

**Table 1: Sample description**

|    | Country       | Number of firms | Percentage | Years of survey (2003 - 2020)      | GDP per capita (USD) <sup>a</sup> | Human Capital Index <sup>b</sup> | World Bank income category <sup>c</sup> |
|----|---------------|-----------------|------------|------------------------------------|-----------------------------------|----------------------------------|---|
| 1  | Angola        | 555             | 1.75       | 2006, 2010                         | 2,137.91                          | 0.36                             | Lower-middle income                     |
| 2  | Benin         | 292             | 0.92       | 2004, 2009, 2016                   | 1,428.45                          | 0.4                              | Lower-middle income                     |
| 3  | Botswana      | 437             | 1.38       | 2006, 2010                         | 7,347.55                          | 0.41                             | Upper-middle income                     |
| 4  | Burkina Faso  | 383             | 1.21       | 2006, 2009                         | 918.15                            | 0.38                             | Low income                              |
| 5  | Cameroon      | 571             | 1.8        | 2006, 2009, 2016                   | 1,661.70                          | 0.4                              | Lower-middle income                     |
| 6  | Cape Verde    | 173             | 0.54       | 2006, 2009                         | 3,445.76                          | -                                | Lower-middle income                     |
| 7  | Chad          | 215             | 0.68       | 2009, 2018                         | 696.42                            | 0.3                              | Low income                              |
| 8  | Cote d'Ivoire | 550             | 1.73       | 2009, 2016                         | 2,578.76                          | 0.38                             | Lower-middle income                     |
| 9  | DRC           | 1035            | 3.26       | 2006, 2010, 2013                   | 584.11                            | 0.37                             | Low income                              |
| 10 | Egypt         | 5460            | 17.2       | 2004, 2007, 2008, 2013, 2016, 2020 | 3,876.36                          | 0.49                             | Lower-middle income                     |
| 11 | Ethiopia      | 942             | 2.97       | 2011, 2015                         | 943.97                            | 0.38                             | Low income                              |
| 12 | Ghana         | 1100            | 3.46       | 2007, 2013                         | 2,445.29                          | 0.45                             | Lower-middle income                     |
| 13 | Kenya         | 1614            | 5.08       | 2007, 2013, 2018                   | 2,006.83                          | 0.55                             | Lower-middle income                     |
| 14 | Lesotho       | 191             | 0.6        | 2009, 2016                         | 1,166.46                          | 0.4                              | Lower-middle income                     |
| 15 | Liberia       | 199             | 0.63       | 2009, 2017                         | 673.09                            | 0.32                             | Low income                              |
| 16 | Malawi        | 553             | 1.74       | 2005, 2009, 2014                   | 642.66                            | 0.41                             | Low income                              |
| 17 | Mali          | 807             | 2.54       | 2003, 2007, 2010, 2016             | 917.91                            | 0.32                             | Low income                              |
| 18 | Morocco       | 1685            | 5.31       | 2004, 2007, 2013, 2019             | 3,496.76                          | 0.5                              | Lower-middle income                     |
| 19 | Niger         | 279             | 0.88       | 2005, 2009, 2017                   | 594.93                            | 0.32                             | Low income                              |
| 20 | Nigeria       | 6394            | 20.14      | 2007, 2009, 2014                   | 2,085.03                          | 0.36                             | Lower-middle income                     |
| 21 | Rwanda        | 583             | 1.84       | 2006, 2011, 2019                   | 833.83                            | 0.38                             | Low income                              |
| 22 | Senegal       | 1161            | 3.66       | 2003, 2007, 2014                   | 1,606.47                          | 0.42                             | Lower-middle income                     |
| 23 | Sierra Leone  | 208             | 0.66       | 2009, 2017                         | 515.93                            | 0.36                             | Low income                              |
| 24 | South Africa  | 1598            | 5.03       | 2003, 2007                         | 6,994.21                          | 0.43                             | Upper-middle income                     |
| 25 | Tanzania      | 855             | 2.69       | 2006, 2013                         | 1,135.54                          | 0.39                             | Lower-middle income                     |
| 26 | Togo          | 206             | 0.65       | 2009, 2016                         | 992.33                            | 0.43                             | Low income                              |

|              |          |               |            |                  |          |      |                     |
|--------------|----------|---------------|------------|------------------|----------|------|---------------------|
| 27           | Tunisia  | 737           | 2.32       | 2013, 2020       | 3,924.34 | 0.52 | Lower-middle income |
| 28           | Uganda   | 997           | 3.14       | 2006, 2013       | 858.06   | 0.38 | Low income          |
| 29           | Zambia   | 1221          | 3.85       | 2007, 2013, 2019 | 1,120.63 | 0.4  | Low income          |
| 30           | Zimbabwe | 748           | 2.36       | 2011, 2016       | 1,737.17 | 0.47 | Lower-middle income |
| <b>Total</b> |          | <b>31,749</b> | <b>100</b> |                  |          |      |                     |

**Notes:** The total sample size (*N*) is 36,968 observations

<sup>a</sup> World Bank values for 2021

<sup>b</sup> World Bank HCI values for 2020; global average HCI is 0.56

<sup>c</sup> According to the World Bank categorisation for the fiscal year 2022, high-income countries are those with a per-capita GNI of \$12,696 (USD) or more. Middle-income countries are split into two categories: upper-middle-income nations, which have per capita incomes between \$12,695 and \$4,096, and lower-middle-income nations, which have a GNI per capita of \$4,095 to \$1,046. Finally, those countries whose GNI per capita was computed to be \$1,045 or less were placed in the low-income category.

**Table 2: Variables**

| Variable   | Definition  | Obs (N) | Mean  | Std. Dev | Min | Max |
|--|---|---------|-------|----------|-----|-----|
| <b>Panel A: Outcome variables (sources of finance for working capital and access to finance)</b> |   |         |       |          |     |     |
| <i>Retained earnings or internally gen. funds</i>  | Finance from retained earnings or internal funds <sup>a</sup>   | 35,750  | 3.281 | 1.032    | 1   | 4   |
| <i>Banks (public &amp; private)</i>  | Finance from bank financial institutions, private and state-owned <sup>a</sup>  | 32,791  | 1.150 | 0.502    | 1   | 4   |
| <i>Non-banks (micro fin., coops., etc)</i>   | Finance from non-bank financial institutions which include microfinance institutions, credit cooperatives, credit unions, or finance companies <sup>a</sup>                                   | 34,763  | 1.024 | 0.204    | 1   | 4   |
| <i>Access to (supply of) finance 1</i>   | Subjective measure of constraints (obstacles) faced in accessing external finance (0= very severe obstacle; 1= major obstacle; 2= moderate obstacle; 3= minor obstacle; 4= no obstacle)       | 35,111  | 2.090 | 1.421    | 0   | 4   |
| <i>Access to (supply of) finance 2</i>   | Objective measure of access to finance (1= Fully credit constrained; 2= Partially credit constrained; 3= Maybe credit constrained 4= Not credit constrained) following Kuntchev et al. (2013) | 19,409  | 3.296 | 1.057    | 1   | 4   |
| <b>Panel B: Objective treatment variable (Regulatory BE)</b>                                     |   |         |       |          |     |     |
| <i>Ease of starting a business (registration, permits, etc)</i>                                  | The regulatory BE proxied by the DB 'ease of starting a business' score <sup>b</sup>  | 35,201  | 0.590 | 0.492    | 0   | 1   |
| <b>Panel C: Subjective treatment variables (Regulatory BE)</b>                                   |   |         |       |          |     |     |
| <i>Tax administration</i>  | Regulatory BE of a firm proxied by how much of an obstacle tax administration poses to a firm (0= obstructive regulatory BE; 1= enabling regulatory BE) <sup>c</sup>                          | 23,052  | 0.670 | 0.470    | 0   | 1   |

|  |   |        |        |        |       |        |
|--|---|--------|--------|--------|-------|--------|
| <i>Business licensing &amp; permit regulations</i> | Reg BE of a firm proxied by how much of an obstacle business licensing & permit regulations pose to a firm (0= obstructive regulatory BE; 1= enabling regulatory BE) <sup>c</sup> | 23,719 | 0.806  | 0.396  | 0     | 1      |
| <i>Customs &amp; trade regulations</i>             | Reg BE of a firm proxied by how much of an obstacle customs & trade regulations pose to a firm (0= obstructive regulatory BE; 1= enabling regulatory BE) <sup>c</sup>             | 24,237 | 0.797  | 0.402  | 0     | 1      |
| <b>Panel D: Explanatory variables</b>              |   |        |        |        |       |        |
| <i>Size of firm</i>                                | The size of a firm  | 36,968 | 20.443 | 19.465 | 5     | 99     |
| <i>Status of firm</i>                              | Legal status of firm (1= Sole Proprietorship; 2= Partnership; 3= Limited Partnership; 4= Shareholding with traded shares; 5= Shareholding with non-traded shares; 6= Other)       | 35,724 | 3.079  | 0.957  | 1     | 6      |
| <i>Age of firm</i>                                 | The age of firm   | 36,033 | 16.272 | 13.839 | 0     | 220    |
| <i>Human capital of O/M</i>                        | The human capital of the Owner/Manager (represented by years of business related experience)  | 35,924 | 15.111 | 10.554 | 0     | 70     |
| <i>Gender of O/M</i>                               | The gender of the Owner/Manager (0= Male; 1= Female)  | 25,641 | 0.141  | 0.348  | 0     | 1      |
| <i>Sector</i>                                      | The sector/industry of firm (1= Manufacturing e.g. fabrication, and publishing; 2 = Retail e.g. electronics and petroleum products; and 3 = Services e.g. motor garages, and IT)  | 30,352 | 1.822  | 0.877  | 1     | 3      |
| <i>Competition from informal firms</i>             | How much of an obstacle is competition from informal or unregistered firms (0= very severe obstacle; 1= major obstacle; 2= moderate obstacle; 3= minor obstacle; 4= no obstacle)  | 34,674 | 1.740  | 1.385  | 0     | 4      |
| <i>Gross Domestic Product Per Capita</i>           | The log of the GDP per capita of the country where firm is located  | 36,016 | 7.374  | 0.775  | 5.543 | 8.769  |
| <i>Interest rates</i>                              | Lending interest rates  | 29,010 | 15.103 | 8.161  | 4.740 | 56.520 |

|                             |  |        |          |       |         |        |
|-----------------------------|--|--------|----------|-------|---------|--------|
| <i>Profit</i>               | Log of profits   | 30,317 | 11.256   | 2.783 | -10.397 | 24.544 |
| <i>Revenue per employee</i> | Log of revenue per employee  | 33,027 | 9.253    | 2.468 | -6.615  | 23.518 |
| <i>Loan</i>                 | If firm applied for a loan/ credit in previous fiscal year                     | 29,846 | 1.831    | 0.375 | 1       | 2      |
| <i>Country</i>              | The country where firm is located (30 African countries in alphabetical order) | 36,968 | 16.451   | 7.437 | 1       | 30     |
| <i>Year</i>                 | Year survey was conducted  | 36,968 | 2012.108 | 4.682 | 2003    | 2020   |

<sup>a</sup> (1= 0 to 25%; 2= 26 to 50%; 3= 51 to 75%; 4= 76 to 100% of working capital)

<sup>b</sup> Obstructive reg BE = firms in locations with scores up to the 50th percentile in the distribution;  
Enabling reg BE = firms in locations with EODB scores above the 50th percentile in the distribution

<sup>c</sup> Obstructive regulatory BE = firms that considered specific regulation as a 'major obstacle' or 'severe obstacle' to their operations); Enabling regulatory BE = firms that considered specific regulation as 'no obstacle' or 'minor obstacle' to their operations)

**Table 3: Descriptive statistics of sourcing for working capital**

| <b>Source of finance</b>                             | <b>% of total working capital financed</b> | <b>No. of firm obs. (N)</b> | <b>Percentage</b> |
|--|--|-----------------------------|-------------------|
| <b>Retained earnings &amp; internally gen. funds</b> | 0 to 25%                                   | 3,542                       | 9.91              |
|  | 26 to 50%                                  | 4817                        | 13.47             |
|  | 51 to 75%                                  | 5457                        | 15.26             |
|  | 76 to 100%                                 | 21,934                      | 61.35             |
| <b>Total</b>   |  | <b>35,750</b>               | <b>100</b>        |
| <b>Banks (public &amp; private)</b>                  | 0 to 25%                                   | 29,434                      | 89.76             |
|  | 26 to 50%                                  | 2,292                       | 6.99              |
|  | 51 to 75%                                  | 575                         | 1.75              |
|  | 76 to 100%                                 | 490                         | 1.49              |
| <b>Total</b>   |  | <b>32,791</b>               | <b>100</b>        |
| <b>Non-bank (micro fin., coops., etc)</b>            | 0 to 25%                                   | 34,156                      | 98.25             |
|  | 26 to 50%                                  | 456                         | 1.31              |
|  | 51 to 75%                                  | 71                          | 0.2               |
|  | 76 to 100%                                 | 80                          | 0.23              |
| <b>Total</b>   |  | <b>34,763</b>               | <b>100</b>        |

**Table 4: Descriptive statistics on objective RBE treatment**

|                                    | <b>Mean</b> | <b>Std.<br/>Dev.</b> | <b>Min</b> | <b>P25</b> | <b>Median</b> | <b>P75</b> | <b>Max</b> | <b>Obs. (N)</b> |
|------------------------------------|-------------|----------------------|------------|------------|---------------|------------|------------|-----------------|
| <b>Ease of starting a business</b> | 68.682      | 17.821               | 17.4       | 59         | 73.8          | 81.4       | 94.6       | 35,201          |

**Table 5: Probability of firm being located in an enabling RBE**

|  | <b>Objective RBE -<br/>Ease of starting a<br/>business</b> |
|--|--|
| <b>Size of firm</b>                    | 0.684***<br>(0.080)  |
| <b>Age of firm</b>                     | 0.217***<br>(0.055)  |
| <b>Status of firm</b>                  | -0.101***<br>(0.037)                                       |
| <b>Human capital of O/M</b>            | 0.002<br>(0.058)   |
| <b>Gender of O/M</b>                   | -0.821***<br>(0.124)                                       |
| <b>Sector of firm</b>                  | 0.343***<br>(0.047)  |
| <b>Competition from informal firms</b> | -0.762***<br>(0.088)                                       |
| <b>GDP per capita</b>                  | 3.642***<br>(0.235)  |
| <b>Interest rates</b>                  | -0.255***<br>(0.019)                                       |
| <b>Profits</b>                         | -0.531***<br>(0.061)                                       |
| <b>Revenue per employee</b>            | 0.327***<br>(0.062)  |
| <b>Loan</b>                            | 0.340***<br>(0.104)  |
| <b>Country</b>                         | 0.201***<br>(0.016)  |



|                         |                       |
|-------------------------|-----------------------|
| <b>Constant</b>         | -24.981***<br>(1.646) |
| <b>Observations (N)</b> | 12,012                |
| <b>No. of firms (n)</b> | 10,963                |
| <b>Wald chi2(13)</b>    | 310.02***             |

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Notes: Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**Table 6 - ATET results of Nearest Neighbour Matching using the objective treatment**

|                        | Sources of funding  |                     |                     |                      |                        |
|------------------------|---------------------|---------------------|---------------------|----------------------|------------------------|
|                        | Access to finance   |                     | Retained earnings   | Bank institutions    | Non- bank institutions |
|                        | Model 1             | Model 2             | Model 3             | Model 4              | Model 5                |
| <b>ATET</b>            | 0.217***<br>(0.051) | 0.110***<br>(0.040) | 0.155***<br>(0.052) | -0.141***<br>(0.029) | -0.018*<br>(0.010)     |
| <b>Observations:</b>   |                     |                     |                     |                      |                        |
| <b>Total Raw</b>       | 9,581               | 5,986               | 9,398               | 8,288                | 9,332                  |
| <b>Total matched</b>   | 12,828              | 8,666               | 12,680              | 10,438               | 12,526                 |
| <b>Treated matched</b> | 6,414               | 4,333               | 6,340               | 5,219                | 6,263                  |
| <b>Control matched</b> | 6,414               | 4,333               | 6,340               | 5,219                | 6,263                  |

Notes: Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

ATET is average treatment effect on the treated

The following covariates are included in all models: size of firm, age of firm, status of firm, human capital of O/M, gender of O/M, sector of firm, year of survey, GDPC of country, interest rates, comp. from informal firms, loan, profits, revenue per employee

**Table 7 - ATET results of Inverse Probability Weighting using the objective treatment**

|                                      | Sources of funding  |                     |                     |                     |                        |
|--------------------------------------|---------------------|---------------------|---------------------|---------------------|------------------------|
|                                      | Access to finance   |                     | Retained earnings   | Bank institutions   | Non- bank institutions |
|                                      | Model 1             | Model 2             | Model 3             | Model 4             | Model 5                |
| <b>ATET</b>                          | 0.249***<br>(0.034) | 0.121*<br>(0.062)   | 0.318**<br>(0.139)  | -0.149**<br>(0.071) | -0.028<br>(0.037)      |
| <b>POM<sup>a</sup> (Enabling BE)</b> | 2.205***<br>(0.033) | 3.552***<br>(0.053) | 3.049***<br>(0.144) | 1.257***<br>(0.079) | 1.049***<br>(0.036)    |
| <b>Observations:</b>                 |                     |                     |                     |                     |                        |
| <b>Total weighted</b>                | 9,581               | 5,986               | 9,398               | 8,288               | 9,332                  |
| <b>Treated weighted</b>              | 3,874.6             | 2,201.3             | 3,947.2             | 3,611.4             | 3,910.7                |
| <b>Control weighted</b>              | 5,706.4             | 3,784.7             | 5,450.8             | 4,676.6             | 5,421.3                |

Notes: Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

ATET is average treatment effect on the treated

<sup>a</sup>Potential outcome mean

The following covariates are included in all models: size of firm, age of firm, status of firm, human capital of O/M, gender of O/M, sector of firm, year of survey, GDPC of country, interest rates, comp. from informal firms, loan, profits, revenue per employee

**Table 8 - ATET results of Regression Adjustment <sup>a</sup> using the objective treatment**

|                                      | Sources of funding  |                     |                     |                      |                        |
|--------------------------------------|---------------------|---------------------|---------------------|----------------------|------------------------|
|                                      | Access to finance   |                     | Retained earnings   | Bank institutions    | Non- bank institutions |
|                                      | Model 1             | Model 2             | Model 3             | Model 4              | Model 5                |
| <b>ATET</b>                          | 0.546***<br>(0.047) | 0.103**<br>(0.041)  | 0.213***<br>(0.054) | -0.188***<br>(0.036) | -0.038***<br>(0.013)   |
| <b>POM<sup>b</sup> (Enabling BE)</b> | 1.908***<br>(0.045) | 3.570***<br>(0.041) | 3.153***<br>(0.052) | 1.297***<br>(0.036)  | 1.058***<br>(0.013)    |
| <b>Observations</b>                  | 9,581               | 5,986               | 9,398               | 8,288                | 9,332                  |

Notes: Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

ATET is average treatment effect on the treated

<sup>a</sup>Outcome model is Poisson

<sup>b</sup>Potential outcome mean

The following covariates are included in all models: size of firm, age of firm, status of firm, human capital of O/M, gender of O/M, sector of firm, year of survey, GDPC of country, interest rates, comp. from informal firms, loan, profits, revenue per employee  
Results of regressions used in estimating the control and treated POMs in Regression Adjustment Estimator can be provided on request