Small business and job creation:

Evidence from the EBRD regions

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While small- and medium-sized enterprises (SMEs) account for the vast majority of all formal jobs in developing countries, they often struggle to obtain the financing they need to grow. Indeed, access to finance remains one of the top five obstacles SMEs face in the regions where the European Bank for Reconstruction and Development (EBRD) invests. This raises the question of whether improving SME access to finance can help create additional employment. This Impact Brief draws on data from the recent EBRD, European Investment Bank and World Bank Group (EBRD-EIB-WBG) Enterprise Surveys and from clients of the EBRD's Advice for Small Businesses (ASB) programme to estimate the impact of access to finance, and related advisory services, on employment. The analysis reveals that credit-constrained firms employ fewer workers than non-credit-constrained firms and that advisory projects, which often have an associated financing component, have a positive impact on firm-level employment, sales and total assets.

Why SMEs matter

SMEs play a critical role in the provision of employment around the world, accounting for more than two-thirds of all jobs (Ayyagari et al., 2011; ILO, 2019). One of the challenges many small businesses face is accessing the finance they need to develop and grow. Smaller firms often lack a track record or collateral and may not adhere to international accounting standards. As a result, they tend to face higher interest rates or remain cut off from bank credit altogether.

Limited access to finance can restrict firms' growth, for example, by limiting their ability to finance working capital and fixed assets or to innovate (Bircan and De Haas, 2020). The impact of credit constraints on firms' employment decisions, however, is not as clear cut. On the one hand, better access to credit may allow firms to invest more, to scale up production and, all else being equal, to hire more employees, thus creating additional employment. On the other, better access to credit may also allow companies to replace employees (human capital) with machinery (physical capital), thus increasing labour productivity at the cost of employment (at least in the short run).

This Impact Brief assesses the link between credit constraints and SME employment in two ways. First, it uses data from the latest round of EBRD-EIB-WBG Enterprise Surveys (ES). Second, it follows clients of the EBRD's Advice for Small Businesses (ASB) programme over time and compares them with a control group of similar enterprises that did not receive ASB support.

Evidence from the Enterprise Surveys

The latest round of ES data, collected across the EBRD regions between 2018 and 2020, show that access to finance remains among the top five obstacles SMEs face in their day-to-day operations. Credit-constrained firms are defined as those that were either discouraged from applying for a loan or rejected when they applied. Non-credit constrained firms are those that either had no need for credit or whose demand for credit was met. Evidence from the ES indicates that, based on these definitions, around a quarter of firms were credit constrained, ranging from just 4.1 per cent of firms in the Czech Republic to more than 48 per cent of firms in Moldova.

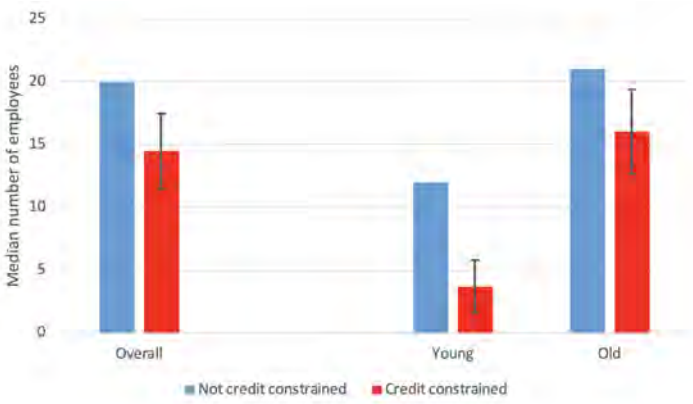
One should bear in mind that the extent to which a firm is credit constrained can be influenced by the company's investment and employment decisions. To alleviate such concerns, the impact of credit constraints on employment is estimated in two stages. The first stage isolates the degree of credit constraint attributable solely to exogenous factors ("instrumental variables"), thus unlikely to be affected by employment. This is then used in the second stage to estimate the causal impact of credit constraints on employment.

The first stage draws on external variations in credit constraints across different localities (towns and cities). During and after the global financial crisis – particularly after the 2011 regulatory stress tests conducted by the European Banking Authority – many banks had to boost their regulatory capital (the Tier 1 ratio, which measures a bank's core equity capital against its risk-weighted assets) within a short period of time. As raising additional equity was costly due to the difficult global capital-market situation, many banks deleveraged by shrinking their risk-weighted assets, also through cuts in lending (Gropp et al., 2019). The instrumental variable used in this analysis, therefore, measures the change in the average regulatory capital (Tier 1) ratio from 2007 (just before the global financial

crisis) to 2014 (after both the global financial crisis and the subsequent Eurozone crisis) for all banks in a firm's immediate vicinity (within a 15 km radius).[1] As expected, the analysis shows firms in localities where banks had to do more to rebuild their capital base to be more likely credit constrained in the years that followed, all else being equal.

The second-stage estimate suggests that, as a result of being credit constrained, firms employ on average 28 per cent fewer workers than firms that are not credit constrained (statistically significant at the 5 per cent level). For a median firm with 20 employees, that translates into five-plus fewer employees as a result of credit constraints (see Chart 1). Perhaps unsurprisingly, credit constraints limit young firms (less than five years old) more than old ones.

Chart 1: Impact of credit constraints on employment



Note: This chart shows the median number of employees in credit-constrained and non-credit constrained firms, as implied by instrumental variable regressions using survey-weighted observations, as well as a 95 per cent confidence interval for the estimated median number of employees in credit-constrained firms. The first-stage instruments are (i) a branch-weighted measure of the average change in the Tier 1 ratio between 2007 and 2014 for all banks within a 15 km radius of a firm, and (ii) a "leave-one-out" instrument of credit-constraint conditions of firms in the same country-region-sector cell, excluding the observations from the firm's two-digit industrial classification. All regressions include firm-level controls (indicators of exporter status, listing, sole proprietorship, foreign/state ownership, multiple establishments, audited financial reports, the log of firm age and percentage of female ownership); locality-level credit-market controls (log average amount of bank assets and the number of bank branches in a 15 km radius) and population size class, as well as country and sector fixed effects.

1 The data required to calculate the change in the average Tier 1 ratio were not available for Cyprus, Greece, Montenegro, Tunisia, Uzbekistan or the West Bank and Gaza. Stage 1 also includes a "leave-one-out" instrument that averages the credit constraints of firms in the same country-region-sector cell, excluding observations from the firm's two-digit industrial classification.

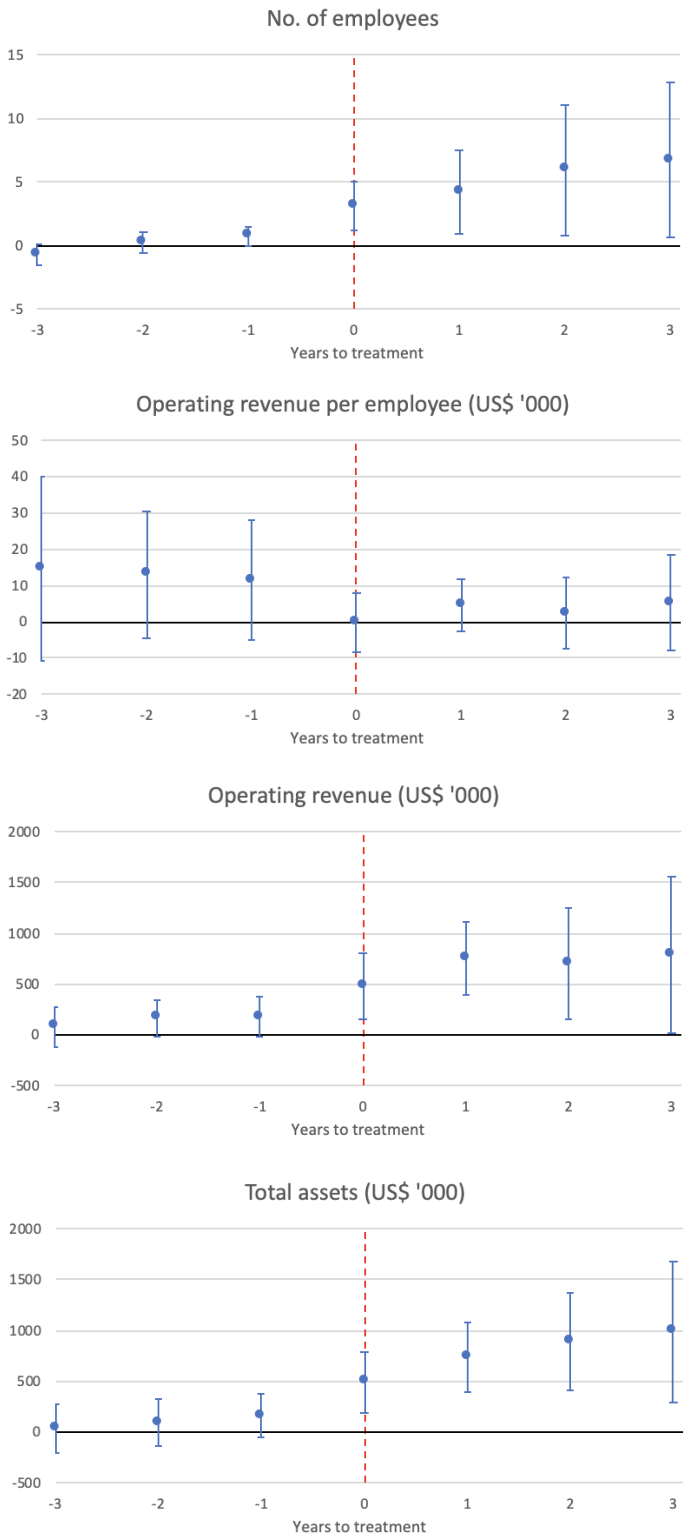
Evidence from the EBRD's Advice for Small Businesses programme

Through its Small Business Initiative, in addition to finance, the EBRD provides business advice to help SMEs grow. Advice for Small Businesses (ASB) clients receive help from international advisers and/or local consultants in the areas of strategy, marketing, operations, quality management, energy efficiency, financial management and more. A large portion of clients also receive funding, either from the EBRD (directly or through one of its partner financial institutions) or from other financial institutions, mostly in tandem with or soon after the start of the ASB project. This facilitates an analysis of the impact of ASB activities on firm-level employment, as well as on total assets, operating revenue and operating revenue per employee.

To obtain data on total assets, operating revenue and employment, ASB clients were first found in the Bureau van Dijk Orbis database. They were then matched to similar non-ASB clients (control firms) in Orbis based on total assets, operating revenue and employment in the three-year period prior to the start of the ASB advisory project (the "treatment"). Precise matching ensures that the ASB and control firms were on similar development paths before the ASB firms started to receive advice and, eventually, funding from the EBRD or from other financial institutions. Matching was also conducted within the same country and industry. The final sample comprised 515 ASB clients.[2]

Chart 2 shows the resulting average treatment effect estimates for the three years after the start of the ASB advisory projects. It is clear that ASB clients had, on average, almost seven more employees (a 12 per cent increase for an average client with 56 employees) than very similar firms that did not benefit from ASB advice during that period. ASB clients also saw an almost 30 per cent increase in total assets and a 17.4 per cent increase in operating revenue. There was, however, no significant impact on operating revenue per employee (a rough proxy for labour productivity). Thus, the results show how advisory projects (which often have an associated financing component) can have a strong positive impact on employment, as well as on other performance outcomes, at least in the short term.

Chart 2: Impact of ASB advisory projects on firm performance



Note: This chart shows the average treatment effect on the treated (ATT) estimates of ASB projects on clients' performance, where "treatment" is participation in an ASB advisory project, with the 95 per cent confidence interval of the ATT estimates. ASB clients are compared with similar non-clients, matching them on total assets, revenue and employment in the three-year period prior to treatment. Clients and non-clients are also matched exactly by country, year and two-digit NACE Rev. 2 sector.[3]

2 As most of the projects in the sample started recently, an unbalanced sample is used to maximise the number of post-treatment observations.
3 NACE Rev. 2 is the statistical classification of economic activities in the European Union, revision 2.

Lessons learned

This Impact Brief uses two different data sources to analyse the impact of (reducing) credit constraints on employment by small businesses. The results indicate that there may, indeed, be a positive and causal effect of improving access to credit on employment, particularly for younger firms. Recent evidence from Portugal comes to a similar conclusion (Bonfim et al., 2021). Moreover, the analysis demonstrates that business advice can also have a strong positive impact on employment and other firm-level outcomes. This is in line with evidence from recent randomised control trials (RCTs) to test the impact of firms' access to consulting services (Bloom et al., 2013; Bruhn et al., 2018).

Some caveats apply, however. First, estimates based on ES data tell us about the general relationship between firms' use of bank credit and employment, but not about the impact of specific credit lines and how they should be structured for optimal impact. Moreover, data availability in Orbis is far from complete, creating potential selection issues in the ASB analysis.

To facilitate similar analyses in future and to improve their accuracy, it is important to set up a structure for collecting the minimum required information from client firms and to come up with feasible ways of identifying suitable control firms. In the absence of RCTs, this can, in some cases, be done by arranging access to granular administrative data on firm performance (such as corporate tax records) or by accessing data from credit registries or bureaus.

Suggestions for further reading

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PHOTOGRAPHY

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