

Review paper on strength analysis of Italy as a member of G20

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Abstract

The G20 is an international forum that brings together the world's 20 leading industrialised and emerging economies. The group accounts for 85 per cent of world GDP and two-thirds of its population. Its membership comprises 19 countries plus the European Union. The G20 is an apt model for global cooperation in today's world. Over the past six years, the G20 has framed the world's efforts to restore growth and build the resilience of financial institutions and national economies. It led the world out of an economic crisis and through the initial stages of the recovery. With the world now free from immediate economic crisis, the G20 can increasingly shift its attention to driving practical actions that will lead to sustained global growth. This paper particularly focus on statistical analysis of Italy as a member of G20. This paper shed light on different areas and their performance over a period of time.

Introduction

Italy is a country that falls in Europe continent with a population of around 61 million. As geographically its location is in the centre of the Europe, so it has a history of being home to innumerable peoples and cultures. Over a period of time Italy has shown a dramatic development culturally and economically. It is 8th largest in the world economically. Italy has worked upon human development tremendously and comes in top countries for life expectancy. Country plays pivotal role in distinguished areas like economy, finance, military, health, trade and so on. It is a member of G20. It has a GDP of \$1,815,759, A continuous increase in GDP can be seen. it has a exchange rate of \$1.11 per EUR. It covers 294,140 km² areas.

Objective of the research

- To analyse the statistical performance of Italy in different areas.
- To find out the performance as a member of G20.

Discussion of analysis

- **Economy and Finance**

The table depicts the economical and financial condition of the country from 2000 to 2015. Starting with GDP, in the first 10 years, it showed an increase from \$1,145bn to \$2,129bn. Further, in next five years it came down to \$1,816bn. Moving to GDP per capita, in the first five years, it significantly went up by a value of \$11,949 and further a small rise by \$3,909 in next five years. By the year 2015, it came down by \$6102. GDP change reflected decline over a decade from 3.7% to 0.8%. Government revenue as well as government expenditure underwent a continuous increase over a period of 10 years from 44.2% to 47.9%. and 45.5% to 50.5% respectively. General government net lending/borrowing went

thorough ups and down in the given time period. In the initial five years gross debt dwindled slightly however, it went up substantially in the remaining period.

■ Economy and finance	Unit	Source	2000	2005	2010	2015
Gross domestic product (GDP), current prices	bn US\$	IMF-WEO	1,145	1,856	2,129	1,816
Gross domestic product (GDP) per capita, current prices	US\$	IMF-WEO	20,117	32,066	35,969	29,867
Gross domestic product (GDP), change on previous year	%	IMF-WEO	+3.7	+1.0	+1.7	+0.8
General government revenue	% GDP	IMF-WEO	44.2	43.0	45.6	47.9
General government expenditure	% GDP	IMF-WEO	45.5	47.1	49.9	50.5
General government net lending / borrowing	% GDP	IMF-WEO	-1.3	-4.2	-4.2	-2.6
General government gross debt	% GDP	IMF-WEO	105.1	101.9	115.4	132.7
Inflation rate (annual change of price index on prev. year)	%	IMF-WEO	2.6	2.2	1.6	0.1
Exchange rate, annual average	EUR per US\$	IMF-IFS	1.09	0.80	0.76	0.90
Stock of inward foreign direct investment (FDI)	bn US\$	UNCTAD	122.5	237.5	328.1	335.3
Stock of outward foreign direct investment (FDI)	bn US\$	UNCTAD	170.0	244.6	491.2	466.6
Net flow: inward FDI	bn US\$	UNCTAD	13.4	23.3	9.2	20.3
Net flow: outward FDI	bn US\$	UNCTAD	6.7	39.4	32.7	27.6
Gross value added:						
▾ Agriculture, forestry, fishing	% GDP	WB-WDI	2.8	2.2	2.0	2.2
▾ Industry	% GDP	WB-WDI	27.1	25.8	24.4	23.5
▾ Services	% GDP	WB-WDI	70.0	71.9	73.7	74.2

Moving further, inflation rate dropped off in the given duration from 2.6% to 0.1%. Exchange rate reduced continuously in the first ten years and then went up slightly in last five years. Maximum contribution to the GDP was by service sector followed by industry. Agriculture, forestry and fishing contributed minimal to the gross value.

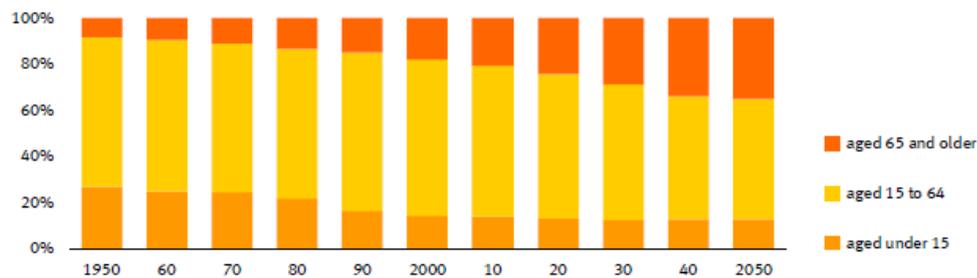
Population

The table depicts the population trend in Italy from 2000 to 2015. A rise in population can be noticed from the table in the given period by an amount of 860,000. Population density per square km also demonstrates an increase. By seeing the population by age group it can be observed that in the given period the population percentage of age group under 15 was almost constant. However the age group 15-64 experienced slight decrease in the percentage. On the contrary, the age group above 65 observed increase in the percentage. Foreign born population underwent an increase though it is slight. Fertility rate is displaying a decline. Life expectancy of women at birth is more as compared to men. Nevertheless, both demonstrate surge in their life expectancy over a period of 15 years.

Population	Unit	Source	2000	2005	2010	2015
Population	1,000	WB-WDI	56,942	57,969	59,277	60,802
Population density	inhabitants per km ²	WB-WDI	194	197	202	207
Population (aged under 15)	% of total population	WB-WDI	14.3	14.1	14.0	13.7
Population (aged 15 to 64)	% of total population	WB-WDI	67.6	66.4	65.5	63.9
Population (aged 65 and older)	% of total population	WB-WDI	18.1	19.5	20.4	22.4
Foreign-born population	% of total population	WB-WDI	3.7	6.7	9.7	9.7
Fertility rate, total	births per woman	WB-WDI	1.26	1.34	1.46	1.39 ¹
Population change	% on previous year	WB-WDI	+0.05	+0.49	+0.31	+0.02
Life expectancy at birth (men)	years	WB-WDI	76.9	78.1	79.5	80.3 ¹
Life expectancy at birth (women)	years	WB-WDI	82.8	83.6	84.7	85.2 ¹

¹ 2014.

Demographic trend by age group



From 2020 onwards: United Nations population projection, medium variant.

Source: UN-POP

The bar chart illustrates demographic trend of population by age group over a period of 100 years which also includes prediction. The data from the past years reveals that age group under 15 follows a decreasing trend as it reduced from almost 40% in 1950 to round about 30% in 2010 and it is predicted that it will further decrease in future. Unlike age group under 15, the population of age group 15 to 64, from 1950 to 1980, was almost constant which afterwards reflects a rise which will continue in the future. Moving to the age group 65 and older, it can be seen that till year 2000 it was steady and then started rising gradually and further expected to rise.

Health

Health	Unit	Source	2000	2005	2010	2014
Total expenditure on health	% GDP	WHO	7.9	8.7	9.4	9.2
Physicians	per 1,000 inhabitants	WHO	4.2	.	3.5	.
Hospital beds	per 1,000 inhabitants	WB-WDI	4.7	4.0	3.5	.
Infant mortality rate	per 1,000 live births	UN-IGME	4.7	3.7	3.4	3.0

Expenditure on health is showing increase indicating that country is spending on health measures. However, number of physicians and hospitals beds per 1,000 inhabitants have decreased indicating scarcity of resources. Infant mortality rate is diminishing showing better health conditions.

Education

Education	Unit	Source	2000	2005	2010	2013
Public expenditure on education	% GDP	UNESCO	4.3	4.2	4.3	4.1 ²
Pupil-teacher ratio, primary	number	UNESCO	11.0	10.5	.	12.0
Pupil-teacher ratio, secondary	number	UNESCO	10.5	10.5	.	11.4
Students, tertiary	per 100,000 inhabitants	UNESCO	3,097	3,435	3,323	3,133

² 2011.

Expenditure on education has raised 4.1% GDP to 5.2%GDP from 2000 to 2010.for next five years nothing has spent on education. Student-teacher ratio for primary education is more in comparison to secondary education. The ratio falls between 27 to 28 in number in case of primary and 16 to 18 in case of secondary education in given duration.

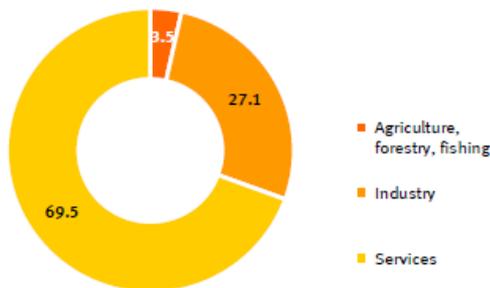
Labour Force

A significant increase in the amount of labour force can be seen in the given duration. The increase in number is accounted for 1, 64, 03000. Participation rate has also shown increase though not too significant. Employment rate is almost stagnated with a slight increase of 1% from 2010 to 2015.Employment rate for men is more than women. However, employment rate in case of women has risen unlike in case of men which has experienced fall in the percentage in the given duration. Self-employed rate has also demonstrated decline. The percentage of unemployed labour for those who are 15+ age, is low which has increased in first 10 years and have shown a slight decrease afterwards. Unemployment rate in case of the labour between 15 and 24 age group is slightly more and is rising over a period of time. Long term unemployment rate has undergone fluctuations between 0.9% and 1.4%.

Labour force	Unit	Source	2000	2005	2010	2015
Labour force (aged 15+)	1,000	ILO-KILM	23,437	24,683	24,603	24,963
Labour force participation rate (aged 15+)	%	ILO-KILM	47.9	49.0	48.0	48.4
Employment rate (aged 15+)	%	ILO-KILM	42.7	45.2	44.0	42.5
Employment rate, men (aged 15+)	%	ILO-KILM	56.2	57.2	54.6	51.4
Employment rate, women (aged 15+)	%	ILO-KILM	30.2	34.0	34.1	34.2
Self-employed rate (aged 15+)	%	ILO-KILM	28.2	26.7	25.3	24.7 ¹
Unemployment rate (aged 15+)	%	ILO-KILM	10.8	7.7	8.4	12.1
Unemployment rate (aged 15 to 24)	%	ILO-KILM	31.4	24.0	28.2	42.1
Long-term unemployment rate (aged 15+)	% of unemployed persons	ILO-KILM	61.2	48.1	48.0	60.8 ¹
Average labour costs in manufacturing	US\$ per hour	BLS	16.64	27.71	33.57	34.18 ²

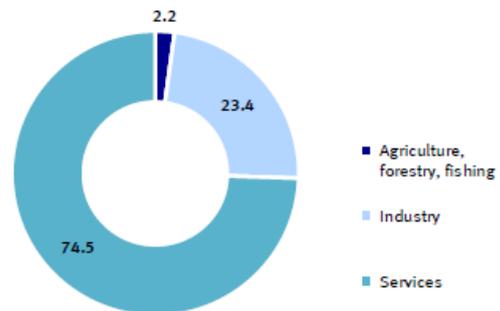
¹ 2014 – ² 2012.

Employed persons by sector 2014 in %



Source: ILO-KILM

Gross value added by sector 2014 in %



Source: WB-WDI

The pie charts elucidate the contribution of different sectors in employment and gross value in percentage. It can be clearly seen that in both the cases major contribution is of service sector. It shows an involvement of 62.4% and 62.1% in employment and gross value respectively. Industry comes at second place with an employment rate of 23.6% and gross value of 34.4%. Agriculture, forestry and fishing have least contribution.

Living conditions

Living conditions	Unit	Source	2000	2005	2010	2014
Gross national income	US\$ per capita	WB-WDI	21,820	32,370	37,670	34,530
Consumer price index for food	2000 = 100	FAO	100	114	128	138

As can be seen from the table that gross national income is showing significant increase thus indicates improvement in living conditions with the passage of time. Further consumer price index for food is also showing rise.....

Production

■ Production	Unit	Source	2000	2005	2010	2015
Production index of manufacturing industry	2010 = 100	IMF-IFS	117	112	100	92
Production: crude steel	1,000 tonnes	WSA	26,759	29,350	25,750	22,018
Production: passenger cars	1,000 vehicles	OICA	1,422	726	573	663

Three industries are there in Italy responsible for production i.e. manufacturing industry, crude oil and passenger cars. Out of these three, manufacturing and crude oil industries noticed increase in production index over a period of time. However, passenger cars observed a bit fluctuations in the initial 10 years and eventually increase in production.

Agriculture and forestry

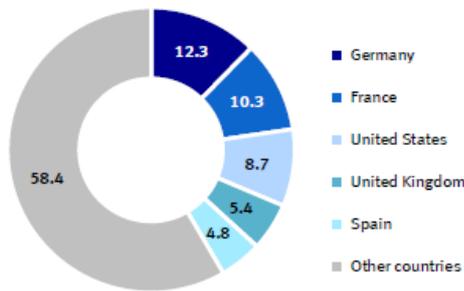
■ Agriculture and forestry	Unit	Source	2000	2005	2010	2013
Agricultural land*	% of land area	FAO	53.2	50.1	48.7	46.3
Forest area*	% of land area	FAO	28.5	29.8	30.7	31.2
Economically active population in agriculture	1,000	FAO	1,250	1,025	844	738
Index of agricultural production	2004 to 2006 = 100	FAO	100	100	97	90
Industrial roundwood, removals	mn m ³	FAO	3.6	3.0	2.6	2.0

The inverse relation can be seen between the area under forest and agriculture land for the period. As the area under agriculture land is increasing the area under forest is decreasing. Though the changes are trivial for the given period. The population which is doing economical contribution through agriculture, witnessed decline from 8,838,000 in 2000 to 7,816,000 in 2013. Index of agriculture production underwent increase in a period of 15 years.

External trade

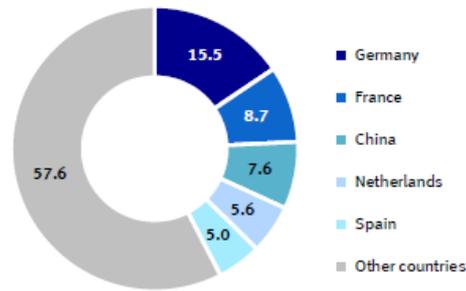
The pie charts depict the share of goods exported and imported in the year 2015 in percentage. It is quite vigilant from the pie chart that Italy exports majorly to the United States as 81.2% of goods are exported to the US alone. Similarly, major import takes place from the US i.e. 47.4%. Other countries collectively get 16.0% share in case of export and 23.3% in case of import. 17.7% goods are imported from china. 3.5, 3.7 and 4.4 percent goods are imported from Germany, Japan and Korea respectively. Trade balance is negative throughout the period and keeps on fluctuating.

Destination countries 2015
share of goods exported, in %



Source: UN Comtrade

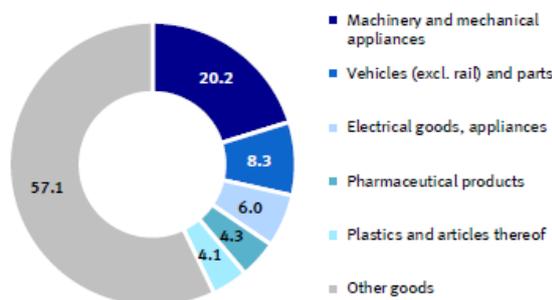
Origin countries 2015
share of goods imported, in %



Source: UN Comtrade

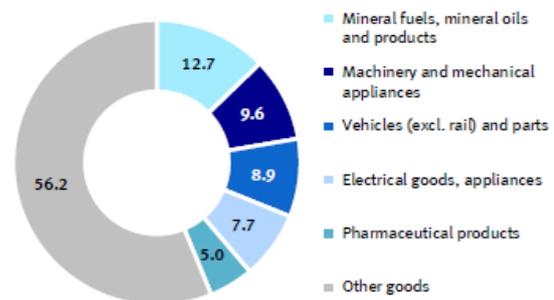
	Unit	Source	2000	2005	2010	2015
Trade balance*	bn US\$	UN-Comt.	+1.9	-11.9	-40.1	+49.8
Export of goods	bn US\$	UN-Comt.	239.9	373	446.8	458.8
↳ Goods exported to Germany	bn US\$	UN-Comt.	36.2	48.8	57.8	56.6
Share of goods exported to Germany*	% of all goods exported	UN-Comt.	15.1	13.1	12.9	12.3
Import of goods	bn US\$	UN-Comt.	238.1	384.8	487.0	409.0
↳ Goods imported from Germany	bn US\$	UN-Comt.	41.8	65.7	78.1	63.0
Share of goods imported from Germany*	% of all goods imported	UN-Comt.	17.5	17.1	16.0	15.4
Import of goods and services	% GDP	WB-WDI	24.8	24.8	27.2	27.0
Export of goods and services	% GDP	WB-WDI	25.7	24.7	25.2	30.1

Selected exports by major commodity groups 2015
share of goods exported, in %



Source: UN Comtrade

Selected imports by major commodity groups 2015
share of goods imported, in %



Source: UN Comtrade

From the pie charts it is conspicuous that vehicles and electrical goods are the commodities which are exported majorly as they have lion's share of export i.e. 23.7 and 21.3 respectively. Machinery and mechanical appliances have got 15.5% share. Quite a little share is taken by mineral fuel and oil i.e. 5.9%. Similar is the case with optical, photographic and electrical instruments as they have a share of 4% only.

Moving further to the illustration of share of goods imported it is crystal clear that electrical goods and appliances have lion's share accounted for 21.6%. It is followed by machinery and mechanical appliances having 17.1% share on its name. Vehicles and its parts, minerals and plastics have 9.4%, 6.7% and 5.6% share respectively. Rest 39% is for other goods.

Transport

■ Transport	Unit	Source	2000	2005	2010	2014
Passenger cars	per 1,000 inhabitants	WB-WDI	552	592	602	.
Pump price for gasoline	US\$ per litre	WB-WDI	0.97	1.56 ¹	1.87	2.14
Road sector energy consumption	kg oil equivalent per capita	WB-WDI	648	669	602	.
Roads: Total network*	km per 1 mn inhabitants	WB-WDI	8,424	8,413	.	.
Rail: Total network*	km per 1 mn inhabitants	WB-WDI	290	289	304	280
Rail: Passenger-kilometres*	per inhabitants	WB-WDI	788	817	751	655
Air transport: passengers*	per 1,000 inhabitants	WB-WDI	534	623	551	425

¹ 2006.

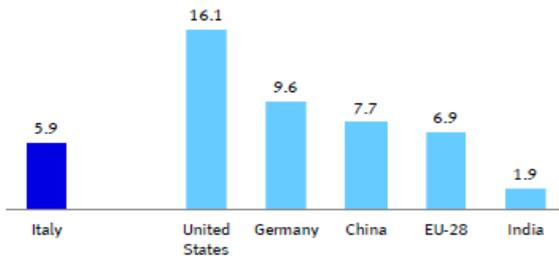
Data given in the table clearly indicates that number of passenger cars per thousand habitant is rising till 2010, though the increase is small i.e. by 50 only. From 2010 to 2014, no change can be seen. Pump price for gasoline has increased over a period of time. In the year 2000 it was \$0.97 and reached \$2.14 in 2014. road sector energy consumption has shown a decline till 2010 and after that it stagnated. Total network for roads is more than total network for rails. Road network with a slight decrease in 2005 has shown no changes in rest of the time period. However, rail network witnessed fluctuations in more than one decade. Rail passengers have increased in the first five years from a figure to 788 per inhabitants to 817 per inhabitants. In the rest 9 years the number underwent a decrease. Same is the trend for air passengers but number of passenger is less in case of air transport as compared to railway.

Environment and energy

A decline in CO₂ emission can be noticed in the given duration from 8.0 tonnes per capita to 5.6 tonnes per capita. Gross electricity consumption and energy consumption demonstrate same trend as it grew in the first five years and after that came down gradually by the year 2014. Fossil fuel energy consumption witnessed decrease in 14 years of time. The percentage of net energy import has decreased from 83.6% to 75.4% over a given period.

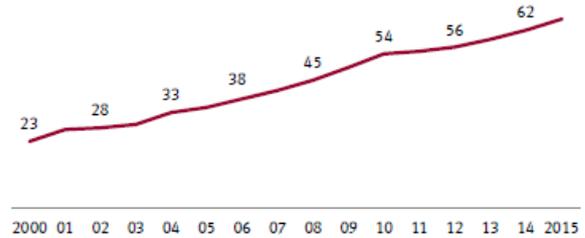
Environment and energy	Unit	Source	2000	2005	2010	2014
CO ₂ -emissions from fuel combustion	tonnes per capita	EDGAR	8.0	8.4	7.1	5.6
Gross electricity consumption	kWh per capita	WB-WDI	5,300	5,731	5,494	5,159 ¹
Energy consumption	kg oil equivalent per capita	WB-WDI	3,012	3,166	2,868	2,405
Fossil fuel energy consumption	% of energy consumption	WB-WDI	92.0	91.0	86.0	79.0
Net energy imports (+) / exports (-)	% of energy consumption	WB-WDI	+83.6	+84.9	+82.7	+75.4

Carbon dioxide emissions 2015 in tonnes per capita



Source: EDGAR

Internet users per 100 inhabitants



Source: ITU

The bar chart clearly depicts that Italy has got moderate level of CO₂ emission as compared to other countries in the world. The line graph apparently shows substantial increase in number of internet users per 100 inhabitants in a period of 14 years.

Science, research, technology

Science, research, technology	Unit	Source	2000	2005	2010	2015
Research & development (R&D) expenditure	% GDP	UNESCO	1.0	1.0	1.2	1.3 ²
Researchers in R&D sector	per 1 mn inhabitants	UNESCO	1,157	1,406	1,736	1,974 ²
Resident patent applications	per 1 mn inhabitants	WIPO	195	.	219	200 ²
Mobile phone subscriptions	per 100 inhabitants	ITU	74.0	122.0	155.0	151.0
Internet users	per 100 inhabitants	ITU	23.1	35.0	53.7	65.6
Broadband subscribers	per 100 inhabitants	ITU	0.2	11.6	21.6	23.8

² 2013.

Science, research and technology has seen growth with the passage of time in the given time period. It clearly shows that country has spent well on all the three areas. Figures illustrate expenditure on research & development, number of researchers and patent applications has

Conclusion

From the overall analysis, it is clear that Italy is emerging as a growing economy as a member of G20. Data has shown significant improvement in almost all the areas in the discussion viz. economy and finance, Transport, energy, science and technology, health and so on. The country is continuously developing in every aspect and securing a good position among G20 countries.

Sources

■ Sources

BLS	U.S. Bureau of Labor Statistics
EDGAR	European Commission, Emissions Database for Global Atmospheric Research
FAO	United Nations, Food and Agricultural Organization
ILO-KILM	International Labour Organization, Key Indicators of the Labour Market
ILOSTAT	International Labour Organization, ILOSTAT Database
IMF-IFS	International Monetary Fund, International Financial Statistics
IMF-WEO	International Monetary Fund, World Economic Outlook
ITU	United Nations, International Telecommunication Union
OICA	International Organization of Motor Vehicle Manufacturers
UN-Comt.	United Nations, Comtrade Database
UNCTAD	United Nations, Conference on Trade and Development
UNESCO	United Nations, Educational, Scientific and Cultural Organization
UN-IGME	United Nations, Inter-agency Group for Child Mortality Estimation
UN-POP	United Nations, Population Division
WB-WDI	World Bank, World Development Indicators
WHO	World Health Organization, Global Health Observatory
WIPO	World Intellectual Property Organization
WSA	World Steel Association