

**Gross Domestic
Product**

November 2019

2018

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INTRODUCTION

This document presents the results of the calculation of the Gross Domestic Product (GDP) for the year 2018 and restates the methodological principles and choices used for the calculations.

The Gross Domestic Product (GDP) summarises economic activity and constitutes an essential information in the current economic debates. It makes it possible to monitor and assess the effectiveness of economic policies implemented and to make comparisons with other countries, particularly EU countries.

The Principality's GDP, which is calculated since 2005, is published in an annual report. Since 2006, the figures are broken down by sectors and are also presented in constant euros, correcting for inflation. In 2018, "Base 100 in 2014" replaced "Base 100 in 2010". This changed the GDP figures in real terms, thus changing the growth rates.

Moreover, GDP N-1 data are updated with the responses received after the deadline. A new extrapolation is thus calculated and included.

In 2018, a major economic operator in Monaco grouped its employees under the Major Activity Sector (MAS) of Accommodation and food service activities, while in 2017 these employees were distributed over two MASs, Accommodation and food service activities and Other service activities. For reasons of comparability, the 2017 data were also corrected.

1. Gross Domestic Product

1.1 International economic situation

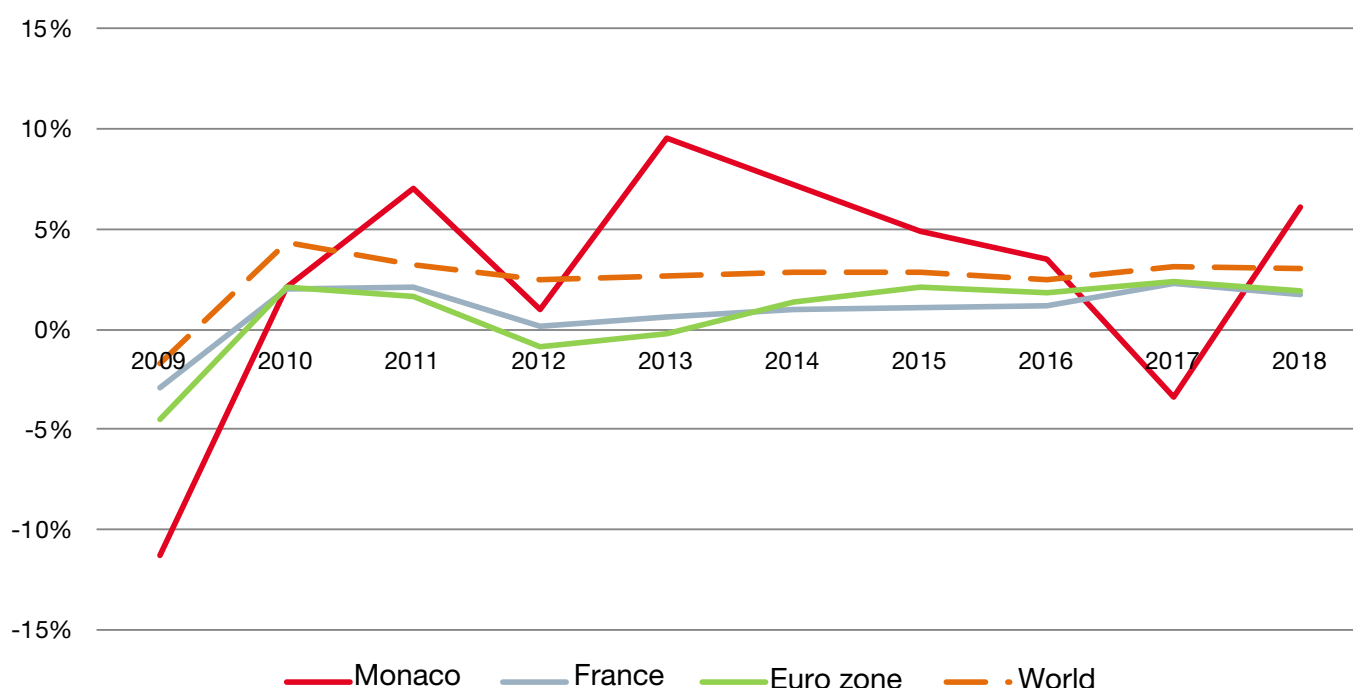
Global trade declined in 4th quarter 2018 (-0.5%) for the first time since 2016 following tensions between the US and China. The slowdown in external trade at the end of the year impacted both advanced and emerging economies. Growth in the UK is still constrained by the prospect of Brexit. In the euro zone, growth is sluggish.

Although successive GDP figures in Monaco, since first calculated in 2005, are affected by global economic trends, they tend to show that the national economy is highly dependent on the performance of a few major local economic operators.

From one year to the next, specific or one-off transactions carried out by economic agents have direct impacts on the results of a small economy such as that of Monaco. This is particularly true for Construction (with real estate transactions) and Other service activities where results can change substantially from one year to the next.

Monaco's GDP for 2018 was EUR 6.09 billion compared with EUR 5.69 billion in 2017, up +6.1% in real terms, corrected for inflation.

FIGURE 1: Change in GDP growth rates by geographical area



Sources: World Bank, IMSEE

1.2 National GDP figures

1.2.1 Summary of results

Following a slowdown in the pace of growth in Monaco (from +9.6% in 2013 to +3.5% in 2016 and -3.4% in 2017), GDP recovered in 2018.

Monaco's GDP for 2018 crossed the EUR 6 billion mark for the first time to reach EUR 6.09 billion, compared with EUR 5.69 billion in 2017 (see table 1). It increased by +6.1 % in real terms, corrected for inflation (see table 2).

In 2018, all components of GDP recorded growth. The highest growth rate stemmed from the Gross Operating Surplus (+11.0%) after a decline of -9.0% in 2017 (see table 3).

Employment continued to grow in 2018, in both the private and public sectors (+2,000 more employees (+3.7%) in December). The wage bill increased (+2.7%), accounting for almost half of GDP (46.6%) excluding subsidies. This corresponds to the share of annually created wealth which is redistributed in the form of salaries and social security contributions.

Taxes paid on products increased substantially in nominal terms (+8.7%) and in real terms (corrected for inflation +7.8%), contributing 12.7% of wealth produced. This increase is mainly due to the increase in VAT and VAT on property and transfer duties.

Subsidies continued to increase (+1.7%) but at a slower pace than in 2017 (+16.1% primarily due to the creation of the Dependency Fund and money allocated to Energy transition).

As in previous years, economic performance by sector shows major disparities depending on the activity (see table 4). Eight MAS out of the twelve sectors of the Monegasque economy witnessed an increase in their sector's GDP. However, this growth was mainly driven by two sectors: Scientific and technical activities, administrative and support service activities, and Wholesale trade.

The three largest economic sectors of the Principality, in terms of GDP, are Scientific and technical activities, administrative and support service activities, Financial and insurance activities, and Real estate activities. They account for almost half (43.9%) of the wealth created.

GDP per capita was EUR 70,881, up +3.5% in real terms (see table 6). GDP per employee, an indicator of productivity, also increased by +2.3% to EUR 108,112 (see table 7).

1.2.2 GDP aggregate

The 2005 GDP is the base year for this aggregate. It is valued in "nominal" terms, i.e. in current euros. Growth is calculated as the change in GDP in nominal terms corrected for inflation (GDP in real terms). The index used for this correction is calculated every year by INSEE. The base year (base 100) is updated every five years. In 2018, the year 2014 replaced the year 2010 as base year. This change marginally impacted the GDP amounts in real terms and their growth.

TABLE 1: GDP in nominal terms¹

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
GDP	3,924.9	4,048.8	4,374.2	4,469.8	4,936.0	5,321.3	5,643.6	5,847.7	5,693.0	6,087.0

Source: IMSEE
Unit: million of euros

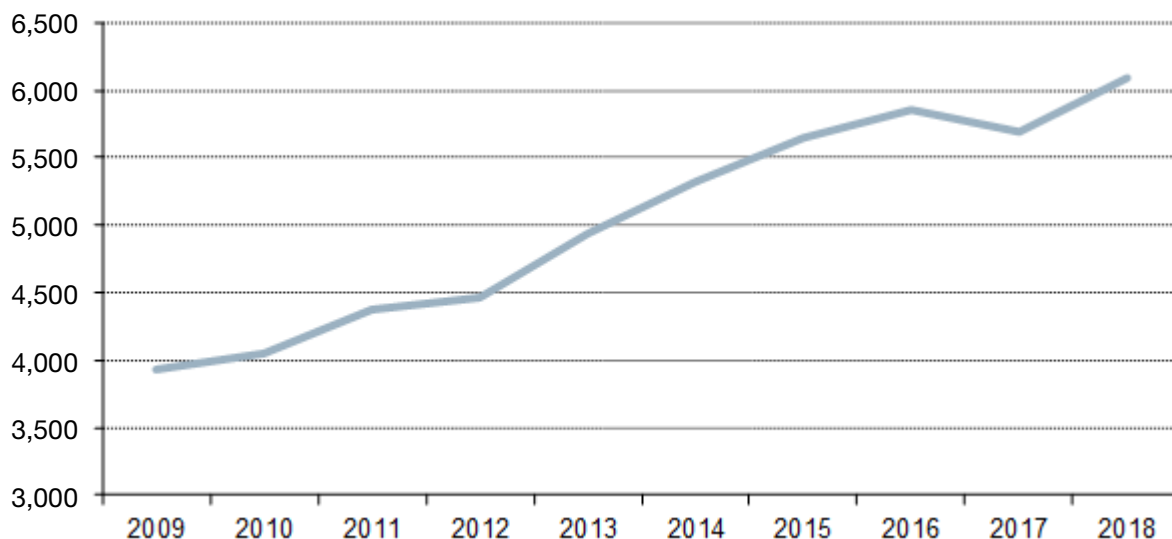
TABLE 2: GDP in real terms²

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
GDP in nominal terms	3,924.9	4,048.8	4,374.2	4,469.8	4,936.0	5,321.3	5,643.6	5,847.7	5,693.0	6,087.0
Price index	95.6	96.6	97.5	98.7	99.4	100.0	101.1	101.7	102.1	102.9
GDP in real terms	4,106.1	4,190.9	4,485.2	4,530.6	4,964.4	5,321.3	5,580.1	5,772.7	5,574.2	5,913.3
Change in real terms	-11.3%	2.1%	7.0%	1.0%	9.6%	7.2%	4.9%	3.5%	-3.4%	6.1%

Sources: INSEE, IMSEE
Unit: million of euros

The Principality's GDP was EUR 6.09 billion in 2018. After the decline of 2017 (-3.4%), Monaco's GDP is growing again (+6.1%).

FIGURE 2: Change in GDP in millions of current euros



Source: IMSEE
Unit: million of euros

¹ GDP in nominal terms is expressed in "current euros".

² GDP in real terms is expressed in "constant euros", base 100 in 2014.

1.2.3 GDP Structure

In 2018, all components of GDP recorded growth. The highest growth rate stemmed from the Gross Operating Surplus (+11.0%) after a decline in 2017 (-9.0%).

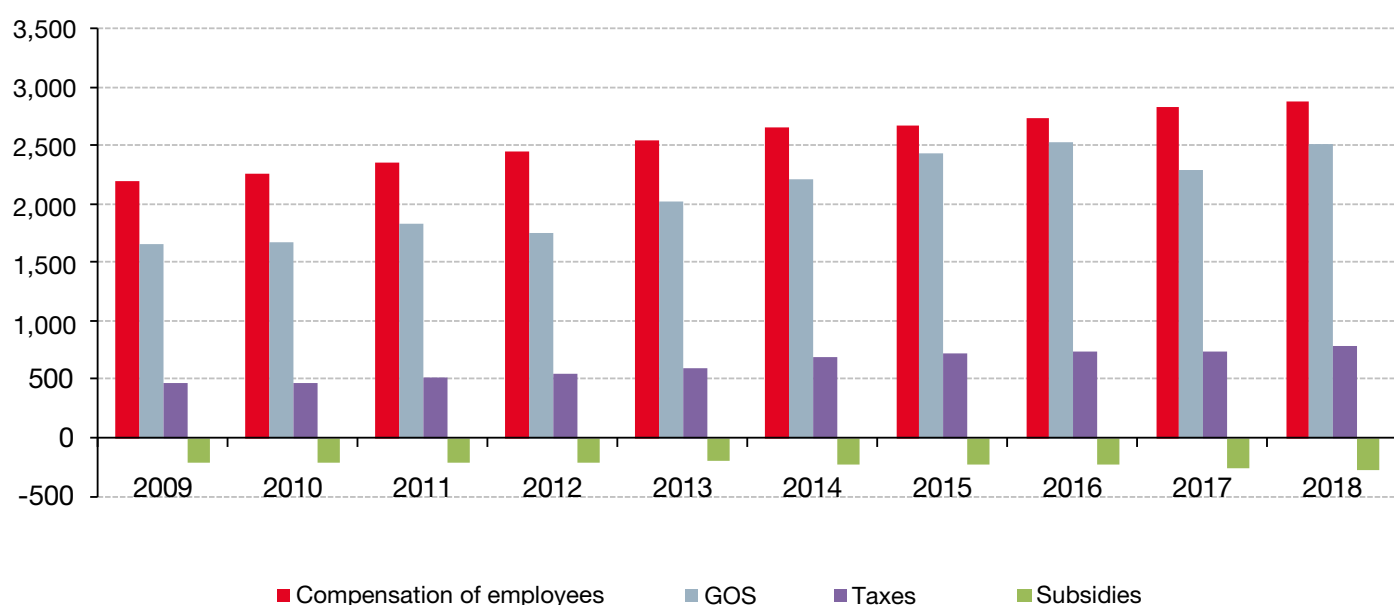
TABLE 3: Structure of GDP in millions of current euros

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Change 17/18
Compensation of employees	2,090.3	2188.5	2,301.0	2,415.3	2,528.7	2,649.6	2,694.7	2,772.0	2,884.9	2,962.9	2.7%
GOS	1,582.0	1,611.8	1,784.5	1,732.8	2,013.0	2,210.4	2,453.7	2,564.8	2,334.5	2,590.4	11.0%
Taxes	452.0	454.1	501.4	537.4	596.8	685.4	726.2	746.0	746.5	811.4	8.7%
Subsidies	-199.4	-205.6	-212.7	-215.6	-202.4	-224.1	-231.0	-235.1	-272.9	-277.6	1.7%
GDP in nominal terms	3,924.9	4,048.8	4,374.2	4,469.8	4,936.0	5,321.3	5,643.6	5,847.7	5,693.0	6,087.0	6.9%

Source: IMSEE

Unit: million of euros

FIGURE 3: Change in GDP components in millions of current euros



Source: IMSEE

Unit: million of euros

Compensation of employees is the only GDP component on a steady increase since 2008. It accounted for almost half (46.6%) of GDP excluding subsidies. However, the increase in wage bill (+2.7%) is lower than the increase in number of employees (+3.7%).

The overall GOS increased sharply (+11.0%) with eight out of twelve sectors on the increase. GOS accounted for 40.7% of GDP excluding subsidies.

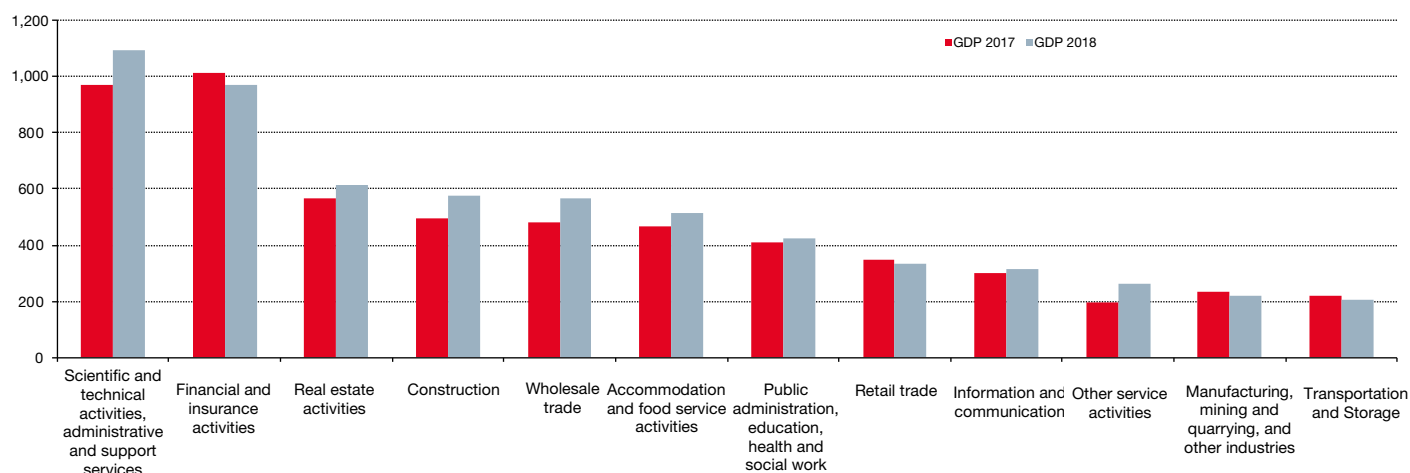
Taxes also increased (+8.7%) both in nominal terms and in real terms (+7.8%) due to the increase in VAT and VAT on property and transfer duties. They accounted for 12.7% of the wealth created excluding subsidies.

Subsidies continued to increase (+1.7%) but at a slower pace than in 2017 (+16.1% primarily due to the creation of the Dependency Fund and money allocated to Energy transition).

1.2.4 GDP distribution

Eight out of twelve sectors recorded an increase in GDP compared with 2017.

FIGURE 4: GDP by sector in 2017 and 2018 in millions of current euros



Source: IMSEE
Unit: million of euros

TABLE 4: GDP in nominal terms by sector expressed in millions of current euros

	GDP 2011	GDP 2012	GDP 2013	GDP 2014	GDP 2015	GDP 2016	GDP 2017	GDP 2018	Change 17/18	Share 2018
Scientific and technical activities, administrative and support services	693.5	771.3	826.3	835.5	837.5	866.7	967.0	1,090.1	12.7%	17.9%
Financial and insurance activities	722.7	750.5	822.0	897.4	947.7	939.1	1,011.1	969.9	-4.1%	15.9%
Real estate activities	360.9	339.3	415.5	540.5	494.2	520.2	567.0	611.1	7.8%	10.0%
Construction	290.6	325.3	381.6	415.5	718.8	837.9	494.3	575.9	16.5%	9.5%
Wholesale trade	455.9	372.7	414.3	483.9	541.9	510.3	479.6	564.8	17.8%	9.3%
Accommodation and food service activities	304.6	321.1	360.0	347.0	374.2	360.3	466.5	513.6	10.1%	8.4%
Public administration, education, health and social work	348.9	349.6	392.4	409.6	404.3	406.1	411.2	423.2	2.9%	7.0%
Retail trade	311.9	311.3	346.3	355.8	334.3	343.4	346.0	334.6	-3.3%	5.5%
Information and Communication	272.0	255.3	242.5	244.2	250.2	271.8	302.4	317.1	4.9%	5.2%
Other service activities	181.9	252.6	231.3	343.3	266.8	370.6	194.6	260.7	34.0%	4.3%
Manufacturing, mining and quarrying, and other industries	270.4	252.6	308.5	256.6	274.5	229.4	234.4	220.2	-6.1%	3.6%
Transportation and Storage	160.9	168.2	195.2	192.1	199.1	192.0	218.6	205.9	-5.8%	3.4%
GDP in millions of euros	4,374.2	4,469.8	4,936.0	5,321.3	5,643.6	5,847.7	5,693.0	6,087.0	6.9%	100%

Source: IMSEE
Unit: million of euros

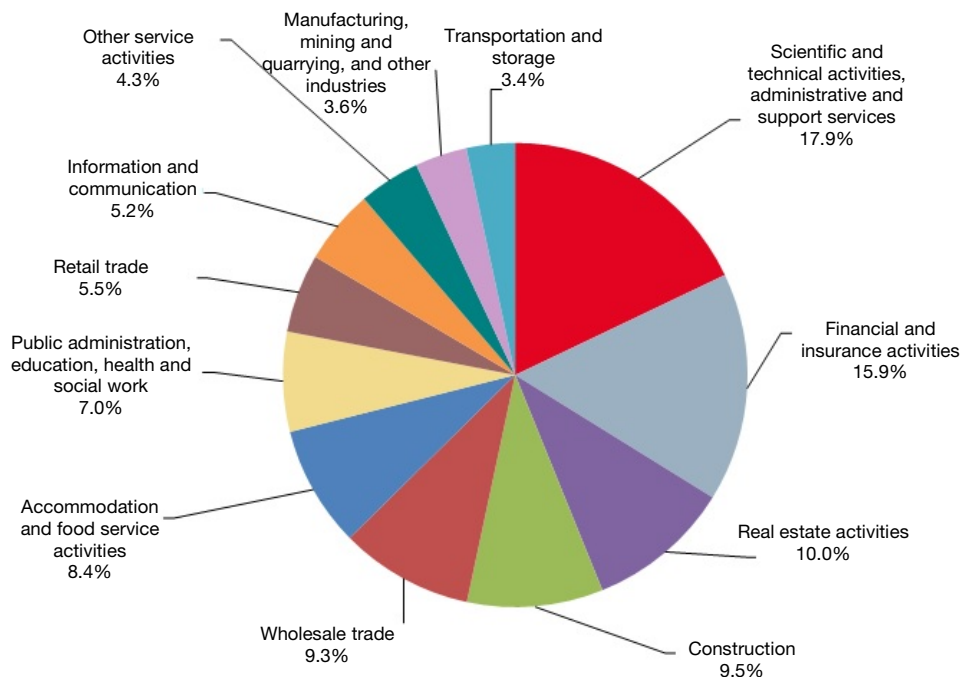
For the first time, Scientific and technical activities, administrative and support services crossed the one billion mark (EUR 1.09 billion) becoming the highest contributor to Monaco's GDP. This follows from their good results (+12.7%) as well as the decline of Financial and insurance activities (-4.1%) mainly due to the departure of a major economic operator.

Following two years of decline, Wholesale trade grew (+17.8%) reaching a historical peak.

Retail trade declined (-3.3%) and is back to its 2015 level.

Industry's GDP contracted (-6.1%) to reach its lowest historical level.

FIGURE 5: 2018 GDP distribution



Source: IMSEE

Three sectors produce nearly half (43.9%) of the wealth generated in the Principality:

- Scientific and technical activities, administrative and support services (17.9%);
- Financial and insurance activities (15.9%);
- Real estate activities (10.0%) which remained significant after the decline of Construction in 2017.

1.3 GDP per capita

The situation in the Principality of Monaco is quite unique in many respects, in particular as regards, firstly, its resident population and, secondly, its wage-earning population.

In 2018, for 38,300 residents, there were 56,303 employees, of whom 85% domiciled outside Monaco. This very uncommon situation, unique in the world, makes international comparisons tricky and the use of certain conventional international indicators inappropriate. This is true in particular for GDP per capita, a usual indicator.

However, in order to be able to place the Principality in its environment and in an international context, two types of "ad hoc" GDP per person are calculated.

Firstly, GDP per capita calculated since 2005 and, secondly, GDP per employee.

1.3.1 GDP per capita: presence on the economic territory

For the calculation of GDP per capita, the European system of accounts (ESA) uses the resident population on the economic territory. However, it is important to take into account specific local economic features.

In the case of the Principality, the wage-earning population consists of "daily workers" who do not reside on the Monegasque territory. Considering their economic weight and their daily contribution to wealth creation, it seemed appropriate to create a reference population for the calculation of GDP per capita.

The reference population used consists of two components: the resident population and the non-resident population employed in the economic territory.

TABLE 5: Reference population for the calculation of GDP per capita

	2013	2014	2015	2016	2017	2018	Change 17/18
Residents (all nationalities)	36,900	37,600	38,200	37,500	38,300	38,300	0.0%
Non-resident employees	41,884	43,218	42,931	43,559	45,497	47,576	4.6%
of whom private sector employees excl. MC	39,829	41,094	40,726	41,306	43,155	45,153	4.6%
of whom public sector employees excl. MC	2,055	2,124	2,205	2,253	2,342	2,423	3.5%
Total reference population	78,784	80,818	81,131	81,059	83,797	85,876	2.5%

Source: IMSEE

Previous population estimates have been updated following the 2016 population census. The total reference population in 2018 was 85,876 (+2,079).

TABLE 6: GDP per capita

	2013	2014	2015	2016	2017	2018
GDP in millions of current euros	4,936.0	5,321.3	5,643.6	5,847.7	5,693.0	6,087.0
Total population	78,784	80,818	81,131	81,059	83,797	85,876
GDP per capita in current euros	62,652	65,842	69,562	72,141	67,938	70,881
Price index	99.4	100.0	101.1	101.7	102.1	102.9
GDP per capita in constant euros	63,014	65,842	68,779	70,959	66,520	68,858
Change in real terms		4.5%	4.5%	3.2%	-6.3%	3.5%

Sources: INSEE, IMSEE

GDP per capita was EUR 70,881, up +3.5% in real terms. With the increase (+2.5%) in the reference population, the change in GDP per capita is less than the change in GDP.

1.3.2 GDP per employee

It can be used as a means of productivity measurement and comparison.

TABLE 7: GDP per employee

	2013	2014	2015	2016	2017	2018
GDP in millions of current euros	4,936.0	5,321.3	5,643.6	5,847.7	5,693.0	6,087.0
Wage-earning population	50,835	52,239	51,956	52,447	54,303	56,303
GDP per employee in current euros	97,098	101,864	108,623	111,498	104,838	108,112
Price index	99.4	100.0	101.1	101.7	102.1	102.9
GDP per employee in constant euros	97,658	101,864	107,400	109,670	102,650	105,026
Change in real terms	6.9%	4.3%	5.4%	2.1%	-6.4%	2.3%

Sources: INSEE, IMSEE

GDP per employee was EUR 108,112, up +2.3 % in real terms.

1.3.3 GDP per employee in Monaco and in France

French data for 2017 and 2018 are provisional.

TABLE 8: France - GDP per employee in real terms

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Change 17/18
GDP in billions of constant euros (base 2014)	2,025.8	2,065.3	2,110.6	2,117.2	2,129.4	2,149.8	2,173.7	2,197.5	2,247.2	2,285.9	1.7%
Wage-earning population in thousands (France)	24,249	24,300	24,367	24,296	24,375	24,386	24,489	24,741	25,069	25,237	0.7%
GDP "per employee" in constant euros	83,544	84,992	86,619	87,141	87,362	88,155	88,764	88,822	89,641	90,577	1.0%

Sources: INSEE, IMSEE

Units: thousand, billion euros 2014

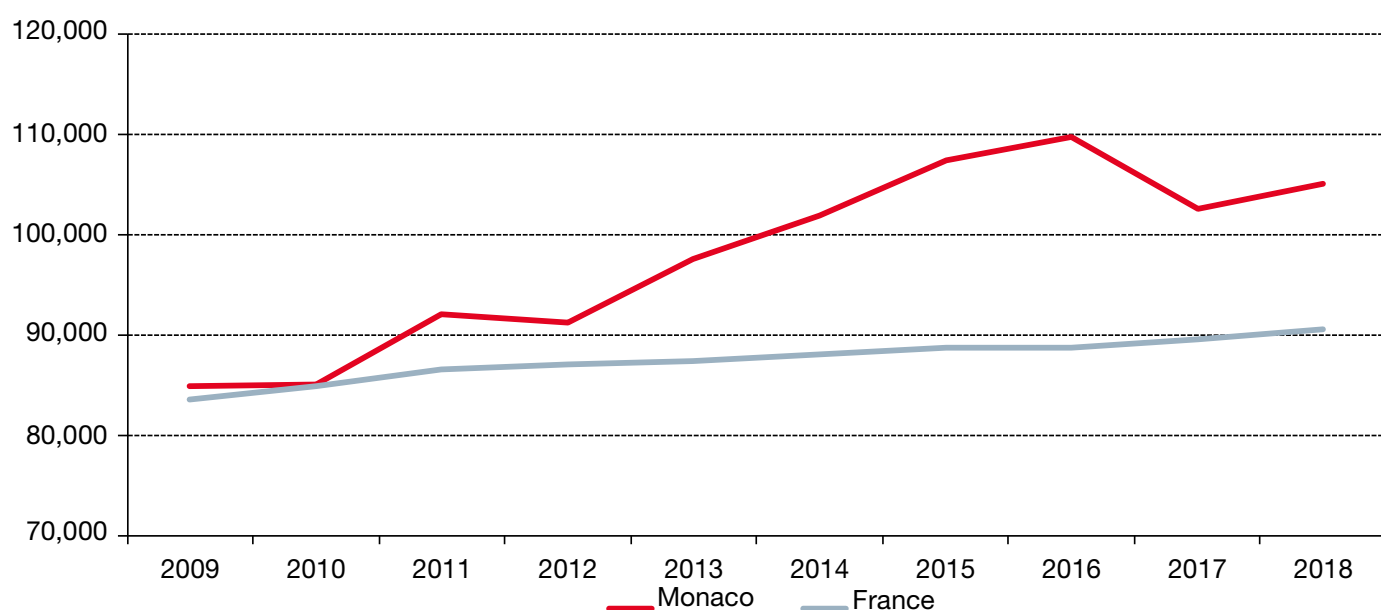
TABLE 9: Change in the GDP gap per employee between Monaco and France in constant euros

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Change 17/18
Monaco	84,952	85,049	92,104	91,326	97,658	101,884	107,400	109,670	102,650	105,026	2.3%
France	83,544	84,992	86,619	87,141	87,362	88,155	88,764	88,822	89,641	90,577	1.0%
Gap Monaco / France	1.7%	0.1%	6.3%	4.8%	11.8%	15.6%	21.0%	23.5%	14.5%	16.0%	

Sources: INSEE, IMSEE
Unit: euros 2014

The GDP per employee in Monaco has always been higher than in France. The maximum difference was reached in 2016.

FIGURE 6: Change in GDP “per employee” in constant euros



Sources: INSEE, IMSEE
Unit: euros 2014

2. GDP calculation methodology and procedure

2.1 Regulatory framework and methodology used

2.1.1 The 1995 European System of Accounts (ESA 1995)

The European system of national and regional accounts (ESA 1995), effective since 1999, broadly consistent with the System of National Accounts of the United Nations (1993 SNA), defines a framework for ensuring the consistency of measurements in the European Union.

For the sake of comparability and transparency with regard to the international community and where information is available, the Principality used ESA 1995 as the basis to design its tools for measuring national wealth, i.e Gross Domestic Product (GDP) and Gross National Income (GNI)³.

2.1.2 The 2010 European System of Accounts (ESA 2010)

ESA 1995 is gradually being replaced by ESA 2010. For many countries (including France and Switzerland), 2014 is the year of revision of the national accounts and of publication of the first aggregates in accordance with ESA 2010.

The main changes made lie in the recognition of research and development expenditure and military expenditure.

In ESA 1995, research and development expenditure are considered as current expenditure and recorded as intermediate consumption. As a result, it reduces a country's GDP. However, this expenditure has a long-term impact that can be measured over several years. This is the reason why, according to 2010, it must be considered as investments. This increases the GDP figure.

As regards military expenditure, in ESA 1995, it is treated as the government's intermediate consumption if the military equipment cannot be used for civilian purposes (e.g. fighter planes). In ESA 2010, it was decided to record all weapons expenditure as an investment if the service life is more than one year.

Other methodological or conceptual changes have also been brought by the new European system of accounts. They have not all been completed in terms of methodology, such as the estimate of production of services by non-life insurers and reinsurers.

Given the particular situation of the Principality of Monaco (customs and monetary union with France, no national accounting system), certain economic information is not available.

This is the reason why GDP calculation in the Principality does not take certain data into account. In particular, this is the true for imputed rentals for housing (estimate of rentals which residents of an accommodation would have paid if they had been tenants and not owners of their accommodation), which is included in GDP according to ESA 2010 but never estimated in Monaco.

This also explains why the changes brought about by ESA 2010 are not taken into account for the calculation of GDP in Monaco, which continues to use ESA 1995 as reference.

The GDP estimate in the Principality is understated as certain components of GDP are not taken into account.

³ The Gross National Income represents total primary income (gross) receivable by resident institutional units (gross operating surplus, gross mixed income, compensation of employees, taxes on production and imports less subsidies, property income (receivable less payable).

It is equal to Gross Domestic Product (GDP) minus primary income payable by resident units to non-resident units, plus primary income receivable by resident units from the rest of the world.

It provides a measurement of the primary income received by all resident institutional units and allows international comparisons.

Source INSEE

2.1.3 GDP at the core of economic rationale

GDP is one of the aggregates that determines national wealth and how it increases, in other words "economic growth".

Along with the Gross National Income (GNI) it is a summary of the theoretical considerations of macro-economics and the practical considerations of the European framework of national accounts.

2.1.4 Determination of GDP

GDP can be approached in three ways, all equivalent in terms of results:

- as an indicator of economic activity (production approach)
GDP is the sum of gross values added (VA) by different institutional sectors or industries, less subsidies on products:
$$\text{GDP} = \text{sum of gross VA} \\ + \text{Taxes on products} \\ - \text{Subsidies on products}$$
- as an indicator of production (expenditure approach)
GDP is the value of goods and services produced by resident units and available for final uses. It is calculated as the sum of final uses of goods and services by resident institutional units.
- as an indicator of income (income approach)
GDP is equal to the sum of primary incomes distributed by resident producer units less subsidies.
$$\text{GDP} = \text{Compensation of employees} \\ + \text{Gross operating surplus and mixed income} \\ + \text{Taxes on production} \\ - \text{Subsidies}$$

The Principality's approach is that of GDP as an indicator of income insofar as this approach does not imply the immediate creation of national accounts. The key macro-economic aggregates show that this is a coherent choice.

GDP measured in nominal terms

GDP calculated in this manner is measured in "nominal" terms, i.e. in current euros.

To measure the "real" growth of the aggregates, the price effect must be separated from the volume effect. To do this, the GDP in "nominal" terms is deflated by the average price variation over the year ended. This gives the GDP in "real" terms.

The price index used for these calculations is France's price index published by INSEE. The GDP in real terms will be calculated based on the change in the consumer price index taking 2014 as the base year.

Scope of calculation: residence

The scope of calculation is the national economy. This includes all resident units, i.e. units having a centre of economic interest on the economic territory.

- Determining the coverage area implies defining an economic territory that includes the following:
 - The country's geographic territory;
 - Any free zones, including bonded warehouses and factories under customs control;
 - The national air-space, territorial waters and the continental shelf lying in international waters, over which the country enjoys exclusive rights;
 - Territorial enclaves;

- Deposits in international waters worked by resident units.
- Coverage period: one year
 - A unit is recognised as having a centre of economic interest on the economic territory when it engages for an extended period (one year or more) in economic activities on this territory. Nationality is not a criterion considered. Any other unit is classified as non-resident.
- The subdivision of the economic territory into different classifications: economic agents, economic transactions, accounts.

2.2 Procedure implemented in the Principality

In order to meet the objectives set out above, the Government set up a working group on this matter in 2005. The objectives were to define the given territory and to carry out a census of economic agents. The aim is to determine the statistical elements necessary for producing financial aggregates, in particular through a national statistical survey, which is essential for constructing the GDP.

IMSEE (Monegasque Institute of Statistics and Economic Studies), established by Sovereign Ordinance no. 3.095 of 24/01/2011 and a spin-off of the Statistics and Economic Studies Division, is today responsible for calculating the Principality's GDP.

2.2.1 Determining the calculation algorithms

The main objective of this large-scale project was to define the algorithms for calculating economic aggregates (see 2.3) and to ensure the consistency of all information collected.

2.2.2 Extrapolation method used for the GDP results

Since the calculation of GDP in 2005, data on the Gross Operating Surplus (GOS) of Monegasque economic agents have been compiled through a survey.

Of the 9,667 economic agents concerned in 2018, the percentage of files processed was 88.6%. To understand the overall GOS, and address the percentage of non-responses, statistical extrapolation procedures are used (with the same methodology applied since the beginning). It was nevertheless possible to use certain data pertaining to non-responding companies, in particular the legal form, the sector and sub-sector of activity and the workforce for some of them.

Initially, discriminant variables of the GOS were determined based on the data provided by the responding companies. Based on statistical analyses, five discriminant variables were determined:

1. Size of the business: the top 100 businesses in terms of turnover were processed differently. The aim is not to reproduce the atypical nature of these companies across all non-responding companies;
2. Legal form;
3. Sector of activity;
4. The company's workforce;
5. The wage bill.

However, with the data available on the non-responding companies it was not possible to exploit all of these explanatory variables. For example, statistical analyses show that the number of employees seems to be a discriminant variable of the GOS. However, it was not possible to use this information insofar as the number of employees is rarely available for non-responding companies. The work was thus refocused on known variables of these entities, namely the legal form, the sector and sub-sector of activity.

Subsequently, the results obtained from the discriminant analyses were corrected for the bias caused by the existence of outliers. Thus, for a legal form and sub-sector of activity, 90% of the data were kept for extrapolation. The objective was to have a less volatile estimate of the GOS, not biased by outlier businesses of the class under consideration. After correcting the average GOS estimates per class, the extrapolation was possible using the data available on non-responding companies.

2.2.3 Determining GDP per sector

As part of the analyses conducted by most Monegasque authorities, 12 sectors of activity were identified across the Principality's economic fabric.

Key assumptions for calculating GDP per sector:

As regards salaries, IMSEE uses the data provided by the Social Security offices (Caisses Sociales) in Monaco.

The GOS of each sector was then extrapolated using the same method as that used for calculating total GDP (see above).

Subsidies were allocated to and weighted for each sector based on their nature and purpose.

As regards the allocation of taxes per sector of activity, several analyses were carried out.

Based on these, the following apportionment rules were decided:

- For VAT collected, a small part consists of an account "Non-apportioned by sector". It was accepted that it is possible to apply to this item a distribution key corresponding to that of the known part of VAT collected per sector.
- Similarly, it was accepted that this distribution key could apply to all the other items listed below:
 - French repayment in respect of the VAT-sharing account;
 - Import duties;
 - Annual vessel flag fees;
 - Domestic tax on petroleum products (TIPP) and excise duty on tobacco products;
 - Profits of the Tobacco Monopoly;
 - Leasehold rights;
 - Stamp duties;
 - Tax on insurance contracts;
 - Alcohol excise duties;
 - Duties levied on company cars.
- However, it was agreed to allocate the budgetary items "VAT on property" and "Transfer duties" to the real estate sector.

2.2.4 GDP in current euros and in constant euros

To measure GDP in constant euros, an inflation/revaluation index was applied to the 2014 aggregates. Considering the characteristics and the geographical location of the territory of the Principality of Monaco, it was agreed to rely on the data and assumptions made to measure the French GDP, provided by INSEE.

The annual accounts at constant prices (also called "in real terms") of the 2014 base are presented "at the price of the previous year, chain-linked, 2014 base" (1.03 Price index of supply and use of goods and services).

The objective of this presentation is to provide users of aggregates with the best time series at constant prices. The change of an aggregate at constant prices is easier to interpret when the year of constant prices is close enough to the year of the prices under review.

This is why changes in aggregates at constant prices of the annual national accounts for a given year are systematically calculated taking as basis the aggregates at constant prices of the previous year, to which are applied the price changes of the previous year. These series are then called 100 in 2014, then multiplied by the value at current prices of the aggregate in 2014, in such a way that users have at their disposal at the same time the order of magnitude of the aggregate.

2.3 GDP calculation algorithm

2.3.1 Gross Domestic Product

$$\text{GDP} = \begin{aligned} & \text{Compensation and social charges (D1)} \\ & + \text{Gross operating surplus and Mixed income} \\ & + \text{Taxes on production (D2)} \\ & - \text{Subsidies (D3)} \end{aligned}$$

2.3.2 Compensation and social charges (D1)

$$\text{D1} = \begin{aligned} & \text{Gross wages and salaries in cash} \\ & + \text{Effective social contributions payable by employers} \\ & + \text{Imputed social contributions payable by employers} \end{aligned}$$

2.3.3 Gross Operating Surplus and mixed income

If the respondent fills in the detailed Q1 questionnaire:

$$\text{GOS} = \begin{aligned} & \text{Turnover, net of taxes} \\ & + \text{Capitalised production costs} \\ & - \text{Amount of purchases} \\ & \pm \text{Changes in inventories} \\ & - \text{Consumption for the year} \\ & + \text{Operating subsidies} \\ & - \text{Taxes and similar levies} \\ & - \text{Gross Salaries \& Compensation} \\ & - \text{Total social contributions} \end{aligned}$$

If the respondent fills in the Q2 questionnaire:

$$\text{GOS} = \begin{aligned} & \text{TO / Fees and/or Treatments charged} \\ & - \text{Purchases and expenses for the year} \\ & \pm \text{Changes in inventories} \\ & + \text{Operating subsidies} \\ & - \text{Gross Salaries and Compensation} \\ & - \text{Total social contributions} \end{aligned}$$

2.3.4 Taxes on production (D2)

D2 = VAT
+ Taxes on imports (D212)
+ Other taxes on products (D214)
+ Other taxes on production

VAT

VAT = D211
+ net VAT collected in the Principality (excluding VAT on property)
± French repayment in respect of the sharing account.

Taxes on imports

D212 = Import duties
+ Annual vessel flag fees

Other taxes on products

D214 = Domestic tax on petroleum products (TIPP) and excise duty on tobacco products
+ Profits of the tobacco monopoly
+ Transfer duties
+ Leasehold rights
+ Stamp duty
+ Tax on insurance contracts
+ VAT on property
+ Alcohol excise duties

Other taxes on production

D29 = Taxes related to property or to the use of real estate, machines, vehicles and equipment. Taxes on the wage bill and payroll, on authorisation to carry out a professional activity, on harmful emissions.

2.3.5 Subsidies (D3)

D3 (D393 + D399) = Operating grant from the Municipality
+ Operating grant from the CHPG
+ Operating grant from other public institutions
+ Subsidies in the educational and cultural field
+ Subsidies for public policies
+ Subsidies in the social and humanitarian field
+ Funding for sports
+ Organisation of events in the Principality

Gross Domestic Product 2018

November 2019

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