainty}$

Notes: The left figure plots employment-weighted average uncertainty at the country level divided by US uncertainty against GDP per capita. In the right figure we compute employment-weighted average expectations and uncertainty across firms in each country-wave, and then take the simple average across countries in a region and quarter, focusing on the two regions where we have coverage for each quarter. Expected sales corresponds to the next 6 months relative to the same period of 2019. Data for the UK come from the UK Decision Maker Panel (see www.decisionmakerpanel.co.uk and Bloom(2018). Data for the US come from the US Survey of Business Uncertainty (see www.atlantafed.org/sbu and Altig et al., 2020).
Forecast Accuracy vs. GDP/person

Raw Cross-Country Relationship

Firm Size, Sector, Time Controls

Notes: The left figure plots employment-weighted absolute forecast errors in each country-wave of the World Bank Business Pulse and Enterprise Surveys against the country’s 2019 GDP per capita on the horizontal axis. The right figure shows the employment-weighted relationship across firms, controlling for firm size (log(employment)), sector fixed effects, and calendar quarter fixed effects.
## FORECAST ACCURACY VS. GDP/PERSON

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<tr>
<td><strong>Absolute Forecast Error</strong></td>
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<tr>
<td>Uncertainty in wave 1</td>
<td>0.466***</td>
<td>0.356***</td>
<td>0.372***</td>
<td>0.287**</td>
<td>0.285**</td>
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<td>(0.121)</td>
<td>(0.126)</td>
<td>(0.116)</td>
<td>(0.122)</td>
<td>(0.116)</td>
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<tr>
<td>GDP per capita (log)</td>
<td>-0.081**</td>
<td>-0.072***</td>
<td>-0.038*</td>
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<td>(0.037)</td>
<td>(0.025)</td>
<td>(0.020)</td>
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<tr>
<td>World Uncertainty Index</td>
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<td>-1.059**</td>
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<td>(0.421)</td>
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<td>World Pandemic Uncertainty Index</td>
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<td>0.760*</td>
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<td>(0.381)</td>
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<td>Constant</td>
<td>0.250***</td>
<td>0.983***</td>
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<td></td>
<td>(0.072)</td>
<td>(0.358)</td>
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<tr>
<td>Size and sector</td>
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<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Quarter</td>
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<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Observations</td>
<td>2563</td>
<td>2563</td>
<td>2563</td>
<td>2563</td>
<td>2563</td>
</tr>
<tr>
<td>Within $R^2$</td>
<td>0.056</td>
<td>0.096</td>
<td>0.069</td>
<td>0.096</td>
<td>0.119</td>
</tr>
</tbody>
</table>

**Notes:** Linear regressions with absolute errors about six-months-ahead sales (relative to the same period in 2019) between waves 1 and 2 as dependent variable. Size is measured as log employment and all specifications are weighted by employment. Heteroskedasticity-robust standard errors are clustered at the country-sector level. All columns control for the number of days between the wave 1 and wave 2 interviews. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
No Consistent Pattern for Expectations vs. GDP/person

**Notes:** The figure shows employment-weighted binned scatter plots of expected six-months-ahead sales against 2019 GDP per capita (log scale). The sample includes all countries and survey waves. Six-months-ahead sales are expressed in relation to the same period of 2019.
MANAGERS ARE Overprecise:
Uncertainty < Abs. Forecast Errors

Notes: The figure shows employment-weighted binned scatter plots of overprecision (defined as the average gap between absolute forecast errors and subjective uncertainty about six-months-ahead sales at the country level) against 2019 GDP per capita (log scale). The sample includes all countries and survey waves. Six-months-ahead sales are expressed in relation to the same period of 2019.
Implications

Higher business uncertainty and lower forecast accuracy in developing/emerging economies could mean:

▶ *Depressed investment, excessive entry, and too little exit* (e.g. Hsieh & Klenow, 2014)

▶ More scope for *static misallocation* (e.g. David & Venkateswaran, 2019; Ma, Ropele, Sraer, Thesmar, 2020)

▶ More *overprecision* (Barrero, 2021) in developing/emerging economies ⇒ *efficiency losses* at the firm and macro levels

*Overprecision* cuts the other way: it lowers uncertainty relative to *objective risk*

Expectations & uncertainty vs. hiring & mitigation decisions
OUTLINE

Data & methodology

Features of expectations & uncertainty
  ▶ Firm level
  ▶ Across countries

Role of policy support
FACTS ABOUT BUSINESS EXPECTATIONS & UNCERTAINTY

1. Predictive power for future outcomes & absolute errors
   (Barrero, 2021; Altig et al., 2020)

2. Higher uncertainty in volatile and changing environments
   (Altig et al. 2020; Bloom et al., 2021; Bachmann et al., 2021)

3. Uncertainty (& forecast accuracy) decrease with GDP/person

4. Policy support correlates with lower uncertainty, but less so with higher forecast accuracy
### Uncertainty vs. Receiving Policy Support

<table>
<thead>
<tr>
<th>Firm received support?</th>
<th>Size and sector</th>
<th>Severity of the shock</th>
<th>Quarter</th>
<th>Country</th>
<th>Observations</th>
<th>( R^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.428*** (0.060)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>7,101</td>
<td>0.031</td>
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<tr>
<td>-0.336*** (0.052)</td>
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<td>X</td>
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<td></td>
<td>7,101</td>
<td>0.078</td>
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<tr>
<td>-0.330*** (0.076)</td>
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<td>X</td>
<td></td>
<td>6,502</td>
<td>0.121</td>
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<tr>
<td>-0.370*** (0.058)</td>
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<td>6,732</td>
<td>0.051</td>
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<tr>
<td>-0.149** (0.071)</td>
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<td>7,101</td>
<td>0.196</td>
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<tr>
<td>-0.112* (0.067)</td>
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<td>6,502</td>
<td>0.261</td>
</tr>
</tbody>
</table>

**Notes:** Heteroskedasticity-robust standard errors in parentheses (128 clusters at the country-sector level). The dependent variable is subjective uncertainty in logs. The analysis only includes firms receiving support or firms that indicated that they applied for support, but not received it (“I have applied but not received it”). The dummy “Firm received support?” is 1 when the firm reports receiving support (regardless of the instrument) and 0 for those that applied but did not receive it. The controls for severity of the shock are the percentage change in sales the 30 days prior to the interview (relative to the same period of 2019) and average mobility the 30 days prior to the interview around transit stations. Our sample considers only the latest data point available in the case of the panel observations. Mean and standard deviation (SD) of the dependent variables are computed over the sample in specifications (1). The mean of subjective uncertainty (in levels) is 0.212 with a SD of 0.194. * \( p < 0.1 \), ** \( p < 0.05 \), *** \( p < 0.01 \).
## Forecast Accuracy vs. GDP & Policy

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<tr>
<td></td>
<td>Absolute Forecast Error</td>
<td>Absolute Forecast Error</td>
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<tr>
<td>Uncertainty in wave 1</td>
<td>0.287**</td>
<td>0.292**</td>
<td>0.287**</td>
<td>0.265**</td>
<td>0.292**</td>
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<td>(0.122)</td>
<td>(0.120)</td>
<td>(0.123)</td>
<td>(0.123)</td>
<td>(0.124)</td>
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<tr>
<td>GDP per capita (log)</td>
<td>-0.072***</td>
<td>-0.076***</td>
<td>-0.074***</td>
<td>-0.043*</td>
<td>-0.048</td>
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<tr>
<td></td>
<td>(0.025)</td>
<td>(0.028)</td>
<td>(0.027)</td>
<td>(0.025)</td>
<td>(0.048)</td>
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<tr>
<td>Access to government support, wave 1</td>
<td>0.051</td>
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<td>Access to government support, wave 2</td>
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<tr>
<td>Share of firms w/ access to support,</td>
<td>-0.003***</td>
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<td>Govt. expenditure on relief measures/GDP</td>
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<td>-0.008</td>
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<td>Size and sector</td>
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<td>Quarter</td>
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<td>Observations</td>
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<tr>
<td>$R^2$</td>
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<td>0.140</td>
<td>0.138</td>
<td>0.150</td>
<td>0.138</td>
</tr>
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</table>

### Notes:
All specifications control for the number of days between interviews. We obtain the share of firms with access to support based on wave 1 responses and measure it for each country-sector-size cell. Clustered standard errors country-sector. Size measured as log employment. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. 
CONCLUSION & KEY TAKEAWAYS

Measuring business expectations & uncertainty in developing & emerging economies is feasible and informative
► 72% of interviewed firms provide usable subjective distributions
► Timely, quantitative, bottom-up information for policymakers
► Becoming standard in advanced economies (US, UK, Germany, Japan,...)

Business uncertainty decreases & forecast accuracy increases with GDP/person
► Implications for investment, efficiency
► Macro & policy environment explain some of the relationship

More to come: survey efforts continue through end of 2021 & some of 2022
REFERENCES


Larger firms are more likely to provide “well-formed” distributions

Notes: This figure plots the predicted likelihood of providing a distribution that is well-formed: it has 2 or 3 support points and the probabilities add to 100%. Each bar reports the average predicted probability across firms in a given quintile of the country-wave-sector size distribution. Our estimates come from a regression of an indicator variable for providing a “well-formed” distribution that includes country, size, and quarter fixed effects. Size is measured using the number of workers at the end of December 2019 (the pre-pandemic baseline).
Uncertainty Declines With Expected Sales

Notes: The figure plots country-wave employment-weighted average subjective uncertainty about six-months-ahead sales growth on the vertical axis against employment-weighted average expected sales growth on the horizontal axis. Sales expectations and uncertainty concern the next 6 months relative to the same period of 2019. The reported statistics below the figure in panel b correspond to the least squares regression in the underlying micro data and the corresponding robust standard error. The sample includes businesses from all countries and waves.

Subjective uncertainty

Expected growth rate

Wave 1  Wave 2  Wave 3
Notes: The figure shows average uncertainty about six-months-ahead sales growth by firm size category and quarter after adjusting for country and sector effects. In each case, these averages correspond to the average prediction from a linear regression on dummies for country, sector, and the interaction of size and quarter and sector and quarter. Computations weighted by employment. The future sales horizon corresponds to the next 6 months and future sales are expressed relative to the same period of 2019.
Notes: The figure on the right shows average uncertainty about six-months-ahead sales growth by sector and quarter after adjusting for country and size effects. In each case, these averages correspond to the average prediction from a linear regression on dummies for country, size, and the interaction of sector and quarter and size and quarter. Computations weighted by employment. The future sales horizon corresponds to the next 6 months and future sales are expressed relative to the same period of 2019.
## Business Expectations Across Countries

<table>
<thead>
<tr>
<th>Sales Expectations</th>
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<tbody>
<tr>
<td>(1)</td>
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<tr>
<td>(2)</td>
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<tr>
<td>(3)</td>
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<td>(4)</td>
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<td>GDP per capita (log)</td>
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<td>Transit mobility</td>
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<td>Absolute change in sales</td>
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<td>Observations</td>
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<tr>
<td>Within $R^2$</td>
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<td>No of clusters</td>
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</table>

**Notes** Linear regressions with expectations about six-months-ahead sales (relative to the same period in 2019) as the dependent variable. Transit mobility is the level of mobility observed around transit stations in the 30 days before the interview according to Google Mobility Trends. Change in sales refers to the arc change in sales in the 30 days before the interview. Heteroskedasticity-robust standard errors are clustered at the country-sector level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$
Notes: The figure shows the average expected six-months-ahead sales by firm sector and quarter after adjusting for country and size effects. In each case, these averages correspond to the average prediction from a linear regression on dummies for country, sector, and the interaction of size and quarter and sector and quarter. Computations weighted by employment. Expected sales corresponds to the next 6 months relative to the same period of 2019.
Notes: The figure shows average expected six-months-ahead sales by firm size category and quarter after adjusting for country and sector effects. In each case, these averages correspond to the average prediction from a linear regression on dummies for country, size, and the interaction of sector and quarter and size and quarter. Computations weighted by employment. Expected sales corresponds to the next 6 months relative to the same period of 2019.
Expected sales

Subjective uncertainty

Notes: The figure reports the coefficient on expected sales (panel a) and subjective uncertainty (panel b) from three linear regressions for each of the dependent variables mentioned, which also include dummies for country, quarter, size, and sector; the percentage change in sales the 30 days prior to the interview relative to the same period of 2019; the average mobility around transit stations the 30 days prior to the interview; and both mean sales forecast and uncertainty. All specifications are weighted by employment. Expected sales corresponds to the next 6 months relative to the same period of 2019.
**Expectations & Uncertainty vs. Mitigation Measures**

Notes: The figure reports the coefficient on expected sales (panel a) and subjective uncertainty (panel b) from linear regressions for the five dependent variables mentioned on dummies for country, quarter, size, and sector; percentage change in sales the 30 days prior to the interview relative to the same period of 2019; average mobility around transit stations the 30 days prior to the interview; and both mean sales forecast and uncertainty. Computations weighted by employment. Expected sales growth corresponds to the next 6 months relative to the same period of 2019.