

ENTREPRENEURSHIP DATABASE – METHODOLOGY NOTE

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INTRODUCTION

The Entrepreneurship Database is a unique source of comparable and cross-country data on the dynamics of formal private enterprises around the world based on administrative data collected from public agencies. First published in 2011, the Entrepreneurship Database has been updated every two years and grows in scope to cover more economies and more data points over time. The 7th edition of Entrepreneurship Database contains annual data on the number of companies over the period of 2006-2022 and sex disaggregated annual data on entrepreneurs over the period 2014-2022.¹

The Entrepreneurship Database has developed a data collection methodology to systematically measure entrepreneurial activity. To facilitate cross-country comparability, the Entrepreneurship Database employs consistent units of measurement, sources of information, and concept of entrepreneurship that is applicable and available among the diverse sample of participating economies.

1. DEFINITIONS AND UNITS OF MEASUREMENT

In order to measure entrepreneurship in a way that is universally comparable, the Entrepreneurship Database employs a methodology that can be applied across heterogeneous legal regimes and economic systems. The concept of entrepreneurship can cover a wide range of activities. Schumpeter defines entrepreneurship as the assumption of risk and responsibility in designing and implementing a business strategy or starting a business.² Gough defines an entrepreneur as a person who undertakes and operates a new enterprise and assumes some accountability for the inherent risks.³ For the purposes of this project, entrepreneurship is defined as the activities of an individual or a group of individuals aimed at initiating economic enterprise in the formal sector under a legal form of business.

The legal form of business refers to private companies with limited liability. Limited liability companies are those in which the financial liability of the firm's members is limited to the value of their investment in the company. A limited liability company is a separate legal entity that has its own privileges and liabilities. Although the laws on business registration vary greatly across countries, the approach to legal entities is largely uniform: any business with a unique legal entity (or "corporate personhood") separate from its owners must be registered.

The Entrepreneurship Database assesses the flow and the stock of companies with limited liability. In terms of units of measurement, it looks the number of new companies with limited liability registered during each calendar year, the number of limited liability companies closed during each calendar year, and the total number of companies with limited liability at the end of each calendar year.

¹ Sex disaggregated data are about individuals starting or managing new companies.

² Schumpeter, J. A. 1911. *Theorie Der Wirtschaftlichen Entwicklung*. Leipzig: Duncker and Humblot

³ Gough, J. W. 1969. *The Rise of the Entrepreneur*. New York: Schocken Books

The Entrepreneurship Database does not include all other cases such as the suspension of firms, restoration of firms, temporary measures, etc.

Those following indicators are computed and published:

- New business density, defined as the number of newly registered companies with limited liability per 1,000 working-age adults (ages 15–64) per calendar year.
- Closed business density, defined as the number of closed companies with limited liability per 1,000 working-age adults (ages 15–64) per calendar year.
- Total business density, defined as the total number of registered firms with limited liability per 1,000 working-age people (ages 15–64) at the end of each calendar day.

Regarding the working age population, the main source of information is the World Development Indicators on adult population.⁴ If the population data are not available in the World Development Indicators; other sources such as the CIA, the ILO, the Index Mundi or national databases are used.

With regards to sex disaggregated data on entrepreneurs, the database covers the number of female and male owners of new limited liability companies registered per calendar year, the number of female and male directors of new limited liability companies registered per calendar year, and the number of new female and male sole proprietors registered per calendar year.

2. QUESTIONNAIRE PREPARATION AND REVIEW

The preparation of the data collection process starts with the drafting of the questionnaire - that is the instrument to gather information. The questionnaire contains several tables on firms' statistics and sex disaggregated data on entrepreneurs. In addition, it includes questions on the legal framework to verify that all types of companies with limited liability are included in the statistics and questions on recent policy changes that could influence the number of limited liability companies.

Questions are drafted in a manner that is accessible for the respondent, including asking questions in a language that the respondent is comfortable with. The general rule is that the questionnaire must be translated into the language that is used for the data collection. Oftentimes, there have been previous translations of questionnaires. In these cases, translations should be based on the previous version, where the wording is repeated to assure comparability. For the 7th edition of the Entrepreneurship Database, the questionnaire was available in six languages: Arabic, English, French, Spanish, Portuguese, and Russian.

The questionnaire is not prepopulated with historical data collected from previous editions of the Entrepreneurship Database. The statistics tables are empty so that respondents provide the latest data for all years from their database. It is common that historical data is cleaned and updated by the business registry or statistical office.

⁴ <https://databank.worldbank.org/source/world-development-indicators>

The questionnaire is submitted for internal review and external review. The internal review is conducted with the feedback on the questionnaire from World Bank staff. The external review is done with the contributions from other international organizations using the Entrepreneurship Database.

3. IDENTIFICATION OF DATA SOURCES

The main sources of information for the Entrepreneurship Database are national business registries. Business registries have the mandate to collect and publish data on formal companies. In a limited number of cases where the business registry is unable to provide the data, the Entrepreneurship Database uses other alternatives sources, such as national statistics agencies, ministries of economy, chambers of commerce, private sector, or publicly available data. In federal states where business registries do not have a centralized database, the Entrepreneurship Database tends to work with national statistics agencies that centralize information for the country.

Over the years, the Entrepreneurship Database has built a directory of sources, in compliance with the World Bank's privacy policy.⁵ This existing list of respondents is updated before sending out the questionnaire for data collection. This is mostly done with online searches on the latest information on the business registries' websites. New respondents are also identified thanks to collaboration with other international organizations and regional organizations of business registries. Finally, the project relies on World Bank's country offices and regional colleagues to identify respondents within the government counterparts.

The list of data sources is available in Annex 1.

4. DATA COLLECTION

Once the questionnaires are finalized and the sources are identified, the data collection process starts with the distribution of questionnaires across economies in the world. Questionnaires are sent by emails to respondents and a follow-up call is conducted to ensure that the questionnaire has been well-received. In some cases where languages can be a barrier for data collection, the project relies on local consultants to collect data on the ground. This was for instance the case of Ethiopia for the 7th edition of the Entrepreneurship Database.

After the questionnaire is received, the follow-up process is conducted by analysts of the Entrepreneurship Database's project with email correspondence and telephone interviews with business registries and other relevant agencies. The follow-up process aims at understanding changes and/or inconsistencies in the new data reported by respondents and can involve several rounds of emails. This process results from the internal data review process (cf. following section).

When the follow-up is completed, data is entered in a master excel file that is the repository of all data for all economies. Each analyst is in charge of analyzing and submitting the data for review to the Topic Task Leader (TTL) of the Entrepreneurship Database.

5. INTERNAL DATA REVIEW PROCESS

⁵ <https://ppfdocuments.azureedge.net/0298ff3b-8893-4894-91af-1ffb7c0d59e1.pdf>

Data is checked for consistency with a series of quality assurance measures.

Data quality checks include but are not limited to the following:

- *Identifying major data changes and ensuring justifications.* Big increases/decreases (+/- 10%) in the numbers of companies across years are identified and require explanations from respondents. Main reasons behind major data changes are reforms impacting business incorporations (e.g., a simplified business start-up process or a new type of limited liability company), and data corrections (e.g., typos or issues of the database of the business registry).
- *Understanding revisions in the historical data.* If historical data is subject to a major data revision, explanations are requested from respondents. One of the main reasons behind those revisions is data cleaning of the database of the business registry.
- *Understanding breaks in the data series.* Data breaks can happen when business registries stopped collecting or publishing certain types of data due to temporary difficulties or changes of data management systems.
- *Conducting logic checks across new, closed, and total numbers.* Logic checks are conducted to make sure that the total number of companies represent the stock, and the new number of companies represent the flow (e.g., the number of new companies in a specific year cannot exceed the total number of companies).
- *Conducting consistency checks between data and legal questions.* Legal questions identify all the types of limited liability companies and help verify that the firms' statistics do not miss some types of companies with limited liability.

6. EXTERNAL DATA REVIEW PROCESS

In addition to the internal data review process, an external review process is conducted. Two types of validation checks are done:

- *Validation checks with other datasets.* Those checks compare the data collected by the Entrepreneurship Database with other publicly available databases like Eurostat or data on companies from tax authorities. Those validation checks can only cover a limited number of data due to a limited coverage of countries of other external databases., While they are some differences, they can be explained by different data sources and definitions.
- *Validation checks with projections.* This creates a series for the evolution of the total number of firms by adding the net number of firms created in each year and then compare this series with the actual series on the total number of firms included in the Entrepreneurship database. This gives an intuitive indication how the total number of companies should evolve. One caveat is that there are many other categories (besides the new and closed numbers) that impact the total number of companies such as the suspension of firms, restoration of firms, temporary measures that are not measured by the Entrepreneurship Database (cf. Section 1) and explain possible differences between the projected and the actual numbers.

7. OFFSHORE CENTERS

Data collected from economies categorized as offshore financial centers by Eurostat are excluded from the analysis, because registered entities in these countries may not fit the objective of the Entrepreneurship Database aiming at measuring formally registered companies with actual economic

activities. The information provided by these economies likely reflects a number of shell companies, defined as companies that are registered for tax purposes but are not economically active.

The information on offshore centers is collected and published by the Entrepreneurship Database, but it is not used for trend analysis purposes.

The list of offshore centers defined by Eurostat is in Annex 2.

8. DATA PUBLICATION

After the final review of the dataset is complete, the data go through the following protocol of dataset publication: (i) After TTL clears the data for publication, the TTL requests clearance to publish the data from the ETIIC Manager. The TTL alerts the ETIIC Manager via email that the data have gone through internal and external checks and is ready for publication. The TTL also shares any relevant communication material used at the time of the data release. (ii) After the ETIIC Manager gives clearance for data release, the ETIIC Manager requests concurrence to the clearance from the TIC Director. The Manager sends an email to the Director, including the documentation provided by the TTL. (iii) The data is only ready to be made publicly available after the approval of the TIC Director.

The data is made publicly available on the Entrepreneurship Database's website.⁶ The website contains the data on firm dynamics, sex-disaggregated data on entrepreneurs, motivations for the project, methodology, list of data sources, and any relevant communication documents. It is also possible to upload excel files containing all data points for all economies on the website.

9. AUDIENCE AND DATA USES

The data users of the Entrepreneurship Database include government policy makers, academics (students and researchers) and international organizations. Data in different ways. Policy makers tend to use certain data points and indicators to track the impact of their policies. Policy makers also consult reports or policy analytical pieces that summarize the results of the data. Academics use the raw survey data for econometric analyses and to understand factors impacting formal entrepreneurship. International organizations rely on the data to guide their private sector development operational work and use indicators like the new business density as a primary source data for the development of their indices.

⁶ <https://www.worldbank.org/en/programs/entrepreneurship>

ANNEX 1. LIST OF DATA SOURCES FOR THE 7TH EDITION OF THE ENTREPRENEURSHIP DATABASE

Economy	Agency
Afghanistan	Central Business Registry
Albania	Institute of Statistics
Algeria	Centre National du Registre du Commerce
Angola	Ministério da Economia e Planeamento, Departamento para o Fomento Empresarial - Guiché Único da Empresa
Antigua and Barbuda	Intellectual Property and Commerce Office
Argentina	Secretaria General del Gobierno
Armenia	State Register Agency of Legal Entities
Australia	Securities & Investments Commission
Austria	Bundesministerium für Arbeit und Wirtschaft
Azerbaijan	Ministry of Taxes
Bahrain	Ministry of Industry and Commerce
Bangladesh	Private sector
Barbados	Corporate Affairs and Intellectual Property Office
Belarus	Unified State Register of Legal Entities and Individual Entrepreneurs
Belgium	Direction Générale de la Statistique et Information Economique
Belize	Companies and Corporate Affairs Registry and Secretariat to the Economic Development Council
Benin	Agence de Promotion des Investissements et des Exportations
Bhutan	Ministry of Economic Affairs
Bolivia	Servicio Plurinacional de Registro de Comercio
Bosnia and Herzegovina	Agency for Statistics
Botswana	Companies and Intellectual Property Authority
Brazil	Secretaria da Microempresa e Empresa de Pequeno Porte e do Empreendedorismo
Brunei Darussalam	Registry of Companies & Business Names
Bulgaria	Registry Agency
Burkina Faso	Maison de l'Entreprise
Cabo Verde	Casa do Cidadão
Cambodia	Business Registration Department of the Ministry of Commerce
Cameroon	Ministère des Petites et Moyennes Entreprises, de l'Économie Sociale et de l'Artisanat
Canada	Corporations Canada Registraire des Entreprises du Québec Business Registry of Nova Scotia
Cayman Islands	Companies Register
Central African Republic	Guichet Unique de Formalités des Entreprises
Chad	One Stop Shop of Business Creation
Chile	Ministry of Economy
China	Ministry of Finance (Beijing)

	Administration of Industry and Commerce (Shanghai)
Colombia	Confecamaras
Comoros	Agence Nationale pour la Promotion des Investissements
Congo, Dem. Rep.	Guichet Unique de Création d'Entreprise
Congo, Rep.	Institut National de la Statistique
Cook Islands	Business Registrar
Costa Rica	Registro de Personas Jurídicas
Côte d'Ivoire	Centre de Promotion des Investissements en Côte d'Ivoire
Croatia	Financial Agency
Cyprus	Department of Registrar of Companies and Official Receiver
Czechia	Statistical Office
Denmark	Danish Business Authority
Djibouti	Agence Nationale de la Promotion des Investissements
Dominica	Companies and Intellectual Property Office
Dominican Republic	Santo Domingo Chamber of Commerce
Egypt, Arab Rep.	General Authority for Investment
El Salvador	Centro Nacional de Registros
Estonia	Centre of Registers and Information Systems
Eswatini	Investment Promotion Authority
Ethiopia	Ministry of Trade and Regional Integration
Fiji	Companies Registrar
Finland	Finnish Patent and Registration Office
France	Institut National de la Statistique et des Etudes Economiques
Gabon	Agence Nationale de la Promotion des Investissements
Georgia	National Agency of Public Registry, Ministry of Economy and Sustainable Development
Germany	Federal Statistical Office
Ghana	Registrar's General Department
Greece	Greek Business Registry
Grenada	Ministry of Legal Affairs
Guatemala	Registro Mercantil General de la República de Guatemala
Guernsey	Guernsey Registry
Guinea	Ministry in charge of Investments and Public Private Partnerships
Guyana	Registrar of Commerce
Haiti	Registre du Commerce
Honduras	Cámara de Comercio e Industria de Tegucigalpa - Registro Mercantil
Hong Kong SAR, China	Hong Kong Companies Registry
Hungary	Central Statistical Office
Iceland	Statistics Iceland; Internal Revenue Office

India	Ministry of Corporate Affairs
Indonesia	Private sector
Iran, Islamic Rep.	Company Registration Office
Iraq	General Secretariat for the Council of Ministers
Ireland	Companies Registration Office
Isle of Man	Companies Registry
Israel	Ministry of Justice
Italy	Unioncamere
Jamaica	Registrar of Companies
Japan	Ministry of Justice
Jersey	Jersey Financial Services Commission
Jordan	Companies Control Department
Kazakhstan	Ministry of Justice
Kenya	Business Registration Service
Kiribati	Ministry of Commerce, Industry and Cooperatives, Company Registration Division
Korea, Rep.	Korea Institute of Startup & Entrepreneurship Development
Kosovo	Business Registration Agency, Ministry of Trade and Industry
Kuwait	Kuwait Direct Investment Promotion Authority
Kyrgyz Republic	Ministry of Justice, The Unified State Register of Legal Entities and Individual Entrepreneurs
Lao PDR	Department of Enterprise Registration and Management
Latvia	Register of Enterprises
Lesotho	One-Stop Business Facilitation Centre
Liberia	Liberia Business Registry
Liechtenstein	Office of Economic Affairs; Office of Justice, Commercial Register Division
Lithuania	State Enterprise Centre of Registers
Luxembourg	Registre de Commerce et des Sociétés
Madagascar	Economic Development Board of Madagascar
Malawi	Department of the Registrar General
Malaysia	Companies Commission
Maldives	Ministry of Economic Development
Mali	Services de Création d'Entreprises de l'Agence de la Promotion des Investissements
Malta	Malta Business Registry
Marshall Islands	Office of Commerce, Investment & Tourism
Mauritania	One-Stop Shop, Ministry of Economy and Finances
Mauritius	Registrar of Companies Division
Mexico	Ministry of Economy, General Direction of Business Regulation; Registro Público de Comercio

Micronesia, Fed. States	FSM Registrar of Corporations
Moldova	Public Services Agency
Mongolia	General Authority for State Registration, State Registration of Legal Entity's Legal Department
Montenegro	Ministry of Economic Development; Central Registry of Business Entities
Morocco	National Committee for Business Environment
Mozambique	Balcão de Atendimento Único
Myanmar	Directorate of Investment and Company Administration
Namibia	Business and Intellectual Property Authority
Nepal	Company Registry
Netherlands	Netherlands Chamber of Commerce
New Zealand	New Zealand Companies Register
Niger	Maison de l'Entreprise
Nigeria	Corporate Affairs Commission
North Macedonia, Rep.	Central Registry
Norway	The Bronnoysund Register Center
Oman	Ministry of Commerce, Industry and Investment Promotion
Pakistan	Securities & Exchange Commission
Panama	Registro Público
Papua New Guinea	Registrar of Companies Office
Paraguay	Ministry of Commerce and Industry
Peru	National Superintendence of Public Registries
Philippines	Securities and Exchange Commission
Poland	Ministry of Economic Development and Technology
Portugal	Institute of Registries
Puerto Rico	Department of State
Qatar	Ministry of Commerce and Industry
Romania	National Trade Register Office
Russian Federation	Federal Tax Service
Rwanda	Rwanda Development Board
Samoa	Ministry of Commerce, Industry and Labour
São Tomé and Príncipe	Guiché Único Para Empresas
Saudi Arabia	General Authority for Statistics
Senegal	National Agency of Statistics and Demography
Serbia	Serbian Business Registers Agency
Seychelles	Company and Land Registry
Sierra Leone	Corporate Affairs Commission

Singapore	Accounting and Corporate Regulatory Authority
Slovak Republic	Statistical Office; Ministry of Economy
Slovenia	Agency for Public Legal Records and Related Services
Solomon Islands	Ministry of Commerce, Industry, Labor, and Immigration
Somalia	Ministry of Commerce and Industry
South Africa	Companies and Intellectual Property Commission
South Sudan	National Revenue Authority
Spain	Central Mercantile Registry
Sri Lanka	Department of Registrar of Companies
St. Kitts and Nevis	Financial Services Regulatory Commission - St. Kitts Branch
St. Lucia	Registry of Companies and Intellectual Property
St. Vincent and the Grenadines	Investment Agency SVG
Suriname	Chamber of Commerce; Commercial Register
Sweden	Swedish Companies Registration Office
Switzerland	Commercial Registry, Federal Office of Justice
Taiwan, China	Ministry of Economic Affairs
Tajikistan	Business Registration Department
Tanzania	Business Registrations and Licensing Agency
Thailand	Department of Business Development
Timor-Leste	Serviço de Registo e Verificação Empresarial, Instituto Público
Togo	Centre de Formalités des Entreprises
Tonga	Ministry of Trade and Economic Development
Trinidad and Tobago	Registrar General Secretariat
Tunisia	Registre des Entreprises
Türkiye	Ministry of Trade
Tuvalu	Ministry of Finance
Uganda	Uganda Registration Services Bureau
Ukraine	State Statistics Services
United Arab Emirates	Business Registration in Department of Economic Development
United Kingdom	Companies House
Uruguay	Dirección General Impositiva
Uzbekistan	State Committee on Statistics
Vanuatu	Company Registry
Viet Nam	Agency for Business Registration
Zambia	Patents and Companies Registration Agency
Zimbabwe	Registrar of Companies and Intellectual Property Office

ANNEX 2: LIST OF OFFSHORE CENTERS ACCORDING TO EUROSTAT⁷

- Andorra,
- Antigua and Barbuda,
- Anguilla,
- Aruba,
- Barbados,
- Bahrain,
- Bermuda,
- Bahamas,
- Belize,
- Cook Islands,
- Curaçao,
- Cayman Islands,
- Dominica,
- Grenada,
- Guernsey,
- Gibraltar,
- Hong Kong SAR, China,
- Isle of Man,
- Jersey,
- St Kitts and Nevis,
- Lebanon,
- Saint Lucia,
- Liechtenstein,
- Marshall Islands,
- Montserrat,
- Mauritius,
- Nauru,
- Niue,
- Panama,
- Philippines,
- Seychelles,
- Singapore,
- Sint Maarten,
- Turks and Caicos Islands,
- Saint Vincent and the Grenadines,
- Virgin Islands (British),
- Virgin Islands (U.S.),
- Vanuatu,
- Samoa.

⁷ <https://ec.europa.eu/eurostat/statistics-explained/index.php?oldid=413182>