

Methodology Report

Data Platform





Data Platform: Methodology Report

Key considerations that informed the methodological choices made in selecting indicators, defining dimensions, and categorizing data throughout the development of ESNA's Data Platform

© Europe Startup Nations Alliance (ESNA)

March 2026

All rights reserved.

All questions related to rights and licensing should be addressed to admin@esnalliance.eu.

For further information on ESNA's activities, please visit our website www.esnalliance.eu/en

Published by the Europe Startup Nations Alliance, Associação.

Europe Startup Nations Alliance

Avenida da República, 79A

1069-218 Lisboa, Portugal

This is a publication by the Data & Economic Intelligence Unit.

About ESNA

Founded as a direct result of the EU Startup Nations Standard of Excellence Ministerial Declaration in March 2021, ESNA is committed to transforming Europe's startup landscape by fostering a robust, interconnected, and competitive entrepreneurial environment within Europe, that drives innovation and economic prosperity across the continent.

About the Data & Economic Intelligence Unit

The **Data & Economic Intelligence Unit** drives ESNA's mission by collecting, analysing, and translating data into actionable knowledge that informs policy and strategic decisions. Through comprehensive research on startup ecosystems, macroeconomic trends, and investment flows, the department provides evidence-based insights that strengthen Europe's competitive position in the global entrepreneurial landscape.

Disclaimers

Views and opinions expressed in this document do not necessarily reflect the position of the European Union regarding each topic covered in this report.

This publication was developed with the assistance of Artificial Intelligence (AI) tools for drafting and language refinement. All AI-generated content was reviewed, edited, and validated by the ESNA team. ESNA assumes full responsibility for the final content of this publication.

The methodology and related data processing infrastructure described in this report are subject to continuous development. As a result, minor technical adjustments to software and data pipelines may occur prior to the formal publication of release notes or updated versions of this document. For further information or questions, please contact data@esnalliance.eu



Table of Contents

1. INTRODUCTORY NOTE	4
2. DATA SOURCES AND INDICATOR SELECTION FRAMEWORK	4
3. ECOSYSTEM DATA, INDICATORS AND DASHBOARDS	5
3.1. Definitions	5
3.2. Primary Data Selection and Data Matching Process	9
3.3. Data Harmonisation	10
3.4. Handling missing values	12
3.5. Distinct Category Breakdowns and Mappings	15
4. MACROECONOMIC DATA AND INDICATORS	15
5. CLOSING REMARKS	18
A. ANNEXES	19
A1. Sector Type Mappings	19
A2. Technologies Type Mappings	28
A3. Investor Type Mappings	31
A4. Investment Type Mappings	34
A5. Round Type Mappings	36
A6. Exit Type Mappings	38
A6. World Bank Macroeconomic Indicators	39
A8. World Bank Missing Values by Country and Year	44

Figures

Figure 1: Data Sources Identification Methodology	5
Figure 2: Startup Definition Schema.....	6
Figure 3: Company entities matching process.....	10

Tables

Table 1: Crunchbase Employee Headcount Ranges to ESNA Data Platform	11
Table 2: Crunchbase Employee Revenue Ranges to ESNA Data Platform.....	12
Table 3: Hypothetical Scenario for Company “X” Yearly Headcount from Founded Year (2018) to Current Calendar Year (2025)	13
Table 4: Hypothetical Scenario for Company “X” Yearly Valuation from Founded Year (2018) to Current Calendar Year (2025)	14
Table 5: World Bank Macroeconomic Indicators	43
Table 6: Missing Values - Central Government Debt, Total (% of GDP) - GC.DOD.TOTL.GD.ZS..	46
Table 7: Missing Values - Commercial Service Exports (current US\$) - TX.VAL.SERV.CD.WT	47
Table 8: Missing Values - Commercial Service Imports (current US\$) - TM.VAL.SERV.CD.WT	48
Table 9: Missing Values - Current Account Balance (BoP, current US\$) - BN.CAB.XOKA.CD	49

Table 10: Missing Values - Employment to Population Ratio, 15+, total (%) (modelled ILO estimate)- SL.EMP.TOTL.SP.ZS.....	50
Table 11: Missing Values - Foreign Direct Investment, Net (BoP, Current US\$) - BN.KLT.DINV.CD.....	51
Table 12: Missing Values - Foreign Direct Investment, Net Inflows (% of GDP) - BX.KLT.DINV.WD.GD.ZS.....	52
Table 13: Missing Values - GDP (constant 2015) - NY.GDP.MKTP.ZG.....	53
Table 14: Missing Values - GDP (Current US\$) - NY.GDP.MKTP.CD.....	54
Table 15: Missing Values - GDP growth (annual %) - NY.GDP.MKTP.ZG.....	55
Table 16: Missing Values - GDP per Person Employed (Constant 2021 PPP \$) - SL.GDP.PCAP.EM.KD.....	57
Table 17: Missing Values - General Government Final Consumption Expenditure (% of GDP) - NE.CON.GOV.T.ZS.....	59
Table 18: Missing Values - Gross Capital Formation (% of GDP) - NE.GDI.TOTL.ZS.....	60
Table 19: Missing Values - Inflation, Consumer Prices (Annual %) - FP.CPI.TOTL.ZG.....	61
Table 20: Missing Values - Labor Force Participation Rate, Total (% of Total Population Ages 15+) (modelled ILO estimate) - SL.TLF.CACT.ZS.....	62
Table 21: Missing Values - Lending Interest Rate (%) - FR.INR.LEND.....	64
Table 22: Missing Values - Population, Total - SP.POP.TOTL.....	65
Table 23: Missing Values - Real Interest Rate (%) - FR.INR.RINR.....	67
Table 24: Missing Values - Research and Development Expenditure (% of GDP) - GB.XPD.RSDV.GD.ZS.....	70
Table 25: Missing Values - Tax Revenue (% of GDP) -GC.TAX.TOTL.GD.ZS.....	73
Table 26: Missing Values - Taxes on Income, Profits and Capital Gains (% of Revenue) - GC.TAX.YPKG.RV.ZS.....	76
Table 27: Missing Values - Unemployment, Total (% of Total Labor Force) (modelled ILO estimate) - SL.UEM.TOTL.ZS.....	78
Table 28: Missing Values – Commercial Account Balance (current US\$) - Calculated by ESNA.....	79

1. Introductory Note

As part of its mission, ESNA has launched a digital Data Platform that provides insights into the startup ecosystem. The platform supports the signatory countries of [The EU Startup Nations Standard of Excellence Ministerial Declaration](#) by improving access to relevant information, systematizing key metrics and performance indicators to enhance understanding of the ecosystem, and promoting knowledge sharing and information exchange among EU Member States.

This document presents the key considerations that informed the methodological choices made in selecting indicators, defining dimensions, and categorizing data throughout the development of ESNA's Data Platform.

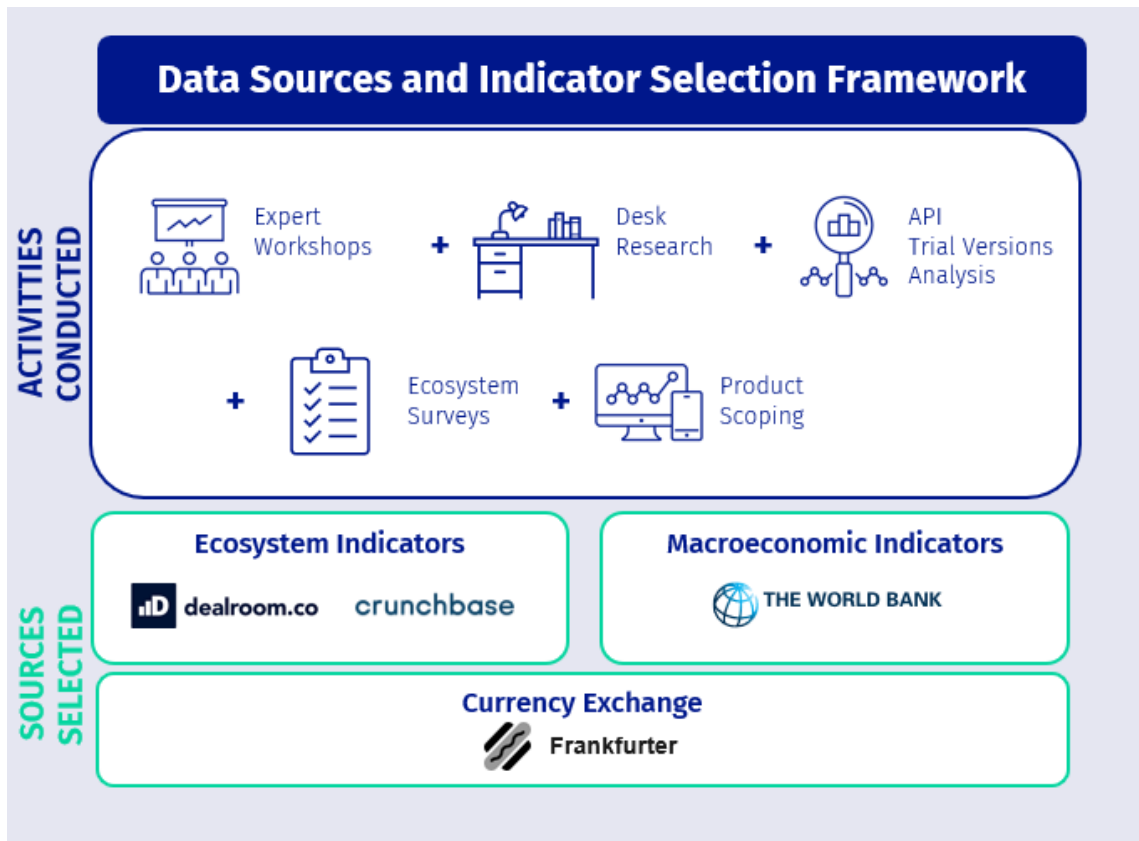
2. Data Sources and Indicator Selection Framework

The methodology adopted for the ESNA Data Platform was designed to offer a reliable and comparable framework for assessing the development and current state of national entrepreneurial ecosystems. Its ultimate goal is to support policymakers in designing and implementing effective national strategies that enhance performance and contribute to positioning Europe as a global leader in innovation.

To this end, ESNA conducted workshops with its members and Advisory Board, supported by desk research, Application Programming Interface (“API”) trial-versions analysis, ecosystem surveys, and product scoping, to identify the most suitable data sources in terms of completeness, relevance and geographical coverage, the most meaningful ecosystem and macroeconomic indicators, and the key challenges to be addressed - such as aligning definitions (e.g., startup definition) and standardizing data mapping across sectors, industries, investor types, and other classifications.

As a result of this exercise, the data sources currently selected to feed the Data Platform are [Dealroom](#) and [Crunchbase](#) for ecosystem-related data, and the [World Bank](#) for macroeconomic indicators. Data ingestion is carried out via their APIs, after which the data is cleaned, transformed, and integrated – guided by the insights and feedback gathered during the activities outlined above, with further details presented in the chapters that follow. Given the international scope of the data, a currency conversion API was also required to ensure consistent financial comparisons across countries. For this purpose, the [Frankfurter](#) API was selected due to its reliability, open access, and daily exchange rate updates. Source: ESNA Analysis (2026)

Figure 1 illustrates the dynamics of this exercise.



Source: ESNA Analysis (2026)

Figure 1: Data Sources Identification Methodology

3. Ecosystem Data, Indicators and Dashboards

Based on the prior research activities - workshops, surveys, and desk research - a set of key indicators was identified to support evidence-based policymaking in the European startup ecosystem. These indicators (non-exhaustive) include the number of startups and other company types, the year-on-year evolution of core business metrics such as revenue, valuation, and employee count, as well as investment-related data, including the number and types of investors, investment size, funding rounds, sectors, and countries of operation. Additionally, the analysis underscored the importance of tracking ecosystem enablers, such as the number of incubators, accelerators, and other support organizations that play a critical role in fostering startup growth and innovation.

3.1. Definitions

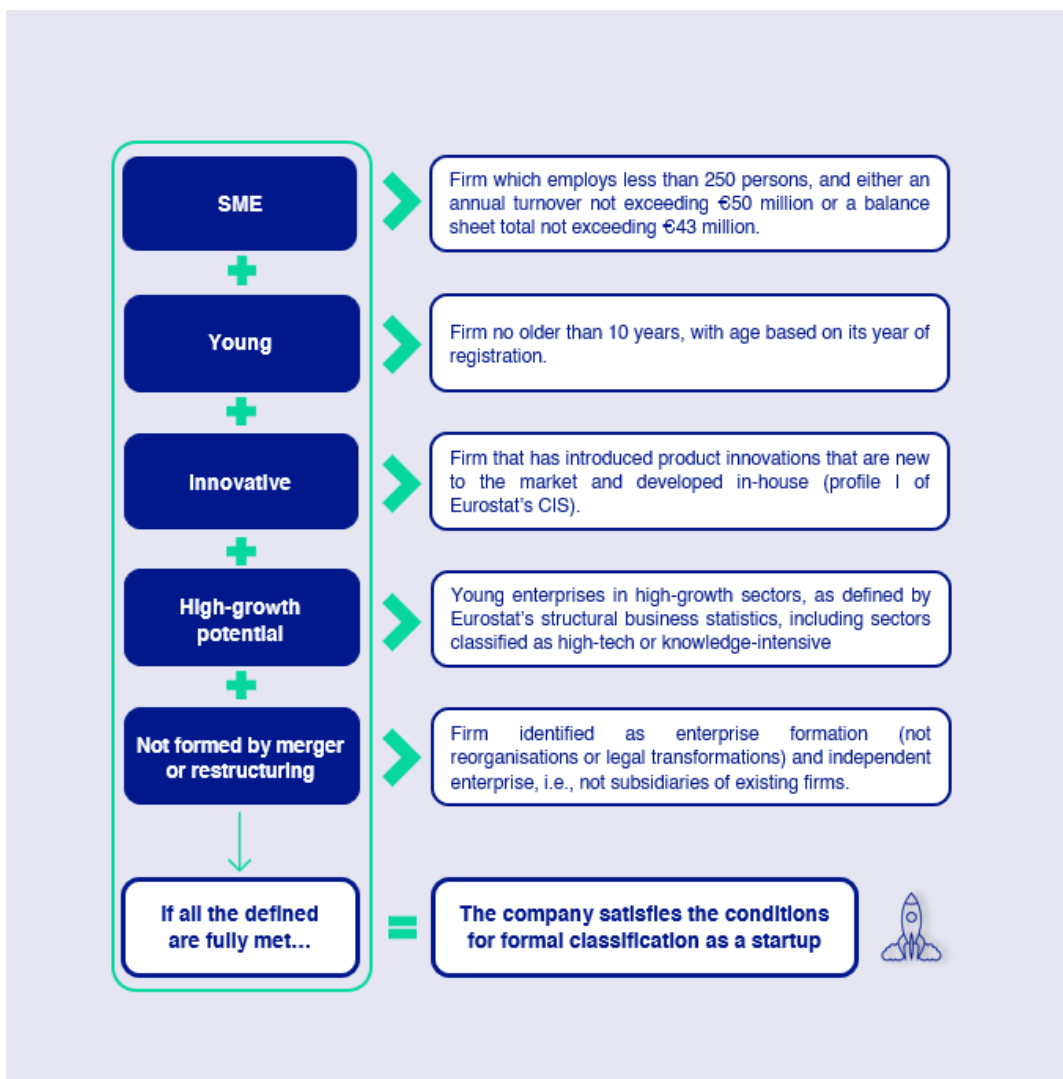
To ensure that ecosystem indicators could be accurately measured and compared, it became essential to establish clear definitions for the various company types represented in the ecosystem. Without a shared understanding of what distinguishes, for example, a startup from a scaleup or an SME, the integrity and comparability of the data would be compromised.

Startup

From the outset, a significant challenge emerged: establishing a clear and consistent definition of what constitutes a startup. To address this, ESNA undertook comprehensive research, further detailed in the [EU Startup Ecosystem - Framework for Startup Definition for Policymaking Report](#). One of the outcomes of this effort was the formulation of a framework for a standardized Startup Definition to be applied across the Data Platform, ensuring consistency and comparability of the data. The adopted definition is presented below, with Source: ESNA Analysis (2026)

Figure 2 offering a comprehensive illustration of its key components and underlying criteria:

“A startup is a Small or Medium-sized Enterprise (SME) that is young, innovative, and with high growth potential, not created through a merger, spin-off, or corporate restructuring.”



Source: ESNA Analysis (2026)

Figure 2: Startup Definition Schema

¹ Source: EU Startup Ecosystem - Framework for Startup definition for policymaking (ESNA, 2025)



The core quantitative variables used to structure and analyse company profiles are founding year, employee count, revenue, and investment type which enable consistent segmentation and meaningful comparisons across the dataset. Regarding the qualitative aspects of innovation and high-growth potential, it is assumed that all company profiles included in Dealroom and Crunchbase meet the necessary criteria, given that conventional businesses do not include their databases.

For the purposes of the Data Platform, this startup definition takes on a slightly broader scope. In this context, we acknowledge as startups those companies that have fewer than 250 employees or generate less than EUR 50 million in annual revenue. This inclusive approach was adopted to better align with reported figures from other trusted ecosystem stakeholders and ensure comparability across different sources. ESNA remains committed to further refining this definition and to curating the dataset by incorporating additional data points and expanding the range of data sources over time.

It was observed during the construction of the dataset that not applying a founding-year threshold substantially expanded the data universe to include a large number of companies that, despite meeting the quantitative criteria, are not generally perceived as startups. More importantly, this approach resulted in the inclusion of companies classified as unicorns that are not typically considered part of the startup ecosystem. A notable example is Louis Vuitton, founded in 1854, which—while highly innovative and meeting the established criteria—would appear in the dataset as a French unicorn. Although Louis Vuitton clearly satisfies the technical parameters used in the classification, there is broad consensus that it should not be considered a startup or startup-origin unicorn. To mitigate such cases and better reflect the contemporary startup landscape, a temporal boundary was introduced. Consequently, the definition was further refined to include only companies founded in 1990 or later, a period widely recognized as marking the acceleration and consolidation of the modern startup ecosystem.

Therefore, for the purposes of the ESNA Data Platform and to ensure consistency, comparability, and conceptual alignment with the modern startup ecosystem, a startup is operationally defined as an innovative, privately held company that is ten years old or younger and either has an annual headcount of no more than 250 employees or annual revenue not exceeding €50 million. Companies founded prior to 1990 are excluded. The company must not have been created through a merger or restructuring process.

Scaleup

A similar research effort was undertaken to define scaleups, aiming to distinguish them from startups and other SMEs within the ecosystem. However, despite extensive analysis and consultation, the findings did not yield a definition with sufficient clarity and consensus to support reliable implementation. As a result, and given the complexity of the topic, ESNA has not yet integrated a standardized Scaleup Definition into the Data Platform. Further research and stakeholder engagement will be necessary to establish a robust classification for this company type in future updates.

Centaur

A Centaur is a company with a valuation of at least €100 million that is classified as a startup at the time it reaches that valuation, or that was classified as a Startup at any earlier point in its development. Once a company qualifies as a Centaur, it retains this



designation permanently, even if it later grows beyond the startup stage. However, a Centaur ceases to hold this status once it reaches Unicorn valuation.

Unicorn

A Unicorn is a company with a valuation of at least €1 billion that is classified as a Startup at the time it reaches that valuation, or that was classified as a Startup at any earlier point in its development. Once a company qualifies as a unicorn, it retains this designation permanently, even if it later grows beyond the startup stage.

Innovative Company

Based on the assumption that Dealroom and Crunchbase primarily cover innovative company entities, all companies included in the ESNA database universe are considered *Innovative Companies*.

Geographic Groups

The current version covers the following 62 countries: Albania (ALB), Argentina (ARG), Armenia (ARM), Australia (AUS), Austria (AUT), Azerbaijan (AZE), Belgium (BEL), Bosnia & Herzegovina (BIH), Brazil (BRA), Bulgaria (BGR), Canada (CAN), Chile (CHL), China (CHN), Colombia (COL), Costa Rica (CRI), Croatia (HRV), Cyprus (CYP), Czechia (CZE), Denmark (DNK), Estonia (EST), Finland (FIN), France (FRA), Georgia (GEO), Germany (DEU), Greece (GRC), Hungary (HUN), Iceland (ISL), India (IND), Ireland (IRL), Israel (ISR), Italy (ITA), Japan (JPN), Kosovo (XKX), Latvia (LVA), Lithuania (LTU), Luxembourg (LUX), Malta (MLT), Mexico (MEX), Moldova (MDA), Montenegro (MNE), Netherlands (NLD), New Zealand (NZL), Nigeria (NGA), North Macedonia (MKD), Norway (NOR), Peru (PER), Poland (POL), Portugal (PRT), Romania (ROU), Serbia (SRB), Singapore (SGP), Slovakia (SVK), Slovenia (SVN), South Africa (ZAF), South Korea (KOR), Spain (ESP), Sweden (SWE), Switzerland (CHE), Turkey (TUR), Ukraine (UKR), United Kingdom (GBR), United States (USA).

The Data Platform includes filtering capabilities for the following country groups: ESNA, the European Union (EU), the Eurozone, the Schengen Area, European Free Trade Association (EFTA), European Economic Area (EEA), and the entire European continent.

ESNA encompasses all its Signatory Countries: Austria (AUT), Belgium (BEL), Bulgaria (BGR), Croatia (HRV), Cyprus (CYP), Czechia (CZE), Denmark (DNK), Estonia (EST), Finland (FIN), France (FRA), Germany (DEU), Greece (GRC), Iceland (ISL), Ireland (IRL), Italy (ITA), Latvia (LVA), Lithuania (LTU), Luxembourg (LUX), Malta (MLT), Netherlands (NLD), Poland (POL), Portugal (PRT), Romania (ROU), Slovakia (SVK), Slovenia (SVN), Spain (ESP), Sweden (SWE), and Ukraine (UKR).

According to *the Annex I – List of countries and territories* in the *Proposal for the Regulation of the European Parliament and of the Council on establishing Global Europe²*, the continent include all EU, ESNA Signatory Countries and the following countries: Albania (ALB), Armenia

² Annexes to the Proposal for a Regulation of the European Parliament and of the Council establishing Global Europe of 16.7.2025 COM(2025) 551 final: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52025PC0551&qid=1753799711782>



(ARM), Azerbaijan (AZE), Bosnia and Herzegovina (BIH), Georgia (GEO), Hungary (HUN), Kosovo (XKX), Moldova (MDA), Montenegro (MNE), North Macedonia (MKD), Norway (NOR), Serbia (SRB), Switzerland (CHE), Turkey (TUR), and United Kingdom (GBR).

Although part of the *Global Europe* framework mentioned above, microstates were removed from the analyses due to unavailability of data. These microstates are Andorra (AND), Liechtenstein (LIE), Monaco (MCO), San Marino (SMR), and Vatican City (VAT).

Additional countries and country groups may be added to the platform in the future, depending on user needs and the availability of new data sources.

3.2. Primary Data Selection and Data Matching Process

Upon obtaining data from both Dealroom and Crunchbase, a comprehensive assessment of data completeness was conducted. This evaluation focused on the year-on-year availability of key taxonomy-related indicators - such as founded year, revenue, employee count, and investment type - as well as other critical financial and operational metrics, including valuation, investment size, investor types, and company location. The analysis concluded that Dealroom offers the most comprehensive and complete dataset, making it the primary data source for the Ecosystem section of the Data Platform. To address any gaps or missing information, Dealroom data is supplemented with Crunchbase, ensuring broader coverage and enhanced overall data quality. However, Crunchbase data on company entities that do not match those found in Dealroom were not added to the dataset. This decision was taken due to the limitations inherent to Crunchbase data, which generally provide only a single point-in-time observation for most metrics. Furthermore, these observations are frequently reported as broad and imprecise ranges rather than exact values. For instance, company revenue is not disaggregated across different years of operation and is typically presented within intervals (e.g., USD 1–10 million), rather than as a precise figure (e.g., USD 5,5 million). This approach helps minimize the number of estimated values, as better described in section 3.4.

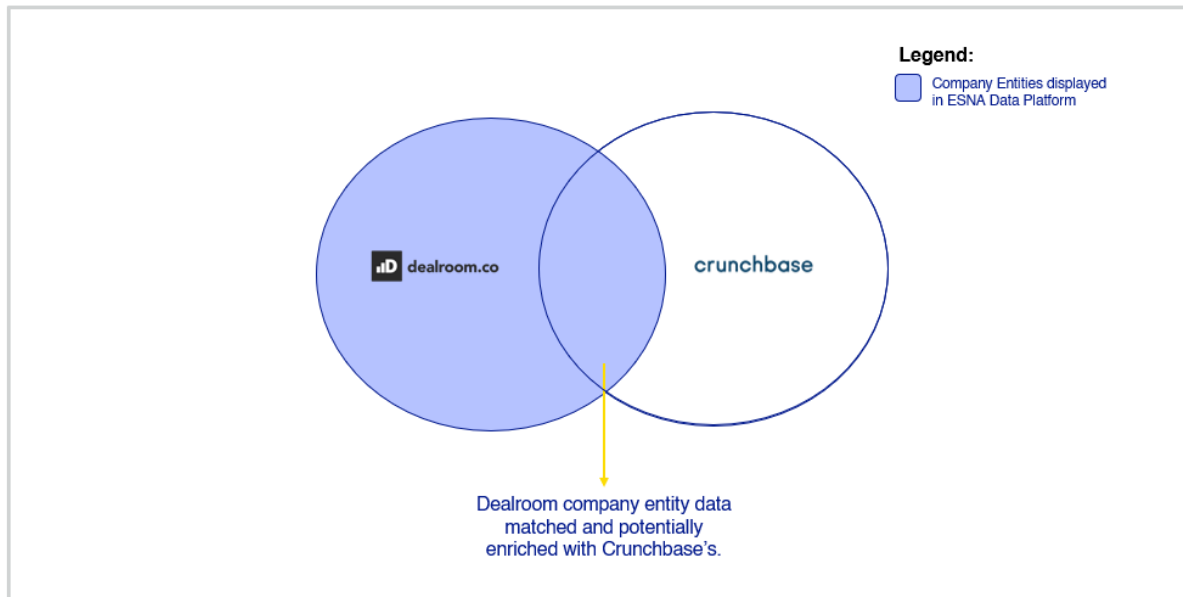
Company entities matching process

To enable the integration of complementary data sources, a structured company entity matching process is implemented to accurately identify and link corresponding company records across Dealroom and Crunchbase datasets.

This process relies on the alignment of standardized company names, combining string normalization techniques with a bespoke fuzzy-matching algorithm specifically designed to minimize duplication and enhance entity resolution accuracy. The approach accounts for variations in naming conventions, spelling inconsistencies, and formatting differences, thereby reducing the risk of fragmented or duplicated company entities across sources.

Following the matching procedure, the integrated dataset undergoes a systematic deduplication process to ensure that each company is uniquely represented. In instances where multiple records are identified for the same entity, conflicts are resolved through a predefined source hierarchy, whereby Dealroom data are prioritized. Source: ESNA Analysis (2026)

Figure 3 illustrates the join logic applied to integrate and reconcile the data.



Source: ESNA Analysis (2026)

Figure 3: Company entities matching process

Transaction entities

At this stage, ESNA relies exclusively on Dealroom data for investment transactions, using the transaction date reported by Dealroom. This approach ensures consistency across the dataset, while ESNA is actively working towards incorporating Crunchbase data through the development of a robust and harmonised set of rules aimed at minimising duplication and aligning the treatment of transaction-related features across datasets.

3.3. Data Harmonisation

In the process of enriching Dealroom's data with information from Crunchbase, we encountered structural differences that required harmonisation. Particularly in the fields of Employee Headcount and Revenue, Dealroom provides point estimates for these variables, whereas Crunchbase reports them as predefined value ranges. Employee Headcount

For employee headcount, Crunchbase uses the following brackets: *1-10*, *11-100*, *101-500*, *501-5,000*, *5,001-10,000*, and *More than 10,000*. To harmonise these with Dealroom's single-value format, ESNA mapped each range to its lower bound, assigning the values 1, 11, 101, 501, 5,011, and 10,000 respectively. This approach offers a conservative but consistent approximation that enables downstream comparison and analysis. The selected values reflect the minimum plausible figure within each category, including for open-ended intervals such as *More than 10,000*, where 10,000 was used as a reasonable proxy to ensure integration with other datasets while limiting the influence of extreme outliers. An overview of the mapping approach is presented in Table 1.

Crunchbase Employee Headcount Ranges	ESNA Data Platform
1 - 10	1
11 - 100	11
101 - 500	101
501 - 5 000	501
5 001 - 10 000	5 001
More than 10 000	10 000

Source: ESNA Analysis (2026)

Table 1: Crunchbase Employee Headcount Ranges to ESNA Data Platform

Revenue

For revenue, Crunchbase reports values using predefined ranges, namely: less than 1 million dollars (USD); USD 1 million to 10 million; USD 10 million to 50 million; USD 50 million to 100 million; USD 100 million to 500 million; USD 500 million to 1 billion; USD 1 billion to 10 billion; and more than USD 10 billion.

For analytical purposes, ESNA converts these intervals into representative point estimates, respectively: (USD) 500 thousand; USD 1 million; USD 10 million; USD 50 million; USD 100 million; USD 500 million; USD 1 billion; and USD 10 billion. Again, the lower bound of each range was used as the representative figure, applying a conservative estimation strategy to avoid inflating company size and to maintain consistency across data sources. For open-ended ranges, such as *Less than \$1M* and *More than \$10B*, values of \$500K and \$10B were assigned based on common industry heuristics and the need for comparability. Table 2 presents the mapping used to harmonise Crunchbase’s revenue brackets.

Crunchbase Revenue Ranges	ESNA Data Platform
Less than USD 1 m	USD 500 k
USD 1 m – 10 m	USD 1 m
USD 10 m – 50 m	USD 10 m
USD 50 m – 100 m	USD 50 m
USD 100 m – 500 m	USD 100 m
USD 500 m – 1 b	USD 500 m
USD 1 b – 10 b	USD 1 b
More than USD 10 b	USD 10 b

Source: ESNA Analysis (2026)

Table 2: Crunchbase Employee Revenue Ranges to ESNA Data Platform

Currency Exchange

Dealroom and Crunchbase report financial data in different currencies, reflecting their international scope. To ensure comparability and consistency across all financial values were converted to euros (EUR) based on the exchange rate corresponding to the specific date of the data point, enabling precise cross-border financial analysis over time.

For this purpose, ESNA implemented a currency exchange pipeline using the Frankfurter API, which provides historical foreign exchange rates sourced from the European Central Bank.

The Frankfurter integration is built around a custom engine that retrieves time series data from 1990 to the present, using EUR as the base currency. This system transforms raw API responses into an analysis-ready format through a multi-step pipeline: first converting JSON data into a structured Pandas Data Frame, then reshaping it into a normalized long format with clearly defined date, base currency, target currency, and exchange rate fields. Daily exchange rates were aggregated into monthly averages to balance temporal granularity and stability. The resulting harmonized exchange rate table ensures all monetary fields across the dataset are expressed in EUR, supporting accurate and consistent economic assessments across geographies.

3.4. Handling missing values

After the data harmonisation process, when key company metrics remain missing - particularly revenue, employee count, and valuation - a structured imputation strategy is applied to enhance completeness while preserving data integrity.

For revenue and employee count, the imputation process begins with forward and backward filling within each company's time series, ordered chronologically from the founding year

to the current calendar year. When a value is missing, it is first filled using the closest available data point from either the previous or following year. If values are available on both sides of the gap, the missing value is imputed as the average of the two, applying a simple and conservative interpolation. This method ensures that imputed values remain grounded in the company's actual historical context, while minimizing the risk of overfitting or introducing unrealistic assumptions about growth patterns. Table 3 illustrates a hypothetical example of this imputation process, using the employee headcount of Company X, which was founded in 2018.

	Dealroom	Crunchbase	ESNA Data Platform
2018	-	-	90
2019	90	-	90
2020	100	-	100
2021	-	-	110
2022	-	-	110
2023	120	(range 101 to 500) = 101	120*
2024	-	-	120
2025	-	-	120

LEGEND:

Green: Original Values; **Purple:** Estimated Values

NOTES:

* When both data sources provide a value for a given year, Dealroom's observation takes precedence.

Source: ESNA Analysis (2026)

Table 3: Hypothetical Scenario for Company "X" Yearly Headcount from Founded Year (2018) to Current Calendar Year (2025)

For valuation, the imputation process begins with forward and backward filling within each company's time series, ordered chronologically from the founding year to the current calendar year. If a value is missing from the founding year up to the first year with available data, a backward fill equal to zero is applied, reflecting the assumption that the company had no significant valuation prior to the earliest recorded figure. Forward fill propagates the most recent available data point to subsequent missing years.

When values are available on both sides of a missing year, the gap is imputed using the earliest available value, following a conservative approach that avoids overstating growth.

This method ensures that imputed values remain grounded in the most relevant temporal context, reducing the risk of distortion or unrealistic trends in the company’s valuation profile.

Table 4 illustrates a hypothetical example of this imputation process, using the valuation of Company X, which was founded in 2018.

	Dealroom	Crunchbase	ESNA Data Platform
2018	-	-	0
2019	90 000	-	90 000
2020	100 000	-	100 000
2021	-	-	100 000
2022	-	-	100 000
2023	150 000	170 000	150 000*
2024	-	175 000	175 000
2025	-	-	175 000

LEGEND:

Green: Original Values; **Purple:** Estimated Values

NOTES:

* When both data sources provide a value for a given year, Dealroom’s observation takes precedence.

Source: ESNA Analysis (2026)

Table 4: Hypothetical Scenario for Company “X” Yearly Valuation from Founded Year (2018) to Current Calendar Year (2025)

To maintain full transparency and analytical flexibility, the pipeline tracks the provenance of each value. When a metric is imputed, its associated source field is marked as “Filled” in the database, clearly distinguishing it from values directly sourced from Dealroom or Crunchbase.

At present, the Data Platform displays all values - filled and original—aggregated together. However, a future version of the web application may introduce a filter that enables users to isolate or exclude imputed data, allowing for more advanced and targeted analysis, providing policymakers and analysts with even greater control, depending on the precision and confidence required for specific use cases.

3.5. Distinct Category Breakdowns and Mappings

In the process of building a unified and user-friendly Data Platform, particular attention was given to standardizing the categorical dimensions that are essential for filtering, comparison, and navigation across the dataset. Among these, the ones that were given priority for the first version of the Data Platform were Sectors, Technologies, Investor, Investment, Round and Exit types.

These fields originate from both data sources each with their own taxonomy, naming conventions, and classification logic. As a result, a significant normalization effort was required to ensure consistency across the platform.

The original taxonomies contained highly granular and sometimes overlapping categories, which, while useful for certain analytical purposes, posed challenges for user interface design and user experience (UI/UX). Since these fields are meant to function as interactive filters within the Data Platform, it was essential to strike a balance between preserving analytical value and offering a clear, intuitive set of options for users.

To address this, categories were consolidated and harmonized into simplified, standardized groupings based on exploratory data analysis of the categories' observations distribution. Detailed information on these mappings is provided in Annexes A1. Sector Type Mappings, A2. Technologies Type Mappings, A3. Investor Type Mappings, A4. Investment Type Mappings, A5. Round Type Mappings, and A6. Exit Type Mappings.

4. Macroeconomic Data and Indicators

To provide a robust contextual layer for analyzing the startup ecosystem, macroeconomic data was integrated into the platform. After evaluating several potential sources - including OECD, Eurostat, and the IMF - the World Bank was selected as the primary data source. This decision was based on its broader country coverage, consistent methodological standards, and longer historical time span, which together ensure greater data completeness and comparability across geographies and time periods.

World Bank's open data platform provides reliable, regularly updated indicators that are essential for understanding the wider economic environment in which startups operate. These indicators offer valuable insights for cross-country benchmarking, time-series trend analyses, and correlations with startup ecosystem dynamics.

The Data Platform ingests a total of 22 distinct macroeconomic indicators, including:

1. Central Government Debt, Total (% of GDP)
2. Commercial Service Exports (current US\$)
3. Commercial Service Imports (current US\$)
4. Current Account Balance (BoP, current US\$)
5. Employment to Population Ratio, 15+, Total (%)
6. Foreign Direct Investment, Net (BoP, current US\$)
7. Foreign Direct Investment, Net Inflows (% of GDP)



8. GDP (constant 2015)
9. GDP (current US\$)
10. GDP Growth (%)
11. GDP per Person Employed (constant 2021 PPP \$)
12. General Government Final Consumption Expenditure (% of GDP)
13. Gross Capital Formation (% of GDP)
14. Inflation, Consumer Prices (annual %)
15. Labor Force Participation Rate, Total (% of population ages 15+)
16. Lending Interest Rate (%)
17. Population, Total
18. Real Interest Rate (%)
19. Research and Development Expenditure (% of GDP)
20. Tax Revenue (% of GDP)
21. Taxes on Income, Profits, and Capital Gains (% of revenue)
22. Unemployment, Total (% of total labor force)

Additionally, from the Commercial Service Exports and Commercial Service Imports data, ESNA calculates one derived indicator:

23. Commercial Account Balance

For the European Union (EU) and the Eurozone, the system relies on pre-existing group-level indicators retrieved directly from the World Bank API, rather than recomputing these aggregates internally. In contrast, for other geopolitical groupings—the EEA, EFTA, ESNA, and the Schengen Area—the World Bank API does not provide native group-level statistics. Consequently, for these groups the data pipeline derives group-level values from country-level data. Absolute indicators are aggregated using summation, whereas rate-based indicators are computed using simple averages.

Missing values are not artificially imputed. When an indicator cannot be calculated due to insufficient country coverage, it is displayed as N/A. Future iterations of the Data Platform will incorporate additional data sources to mitigate gaps and improve coverage.

All 22 macroeconomic indicators complete names, source reference codes, and definitions are provided in Annex A6. World Bank Macroeconomic Indicators, and the discrimination of missing values by country and year is provided in Annex A8. World Bank Missing Values by Country and Year All monetary values originally in US dollars are converted to euros, as detailed in the Currency Exchange section of Subchapter 3.3. Data Harmonisation.

In future product developments, macroeconomic data will also be ingested at the sector level, where available and relevant, to facilitate more granular analyses and enable sector-specific correlations with startup activity and performance. This enhancement will require



reconciling sector classification systems - such as NACE or others - with ESNA's own evolving sector taxonomy, ensuring compatibility and coherence across datasets and analytical layers.

In addition, new macroeconomic indicators may be incorporated based on user feedback and evolving analytical needs. More targeted analyses and expanded data combinations are also planned, with the goal of strengthening the platform's value.

5. Closing Remarks

Looking ahead, future versions of the ESNA Data Platform will focus on strengthening its analytical capabilities, notably through the development of a robust and harmonised set of rules to enable the integration of transaction-level data from Crunchbase alongside Dealroom, while minimising duplication and ensuring consistency across sources. In parallel, ESNA will continue to integrate additional data sources, expand the range of indicators, and develop new dashboards covering broader and more strategic topics relevant to the startup ecosystem.

This expansion will aim to enhance data completeness through the integration of more granular country-level data - particularly from National Business Registries and National Statistics Offices - as well as enriched macroeconomic data from international institutions such as the OECD, IMF, and Eurostat.

In parallel, the inclusion of additional countries and regional groupings will be considered in alignment with evolving user needs and the integration of new data availability.

As part of its commitment to aligning with European policy directions, ESNA also plans to integrate a clear and consistent definition of scaleups, following the European Commission's guidance and ongoing work in this area. Recognizing the importance of high-growth companies in driving innovation, job creation, and competitiveness, the platform will adopt a scaleup taxonomy that reflects quantitative thresholds - such as revenue or employment growth over a specific time - as well as qualitative elements that indicate international ambition and innovation potential. This definition, along with potential further alignments on startup definitions in line with ongoing EU work, will be applied systematically across datasets to allow for better identification, tracking, and policy-making support.

Upcoming product iterations aim also to introduce macroeconomic data at the sector level, where such data is available and relevant. This will enable more granular analyses and support stronger correlations between sector-specific economic conditions and ecosystem dynamics. To enable this, a reconciliation effort will be necessary to align existing sector classification systems - such as NACE or others - with ESNA's own evolving sectoral classification. Furthermore, additional macroeconomic indicators may be integrated in response to user feedback and emerging analytical priorities. These enhancements will be accompanied by more focused analytical approaches and enriched data combinations; all aimed at increasing the platform's relevance and value.

Together, these future enhancements will significantly strengthen the ESNA Data Platform role as a reliable and policy-relevant tool for monitoring, analyzing, and supporting startup ecosystems in Europe.

A. Annexes

A1. Sector Type Mappings

Dealroom's database includes 47 distinct industry types and 78 subindustries. In comparison, Crunchbase provides 48 industry subtypes and 802 subindustries. Across both data sources, only 6 industry types and 21 subindustries share the same name. Some of these categories are used to determine both sectors and/or technologies in the ESNA Data Platform. Moreover, a given company entity can have multiple sector and industry types associated with it, reflecting the multi-dimensional nature of many businesses. The ESNA Data Platform also follows this approach, allowing companies to be classified under more than one sector or industry category when relevant.

In addition to formal industry and subindustry classifications, Dealroom provides a system of "tags", which constitute a more flexible and less standardized layer of categorisation. These tags - of which more than one thousand distinct labels exist - are assigned based on a broad range of attributes and thematic associations and are used to capture specific characteristics or emerging domains that may not be fully reflected in the core industry taxonomy. Within the ESNA methodology, these tags are selectively leveraged to support the identification and refinement of sector and/or technology classifications where appropriate. When used, tags are explicitly indicated in the breakdown presented below; where no tag is referenced, classification relies solely on the primary industry and subindustry mappings.

To ensure consistency, ESNA developed a consolidated classification consisting of 27 distinct industry/sector categories: Agriculture and Farming, Commerce & Shopping, Data & Analytics, Defence, Education, Energy & Natural Resources, FinTech, Food & Beverages, Government, GreenTech, Health, HR & Recruitment, Information Technology, Legal & Insurances, Media & Entertainment, Others, Real Estate & Construction, Robotics & Manufacturing, Science & Engineering, Security & Safety, Services, Software, Space, Telecommunication, Tourism, Transportation & Logistics, Wellness & Lifestyle. The mapping methodology used to harmonize the two data sources into these categories is detailed below.

1. Agriculture & Farming

Dealroom's Distinct Values: NA

Crunchbase's Distinct Values: Agriculture, Agriculture and Farming, AgTech, Animal Feed, Aquaculture, Farming, Forestry, Horticulture, Hydroponics, Livestock, Meat and Poultry

2. Commerce & Shopping

Dealroom's Distinct Values: Accessories, Apparel, Ecommerce Solutions, Fashion, Footwear, In-Store Retail & Restaurant Tech, Luxury, Retail

Crunchbase's Distinct Values: Apparel, Auctions, Cleaning Products, Clothing and Apparel, Collectibles, Commerce and Shopping, Confectionery, E-Commerce, E-Commerce Platforms, Eyewear, Farmers Market, Fashion, Flash Sale, Franchise,

Furniture, Green Consumer Goods, Grocery, Group Buying, Handmade, Jewelry, Lingerie, Local Shopping, Marketplace, Office Supplies, Online Auctions, Retail, Retail Technology, Secondhand Goods, Shoes, Shopping, Shopping Mall, Social Shopping, Sporting Goods, Textiles, Toys, Wearables, Wholesale

3. Data & Analytics

Dealroom's Distinct Values: Marketing Analytics

Crunchbase's Distinct Values: A/B Testing, Analytics, Big Data, Business Intelligence, Cloud Data Services, Data and Analytics, Data Center, Data Center Automation, Data Collection and Labeling, Data Governance, Data Integration, Data Management, Data Mining, Data Storage, Data Visualization, Database, Digital Marketing, Prediction Markets, Predictive Analytics, Quantified Self, SEO, Text Analytics

4. Defence

Dealroom's Distinct Values: N/A

Dealroom's Distinct Values (tags): Biodefense, Defence, Defence Applications, Explosives Detection, Military, Military Deployment, NIF Autonomy, NIF Defense Security and Resilience

Crunchbase's Distinct Values: CivicTech, Government and Military, GovTech, Homeland Security, Military, National Security

5. Education

Dealroom's Distinct Values: Education, Education Management, Education Providers, Learning Tools and Resources

Dealroom's Distinct Values (tags): Space Tech for Education

Crunchbase's Distinct Values: Alumni, Books, Charter Schools, Continuing Education, EBooks, EdTech, Education, Edutainment, E-Learning, Higher Education, Language Learning, MOOC, Music Education, Primary Education, Secondary Education, Special Education, STEM Education, Textbook, Training, Tutoring, Universities, Vocational Education

6. Energy & Natural Resources

Dealroom's Distinct Values: Energy, Energy Providers, Oil & Gas, Water

Crunchbase's Distinct Values: Electrical Distribution, Energy, Oil and Gas, Power Grid, Biofuel, Biomass Energy, Chemical, Chemical Engineering, Fossil Fuels, Fuel, Fuel Cell, Geothermal Energy, Hydroelectric, Mineral, Mining Technology, Nuclear, Precious Metals, Timber, Water Transportation, Wood Processing

7. FinTech

Dealroom's Distinct Values: Banking, Financial Management Solutions, Fintech, Insurance, Insurance, Payments, Wealth Management

Crunchbase's Distinct Values: Angel Investment, Crowdfunding, Cryptocurrency, Decentralized Finance (DeFi), Financial Services, Hedge Funds, Impact Investing, Lending, Micro Lending, Mobile Payments, Payments, Payments, Stock Exchanges, Trading Platform, Transaction Processing, Venture Capital

8. Food & Beverages

Dealroom's Distinct Values: FMCG, Food, Innovative Food, Kitchen & Cooking Tech

Crunchbase's Distinct Values: Alternative Protein, Bakery, Brewing, Catering, Coffee, Craft Beer, Dairy, Dietary Supplements, Distillery, Fast-Moving Consumer Goods, Food and Beverage, Food and Beverage, Food Delivery, Food Processing, Food Trucks, Fruit, Herbs and Spices, Nutraceutical, Nutrition, Organic, Organic Food, Plant-Based Foods, Recipes, Restaurants, Seafood, Snack Food, Tea, Tobacco, Wine And Spirits, Winery

9. Government

Dealroom's Distinct Values: NA

Crunchbase's Distinct Values: CivicTech, Government, GovTech, Homeland Security, Military, National Security, Politics, Public Transportation, Social Assistance, Government and Military

10. GreenTech

Dealroom's Distinct Values: Agritech, Clean Energy, Energy Efficiency, Energy Storage, Waste Solution

Dealroom's Distinct Values (tags): Climate Control Systems, Green Chemical

Crunchbase's Distinct Values: Carbon Capture, Clean Energy, CleanTech, Energy Efficiency, Energy Management, Energy Storage, Environmental Engineering, Green Building, GreenTech, Natural Resources, Natural Resources, Parks, Pollution Control, Recycling, Renewable Energy, Solar, Sustainability, Sustainability, Waste Management, Water, Water Purification, Wildlife Conservation, Wind Energy

11. Health

Dealroom's Distinct Values: Health, Health Platform, Healthcare, Medical Devices, Pharmaceutical

Crunchbase's Distinct Values: Addiction Treatment, Alternative Medicine, Assisted Living, Assistive Technology, Clinical Trials, Cosmetic Surgery, Dental, Diabetes, Elder Care, Elderly, Electronic Health Record (EHR), Emergency Medicine, Fertility, First Aid, Genetics, Health Care, Health Care, Health Care, Health Care, Health Diagnostics, Health Insurance, Home Health Care, Hospital, Medical, Medical Device, Mental Health, mHealth, Neuroscience, Nursing and Residential Care, Oncology, Outpatient Care, Personal Care and Hygiene, Personal Health, Pharmaceutical, Precision Medicine, Primary and Urgent Care, Psychology, Rehabilitation, Telehealth, Therapeutics

12. HR & Recruitment

Dealroom's Distinct Values: Jobs Recruitment, Recruitment

Crunchbase's Distinct Values: Career Planning, College Recruiting, Employee Benefits, Employment, Human Resources, Outsourcing, Professional Networking, Recruiting, Rental Property, Retirement, Skill Assessment, Social Recruiting, Staffing Agency, Virtual Workforce

13. Information Technology

Dealroom's Distinct Values: NA

Crunchbase's Distinct Values: Information and Communications Technology (ICT), Information Technology, Information Technology, IT Infrastructure, IT Management, Management Information Systems

14. Legal & Insurances

Dealroom's Distinct Values: Data Protection, Intellectual Property, Legal, Legal Documents Management, Legal Information, Legal Matter Management, Legal Services, RegTech, RegTech & Compliance, Self-Service and Lawyer Marketplace

Dealroom's Distinct Values (tags): Travel Insurance

Crunchbase's Distinct Values: Advice, DRM, Auto Insurance, Commercial Insurance, Compliance, Insurance, InsurTech, Intellectual Property, Law Enforcement, Legal, Legal Tech, Life Insurance, Procurement

15. Media & Entertainment

Dealroom's Distinct Values: AdTech, Betting & Gambling, Board Games, Console & PC Gaming, Content Production, Esports, Gaming, Media, Mobile Gaming, Music, Publishing, Social Media, Sport League & Club, Sport Media, Sports, Streaming

Crunchbase's Distinct Values: 3D Printing, Ad Exchange, Ad Network, Ad Retargeting, Ad Server, Ad Targeting, Advertising, Advertising Platforms, American Football, Animation, Audio, Audio Recording and Production, Audio/Visual Equipment, Audiobooks, Blogging Platforms, Broadcasting, Cause Marketing, Classifieds, Comics, Concerts, Console Games, Content, Content and Publishing, Content Creators, Content Delivery Network, Content Discovery, Content Marketing, Content Syndication, Copywriting, Creative Agency, Digital Entertainment, Digital Media, Email Marketing, Facebook, Film, Film Distribution, Film Production, Google, Graphic Design, Independent Music, In-Flight Entertainment, Internet Radio, Journalism, Local Advertising, Media and Entertainment, MMO Games, Mobile Advertising, Motion Capture, Museums and Historical Sites, Music, Music and Audio, Music Label, Music Streaming, Music Venues, Musical Instruments, Native Advertising, News, NFC, Outdoor Advertising, Performing Arts, Photo Editing, Photo Sharing, Photography, Podcast, Printing, Private Social Networking, Product Design, Public Relations, Publishing, Semantic Web, Serious Games, Soccer, Social Media, Social Media Advertising, Social Media Marketing, Social Network, Social News, Theatre, TV, TV Production, Twitter, UX Design, Video, Video Advertising, Video Conferencing, Video Editing, Video on Demand, Video Streaming, Web Design

16. Others

Dealroom's Distinct Values: Chemicals

Crunchbase's Distinct Values: Adult, Association, B2B, B2C, Cannabis, Celebrity, Charity, Collaboration, Collaborative Consumption, Consumer, Consumer Applications, Consumer Goods, Consumer Reviews, Corrections Facilities, Coupons, Credit Cards, Crowdsourcing, DIY, Emerging Markets, Enterprise, Enterprise Applications, Generation Y, Generation Z, Gift, Gift Card, Gift Exchange, Gift Registry, Humanitarian, Hunting, Incubators, LGBT, Local, Local Business, Men's, Millennials, Mining, Multi-Level Marketing, Non Profit, Other, Parking, Personal Branding, Personalization, Religion, Self-Storage, Sharing Economy, Small and Medium Businesses, Social Bookmarking, Social Entrepreneurship, Social Impact, Teenagers, Underserved Children, Women's, Young Adults

17. Real Estate & Construction

Dealroom's Distinct Values: Construction, Mortgages & Lending, Real Estate, Real Estate Services, Real Estate Software, Search, Buy & Rent

Crunchbase's Distinct Values: Architecture, Building Maintenance, Civil Engineering, Commercial Real Estate, Construction, Coworking, Facility Management, Homeless Shelter, Infrastructure, Landscaping, Mortgage, Property Development, Property Insurance, Property Management, Real Estate, Real Estate Brokerage, Real Estate Investment, Rental, Residential, Smart Building, Smart Cities

18. Robotics & Manufacturing

Dealroom's Distinct Values: Consumer Electronics, Electronics, Engineering and Manufacturing Equipment, Robotics, Semiconductors

Crunchbase's Distinct Values: Air Conditioning (HVAC), Application Specific Integrated Circuit (ASIC), Battery, Building Material, Charging Infrastructure, Computer, Consumer Electronics, Drone Management, Drones, DSP, Electronics, Flash Storage, Foundries, Google Glass, GPU, Hardware, Heating, Home Appliances, Indoor Positioning, Industrial, Industrial Engineering, Industrial Manufacturing, Laser, Machinery Manufacturing, Manufacturing, Mechanical Design, Mechanical Engineering, Mobile Devices, Nanotechnology, Network Hardware, Paper Manufacturing, Plastics and Rubber Manufacturing, PropTech, RFID, RISC, Robotic Process Automation (RPA), Robotics, Semiconductor, Smart Home, Test and Measurement, Ventilation, Warehouse Automation, Web Browsers

19. Science & Engineering

Dealroom's Distinct Values: Autonomous & Sensor Tech, Biotechnology, Technology

Crunchbase's Distinct Values: Bioinformatics, Biometrics, Biopharma, Biotechnology, Advanced Materials, Life Science, Marine Technology, Science and Engineering, Software

20. Security & Safety

Dealroom's Distinct Values: Device Security & Antivirus, Identity & Access, Public Safety, Security

Crunchbase's Distinct Values: Cloud Security, Cyber Security, Fraud Detection, Identity Management, Intrusion Detection, Network Security, Physical Security, Privacy, Privacy and Security, Public Safety, Security

21. Services

Dealroom's Distinct Values: Consulting, Digital Services, Finance, Financial Advisory, Marketing

Crunchbase's Distinct Values: Banking, Accounting, Administrative Services, Advocacy, Affiliate Marketing, Archiving Service, Asset Management, Billing, Bookkeeping and Payroll, Brand Marketing, Business Development, Business Process Automation (BPA), Business Travel, Call Center, Collection Agency, Commercial, Commercial Lending, Consulting, Consumer Lending, Consumer Research, Contact Management, Contests, Corporate Training, Courier Service, Credit, Credit Bureau, Customer Service, Debit Cards, Debt Collections, Direct Marketing, Direct Sales, Document Preparation, Electronic Design Automation (EDA), Environmental Consulting, Event Promotion, Extermination Service, Facilities Support Services, Field Support, Finance, Financial Exchanges, Financial Services, FinTech, Foreign Exchange Trading, Freelance, Freemium, Funerals, Home Services, Housekeeping Service,

Industrial Design, Information Services, Innovation Management, Internet Services, Janitorial Service, Knowledge Management, Laundry and Dry-cleaning, Lead Management, Leasing, Lending and Investments, Loyalty Programs, Made to Order, Management Consulting, Market Research, Marketing, Office Administration, Personal Finance, Point of Sale, Prepaid Cards, Presentations, Product Management, Product Research, Product Search, Professional Services, Project Management, Reputation, Risk Management, Sales, Sales and Marketing, Sales Automation, Sales Enablement, Semantic Search, Service Industry, Shipping Broker, Smart Contracts, Social Media Management, Sponsorship, Task Management, Tax Consulting, Tax Preparation, Technical Support, Tour Operator, Trade Shows, Translation Service, Vending and Concessions, Vertical Search, Virtual Assistant, Visual Search, Wealth Management

22. Software

Dealroom's Distinct Values: Cloud & Infrastructure, CRM & Sales, Crypto and DeFi, Enterprise Software, Hosting, Navigation & Mapping, Travel Analytics & Software

Crunchbase's Distinct Values: 3D Technology, Android, App Discovery, App Marketing, Application Performance Management, Apps, Artificial Intelligence (AI), Augmented Reality, Bitcoin, Blockchain, Blockchain and Cryptocurrency, Browser Extensions, Business Information Systems, CAD, Chatbot, Cloud Computing, Cloud Infrastructure, Cloud Management, Cloud Storage, CMS, Computer Vision, Consumer Software, CRM, Darknet, Design, Desktop Apps, Developer APIs, Developer Platform, Developer Tools, DevOps, Digital Signage, Document Management, Domain Registrar, Ediscovery, Embedded Software, Embedded Systems, Enterprise Resource Planning (ERP), Enterprise Software, E-Signature, Ethereum, Facial Recognition, Field-Programmable Gate Array (FPGA), File Sharing, Funding Platform, Generative AI, Human Computer Interaction, IaaS, Image Recognition, Intelligent Systems, Internet, Internet of Things, iOS, Lead Generation, Linux, Location Based Services, Machine Learning, macOS, Marketing Automation, Meeting Software, Metaverse, Mobile, Mobile Apps, Natural Language Processing, Non-Fungible Token (NFT), Online Forums, Online Portals, Open Source, Operating Systems, PaaS, Peer to Peer, Penetration Testing, Platforms, Presentation Software, Price Comparison, Private Cloud, Productivity Tools, Q&A, QR Codes, Quality Assurance, Quantum Computing, Reading Apps, Real Time, Remote Sensing, Reservations, SaaS, Scheduling, Search Engine, SEM, Sensor, Simulation, SNS, Software, Software Engineering, Spam Filtering, Speech Recognition, Subscription Service, Usability Testing, Virtual Currency, Virtual Desktop, Virtual Goods, Virtual Reality, Virtual World, Virtualization, VoIP, Web Apps, Web Development, Web Hosting, Web3, WebOS, Windows, Windows Phone, Wireless

23. Space

Dealroom's Distinct Values: Space

Dealroom's Distinct Values (tags): Geospatial Intelligence, IoT Connectivity Satellites, Nanosatellites, Satellite Applications, Satellite Imaging and Data Analytics, Space



Cybersecurity, Space Debris Removal, Space Downstream, Space Habitat, Space Situational Awareness, Space Tech for Culture and Entertainment, Space Tech for Tourism, Spacecraft Propulsion

Crunchbase's Distinct Values: Aerospace, Geospatial, Navigation, Satellite Communication, Space Travel

24. Telecommunication

Dealroom's Distinct Values: Telecom, Telecommunication

Crunchbase's Distinct Values: Communication Hardware, Communications Infrastructure, Email, ISP, Messaging, Messaging and Telecommunications, Optical Communication, SMS, Telecommunications, Unified Communications, Video Chat, Wired Telecommunications

25. Tourism

Dealroom's Distinct Values: Online Travel Agency, Travel

Dealroom's Distinct Values (tags): Coastal and Marine Tourism, Ecotourism, Ground Travel, Marine Tourism, Space Tech for Tourism, Tourism, Travel, Travel & Tourism, Travel and Expense Management, Travel Booking, Travel Guide, Travel Insurance, Travel Package Deals, Travel Packages, Travel Planning, Traveling

Crunchbase's Distinct Values: Adventure Travel, Tourism, Travel, Travel Accommodations, Travel Agency, Travel and Tourism, Vacation Rental

26. Transportation & Logistics

Dealroom's Distinct Values: Automotive, Food Logistics & Delivery, Logistics & Delivery, Maintenance, Mobility, Transportation, Vehicle Production

Crunchbase's Distinct Values: Air Transportation, Automotive, Autonomous Vehicles, Car Sharing, Delivery, Delivery Service, Electric Vehicle, Fleet Management, Freight Service, GPS, Industrial Automation, Last Mile Transportation, Limousine Service, Logistics, Mapping Services, Marine Transportation, Navigation and Mapping, Packaging Services, Ports and Harbors, Railroad, Recreational Vehicles, Ride Sharing, Same Day Delivery, Shipping, Supply Chain Management, Taxi Service, Transportation, Warehousing

27. Wellness & Lifestyle

Dealroom's Distinct Values: Accommodation, Booking & Search, Business Travel, Dating, Event Tech, Fashion, Fitness, Home Living, Kids, Online Travel Agency, Sport Platform & Application, Sport Supplements, Sporting Equipment, Travel, Wellness Beauty, Workspaces



Crunchbase's Distinct Values: Amusement Park and Arcade, Art, Baby, Baseball, Basketball, Beauty, Boating, Card and Board Games, Casino, Casual Games, Child Care, Children, Communities, Community and Lifestyle, Cooking, Cosmetics, Cricket, Cycling, Dating, Diving, Equestrian, eSports, Event Management, Events, Family, Fantasy Sports, Fitness, Flowers, Gambling, Gamification, Gaming, Golf, Guides, Hockey, Home and Garden, Home Decor, Home Improvement, Home Renovation, Hospitality, Hotel, Interior Design, Leisure, Lifestyle, Lighting, Motorsports, Nightclubs, Nightlife, Nintendo, Online Games, Outdoors, Parenting, PC Games, Personal Development, Pet, Playstation, Racing, Recreation, Resorts, Rugby, Sailing, Sex Industry, Sex Tech, Skiing, Social, Social CRM, Sports, Sports Leagues and Teams, Surfing, Swimming, Table Tennis, Tennis, Ticketing, Timeshare, Ultimate Frisbee, Veterinary, Video Games, Volley Ball, Wedding, Wellness, Xbox

A2. Technologies Type Mappings

Dealroom’s database includes 47 distinct industry types and 78 subindustries. In comparison, Crunchbase provides 48 industry subtypes and 802 subindustries. Across both data sources, only 6 industry types and 21 subindustries share the same name. Some of these categories are used to determine both sectors and/or technologies in the ESNA Data Platform. Moreover, a given company entity can have multiple sector and industry types associated with it, reflecting the multi-dimensional nature of many businesses.

Dealroom also includes a dedicated technologies field with 19 distinct categories. Similar to industry classifications, a single company can be linked to multiple technology types. The ESNA Data Platform also follows this approach, allowing companies to be classified under more than one technology category when relevant.

In addition to formal industry and subindustry classifications, Dealroom provides a system of “tags”, which constitute a more flexible and less standardized layer of categorisation. These tags - of which more than one thousand distinct labels exist - are assigned based on a broad range of attributes and thematic associations and are used to capture specific characteristics or emerging domains that may not be fully reflected in the core industry taxonomy. Within the ESNA methodology, these tags are selectively leveraged to support the identification and refinement of sector and/or technology classifications where appropriate. When used, tags are explicitly indicated in the breakdown presented below; where no tag is referenced, classification relies solely on the primary industry and subindustry mappings.

To ensure consistency, ESNA developed a consolidated classification consisting of 12 distinct technology categories: 3D Tech, AI, Autonomous Systems, Blockchain, Data Infrastructure, Deep Tech, Hardware, IoT, Mobile Apps, Nanotechnology, Quantum, XR. The mapping methodology used to harmonize the two data sources into these categories is detailed below.

1. 3D Tech

Dealroom’s Distinct Values (technologies): 3D Technology

Crunchbase’s Distinct Values (industries): 3D Printing, 3D Technology

2. AI

Dealroom’s Distinct Values (technologies): Artificial Intelligence, Deep Learning, Machine Learning, Natural Language Processing

Dealroom’s Distinct Values (tags): Unsupervised Learning Systems

Crunchbase’s Distinct Values (industries): Artificial Intelligence (AI), Chatbot, Generative AI, Machine Learning, Natural Language Processing, Speech Recognition

3. Autonomous Systems

Dealroom's Distinct Values (industries): Autonomous & Sensor Tech

Dealroom's Distinct Values (technologies): Autonomous & Sensor Tech

Crunchbase's Distinct Values (industries): Autonomous Vehicles

4. Blockchain

Dealroom's Distinct Values (industries): Crypto and DeFi

Dealroom's Distinct Values (technologies): Blockchain

Dealroom's Distinct Values (tags): Crypto Yielding, Crypto Derivatives, Crypto Banking, Crypto for Climate, Crypto Swapping

Crunchbase's Distinct Values (industries): Cryptocurrency, Decentralized Finance (DeFi), Smart Contracts, Bitcoin, Blockchain, Blockchain and Cryptocurrency, Ethereum, Non-Fungible Token (NFT), Virtual Currency, Web3

5. Data Infrastructure

Dealroom's Distinct Values (technologies): Data Infrastructure

6. Deep Tech

Dealroom's Distinct Values (technologies): Deep Tech

Dealroom's Distinct Values (tags): DT and LS

7. Hardware

Dealroom's Distinct Values (technologies): Hardware

8. IoT

Dealroom's Distinct Values (technologies): Connected Device, IoT Internet of Things

Dealroom's Distinct Values (tags): IoT Connectivity Satellites, Industrial IoT and Connectivity

Crunchbase's Distinct Values (industries): Internet of Things

9. Mobile Apps

Dealroom's Distinct Values (technologies): Mobile Apps

Crunchbase's Distinct Values (industries): App Discovery, App Marketing, Apps, Mobile, Mobile Apps, Mobile Payments, Reading Apps

10. Nanotechnology

Dealroom's Distinct Values (technologies): Nanotech

Dealroom's Distinct Values (tags): Nanosatellites, Semiconductor Lithography

Crunchbase's Distinct Values (industries): Nanotechnology

11. Quantum

Dealroom's Distinct Values (technologies): Online Quantum

Dealroom's Distinct Values (tags): Quantum Communication, Quantum Dots, Quantum Photonic Chips and Processors

Crunchbase's Distinct Values (industries): Quantum Computing

12. XR

Dealroom's Distinct Values (technologies): Augmented Reality, Computer Vision, Recognition Technology, Virtual Reality

Dealroom's Distinct Values (tags): Virtual Reality Annotation

Crunchbase's Distinct Values (industries): Augmented Reality, Computer Vision, Facial Recognition, Image Recognition, Metaverse, Virtual Assistant, Virtual Desktop, Virtual Goods, Virtual Reality, Virtual World, Virtual Workforce, Virtualization

A3. Investor Type Mappings

In terms of Investor Types and Subtypes, Dealroom provided 14 and 11 distinct values, respectively. Crunchbase, on the other hand, offered 20 distinct investor types without subtypes. Moreover, a given investor entity can have multiple investor types associated with it, reflecting their multi-dimensional nature. The ESNA Data Platform also follows this approach, allowing investors to be classified under more than one category when relevant.

ESNA harmonized these classifications into a single field containing 18 distinct values. These are: Accelerator, Angel, Corporate, Crowdfunding, Family Office, Fund of Funds, Government, Hedge Fund, Incubator, Investment Bank, Others, Pension Fund, Private Equity, Sovereign Wealth Fund, University, Undisclosed, Venture Capital.

More detailed information about the specific mappings can be found below.

1. Accelerator

Dealroom's Distinct Values: Fund – Accelerator, Investment Fund - Accelerator

Crunchbase's Distinct Values: Accelerator

2. Angel

Dealroom's Distinct Values: Fund – Advisor, Fund – Angel Fund, Investor, Investment Fund – Advisor, Investment Fund – Angel Fund

Crunchbase's Distinct Values: Angel, Angel Group

3. Corporate Venture

Dealroom's Distinct Values: Company, Corporate

Crunchbase's Distinct Values: Corporate Venture Capital, Investment Fund – Corporate Venture Fund

4. Crowdfunding

Dealroom's Distinct Values: Crowdfunding

Crunchbase's Distinct Values: NA

5. Family Office

Dealroom's Distinct Values: Fund – Family Office, Investment Fund – Family Office

Crunchbase's Distinct Values: Family Investment Office

6. Fund of Funds

Dealroom's Distinct Values: Investment Fund, Investment Fund – Fund of Funds



Crunchbase's Distinct Values: Fund of Funds

7. Government

Dealroom's Distinct Values: Government & Non-Profit, Government & Non-Profit – Government

Crunchbase's Distinct Values: Government Office

8. Hedge Fund

Dealroom's Distinct Values: NA

Crunchbase's Distinct Values: Hedge Fund

9. Incubator

Dealroom's Distinct Values: Fund – Incubator, Investment Fund - Incubator

Crunchbase's Distinct Values: Incubator

10. Investment Bank

Dealroom's Distinct Values: NA

Crunchbase's Distinct Values: Investment Bank

11. Pension Fund

Dealroom's Distinct Values: Investment Fund - Pension Fund

Crunchbase's Distinct Values: Pension Funds

12. Private Equity

Dealroom's Distinct Values: Fund - Private Equity, Investment Fund – Private Equity

Crunchbase's Distinct Values: Private Equity Firm

13. Sovereign Wealth Fund

Dealroom's Distinct Values: Fund – Sovereign Wealth Fund, Investment Fund – Sovereign Wealth Fund

Crunchbase's Distinct Values: NA

14. University



Dealroom's Distinct Values: University

Crunchbase's Distinct Values: University Program

15. Venture Capital

Dealroom's Distinct Values: Fund – Corporate Venture Fund, Fund – Venture Capital, Investment Fund – Venture Capital

Crunchbase's Distinct Values: Micro VC, Venture Capital, Venture Debt

16. Others

Dealroom's Distinct Values: Event, Government & Non Profit – Non-Profit

Crunchbase's Distinct Values: Co-working Space, Entrepreneurship Program, Investment Partner, Secondary Purchaser, Startup Competition, Syndicate

18. Undisclosed

Dealroom's Distinct Values: null values

Crunchbase's Distinct Values: null values

A4. Investment Type Mappings

Dealroom included 40 distinct round type values, which were mapped into three separate fields in the ESNA database: Investment Type, Round Type, and Exit Type. Crunchbase, on the other hand, listed 28 distinct round types, which were partially mapped into Investment Type and Round Type in ESNA's classification.

The final set of distinct Investment Types in ESNA include *Corporate Spinout, Debt, Equity, Government Grant, Hybrid instrument, Secondary, University Spinout, and Undisclosed*.

Detailed information about these mappings can be found below.

1. Corporate Spinout

Dealroom's Distinct Values: Corporate Spinout

Crunchbase's Distinct Values: NA

2. Debt

Dealroom's Distinct Values: Debt, Lending Capital, Post IPO Debt

Crunchbase's Distinct Values: Debt Financing, Post IPO Debt

3. Equity

Dealroom's Distinct Values: Angel, Early VC, Growth Equity Non-VC, Growth Equity VC, Late VC, Post IPO Convertible, Post IPO Equity, Private Placement Non VC, Private Placement VC, Seed, Series A, Series B, Series C, Series D, Series E, Series F, Series G, Series H, Series I, SPAC IPO, SPAC Private Placement

Crunchbase's Distinct Values: Angel, Equity Crowdfunding, Post IPO Equity, Pre-Seed, Private Equity, Product Crowdfunding, Seed, Series A, Series B, Series C, Series D, Series E, Series H, Series I, Series J

4. Government Grant

Dealroom's Distinct Values: Grant, Support Program

Crunchbase's Distinct Values: Grant, Non-Equity Assistance

5. Hybrid instrument

Dealroom's Distinct Values: Convertible

Crunchbase's Distinct Values: Convertible Note



6. Secondary

Dealroom's Distinct Values: Post IPO Secondary, Secondary

Crunchbase's Distinct Values: Post IPO Secondary, Secondary Market

7. University Spinout

Dealroom's Distinct Values: Spinout

Crunchbase's Distinct Values: NA

8. Undisclosed

Dealroom's Distinct Values: Acquisition, Buyout, ICO, IPO, Media for Equity, Merger, null values, Project, Real Estate, Infrastructure Finance

Crunchbase's Distinct Values: Corporate Round, Initial Coin Offering, Series Unknown, Undisclosed

Subsequently, ESNA introduced a broader classification field distinguishing between Private and Public Investment. All investment types were mapped to Private Investment, except for Government Grant, which was classified as Public Investment.

A5. Round Type Mappings

Dealroom included 40 distinct round type values, which were mapped into three separate fields in the ESNA database: Investment Type, Round Type, and Exit Type. Crunchbase, on the other hand, listed 28 distinct round types, which were partially mapped into Investment Type and Round Type in ESNA's classification.

The final set of distinct Round Types in ESNA include Pre-Seed, Seed, Series A, Series B, Series C, Series D, Series E, Series F and beyond, Exit, Post-IPO, Others, and Undisclosed.

Detailed information about these mappings can be found below.

1. Pre-Seed

Dealroom's Distinct Values: Angel (if invested amount observation is a value below one million euros), Early VC (if invested amount observation is a value below one million euros), Growth Equity VC (if invested amount observation is a value below one million euros), Late VC (if invested amount observation is a value below one million euros), Private Placement VC (if invested amount observation is a value below one million euros)

Crunchbase's Distinct Values: Angel (if invested amount observation is a value below one million euros), Pre-Seed

2. Seed

Dealroom's Distinct Values: Angel (if invested amount observation is a value above one million euros), Early VC (if invested amount observation is a value above one million euros), Growth Equity VC (if invested amount observation is a value above one million euros), Late VC (if invested amount observation is a value above one million euros), Private Placement VC* (if invested amount observation is a value above one million euros), Seed

Crunchbase's Distinct Values: Seed

3. Series A

Dealroom's Distinct Values: Series A

Crunchbase's Distinct Values: Series A

4. Series B

Dealroom's Distinct Values: Series B

Crunchbase's Distinct Values: Series B

5. Series C

Dealroom's Distinct Values: Series C



Crunchbase's Distinct Values: Series C

6. Series D

Dealroom's Distinct Values: Series D

Crunchbase's Distinct Values: Series D

7. Series E

Dealroom's Distinct Values: Series E

Crunchbase's Distinct Values: Series E

8. Series F and beyond

Dealroom's Distinct Values: Series F, Series G, Series H, Series I

Crunchbase's Distinct Values: Series F, Series G, Series H, Series I, Series J

9. Exit

Dealroom's Distinct Values: Acquisition, Bankruptcy, Buyout, IPO, Merger

Crunchbase's Distinct Values: NA

10. Post-IPO

Dealroom's Distinct Values: Post-IPO Convertible, Post IPO Debt, Post EPO Equity, Post IPO Secondary, Private Placement Non-VC, SPAC IPO, SPAC Private Placement

Crunchbase's Distinct Values: Post-IPO Debt, Post-IPO Equity, Post-IPO Secondary

11. ICO

Dealroom's Distinct Values: ICO,

Crunchbase's Distinct Values: Initial Coin Offering

12. Undisclosed

Dealroom's Distinct Values: null values, Convertible, Corporate Spinout, Debt, Grant, Growth Equity Non-VC, Lending Capital, Media for Equity, Project, Real Estate, Infrastructure Finance, Secondary, Spinout, Support Program

Crunchbase's Distinct Values: Convertible Note, Corporate Round, Debt Financing, Equity Crowdfunding, Grant, Secondary Market, Series Unknown, Undisclosed



A6. Exit Type Mappings

Dealroom provided 40 distinct round type values, which were mapped into three separate fields in the ESNA database: Investment Type, Round Type, and Exit Type. Crunchbase, by contrast, listed 28 distinct round types, which were mapped to Investment Type and Round Type in ESNA's classification. None of the Crunchbase values were mapped to Exit Type, as they did not provide any indication of exit-related events.

The final set of distinct Exit Types was derived exclusively from Dealroom data and includes Acquisition, Bankrupt, Buyout, IPO, and Merger.

1. Acquisition

Dealroom's Distinct Values: Acquisition

Crunchbase's Distinct Values: NA

2. Bankruptcy

Dealroom's Distinct Values: Bankruptcy

Crunchbase's Distinct Values: NA

3. Buyout

Dealroom's Distinct Values: Buyout

Crunchbase's Distinct Values: NA

4. IPO

Dealroom's Distinct Values: IPO

Crunchbase's Distinct Values: NA

5. Merger

Dealroom's Distinct Values: Merger

Crunchbase's Distinct Values: NA

A6. World Bank Macroeconomic Indicators

Indicator Complete Name	Reference Code	Definition ³
Central Government Debt, Total (% of GDP)	GC.DOD.TOTL.GD.ZS	Debt is the entire stock of direct government fixed-term contractual obligations to others outstanding on a particular date. It includes domestic and foreign liabilities such as currency and money deposits, securities other than shares, and loans. It is the gross amount of government liabilities reduced by the amount of equity and financial derivatives held by the government. Because debt is a stock rather than a flow, it is measured as of a given date, usually the last day of the fiscal year. Central government is the part of general government that includes all administrative departments of the national executive, legislative, and judicial functions, other central agencies and those non-market producers controlled by the central government, whose competence extends normally over the whole economic territory. This indicator is expressed as a percentage of Gross Domestic Product (GDP) which is the total income earned through the production of goods and services in an economic territory during an accounting period.
Commercial Service Exports (current US\$)	TX.VAL.SERV.CD.WT	Commercial service exports are total service exports minus exports of government services not included elsewhere. Exports of services are services provided by residents to non-residents. This indicator is expressed in current prices, meaning no adjustment has been made to account for price changes over time. This indicator is expressed in United States dollars.
Commercial Service Imports (current US\$)	TM.VAL.SERV.CD.WT	Commercial service imports are total service imports minus imports of government services not included elsewhere. Imports of services are services provided by non-residents to residents. This indicator is expressed in current prices, meaning no adjustment has been made to account for price changes over time. This indicator is expressed in United States dollars.
Current Account Balance (BoP, current US\$)	BN.CAB.XOKA.CD	Balance of current transactions (transactions in goods and services, earned income and transfer income) between residents and non-residents. The term current account balance is used in the external accounts and is expressed from the perspective of resident units. The term current

³ Definitions can be found by searching the indicator's reference code in the World Bank databank: <https://databank.worldbank.org/metadata/glossary/all/series>

		external balance is used in the national accounts and is expressed from the perspective of the non-resident units, and therefore with the opposite sign. This indicator is expressed in current prices, meaning no adjustment has been made to account for price changes over time. This indicator is expressed in United States dollars.
Employment to Population Ratio, 15+, total (%) (modelled ILO estimate)	SL.EMP.TOTL.SP.ZS	Employment to population ratio is the proportion of a country's population that is employed.
Foreign Direct Investment, Net (BoP, Current US\$)	BN.KLT.DINV.CD	Foreign direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Ownership of 10 percent or more of the voting power is evidence of a direct investment relationship. This indicator is expressed in current prices, meaning no adjustment has been made to account for price changes over time. This indicator is expressed in United States dollars.
Foreign Direct Investment, Net Inflows (% of GDP)	BX.KLT.DINV.WD.GD.ZS	Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. This series shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors and is divided by GDP.
GDP (constant 2015 US\$)	NY.GDP.MKTP.ZG	The Gross Domestic Product is the total income earned through the production of goods and services in an economic territory during an accounting period. It can be measured in three different ways: using either the expenditure approach, the income approach, or the production approach. This indicator denotes the percentage change over each previous year of the constant price (base year 2015) series.
GDP (Current US\$)	NY.GDP.MKTP.CD	Gross domestic product is the total income earned through the production of goods and services in an economic territory during an accounting period. It can be measured in three different ways: using either the expenditure approach, the income

		approach, or the production approach. This indicator is expressed in current prices, meaning no adjustment has been made to account for price changes over time. This indicator is expressed in United States dollars.
GDP growth (annual %)	NY.GDP.MKTP.ZG	The Gross Domestic Product is the total income earned through the production of goods and services in an economic territory during an accounting period. It can be measured in three different ways: using either the expenditure approach, the income approach, or the production approach. This indicator denotes the percentage change over each previous year of the constant price (base year 2015) series.
GDP per Person Employed (Constant 2011 PPP \$)	SL.GDP.PCAP.EM.KD	GDP per person employed is gross domestic product (GDP) divided by total employment in the economy. Purchasing power parity (PPP) GDP is GDP converted to 2011 constant international dollars using PPP rates. An international dollar has the same purchasing power over GDP that a U.S. dollar has in the United States.
General Government Final Consumption Expenditure (% of GDP)	NE.CON.GOVT.ZS	Final consumption expenditure is expenditure on goods and services by resident institutional units for the direct satisfaction of human needs or wants, whether individual or collective. General government FCE includes all government current expenditures for purchases of goods and services (including compensation of employees), and most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation. This indicator is expressed as a percentage of Gross Domestic Product (GDP) which is the total income earned through the production of goods and services in an economic territory during an accounting period.
Gross Capital Formation (% of GDP)	NE.GDI.TOTL.ZS	Gross capital formation includes acquisitions less disposals of produced assets for purposes of fixed capital formation, inventories or valuables. This indicator is expressed as a percentage of Gross Domestic Product (GDP) which is the total income earned through the production of goods and services in an economic territory during an accounting period.
Inflation, Consumer Prices (Annual %)	FP.CPI.TOTL.ZG	Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at

		specified intervals, such as yearly. The Laspeyres formula is generally used.
Labor Force Participation Rate, Total (% of Total Population Ages 15+) (modelled ILO estimate)	SL.TLF.CACT.ZS	Labor force participation rate is the proportion of the population ages 15 and older that is economically active: all people who supply labour for the production of goods and services during a specified period
Lending Interest Rate (%)	FR.INR.LEND	Lending rate is the bank rate that usually meets the short- and medium-term financing needs of the private sector. This rate is normally differentiated according to creditworthiness of borrowers and objectives of financing. The terms and conditions attached to these rates differ by country, however, limiting their comparability. This indicator is expressed as a percentage $(a \div b) * 100$.
Population, Total	SP.POP.TOTL	Total population is based on the <i>de facto</i> definition of population, which counts all residents regardless of legal status or citizenship. The values shown are midyear estimates.
Real Interest Rate (%)	FR.INR.RINR	An interest rate is the amount charged, expressed as a percentage of the principal over a period of time, by the owners of certain kinds of financial assets for putting the financial assets at the disposal of another institutional unit. The real interest rate is the lending interest rate adjusted for inflation as measured by the GDP deflator. The terms and conditions attached to lending rates differ by country, however, limiting their comparability. This indicator is expressed as a percentage $(a \div b) * 100$.
Research and Development Expenditure (% of GDP)	GB.XPD.RSDV.GD.ZS	Gross domestic expenditures on research and development (R&D), expressed as a percent of GDP. They include both capital and current expenditures in the four main sectors: Business enterprise, Government, Higher education and Private non-profit. R&D covers basic research, applied research, and experimental development.
Tax Revenue (% of GDP)	GC.TAX.TOTL.GD.ZS	Taxes are compulsory, unrequited payments, in cash or in kind, made by institutional units to government units. This indicator is expressed as a percentage of Gross Domestic Product (GDP) which is the total income earned through the production of goods and services in an economic territory during an accounting period.
Taxes on Income, Profits and Capital	GC.TAX.YPKG.RV.ZS	Taxes on income, profits, and capital gains are taxes payable on the actual or presumed incomes, profits and capital gains. This indicator is expressed as a percentage of revenue which includes all

Gains (% of Revenue)		transactions that add to the amount of economic value of a unit or sector.
Unemployment, Total (% of Total Labor Force) (modelled ILO estimate)	SL.UEM.TOTL.ZS	Unemployment refers to the share of the labour force that is without work but available for and seeking employment.
Commercial Account Balance	(Calculated by ESNA)	Commercial Account Balance is the net value of commercial services trade, calculated as the difference between <i>Commercial Service Exports</i> and <i>Commercial Service Imports</i> . Positive values indicate a surplus, while negative values indicate a deficit.

Table 5: World Bank Macroeconomic Indicators

A8. World Bank Missing Values by Country and Year

Central Government Debt, Total (% of GDP) - GC.DOD.TOTL.GD.ZS

Country	Missing Values
Albania	1990, 1991, 1992, 1993, 1994, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2022, 2023, 2024
Argentina	No Data Available
Armenia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2024
Australia	2023, 2024
Austria	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2024
Azerbaijan	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2022, 2023, 2024
Belarus	1990, 1991, 2003, 2004, 2020, 2021, 2022, 2023, 2024
Belgium	1990, 1991, 1992, 1993, 1994, 2023, 2024
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2015, 2024
Brazil	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2024
Bulgaria	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2024
Canada	1990, 1991, 1992, 1993, 1994, 2024
Chile	1990, 1991, 1992, 1993, 1994, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
China	No Data Available
Colombia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2001, 2002, 2004, 2005, 2006, 2007, 2024
Costa Rica	1990, 1991, 1992, 1993, 1994, 1995, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Croatia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2024
Cyprus	1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Czechia	1990, 1991, 1992, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Denmark	1990, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Estonia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2024
Finland	1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024

France	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2024
Georgia	1990, 1991, 1992, 1993, 1994, 2024
Germany	1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Greece	1990, 1991, 1992, 1993, 1994, 1995, 1996, 2024
Hungary	1990, 2023, 2024
Iceland	2024
India	2019, 2020, 2021, 2022, 2023, 2024
Ireland	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2023, 2024
Israel	2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Italy	1990, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Japan	2023, 2024
Kosovo	No Data Available
Latvia	1990, 1991, 1992, 1993, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Lithuania	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2024
Luxembourg	1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Malta	1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Mexico	2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2024
Moldova	1990, 1991, 1992, 1993, 1994, 2024
Montenegro	No Data Available
Netherlands	1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
New Zealand	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2023, 2024
Nigeria	No Data Available
North Macedonia	No Data Available
Norway	1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Peru	1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2022, 2023, 2024
Poland	1990, 1991, 1992, 1993, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024

Portugal	1990, 1991, 1992, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Romania	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2023, 2024
Russia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2003, 2004, 2024
Serbia	No Data Available
Singapore	2024
Slovakia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2023, 2024
Slovenia	1990, 1991, 1992, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
South Africa	2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2023, 2024
South Korea	1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2024
Spain	2024
Sweden	1990, 1995, 2023, 2024
Switzerland	2024
Turkey	1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2024
Ukraine	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2021, 2022, 2023, 2024
United Kingdom	2024
United States	2024

Table 6: Missing Values - Central Government Debt, Total (% of GDP) - GC.DOD.TOTL.GD.ZS

Commercial Service Exports (current US\$) - TX.VAL.SERV.CD.WT

Country	Missing Values
Armenia	1990, 1991, 1992
Austria	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004
Azerbaijan	1990, 1991, 1992, 1993, 1994
Belarus	1990, 1991, 1992
Belgium	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997
Croatia	1990, 1991, 1992
Czechia	1990, 1991, 1992
Estonia	1990, 1991
Georgia	1990, 1991, 1992, 1993, 1994, 1995, 1996
Greece	1998
Ireland	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2024
Japan	1990, 1991, 1992, 1993, 1994, 1995
Kosovo	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2024
Latvia	1990, 1991
Lithuania	1990, 1991, 1992
Luxembourg	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998
Moldova	1990, 1991, 1992, 1993
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006
New Zealand	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999
North Macedonia	1990, 1991, 1992, 1993, 1994, 1995
Russia	1990, 1991, 1992, 1993
Serbia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2024
Slovakia	1990, 1991, 1992
Slovenia	1990, 1991
Ukraine	1990, 1991, 1992, 1993

Table 7: Missing Values - Commercial Service Exports (current US\$) - TX.VAL.SERV.CD.WT

Commercial Service Imports (current US\$) - TM.VAL.SERV.CD.WT

Country	Missing Values
Armenia	1990, 1991, 1992
Austria	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004
Azerbaijan	1990, 1991, 1992, 1993, 1994
Belarus	1990, 1991, 1992
Belgium	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997
Colombia	No Data Available
Croatia	1990, 1991, 1992
Czechia	1990, 1991, 1992
Estonia	1990, 1991
Georgia	1990, 1991, 1992, 1993, 1994, 1995, 1996
Greece	1998
Ireland	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2024
Japan	1990, 1991, 1992, 1993, 1994, 1995
Kosovo	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2024
Latvia	1990, 1991
Lithuania	1990, 1991, 1992
Luxembourg	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998
Moldova	1990, 1991, 1992, 1993
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006
New Zealand	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999
North Macedonia	1990, 1991, 1992, 1993, 1994, 1995
Russia	1990, 1991, 1992, 1993
Serbia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2024
Slovakia	1990, 1991, 1992
Slovenia	1990, 1991
Ukraine	1990, 1991, 1992, 1993

Table 8: Missing Values - Commercial Service Imports (current US\$) - TM.VAL.SERV.CD.WT

Current Account Balance (BoP, current US\$) - BN.CAB.XOKA.CD

Country	Missing Values
Armenia	1990, 1991, 1992
Austria	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004
Azerbaijan	1990, 1991, 1992, 1993, 1994
Belarus	1990, 1991, 1992
Belgium	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997
Croatia	1990, 1991, 1992
Czechia	No Data Available
Estonia	1990, 1991
Georgia	1990, 1991, 1992, 1993, 1994, 1995, 1996
Greece	1998
Ireland	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2024
Japan	1990, 1991, 1992, 1993, 1994, 1995
Kosovo	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2024
Latvia	1990, 1991
Lithuania	1990, 1991, 1992
Luxembourg	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998
Moldova	1990, 1991, 1992, 1993
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006
New Zealand	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999
North Macedonia	1990, 1991, 1992, 1993, 1994, 1995
Russia	1990, 1991, 1992, 1993
Serbia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2024
Slovakia	1990, 1991, 1992
Slovenia	1990, 1991
Ukraine	1990, 1991, 1992, 1993

Table 9: Missing Values - Current Account Balance (BoP, current US\$) - BN.CAB.XOKA.CD

Employment to Population Ratio, 15+, total (%) (modelled ILO estimate)
- SL.EMP.TOTL.SP.ZS

Country	Missing Values
Armenia	1990
Austria	1990
Azerbaijan	1990
Belarus	1990
Belgium	No Data Available
Bosnia & Herzegovina	1990
Croatia	1990
Czechia	1990
Estonia	1990
Georgia	1990
Greece	1990
Ireland	1990
Japan	1990
Kosovo	No Data Available
Latvia	1990
Lithuania	1990
Luxembourg	1990
Moldova	1990
Montenegro	1990
New Zealand	1990
North Macedonia	1990
Russia	1990
Serbia	1990
Slovakia	1990
Slovenia	1990
Ukraine	1990, 2022, 2023, 2024

Table 10: Missing Values - Employment to Population Ratio, 15+, total (%) (modelled ILO estimate)-
 SL.EMP.TOTL.SP.ZS

Foreign Direct Investment, Net (BoP, Current US\$) - BN.KLT.DINV.CD

Country	Missing Values
Albania	1990, 1991
Armenia	1990, 1991, 1992
Austria	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004
Azerbaijan	1990, 1991, 1992, 1993, 1994
Belarus	1990, 1991, 1992
Belgium	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997
Croatia	1990, 1991, 1992
Czechia	1990, 1991, 1992
Estonia	1990, 1991
Georgia	1990, 1991, 1992, 1993, 1994, 1995, 1996
Germany	No Data Available
Greece	1998
Hungary	1990
India	1990
Ireland	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2024
Japan	1990, 1991, 1992, 1993, 1994, 1995
Kosovo	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2024
Latvia	1990, 1991
Lithuania	1990, 1991, 1992
Luxembourg	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001
Moldova	1990, 1991, 1992, 1993
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006
New Zealand	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999
North Macedonia	1990, 1991, 1992, 1993, 1994, 1995
Russia	1990, 1991, 1992, 1993
Serbia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2024
Slovakia	1990, 1991, 1992
Slovenia	1990, 1991
Ukraine	1990, 1991, 1992, 1993

Table 11: Missing Values - Foreign Direct Investment, Net (BoP, Current US\$) - BN.KLT.DINV.CD

Foreign Direct Investment, Net Inflows (% of GDP) - BX.KLT.DINV.WD.GD.ZS

Country	Missing Values
Albania	1990, 1991
Armenia	1990, 1991
Azerbaijan	1990, 1991, 1992
Belarus	1990, 1991
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997
Croatia	1990, 1991
Cyprus	2024
Czechia	1990, 1991, 1992
Denmark	No Data Available
Estonia	1990, 1991, 1992
Georgia	1990, 1991, 1992, 1995, 1996
Ireland	2024
Kosovo	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2024
Latvia	1990, 1991, 1992, 1993, 1994
Lithuania	1990, 1991, 1992, 1993, 1994
Luxembourg	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2024
Moldova	1990, 1991
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006
North Macedonia	1990, 1991, 1992, 1993
Peru	2024
Russia	1990, 1991
Serbia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2024
Slovakia	1990, 1991, 1992
Slovenia	1990, 1991
South Korea	2024
Ukraine	1990, 1991

Table 12: Missing Values - Foreign Direct Investment, Net Inflows (% of GDP) - BX.KLT.DINV.WD.GD.ZS

GDP (constant 2015) - NY.GDP.MKTP.ZG

Country	Missing Values
Czechia	1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Kosovo	1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007
Liechtenstein	1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024

Table 13: Missing Values - GDP (constant 2015) - NY.GDP.MKTP.ZG

GDP (Current US\$) - NY.GDP.MKTP.CD

Country	Missing Values
Estonia	1990, 1991, 1992
Kosovo	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007
Latvia	1990, 1991, 1992, 1993, 1994
Lithuania	1990, 1991, 1992, 1993, 1994
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996
Serbia	1990, 1991, 1992, 1993, 1994
South Korea	2024

Table 14: Missing Values - GDP (Current US\$) - NY.GDP.MKTP.CD

GDP growth (annual %) - NY.GDP.MKTP.ZG

Country	Missing Values
Kosovo	1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008
Liechtenstein	2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024

Table 15: Missing Values - GDP growth (annual %) - NY.GDP.MKTP.ZG

GDP per Person Employed (Constant 2021 PPP \$) - SL.GDP.PCAP.EM.KD

Country	Missing Values
Albania	1990
Argentina	1990
Armenia	1990
Australia	1990
Austria	1990
Azerbaijan	1990
Belarus	1990
Belgium	1990
Bosnia & Herzegovina	1990
Brazil	1990
Bulgaria	1990
Canada	1990
Chile	1990
China	1990
Colombia	1990
Costa Rica	1990
Croatia	1990
Cyprus	1990
Czechia	1990
Denmark	1990
Estonia	No Data Available
Finland	1990
France	1990
Georgia	1990
Germany	1990
Greece	1990
Hungary	1990
Iceland	1990
India	1990
Ireland	1990
Israel	1990
Italy	1990
Japan	1990
Kosovo	No Data Available
Latvia	1990
Lithuania	1990
Luxembourg	1990
Malta	1990

Mexico	1990
Moldova	1990
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996
Netherlands	1990
New Zealand	No Data Available
Nigeria	1990
North Macedonia	1990
Norway	1990
Peru	1990
Poland	1990
Portugal	1990
Romania	1990
Russia	1990
Serbia	1990, 1991, 1992, 1993, 1994
Singapore	1990
Slovakia	1990
Slovenia	1990
South Africa	1990
South Korea	1990, 2024
Spain	1990
Sweden	1990
Switzerland	1990
Turkey	1990
Ukraine	1990, 2022, 2023, 2024
United Kingdom	1990
United States	1990

Table 16: Missing Values - GDP per Person Employed (Constant 2021 PPP \$) - SL.GDP.PCAP.EM.KD

General Government Final Consumption Expenditure (% of GDP) - NE.CON.GOV.ZS

Country	Missing Values
Austria	2024
Belgium	2024
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2024
Canada	2024
China	2024
Croatia	1990, 1991, 1992, 1993, 1994
Czechia	2024
Denmark	2024
Estonia	1990, 1991, 1992, 2024
Finland	2024
France	2024
Germany	2024
Greece	2024
Hungary	1990, 2024
Iceland	2024
Ireland	2024
Israel	No Data Available
Italy	2024
Japan	2023, 2024
Kosovo	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007
Latvia	1990, 1991, 1992, 1993, 1994, 2024
Lithuania	1990, 1991, 1992, 1993, 1994, 2024
Luxembourg	2024
Moldova	1990, 1991, 1992, 1993, 1994
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999
Netherlands	2024
New Zealand	2023, 2024
Nigeria	No Data Available
Norway	2024
Poland	1990, 1991, 1992, 1993, 1994
Portugal	2024
Serbia	1990, 1991, 1992, 1993, 1994
Slovakia	2024
Slovenia	2024
South Korea	2024
Spain	2024
Sweden	2024

Switzerland	2024
United Kingdom	2024

Table 17: Missing Values - General Government Final Consumption Expenditure (% of GDP) - NE.CON.GOVT.ZS

Gross Capital Formation (% of GDP) - NE.GDI.TOTL.ZS

Country	Missing Values
Albania	2024
Australia	No Data Available
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994
China	2024
Croatia	1990, 1991, 1992, 1993, 1994
Estonia	1990, 1991, 1992
Hungary	1990
Japan	2024
Kosovo	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007
Latvia	1990, 1991, 1992, 1993, 1994
Lithuania	1990, 1991, 1992, 1993, 1994
Moldova	1990, 1991, 1992, 1993, 1994
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999
New Zealand	2024
Nigeria	No Data Available
Poland	1990, 1991, 1992, 1993, 1994
Serbia	1990, 1991, 1992, 1993, 1994
South Korea	2024
Ukraine	1990

Table 18: Missing Values - Gross Capital Formation (% of GDP) - NE.GDI.TOTL.ZS

Inflation, Consumer Prices (Annual %) - FP.CPI.TOTL.ZG

Country	Missing Values
Albania	1990, 1991
Argentina	No Data Available
Armenia	1990, 1991, 1992, 1993
Austria	No Data Available
Azerbaijan	1990, 1991
Belarus	1990, 1991, 1992
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
Czechia	1990, 1991
Estonia	1990, 1991, 1992
Georgia	1990, 1991, 1992, 1993, 1994
Kosovo	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002
Latvia	1990, 1991
Lithuania	1990, 1991
Moldova	1990, 1991
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005
North Macedonia	1990, 1991, 1992, 1993
Romania	1990
Russia	1990, 1991, 1992, 2022, 2023, 2024
Serbia	1990, 1991, 1992, 1993, 1994
Slovakia	1990, 1991
Ukraine	1990, 1991, 1992
United States	No Data Available

Table 19: Missing Values - Inflation, Consumer Prices (Annual %) - FP.CPI.TOTL.ZG

Labor Force Participation Rate, Total (% of Total Population Ages 15+) (modelled ILO estimate) - SL.TLF.CACT.ZS

Country	Missing Values
Austria	No Data Available
Kosovo	No Data Available
Ukraine	2022, 2023, 2024

Table 20: Missing Values - Labor Force Participation Rate, Total (% of Total Population Ages 15+) (modelled ILO estimate) - SL.TLF.CACT.ZS

Lending Interest Rate (%) - FR.INR.LEND

Country	Missing Values
Albania	1998
Argentina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009
Armenia	1990, 1991, 1992, 1993, 1994
Australia	2020, 2021, 2022, 2023, 2024
Austria	No Data Available
Azerbaijan	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997
Belarus	1990, 1991
Belgium	No Data Available
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001
Brazil	1990, 1991, 1992, 1993, 1994, 1995, 1996
Bulgaria	1990, 1991
Canada	2018, 2019, 2020, 2021, 2022, 2023, 2024
Chile	2019, 2020, 2021, 2022, 2023, 2024
Croatia	1990, 1991, 1992, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Cyprus	No Data Available
Czechia	1990, 1991, 1992
Denmark	No Data Available
Estonia	No Data Available
Finland	No Data Available
France	No Data Available
Georgia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002
Germany	No Data Available
Greece	No Data Available
India	2023, 2024
Ireland	No Data Available
Israel	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2023, 2024
Japan	1990, 1991, 1992, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Kosovo	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2019, 2020, 2021, 2022, 2023, 2024
Latvia	No Data Available
Lithuania	No Data Available
Luxembourg	No Data Available
Malta	1990, 1991, 1992, 1993, 1994, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Mexico	1990, 1991, 1992
Moldova	1990, 1991, 1992, 1993, 1994

Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004
Netherlands	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
New Zealand	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Nigeria	2024
North Macedonia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004
Norway	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012
Peru	2023, 2024
Poland	No Data Available
Portugal	No Data Available
Romania	1990, 1991, 1992
Russia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 2024
Serbia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Singapore	2022, 2023, 2024
Slovakia	No Data Available
Slovenia	No Data Available
South Korea	1990, 1991, 1992, 1993, 1994, 1995
Spain	No Data Available
Sweden	1990, 1991, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Switzerland	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007
Turkey	No Data Available
Ukraine	1990, 1991
United Kingdom	2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
United States	2022, 2023, 2024

Table 21: Missing Values - Lending Interest Rate (%) - FR.INR.LEND

Population, Total - SP.POP.TOTL

Country	Missing Values
Greece	No Data Available

Table 22: Missing Values - Population, Total - SP.POP.TOTL

Real Interest Rate (%) - FR.INR.RINR

Country	Missing Values
Albania	1998
Argentina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009
Armenia	1990, 1991, 1992, 1993, 1994
Australia	2020, 2021, 2022, 2023, 2024
Austria	No Data Available
Azerbaijan	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997
Belarus	1990, 1991
Belgium	No Data Available
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001
Brazil	1990, 1991, 1992, 1993, 1994, 1995, 1996
Bulgaria	1990, 1991
Canada	2018, 2019, 2020, 2021, 2022, 2023, 2024
Chile	2019, 2020, 2021, 2022, 2023, 2024
Croatia	1990, 1991, 1992, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Cyprus	No Data Available
Czechia	1990, 1991, 1992
Denmark	No Data Available
Estonia	No Data Available
Finland	No Data Available
France	No Data Available
Georgia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002
Germany	No Data Available
Greece	No Data Available
India	2023, 2024
Ireland	No Data Available
Israel	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2023, 2024
Japan	1990, 1991, 1992, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Kosovo	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2019, 2020, 2021, 2022, 2023, 2024
Latvia	No Data Available
Lithuania	No Data Available
Luxembourg	No Data Available
Malta	1990, 1991, 1992, 1993, 1994, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Mexico	1990, 1991, 1992
Moldova	1990, 1991, 1992, 1993, 1994
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004

Netherlands	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
New Zealand	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Nigeria	2024
North Macedonia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004
Norway	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012
Peru	2023, 2024
Poland	No Data Available
Portugal	No Data Available
Romania	1990, 1991, 1992
Russia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 2024
Serbia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Singapore	2022, 2023, 2024
Slovakia	No Data Available
Slovenia	No Data Available
South Korea	1990, 1991, 1992, 1993, 1994, 1995, 2024
Spain	No Data Available
Sweden	1990, 1991, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Switzerland	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007
Turkey	No Data Available
Ukraine	1990, 1991
United Kingdom	2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
United States	2022, 2023, 2024

Table 23: Missing Values - Real Interest Rate (%) - FR.INR.RINR

Research and Development Expenditure (% of GDP) - GB.XPD.RSDV.GD.ZS

Country	Missing Values
Albania	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Argentina	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Armenia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 2024
Australia	1990, 1991, 1992, 1993, 1994, 1995, 1997, 1999, 2001, 2003, 2005, 2007, 2009, 2012, 2014, 2016, 2018, 2020, 2022, 2023, 2024
Austria	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Azerbaijan	1990, 1991, 1992, 1993, 1994, 1995, 2024
Belarus	1990, 1991, 1992, 1993, 1994, 1995, 2024
Belgium	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2010, 2011, 2024
Brazil	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2021, 2022, 2023, 2024
Bulgaria	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Canada	1990, 1991, 1992, 1993, 1994, 1995, 2024
Chile	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2022, 2023, 2024
China	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Colombia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2021, 2022, 2023, 2024
Costa Rica	1990, 1991, 1992, 1993, 1994, 1995, 2001, 2002, 2005, 2019, 2023, 2024
Croatia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2023, 2024
Cyprus	No Data Available
Czechia	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Denmark	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Estonia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2023, 2024
Finland	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
France	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Georgia	No Data Available
Germany	No Data Available
Greece	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1998, 2000, 2002, 2023, 2024
Hungary	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Iceland	1990, 1991, 1992, 1993, 1994, 1995, 1996, 2004, 2010, 2012, 2023, 2024
India	1990, 1991, 1992, 1993, 1994, 1995, 2021, 2022, 2023, 2024
Ireland	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024

Israel	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Italy	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Japan	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Kosovo	No Data Available
Latvia	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Lithuania	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Luxembourg	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2001, 2002, 2023, 2024
Malta	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2023, 2024
Mexico	1990, 1991, 1992, 1993, 1994, 1995, 2024
Moldova	1990, 1991, 1992, 1993, 1994, 1995, 1998, 1999, 2000, 2001, 2002, 2024
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2008, 2009, 2010, 2012, 2020, 2021, 2022, 2023, 2024
Netherlands	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
New Zealand	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018, 2020, 2022, 2023, 2024
Nigeria	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2020, 2021, 2022, 2023, 2024
North Macedonia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 2024
Norway	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1998, 2000, 2023, 2024
Peru	1990, 1991, 1992, 1993, 1994, 1995, 1996, 2005, 2006, 2007, 2008, 2009, 2010, 2023, 2024
Poland	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Portugal	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Romania	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Russia	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Serbia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 2024
Singapore	1990, 1991, 1992, 1993, 1994, 1995, 2021, 2022, 2023, 2024
Slovakia	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Slovenia	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
South Africa	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1998, 1999, 2000, 2002, 2023, 2024
South Korea	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Spain	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Sweden	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1998, 2000, 2002, 2023, 2024
Switzerland	1990, 1991, 1992, 1993, 1994, 1995, 1997, 1998, 1999, 2001, 2002, 2003, 2005, 2006, 2007, 2009, 2010, 2011, 2013, 2014, 2016, 2018, 2020, 2022, 2023, 2024



Turkey	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024
Ukraine	1990, 1991, 1992, 1993, 1994, 1995, 1996, 2024
United Kingdom	1990, 1991, 1992, 1993, 1994, 1995, 2022, 2023, 2024
United States	1990, 1991, 1992, 1993, 1994, 1995, 2023, 2024

Table 24: Missing Values - Research and Development Expenditure (% of GDP) - GB.XPD.RSDV.GD.ZS

Tax Revenue (% of GDP) - GC.TAX.TOTL.GD.ZS

Country	Missing Values
Albania	1990, 1991, 1992, 1993, 1994, 1999, 2000, 2001, 2005, 2006, 2007, 2008, 2009, 2010, 2024
Argentina	2024
Armenia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2024
Australia	2023, 2024
Austria	2024
Azerbaijan	1990, 1991, 1992, 1993, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2023, 2024
Belarus	1990, 1991, 2024
Belgium	1990, 1991, 1992, 1993, 1994, 2023, 2024
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2024
Brazil	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2024
Bulgaria	2024
Canada	2024
Chile	2024
China	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2024
Colombia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2001, 2002, 2004, 2005, 2006, 2007, 2024
Costa Rica	2024
Croatia	1990, 2024
Cyprus	2024
Czechia	1990, 1991, 1992, 2023, 2024
Denmark	2024
Estonia	1990, 2024
Finland	2024
France	2024
Georgia	1990, 1991, 1992, 1993, 1994, 2024
Germany	2023, 2024
Greece	1991, 1992, 1993, 1994, 2024
Hungary	2023, 2024
Iceland	2024
India	2019, 2020, 2021, 2023, 2024
Ireland	2023, 2024
Israel	2024

Italy	2024
Japan	1990, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Kosovo	No Data Available
Latvia	1990, 1991, 1992, 1993, 2024
Lithuania	1990, 1992, 2024
Luxembourg	2024
Malta	2024
Mexico	2001, 2002, 2003, 2004, 2005, 2006, 2007, 2024
Moldova	1990, 1991, 1992, 1993, 1994, 1995, 2024
Montenegro	No Data Available
Netherlands	2024
New Zealand	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2023, 2024
Nigeria	No Data Available
North Macedonia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2024
Norway	2024
Peru	2022, 2023, 2024
Poland	1990, 1991, 1992, 1993, 2024
Portugal	2024
Romania	2023, 2024
Russia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2024
Serbia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2023, 2024
Singapore	2024
Slovakia	1990, 1991, 1992, 1993, 1994, 2023, 2024
Slovenia	1990, 1991, 2024
South Africa	2023, 2024
South Korea	2024
Spain	1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2024
Sweden	2023, 2024
Switzerland	2024
Turkey	1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2024
Ukraine	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2024

United Kingdom	2024
United States	2024

Table 25: Missing Values - Tax Revenue (% of GDP) -GC.TAX.TOTL.GD.ZS

Taxes on Income, Profits and Capital Gains (% of Revenue) - GC.TAX.YPKG.RV.ZS

Country	Missing Values
Albania	1990, 1991, 1992, 1993, 1994, 1999, 2000, 2001, 2005, 2006, 2007, 2008, 2009, 2010, 2024
Argentina	2024
Armenia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2024
Australia	2023, 2024
Austria	2024
Azerbaijan	1990, 1991, 1992, 1993, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2023, 2024
Belarus	1990, 1991, 2024
Belgium	1990, 1991, 1992, 1993, 1994, 2023, 2024
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2024
Brazil	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2024
Bulgaria	2024
Canada	2024
Chile	2024
China	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2024
Colombia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 2001, 2002, 2004, 2005, 2006, 2007, 2024
Costa Rica	No Data Available
Croatia	1990, 2024
Cyprus	2024
Czechia	1990, 1991, 1992, 2023, 2024
Denmark	2024
Estonia	1990, 2024
Finland	2024
France	2024
Georgia	1990, 1991, 1992, 1993, 1994, 2024
Germany	2023, 2024
Greece	1991, 1992, 1993, 1994, 2024
Hungary	2023, 2024
Iceland	2024
India	2019, 2020, 2021, 2023, 2024
Ireland	2023, 2024

Israel	2024
Italy	1990, 1991, 1992, 1993, 1994, 2024
Japan	1990, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024
Kosovo	No Data Available
Latvia	1990, 1991, 1992, 1993, 2024
Lithuania	1990, 1992, 2024
Luxembourg	2024
Malta	2024
Mexico	2001, 2002, 2003, 2004, 2005, 2006, 2007, 2024
Moldova	1990, 1991, 1992, 1993, 1994, 1995, 2024
Montenegro	No Data Available
Netherlands	2024
New Zealand	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2023, 2024
Nigeria	No Data Available
North Macedonia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2024
Norway	2024
Peru	2022, 2023, 2024
Poland	1990, 1991, 1992, 1993, 2024
Portugal	1991, 1992, 1993, 1994, 2024
Romania	2023, 2024
Russia	1990, 1991, 1992, 1993, 1996, 1997, 2024
Serbia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2023, 2024
Singapore	2024
Slovakia	1990, 1991, 1992, 1993, 1994, 2023, 2024
Slovenia	1990, 1991, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2024
South Africa	2023, 2024
South Korea	2024
Spain	1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2024
Sweden	2023, 2024
Switzerland	2024
Turkey	1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2024

Ukraine	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2024
United Kingdom	2024
United States	2024

Table 26: Missing Values - Taxes on Income, Profits and Capital Gains (% of Revenue) - GC.TAX.YPKG.RV.ZS

Unemployment, Total (% of Total Labor Force) (modelled ILO estimate)
- SL.UEM.TOTL.ZS

Country	Missing Values
Albania	1990
Argentina	1990
Armenia	1990
Australia	1990
Austria	1990
Azerbaijan	1990
Belarus	1990
Belgium	1990
Bosnia & Herzegovina	1990
Brazil	1990
Bulgaria	1990
Canada	1990
Chile	1990
China	1990
Colombia	1990
Costa Rica	1990
Croatia	1990
Cyprus	1990
Czechia	1990
Denmark	1990
Estonia	1990
Finland	No Data Available
France	1990
Georgia	1990
Germany	1990
Greece	1990
Hungary	1990
Iceland	1990
India	1990
Ireland	1990
Israel	1990
Italy	1990
Japan	1990
Kosovo	No Data Available
Latvia	1990
Lithuania	1990

Luxembourg	1990
Malta	1990
Mexico	1990
Moldova	1990
Montenegro	1990
Netherlands	1990
New Zealand	1990
Nigeria	1990
North Macedonia	1990
Norway	1990
Peru	1990
Poland	1990
Portugal	1990
Romania	1990
Russia	1990
Serbia	1990
Singapore	1990
Slovakia	1990
Slovenia	1990
South Africa	1990
South Korea	1990
Spain	1990
Sweden	1990
Switzerland	1990
Turkey	1990
Ukraine	1990, 2022, 2023, 2024
United Kingdom	1990
United States	1990

Table 27: Missing Values - Unemployment, Total (% of Total Labor Force) (modelled ILO estimate) - SL.UEM.TOTL.ZS

Commercial Account Balance (current US\$) - Calculated by ESNA

Country	Missing Values
Armenia	1990, 1991, 1992
Austria	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004
Azerbaijan	1990, 1991, 1992, 1993, 1994
Belarus	1990, 1991, 1992
Belgium	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001
Bosnia & Herzegovina	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997
Colombia	No Data Available
Croatia	1990, 1991, 1992
Czechia	1990, 1991, 1992
Estonia	1990, 1991
Georgia	1990, 1991, 1992, 1993, 1994, 1995, 1996
Greece	1998
Ireland	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2024
Japan	1990, 1991, 1992, 1993, 1994, 1995
Kosovo	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2024
Latvia	1990, 1991
Lithuania	1990, 1991, 1992
Luxembourg	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998
Moldova	1990, 1991, 1992, 1993
Montenegro	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006
New Zealand	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999
North Macedonia	1990, 1991, 1992, 1993, 1994, 1995
Russia	1990, 1991, 1992, 1993
Serbia	1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2024
Slovakia	1990, 1991, 1992
Slovenia	1990, 1991
Ukraine	1990, 1991, 1992, 1993

Table 28: Missing Values – Commercial Account Balance (current US\$) - Calculated by ESNA