

ANNEX B

List of Indicators of Entrepreneurial Determinants

This Annex presents a comprehensive list of indicators of entrepreneurial determinants. Indicators are classified into the six categories of determinants set by the conceptual framework of the OECD-Eurostat Entrepreneurship Indicators Programme: 1. Regulatory Framework; 2. Market Conditions; 3. Access to Finance; 4. Creation and Diffusion of Knowledge; 5. Entrepreneurial Capabilities; 6. Entrepreneurial Culture. For each indicator, a short description and the source of data are provided.

While many critical factors affecting entrepreneurship are covered by the indicators presented in the table, the list should not be considered as exhaustive. The selection of indicators reflects the current availability of data, meaning that important indicators may be missing just because no source of international data was found.

Table B.1. **Indicators of entrepreneurial determinants and data sources**

Category of determinants	Definition	Data sources
1. REGULATORY FRAMEWORK		
Administrative burdens (entry and growth)		
Burden of government regulation	Survey responses to the question: For businesses, complying with administrative requirements (permits, regulations, reporting) issued by the government in your country is (1 = burdensome, 7 = not burdensome). http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/	World Economic Forum, <i>Global Competitiveness Report</i>
Costs required for starting a business	The official cost of each procedure in percentage of Gross National Income (GNI) per capita based on formal legislation and standard assumptions about business and procedure. http://www.doingbusiness.org/data/exploretopics/starting-a-business	World Bank, <i>Doing Business</i>
Minimum capital required for starting a business	The paid-in minimum of capital requirement that the entrepreneur needs to deposit in a bank before registration of the business starts as percentage of income per capita. http://www.doingbusiness.org/data/exploretopics/starting-a-business	World Bank, <i>Doing Business</i>
Number of days for starting a business	The average time (recorded in calendar days) spent during each enterprise start-up procedure. http://www.doingbusiness.org/data/exploretopics/starting-a-business	World Bank, <i>Doing Business</i>
Number of procedures for starting a business	All generic procedures that are officially required to register a firm. http://www.doingbusiness.org/data/exploretopics/starting-a-business	World Bank, <i>Doing Business</i>
Procedures time and costs to build a warehouse	Corresponds to an average of three measurements: 1) Average time spent during each procedure, 2) Official cost of each procedure and 3) Number of procedures to build a warehouse. http://www.doingbusiness.org/data/exploretopics/dealing-with-construction-permits	World Bank, <i>Doing Business</i>
Building quality control index	The indicator is based on six other indices—the quality of building regulations, quality control before construction, quality control during construction, quality control after construction, liability and insurance regimes, and professional certifications indices. http://www.doingbusiness.org/methodology/dealing-with-construction-permits	World Bank, <i>Doing Business</i>
Registering property	Corresponds to an average of three measurements: 1) Number of procedures legally required to register property, 2) Time spent in completing the procedures and 3) Registering property costs. http://www.doingbusiness.org/data/exploretopics/registering-property	World Bank, <i>Doing Business</i>
Index of the quality of the land administration system	The quality of land administration index is the sum of the scores on the reliability of infrastructure, transparency of information, geographic coverage and land dispute resolution indices. The index ranges from 0 to 30, with higher values indicating better quality of the land administration system. http://www.doingbusiness.org/data/exploretopics/registering-property	World Bank, <i>Doing Business</i>

Table B.1. **Indicators of entrepreneurial determinants and data sources (cont.)**

Category of determinants	Definition	Data sources
Time for paying taxes	Time it takes to prepare, file and pay the corporate income tax, vat and social contributions. Time is measured in hours per year. http://www.doingbusiness.org/data/exploretopics/paying-taxes	World Bank, <i>Doing Business</i>
Bankruptcy regulations		
Cost - Average cost of bankruptcy proceedings.	The cost of the proceedings is recorded as a percentage of the estate's value. http://www.doingbusiness.org/data/exploretopics/resolving-insolvency	World Bank, <i>Doing Business</i>
Time - Average duration of bankruptcy proceedings	Time is recorded in calendar years. It includes appeals and delays. http://www.doingbusiness.org/data/exploretopics/resolving-insolvency	World Bank, <i>Doing Business</i>
Recovery rate	The recovery rate calculates how many cents on the dollar secured creditors recover from an insolvent firm at the end of insolvency proceedings. http://www.doingbusiness.org/data/exploretopics/resolving-insolvency	World Bank, <i>Doing Business</i>
Court and legal framework		
Enforcing contracts– Cost in % of claim	Cost is recorded as a percentage of the claim, assumed to be equivalent to 200% of income per capita or USD 5000, whichever is greater. No bribes are recorded. Three types of costs are recorded: court costs, enforcement costs and average attorney fees. http://www.doingbusiness.org/data/exploretopics/enforcing-contracts	World Bank, <i>Doing Business</i>
Enforcing contracts – Time	Time is recorded in calendar days, counted from the moment the plaintiff files the lawsuit in court until payment. This includes both the days when actions take place and the waiting periods between. http://www.doingbusiness.org/data/exploretopics/enforcing-contracts	World Bank, <i>Doing Business</i>
Enforcing contracts – Quality of judicial process	The quality of judicial processes index measures whether each economy has adopted a series of good practices in its court system in four areas: court structure and proceedings, case management, court automation and alternative dispute resolution. http://www.doingbusiness.org/data/exploretopics/enforcing-contracts	World Bank, <i>Doing Business</i>
Product and labour market regulations		
Difficulty of hiring	It measures whether laws or other regulations have implications for the difficulties of hiring a standard worker in a standard company. It covers components such as whether fixed-term contracts are prohibited for permanent tasks, the maximum cumulative duration of fixed-term contracts, the ratio of the minimum wage to the average value added per worker or the availability of incentives for employers to hire employees under the age of 25. http://www.doingbusiness.org/data/exploretopics/labor-market-regulation#difficultyHiring	World Bank, <i>Doing Business</i>
Difficulty of firing	It measures whether laws or other regulations have implications for the difficulties of firing a standard worker in a standard company. Components of the indicator include elements such as the length in months of the maximum probationary period or whether the employer needs to notify a third party (such as a government agency) to terminate a redundant worker. http://www.doingbusiness.org/data/exploretopics/labor-market-regulation#difficultyFiring	World Bank, <i>Doing Business</i>
Ease of hiring foreign labour	Survey responses to a question related to labour market efficiency: In your country, how restrictive are regulations related to the hiring of foreign labor? [1 = highly restrictive; 7 = not restrictive at all]. http://reports.weforum.org/global-competitiveness-report-2015-2016/appendix-a-measurement-of-key-concepts-and-preliminary-index-structure/	World Economic Forum, <i>Executive Opinion Survey</i>
Rigidity of hours index	The indicator is an index with seven components, the most important being: i) the maximum number of days allowed in the work week; ii) the premium for night work; iii) whether there are restrictions on night work; iv) whether there are restrictions on weekly holiday work; vii) the average paid annual leave for workers. http://www.doingbusiness.org/data/exploretopics/labor-market-regulation#rigidityHours	World Bank, <i>Doing Business</i>
Job quality	The indicator covers 12 questions: (i) whether the law mandates equal remuneration for work of equal value; (ii) whether the law mandates non-discrimination based on gender in hiring; (iii) whether the law mandates paid or unpaid maternity leave; (iv) the minimum length of paid maternity leave (in calendar days); (v) whether employees on maternity leave receive 100% of wages; (vi) the availability of five fully paid days of sick leave a year; (vii) the availability of on-the-job training at no cost to the employee; (viii) whether a worker is eligible for an unemployment protection scheme after one year of service; (ix) the minimum duration of the contribution period (in months) required for unemployment protection; (x) whether an employee can create or join a union; (xi) the availability of administrative or judicial relief in case of infringement of employees' rights; and (xii) the availability of a labor inspection system. http://www.doingbusiness.org/data/exploretopics/labor-market-regulation#rigidityEmployment	World Bank, <i>Doing Business</i>
Income taxes, wealth/bequest taxes		
Average income tax plus social contributions	The average rate of taxation in percentage of the gross wage. The indicator is based on a standard case: single (without children) with high income. http://dx.doi.org/10.1787/data-00265-en	OECD <i>Revenue Statistics</i>
Highest marginal income tax plus social contributions	The highest rate of taxation in percentage of the gross wage. The indicator is based on a standard case: single (without children) with high income. http://dx.doi.org/10.1787/data-00265-en	OECD <i>Revenue Statistics</i>

Table B.1. **Indicators of entrepreneurial determinants and data sources (cont.)**

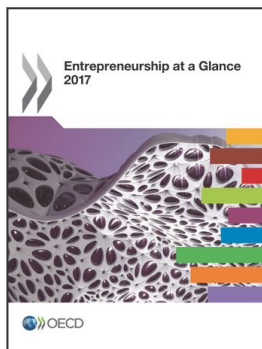
Category of determinants	Definition	Data sources
Revenue from bequest tax	The revenue from bequest tax as a per cent of GDP. http://dx.doi.org/10.1787/ctpa-rev-data-en	OECD <i>Revenue Statistics</i>
Revenue from net wealth tax	The revenue from net wealth tax as a per cent of GDP. http://dx.doi.org/10.1787/ctpa-rev-data-en	OECD <i>Revenue Statistics</i>
Business and capital taxes		
SME tax rates	http://stats.oecd.org/Index.aspx?DataSetCode=TABLE_I12	OECD <i>Revenue Statistics</i>
Taxation of corporate income revenue	The revenue from corporate income tax as percentage of GDP. http://dx.doi.org/10.1787/ctpa-rev-data-en	OECD <i>Revenue Statistics</i>
Taxation of stock options	The average tax wedge for purchased and newly listed stocks. Average incomes are used. http://dx.doi.org/10.1787/9789264012493-en	OECD, The Taxation of Employee Stock Options – Tax Policy Study No. 11
Patent system; standards		
Intellectual property protection	Survey responses to the question: in your country, how strong is the protection of intellectual property, including anti-counterfeiting measures? (1 = extremely weak, 7 = extremely strong). http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/	World Economic Forum, <i>Global Competitiveness Report</i>
Property rights	Survey responses to the question: property rights, including over financial assets (1 = are poorly defined and not protected by law, 7 = are clearly defined and well protected by law). http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/	World Economic Forum, <i>Global Competitiveness Report</i>
2. MARKET CONDITIONS		
Access to Foreign Markets		
Trading across borders	The indicator is an index composed of two components: 1) Time, in days, to comply with all procedures required to import/export goods, 2) The cost associated with all procedures required to import/export goods. http://www.doingbusiness.org/data/exploretopics/trading-across-borders	World Bank, <i>Doing business</i>
Barriers to trade and investment	This indicator measures explicit barriers and other barriers to trade and investment. It is based on qualitative information on laws and regulations collected periodically and turned into quantitative indicators. http://www.oecd.org/eco/growth/indicatorsofproductmarketregulationhomepage.htm#indicators	OECD, <i>Product Market Regulation Indicators</i>
Services Trade Restrictiveness Index (STRI)	The indicator is calculated on the basis of a regulatory database of comparable, standardised information on trade and investment relevant policies in force in each country. http://www.oecd.org/tad/services-trade/services-trade-restrictiveness-index.htm	OECD, <i>Services Trade Restrictiveness Index Regulatory Database</i>
Degree of public involvement		
Government enterprises and investment	Data reflect the number, composition and share of output supplied by State-Operated Enterprises (SOEs) and government investment as a share of total investment. https://www.fraserinstitute.org/sites/default/files/economic-freedom-of-the-world-data-for-researchers.xls	IMF, World Bank, UN National Accounts and World Economic Forum
Licensing restrictions	Zero-to-10 ratings are constructed for 1) the time cost (measured in number of calendar days required to obtain a license) and 2) the monetary cost of obtaining the license (measured as a share of per-capita income). These two ratings are then averaged to arrive at the final rating. http://iresearch.worldbank.org/servicetrade/default.htm#	World Bank
Private Demand		
Buyer sophistication	Survey responses to: purchasing decisions are (1 = based solely on the lowest price, 7 = based on a sophisticated analysis of performance). http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/	World Economic Forum, <i>Global Competitiveness Report</i>
3. ACCESS TO FINANCE		
Access to debt financing		
Country credit rating	The indicator is based on an assessment by the <i>Institutional Investor Magazine Ranking</i> . http://www.imd.org/wcc	IMD <i>World Competitiveness Yearbook</i>
Domestic credit to private sector	The indicator refers to financial resources provided to the private sector – such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable – that establish a claim for repayment. Data are from IMF's International Financial Statistics. http://databank.worldbank.org/data/views/variableSelection/selectvariables.aspx?source=world-development-indicators#	Published in <i>World Indicators</i> , World Bank. <i>Development</i>
Ease of access to loans	Survey responses to: how easy it is to obtain a bank loan in your country with only a good business plan and no collateral (1 = extremely difficult, 7 = extremely easy). http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/	World Economic Forum, <i>Global Competitiveness Report</i>
Interest rate spread	The lending rate minus deposit rate based on an average of annual rates for each country. http://data.worldbank.org/indicator/FR.INR.LNDP	World Bank Open Data
Legal rights index	The degree to which collateral and bankruptcy laws facilitate lending. Higher scores indicating that collateral and bankruptcy laws are better designed to expand access to credit. http://www.doingbusiness.org/data/exploretopics/getting-credit	World Bank, <i>Doing Business</i>

Table B.1. **Indicators of entrepreneurial determinants and data sources (cont.)**

Category of determinants	Definition	Data sources
Share of SME loans in total business loans	Specific definitions are implemented by the countries covered in the Scoreboard. http://www.oecd.org/cfe/smes/financing-smes-and-entrepreneurs-23065265.htm	<i>OECD Financing SMEs and Entrepreneurs: An OECD Scoreboard</i>
Interest rate spread between average SME and large firm rate	Specific definitions are implemented by the countries covered in the Scoreboard. http://www.oecd.org/cfe/smes/financing-smes-and-entrepreneurs-23065265.htm	<i>OECD Financing SMEs and Entrepreneurs: An OECD Scoreboard</i>
Access to venture capital		
Venture capital availability	Survey responses to: how easy it is for entrepreneurs with innovative but risky projects to find venture capital in your country (1 = extremely difficult, 7 = extremely easy). http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/	World Economic Forum, <i>Global Competitiveness Report</i>
Venture capital	Private equity investments	<i>OECD Entrepreneurship Finance Database</i>
Stock markets		
Capitalisation of primary stock market	The capitalisation of the primary stock market (the value of the issued shares on the market) relative to GDP. http://www.world-exchanges.org/home/index.php/statistics/ipo-database	World Federation of Exchanges
Capitalisation of secondary stock	An assessment of the efficiency of stock markets providing finance to companies. Ranking market goes from 1 (worst) to 10 (best). http://www.imd.org/wcc	IMD, <i>World Competitiveness Yearbook</i>
Investor protection	The main indicators include: transparency of transactions (Extent of Disclosure Index), liability for self-dealing (Extent of Director Liability Index), shareholders' ability to sue officers and directors for misconduct (Ease of Shareholder Suits Index), strength of Investor Protection Index (the average of the three index). http://www.doingbusiness.org/data/exploretopics/protecting-minority-investors	World Bank, <i>Doing Business</i>
Market capitalisation of newly listed companies	The market capitalization (total number of new shares issued multiplied by their value on the first day of quotation) of newly listed domestic shares relative to GDP. http://www.world-exchanges.org/home/index.php/statistics/ipo-database	World Federation of Exchanges
4. CREATION AND DIFFUSION OF KNOWLEDGE		
R&D activity		
Business expenditure on R&D BERD	Business enterprise expenditure on R&D (BERD) at current prices and PPPs. http://dx.doi.org/10.1787/msti-v2015-2-table23-en	OECD, <i>Main Science and Technology Indicators</i>
Gross domestic expenditure on R&D GERD	Gross domestic expenditures on R&D covers total intramural expenditure performed on the national territory during a given period. http://dx.doi.org/10.1787/msti-v2015-2-table12-en	OECD, <i>Main Science and Technology Indicators</i>
Higher education expenditure on R&D HERD	Higher education expenditure on R&D (HERD) at 2010 prices and PPPs. http://dx.doi.org/10.1787/msti-v2015-2-table45-en	OECD, <i>Main Science and Technology Indicators</i>
International co-operation between patent applications at PCT	The indicator measures international co-operation between patent applications under the Patent Cooperation Treaty (PCT). The measure is calculated as a percentage of total patents (by application date). http://dx.doi.org/10.1787/data-00507-en	<i>OECD Patent Statistics</i>
Patents awarded	Number of patents awarded to inventors based on their residence. The indicator is a sum of patents awarded by the European Patent Office (EPO) and US Patent and Trademark Office (USPTO). http://dx.doi.org/10.1787/data-00507-en	<i>OECD Patent Statistics</i>
Transfer of non-commercial knowledge		
Research in higher education sector financed by business	R&D expenditure performed at higher education and funded by business, measured in 2010 US dollars, constant prices and PPPs. http://dx.doi.org/10.1787/data-00189-en	OECD <i>Science and Technology Statistics</i>
Patents filed by universities and public labs	Patents filed by universities and public labs per GDP. Only countries having filed at least 250 patents over the period are included. http://dx.doi.org/10.1787/139a90c6-en	OECD Science, Technology and Industry Outlook
Universities or other Public Research Organizations as source of information	The share of innovative enterprises that states universities or other PROs as an important source of information for product and process innovation.	(National) Innovation Surveys
University / Industry collaboration on R&D	Survey responses to: the level of collaboration between business and universities in R&D (1 for non-existent collaboration to 7 for extensive collaboration). http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/	World Economic Forum, <i>Global Competitiveness Report</i>
Co-operation among firms		
SMEs co-operating with other firms for innovation	Share of innovative SMEs stating any type co-operation as the source of innovation.	(National) Innovation Surveys

Table B.1. **Indicators of entrepreneurial determinants and data sources (cont.)**

Category of determinants	Definition	Data sources
Technology availability and take-up		
Turnover from e-Commerce	Total internet sales over the last calendar year, excluding VAT, as a percentage of total turnover. http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tin00110&plugin=1	Eurostat, <i>Information Society Statistics</i>
Enterprises Using e-Government	The share of enterprises using any eGovernment services. The measure is based on all firms with 10 employees or more, excluding the financial sector. http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tin00107&plugin=1	Eurostat, <i>Information Society Statistics</i>
ICT expenditure	Expenditure for ICT equipment, software and services as a percentage of GDP. http://ec.europa.eu/eurostat/product?code=isoc_tc_ite&language=en&mode=view	European Information Technology Observatory (EITO)
ICT expenditure in Communications	Expenditure for telecommunications equipment and carrier services as a percentage of GDP. http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=isoc_tc_ite&lang=en	European Information Technology Observatory (EITO)
5. ENTREPRENEURIAL CAPABILITIES		
Entrepreneurship education		
Population with tertiary education	The share of persons between 25-34 of age with tertiary education including doctoral education or equivalent. http://dx.doi.org/10.1787/eag-2015-table8-en	OECD <i>Education at a Glance</i>
Quality of Management Schools	Survey responses to: the quality of business schools across countries is (1 = extremely poor — among the worst in the world; 7 = excellent—among the best in the world). http://reports.weforum.org/global-competitiveness-report-2015-2016/competitiveness-rankings/	World Economic Forum, <i>Global Competitiveness Report</i>
Training in starting a business	The percentage of the population aged 18-64 that received training in starting a business during school or after school. <i>A Global Perspective on Entrepreneurship Education and Training (2008)</i> . http://www.gemconsortium.org/report	Global Entrepreneurship Monitor (GEM)
Immigration		
Migrants with tertiary education	The share of highly skilled migrants as a percentage of total migrants. http://www.oecd.org/els/mig/databaseonimmigrantsinoecdcountriesdioc.htm	Database on immigrants in OECD countries (DIOC)
6. ENTREPRENEURSHIP CULTURE		
High status successful entrepreneurship	Percentage of 18-64 population who agree with the statement that in their country, successful entrepreneurs receive high status. http://www.gemconsortium.org/	Global Entrepreneurship Monitor (GEM)
Entrepreneurial intention	The percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who intend to start a business within three years. http://www.gemconsortium.org/	Global Entrepreneurship Monitor (GEM)
Desirability of becoming self-employed	Survey responses to: desire to become self-employed within the next 5 years. This question is asked only to non-self-employed individuals. http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf	European Commission, Flash Eurobarometer
Opinion about entrepreneurs	Survey responses to: overall opinion about entrepreneurs (self-employed, business owners). They are ranked against managers in large companies and professions. http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf	European Commission, Flash Eurobarometer
Fear of failure	Percentage of 18-64 population who perceives good opportunities but who indicates that fear of failure would prevent them from setting up a business. http://www.gemconsortium.org/	Global Entrepreneurship Monitor (GEM)
Risk for business failure	Survey responses to: being willing to start a business if a risk exists that it might fail. http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf	European Commission, Flash Eurobarometer
Second chance for entrepreneurs	Survey responses to: people who have started their own business and have failed should be given a second chance. http://ec.europa.eu/public_opinion/flash/fl_354_en.pdf	European Commission, Flash Eurobarometer



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