SIMCO

SIMCO (in Italian, Sistema Informativo Mondiale sulle Costruzioni) is an Information System developed and commercialized by Cresme Research S.P.A. aimed to provide strategic awareness in international construction sector at single country level. SIMCO is a set of standards and processes to develop, manage, update, analyze and distribute construction data.

SIMCO dashboard

The system was developed by Cresme in 2009 in order to fulfill a growing demand of information and statistical data for international construction markets. Today SIMCO covers 150 Countries and provides detailed investment breakdown for the 2000-2027 time period, including short-midterm forecasts. Information on housing, non-residential building and civil engineering are available within the system, further split between new investment and renewal and maintenance activity.

The System is updated quarterly and is available in many formats: database files; country fact sheets; in depth country analysis; interactive dashboards. Depending on client needs, Cresme provides different custom offering options.

The so called SIMCO score is also included in the data-base. The score is designed to provide a synthetic index of market opportunity with respect to the short-midterm scenario, taking into account, other than economic and sectorial growth, of political and economic stability, propensity to attract foreign investments, and indicators of market openness and ease of doing business.

SIMCO also features a huge macroeconomic and socio-economics data base that is freely distributed within any subscription.

Contents

1. Definition and features

Main definitions and features of SIMCO are summarized below:

1. *Surveyed phenomenon*: yearly Gross Fixed Investments in the construction sector;
2. *Measure*: billions of euro at constant prices (usually measured with respect to the previous year);
3. *Time coverage*: recent time series (2000 - previous year) and short-medium term forecasts (current year – four years onward);
4. *Retrospective*: time series starting from 1990 (on demand);
5. *Sectorial splitting*: Residential building (one-two family houses, flats, detached houses, etc.). Non-residential building (Industrial warehouses, commercial buildings, hospitals, schools, sports hall, hotels, offices, etc.). Civil engineering (Roads, motorways, airports, ports, energy infrastructures, telecommunications networks, water, etc.). For each sector: new construction investments and renewal and renovation expenditures. Where possible: further new non-residential investment distinction between industrial buildings, commercial buildings and other.
6. *Auxiliary information*: among the others, construction activity (building permits, public tenders, housing completions, etc.), sectorial production indexes, macro-economic data (output, investments, FDI, prices, exchange rates, unemployment, tourism flows, etc.), socio-demographic variables (population distribution, households, income distribution), indexes of ease of doing business and economic freedom.
7. *Update* is quarterly, usually in the months of January, April, July and October.
8. *Output*: many output options are available: Database files in the most suitable formats (dbf, cs, xlsx, txt, etc.); Fact sheets for each country, or aggregates (geographic or thematic), giving a telling synthesis of data market and the macroeconomic environment; construction market analysis in relation with business environment and the economic outlook, including: tables, figures and maps (also on demand); interactive analytic dashboards in excel or in the Tableau Software packaged format (.twbx), eventually available online directly via browser.

1.1. World Monitor

Starting from 2014 SIMCO is featuring a World Monitor, that is a collection of economic and geo-political news at single country level gathered by Cresme researchers. For each country, sectorial news and economic analysis are selected and provided in a uniform and interactive environment, accessible via the SIMCO dashboards, with the aim of providing all the information needed to depict country scenarios and sectorial trends.

SIMCO World Monitor within SIMCO dashboard (currently available in Italian)

1.2. SIMCO Score

The so called SIMCO score is a synthetic score, updated regularly, designed to provide a suitable scoring for the most interesting countries in the short-midterm scenario, in terms of sector expectations, macroeconomic outlook, business environment and political and economic risk.
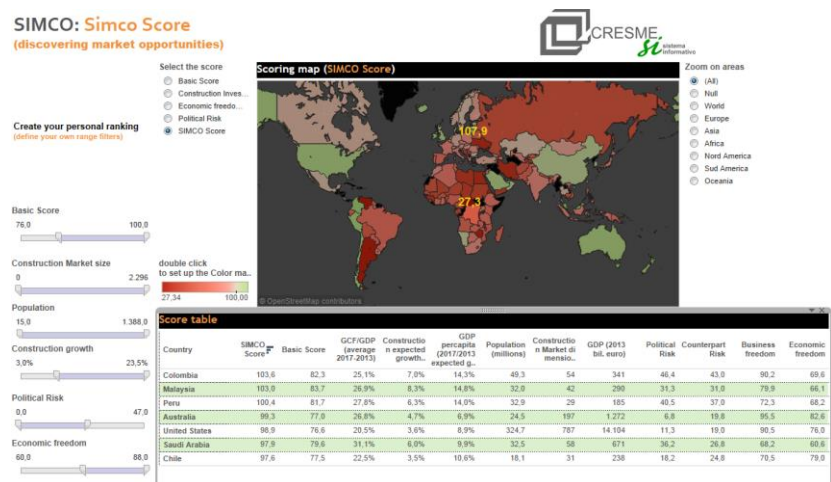
The score is defined in two steps: first, the macroeconomic indicators are used to define a base score (also available within the system), which allows to classify countries on the basis of mid-term economic and market outlooks. The base index only provides an indication of the economic scenario, assigning a higher score to countries where it is expected an high combined growth of construction investment and GDP per capita, together with a higher level of forecasted fixed investment with respect to GDP, that represents, literally, the investment effort expected in a country. GDP per-capita is used as a proxy of the private availability to invest, and it is the only proxy of this kind practicable for international comparisons.

Then, in order to take into account of conditions of the political and economic context, an index of political risk is employed. The country risk index is defined by a weighted average of the SACE indications about: risk of war and civil unrest; country ratings for the risk of nationalization and expropriation and country rating for transferring and convertibility. Also indication about counterpart risk, that is the risk that the counterpart may fail to honor obligations arising from a commercial or financial contract (Bank, small or large enterprises, Sovereign), is considered.

Another aspect taken into account is the opening of the economic system, that is, all those aspects, regulatory, social and cultural, which favor (or oppose) the business activity and the flow of foreign capital. At this purpose, the Index of Economic Freedom is employed.

Starting from the Basic-Score, the final score (Score SIMCO) is defined by a mechanism of penalty / reward. That is, starting from statistical distribution of the indicators, a penalty is assigned, in percentage of the basic score, to countries that are over the higher percentiles for Political risks and Counterpart risk, and a premium in the case of higher level of economic and business freedom. A penalty is also given to countries with respect to the market size in order to take into account of market inertia (that is a measure of short term market stability).

SIMCO Score control panel

The SIMCO score is provided within the SIMCO dashboard and allows the user to define custom rankings by managing suitable filters to control the importance to be given to economic and risk parameters.

1.3. SIMCO dashboard

The SIMCO data base could be explored by using dashboards. A dashboard is an easy to read real-time user interface that allows to navigate a large data set of information and stats within a graphical and interactive environment; dashboards are designed to easily communicate historical trends and depict scenarios in a rapid, easy, clear, and fashioning way.

Dashboards are customized by Cresme developers according to clients' needs and indications. By default, SIMCO features an analytic dashboard (SIMCO dashboard) designed by Cresme developers to provide an efficient analysis environment. The standard SIMCO dashboard include many different sections:

1. Exploring general trends;
2. Analyzing and comparing size relationships among countries or aggregates;
3. Obtaining synthetic country profiles;

4. Discovering country sector structures and scenario analysis;
5. Data warehousing to compose and export data tables;
6. Navigating among interactive and dynamic figures, maps and plots;
7. Working the SIMCO score control panel;
8. Browsing auxiliary information through ad-hoc exploring dashboards.

SIMCO dashboard: country profiles

2. Methodology

SIMCO is characterized by a methodological approach focused on a constant and progressive refinement of construction data quality and disaggregation. From a methodological point of view, SIMCO can be seen as a set of standards and processes to develop, manage, update, analyze and distribute data.

The developing process starts with a set of Data Base operations: *collecting data from different sources; controlling and validating; cleaning and storing.* Then, many statistical operation are put in place, for instance*: estimation of missing values; statistical synthesis (indicators developing); forecasting.* Finally, the important phase of data distribution is tackled, for instance, by reporting, by the developing of data visualization tools (SIMCO dashboard) and by providing tools for data warehousing (i.e. a system for querying the data base and extracting data).

A synthetic scheme of the SIMCO developing process is here summarized:
A. **Data Base operation**:
1. Review of the available statistical sources for each country;
2. Definition and updating of a data catalogue (confidential), including metadata and data release schedules;
3. Prioritization of the selected sources (*priority is given to official statistical sources*);
4. Data collection;
5. Validation, cleaning and storing of basic information by means of standard statistical methods (*clustering, regression, panel analysis, etc.*);
B. **Statistical Analysis:**
1. Estimating missing values and developing models for sector splitting based on the available information;
2. Development and implementation of econometric models for forecasting;

3. Expert country by country validation and control of the forecasting model output;
4. Synthesis and definition of suitable indicators and indexes.

C. Data distribution:
1. Data Warehousing
2. Dashboard design for data analysis and visualization
3. Reporting activity, standard and on demand (*World and country outlooks, in-depth analysis of specific subsectors, scenario developing, etc.*).
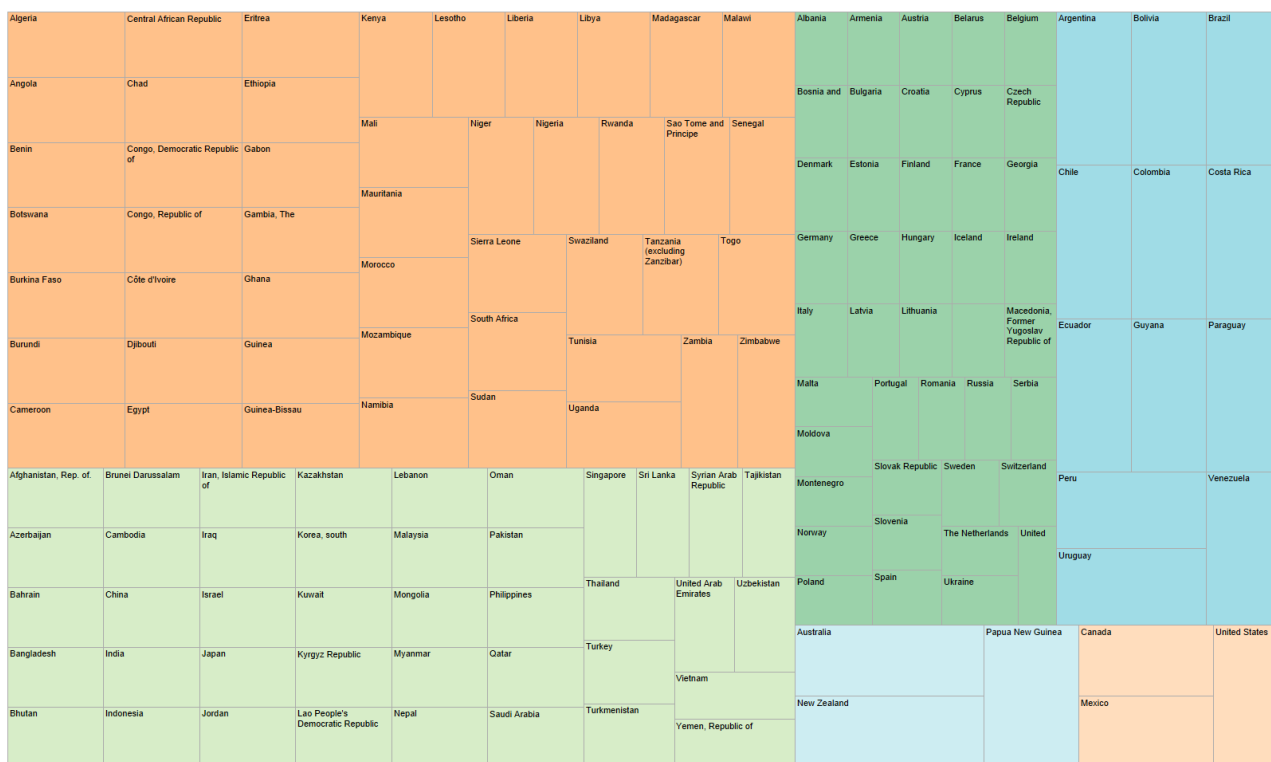
3. Country Coverage

SIMCO features all the available construction data for the principal World economies, but also includes general economic and construction market information for many small and emerging countries that are usually excluded from other sectorial data-banks. Among this, 42 Sub-Saharan countries, 12 South American economies, all the emerging Asia.

As a whole, 150 Countries are included in the data base, covering the 99% of World total gross domestic product and the 98% of World population.

The current SIMCO country list is presented here (note that the 19* Euroconstruct countries are distributed according to Euroconstruct network subscription conditions):

1. Europe (*Albania, Austria*, Belgium*, Bulgaria, Denmark*, Finland*, France*, Germany*, United Kingdom*, Greece, Ireland*, Italy, Iceland, Montenegro, Serbia, Norway*, The Netherlands*, Poland*, Portugal*, Romania, Spain*, Sweden*, Switzerland*, Ukraine, Hungary*, Russia, Estonia, Lettonia, Lituania, Croatia, Slovenia, Bosnia and Herzegovina, Macedonia, Moldova, Slovak Republic*, Belarus, Czech Republic*, Armenia, Georgia, Malta, Cipro, Lussemburgo*)
2. Africa (*Algeria, Angola, Côte d'Ivoire, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Congo, Egypt, Ethiopia, Gabon, Gambia, Ghana, Djibouti, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Morocco, Mauritania, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Togo,Tunisia, Uganda, Congo-Democratic Republic, Zambia, Zimbabwe, Eritrea*)
3. North Africa (*Algeria, Egypt, Libya, Morocco, Tunisia*)
4. Asia (*Afghanistan, Saudi Arabia, Bahrain, Bangladesh, Bhutan, Myanmar, Brunei Darussalam, Cambodia, Sri Lanka, China, Korea-south, United Arab Emirates, Philippines, Japan, Jordan, India, Indonesia, Iran, Israel, Kuwait, Lao People's Democratic Republic, Lebanon, Malaysia, Mongolia, Nepal, Oman, Pakistan, Qatar, Singapore, Syria, Thailand, Turkey, Vietnam, Yemen, Kazakhstan, Uzbekistan, Kyrgyz Republic, Tajikistan, Taiwan, Turkmenistan, Iraq, Azerbaijan*)
5. Middle East (*Saudi Arabia, Bahrain, United Arab Emirates, Jordan, Iran, Israel, Kuwait, Lebanon, Oman, Qatar, Syrian, Yemen*)
6. Oceania (*Australia, New Zealand, Papua New Guinea*)
7. South America (*Costa Rica, Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Uruguay, Venezuela*)
8. North America (*Canada, Mexico, United States*)
9. BRIICS (*Brazil, Russia, India, Indonesia, China, South Africa*)

SIMCO country map-list

4. List of available data

A non-exhaustive list of SIMCO available indicators, together with a short description and the unity of measure, can be found in the table below.

1	**Construction Investments**	**Billions of euro constant**
2	Residential	Billions of euro constant
3	Civil Engineering	Billions of euro constant
4	Non Residential	Billions of euro constant
5	Population	Millions of persons
6	Percapita investment	Euro percapita (constant)
7	Percapita investment at P.P.P.	Euro at P.P.P: percapita (constant)
8	**GDP**	**Billions of euro constant**
9	GDP Deflator, evaluated in local currency	Index
10	**Fixed Investments**	**Billions of euro constant**
11	Percapita GDP	Euro percapita (constant)
12	Percapita GDP at P.P.P.	Euro at P.P.P: percapita (constant)
14	GCF Annual Growth rate	Real Var. %
15	Construction Annual Growth Rate	Real Var. %
16	GDP Annual Growth Rate	Real Var. %
17	Purchasing Power Parity Relative Index (USA = 1)	Index
18	Construction / GDP	Fraction
19	Change Euro-Local Currency $C_t(l,€)$	Index
21	Renewal Residential	Billions of euro constant
22	New Residential	Billions of euro constant
31	Renewal Civil Engineering	Billions of euro constant
32	New Civil Engineering	Billions of euro constant
41	Renewal non Residential	Billions of euro constant
42	New non Residential	Billions of euro constant
43	New non Residential Industrial	Billions of euro constant
44	New non Residential Commercial	Billions of euro constant
70	Agriculture, hunting, forestry, fishing (ISIC A-B)	Fraction of Value Added
71	Mining, Manufacturing, Utilities (ISIC C-E)	Fraction of Value Added

72	Construction (ISIC F)	Fraction of Value Added
73	Wholesale, retail trade, restaurants and hotels (ISIC G-H)	Fraction of Value Added
74	Transport, storage and communication (ISIC I)	Fraction of Value Added
75	Other Activities (ISIC J-P)	Fraction of Value Added
76	Manufacturing (ISIC D)	Fraction of Value Added
77	Total Value Added	Fraction of Value Added
78	Gross Domestic Product (GDP)	Fraction of Value Added
80	Household consumption expenditure (including Non-profit institutions serving households)	Fraction of Value Added
81	General government final consumption expenditure	Fraction of Value Added
82	Final consumption expenditure	Fraction of Value Added
83	Gross fixed capital formation (including Acquisitions less disposals of valuables)	Fraction of Value Added
84	Changes in inventories	Fraction of Value Added
85	Gross capital formation	Fraction of Value Added
90	Imports of goods and services	Fraction of Value Added
91	Exports of goods and services	Fraction of Value Added
92	Var. % Exports of goods and services	Real Var. %
93	Var. % Imports of goods and services	Real Var. %
99	Unemployment	Index
60	Research and development expenditure (% of GDP)	Fraction of GDP
61	Scientific and technical journal articles	Number
51	Population ages 0-14 (% of total)	% of total Population
53	Population ages 65 and above (% of total)	% of total Population
52	Population ages 15-64 (% of total)	% of total Population
13	IDE Inflows	% of GDP
63	International Tourism Arrivals	Thousand
64	Tourism Inbound Expanditures	Millions of current euro
65	International Departures	Thousand
66	Tourism Outbound Expanditures	Millions of current euro
50	Average year of schooling (people with 15 years or over)	Average years
54	Education index	Standard Index
55	Country surface	kmq of surface
56	Urban living population	share of total population
57	Urban population growth	Annual growth rates
58	Share of population living in largest cities (over 1 millions of residents)	% of total Population
59	Gini index (wealth concentration)	Stanard index (%)
96	Real interest rates	Percentage
97	First quintile of wealth	share of wealth owned by the first quintile in the distribution
98	Government Revenue	share of wealth owned by the middle quintile
46	Employment in agriculture	(% of total employment)
47	Maternal mortality ratio (modeled estimate, per 100,000 live births)	per 100,000 live births
48	Life expectancy at birth	years
49	Poverty gap at $2 a day (PPP) (%)	share of total population
45	HDI	index
67	Population Density	inhabitants per Kmq of surface
100	Domestic credit to private sector	% of GDP
34	Roads	Billions of euro constant
35	Airport	Billions of euro constant
36	Railways	Billions of euro constant
37	Maritime	Billions of euro constant

5. Offering and Prices

SIMCO is distributed by Cresme Research s.p.a., which, depending on client needs, develop different offering subscription options.

Subscriptions are composed by choosing the *spatial coverage* (number of countries), the *information coverage* (number of interest variables, that is the number of construction sector and subsector of interest, e.g. total civil engineering, residential new, total construction, etc.), the *frequency* of the updates (that is, the number of updates to receive within an year).

All options include the full socio-economic data-base for countries and areas, the World Monitor and the SIMCO Score for the selected countries. Quarterly updates are available indicatively in the months of January, April; July; October.

Discounts are given as the quantity of information requested increases, and many promotional offers are offered by Cresme. Moreover, Cresme associates can obtain the system at a special price (-30% of the current price).

SIMCO is not a static system but is developed to be easily extended. The client could require a system extension, for instance, to cover specific sectors (construction material or products), to receive further investment splitting (for instance, road infrastructure, or energy infrastructure, rather than information on school buildings, hotels or offices), to include specific countries or region or specific indicators. Moreover, the client could ask Cresme to use SIMCO data base to provide specific market analysis and to develop specific scenarios for some sector or country.

6. Contacts

SIMCO is a brand of Cresme Ricerche s.p.a., Piazza Mincio 2, 00198, Rome, Italy.
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