2018 REPORT

OBSERVATORI BARCELONA

Presentation

It gives us great pleasure to present the *2018 Report* from the Barcelona Observatory, which demonstrates how Barcelona and its metropolitan area has become consolidated as an international capital of economic activity and innovation.

In 2017, our city experienced moments of uncertainty and instability. But despite this complex context, Barcelona's economy and labour market have remained vibrant and notably dynamic. So say the macro-economic figures such as the increase in GDP, which has registered an annual growth of over 3%, the good job creation rate, the reduced unemployment figures, and the increase in exports. So too, do the rich, diverse local production network and the numerous economic, social and cultural assets available in Barcelona, which give this global city such potential, and put it in the best possible position to face the future. However, we also face great challenges: continuing to consolidate the city's position as an international leader in technology, innovation and science; working to ensure that the jobs created are of a high quality; and attracting investment that provide the city with high added value.

Promoting Barcelona internationally is key to being able to face these challenges. And the Report we present today is a good temperature gauge for this. According to the "Global Power City Index 2018", our city enjoys a prominent position in the international context, where it is placed among the top twenty-five urban areas in the world. It is also one of the fifteen safest cities in the world (The Economist Intelligence Unit). What is more, Barcelona not only appreciates and makes the most of its people's talents but it also attracts talent from elsewhere: In 2018 it was rated as the fourth most attractive metropolis in the world for working abroad, according to the report "Decoding Global Talent" (Boston Consulting Group). It has a significant volume of workers in high added value sectors in the Catalan labour market, which employs more than 800,000 people in science and technology, and its research centres and facilities are a benchmark on the continent.

This is thanks to the efforts of many agents in the city. Within public administration, we continue to work to reinforce this image of Barcelona to the world. We have recently launched the "Barcelona science" plan, with the aim of reinforcing our city as a capital city of science. The report also confirms that in 2017 we were the fifth metropolis in Europe and the eighteenth in the world in terms of scientific production. We therefore have a fantastic research ecosystem, which is what enables us to aspire to being one of the greatest capitals of science in Southern Europe. At the same time, Barcelona is also a hub for innovation in the region: it is already the third favourite European city for start-ups, according to the "Startup Heatmap Europe Report 2018". It is also the eighth most innovative metropolis on the continent, according to "Innovation Cities Index 2018". As part of this emerging reality, over the last two years we have launched

initiatives such as the Digital Future Society, with the collaboration of Fundación MWCapital, the first Mobile Week, Smart City Week and the Sharing Cities Summit. One of our goals is to position Barcelona as an innovative city that reflects on the urban challenges of our times and responds with real solutions that can also help many other large metropolises.

And so Barcelona is advancing, and public leadership is vital to govern this process, not only boost innovation that must be intelligent, inclusive and sustainable, but also to guarantee that this external image reinforces the local production network. At the City Council we are supporting this network by implementing six economic development plans in the city's lower than average income districts. This year saw the launch of InnoBA, Barcelona Activa's new benchmark centre for socio-economic innovation, which will find and support business projects with a social impact, and Nou Barris Activa,an important step towards decentralising BASA and bringing it to the neighbourhoods. We have also reached significant milestones regarding procurement, with the first Public Procurement Fair and the purchase of a procurement e-platform. In all, we have reached a point where the unprecedented development policies introduced during this term of office are starting to bear fruit and come into their own with numerous initiatives and services for the whole city.

We are sure that cities will be key players in facing the great challenges that the XXI century will bring. In Barcelona, we will seek to join forces with businesses, city residents, research centres and other relevant stakeholders in the city and its districts, to create active, first-class partnerships that help us develop a diversified, pluralistic, innovative and socially inclusive economy.

On the occasion of presenting this sixteenth annual report from the Barcelona Observatory, I would like to express my gratitude to the technical teams at the Chamber of Commerce and Barcelona City Council who have made this publication possible; thank you to everyone involved from both entities who have lent their support and renewed their commitment to the city with this rigorous international comparison of urban dynamics. It is a good example of the collaboration between institutions that is characteristic of our history, and reminds us that Barcelona is a collective project between institutions businesses and city residents.

Gerardo Pisarello
First Deputy Mayor

I am pleased to present the 16th edition of the Barcelona Observatory, which is the result of the collaboration between the Barcelona Chamber of Commerce and Barcelona City Council, where the two organisations aim to offer indicators concerning Barcelona's positioning in world city rankings. In order to attract investment projects, global cities are competing amongst themselves more and more. This means having or attracting the best talent, guaranteeing a stable and legally safe environment, simplifying administrative processes and offering a good quality of life and a socially cohesive environment.

For all of these reasons, it is necessary to monitor existing information and detect our city's strong points and those that need to be improved. We should congratulate ourselves that the Barcelona city has consolidated the good positioning it has achieved in Europe and in the world regarding most of the indicators analysed in this Barcelona Observatory 2018 Report. The city remained among the 25 major metropolises in terms of global competitiveness, according to the Mori Memorial Foundation, and among the world's top ten urban areas for attracting investment projects in 2017, according to KPMG. Barcelona also continued to be well-positioned as a leading city for attracting tourism in 2017, as it was the 6th most popular international destination in Europe and 23rd in the world, for the second year running. Barcelona Port maintained its leadership in cruise ship passengers for the 17th year running and Prat Airport came 7th in the ranking of European airports in terms of passenger volume, and was second out of the ten major European airports for growth in 2017. Also in 2017, Barcelona climbed to first position in the ranking for both organising congresses and the number of delegates attending them, which is the first time that this has happened since this ranking was first produced by the ICCA in 2004. However, not all of the indicators are favourable. The city is facing big challenges, like other global cities, such as the arrival of immigration, rising prices in housing for both purchasing and rental, the pressure of tourism, making it necessary to opt for quality rather than quantity, and social cohesion, among others.

Barcelona's favourable economic evolution in recent years has helped to consolidate the city's good positioning in the world. After the times of uncertainty and instability experienced towards the end of 2017, Barcelona has recovered its rhythm of economic activity in 2018. The city's GDP has continued to rise for the fifth year running, and during the third quarter of 2018, it achieved a record number of 1,114,634 workers registered with the general Social Security system, which represents a 2.6% increase on last year's figure. The performance of businesses also shows very positive average figures for the first three quarters of 2018, although they are more moderate than those for 2017, while employment shows the best result in recent years, according to the monograph 'Business Climate in the AMB', which is included in this publication for the eighth year running.

Barcelona city's most important change in recent years has been its transformation into the main technological-entrepreneurism hub for Southern Europe, and its aspiration to become a leading European city in this regard, along with other cities such as Berlin and London. In reality, 34% of all Spanish startups are located in Barcelona, a figure that represents 1,100 technological start-ups and 58% of the investments made in Spain in 2017. Barcelona is also the 3rd most attractive place out of 93 European cities for starting a business project, according to the Startup Heatmap Europe Report 2018. Furthermore, Barcelona is specialising in hosting technology congresses (Mobile World Congress, 4TFN, Smart City Expo, IoT, Ind3Dustry, etc.). This is in addition to the international companies that have come to Barcelona in 2018 to set up their technological innovation centres, such as Microsoft, Facebook, Siemens and Allianz. All the above is creating an increasing demand for information technology (ICT) professionals, which cannot be covered with internal talent. This means attracting them from abroad, a fact which is causing salaries to rise. Barcelona must make the best of this opportunity in technological entrepreneurship by fostering technological careers among young people, and especially among young women, by improving working conditions and by guaranteeing the quality and cost of living in the city, especially in terms of access to housing.

Miquel Valls i Maseda
President of the Barcelona Chamber of Commerce

Credits

BARCELONA CITY COUNCIL

Gerardo Pisarello Prados
First Deputy Mayor

Sara Berbel Sánchez
General Manager of Political Economy and Local Development and CEO of Barcelona Activa

Àngels Santigosa i Copete
Head of the Political Economy and Local Development Studies Department

BARCELONA CHAMBER OF COMMERCE

Miquel Valls i Maseda
President

Xavier Carbonell i Roura
General Manager

Joan Ramon Rovira i Homs
Head of the Economic and Infrastructure Studies Department

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Contents

INTRODUCTION

Introduction

Presenting the Barcelona Observatory's *2018 Report*.

The Barcelona Observatory is an initiative promoted by Barcelona City Council and the Barcelona Chamber of Commerce, with the collaboration of other city organisations which, year after year, take part by facilitating information and making key contributions concerning their sector of activity.

This sixteenth edition of the Barcelona Observatory's annual report aims to offer various references for decision-making by economic stakeholders interested in doing business or becoming established in Barcelona, in order to attract talent and provide support for candidacies for holding events or the opening of offices in the City of Barcelona. To this end, as always, the report presents Barcelona's positioning in relation to the world's major cities, based on a series of economic and social indicators.

The *2018 Report* presents the following contents:

- A selection of 33 significant indicators that offer readers a synoptic, efficient presentation of the city's positioning, its characteristics and the goals yet to be achieved, which are presented in six thematic areas: economic activity, quality of life, sustainability and social cohesion, the job market and training, the knowledge society, tourism and prices, and costs.

As a new feature, this year's report also includes four new indicators: Cities prepared for the technological future and creative and cultural cities, which are included in the chapter 'Quality of life, sustainability and social cohesion'; attraction for global talent, in the chapter 'The job market and training'; and preferred cities for locating a new start-up, in the chapter 'Knowledge society'. The gender perspective is also included in all indicators where this is possible.

- A synoptic table presenting the series of indicators, in order to showcase the results and a graphic showing Barcelona's international positioning according to various rankings.
- A monographic article produced by the Chamber of Commerce, presenting an analysis of the business climate in the Barcelona Metropolitan Area (AMB) during the first three quarters of 2018 and its short-term prospects, which includes a specific analysis of the main economic sectors. Based on the opinions of business people, the environment surrounding Catalonia and the City of Barcelona is put into context, along with their future prospects.

The collected information has the following characteristics:

- It is based on a series of indicators, defined preferentially on a city scale, but susceptible to being extended to other territorial areas.
- The information sources are all prestigious international organisations and institutions.
- Most of the sources are international rankings, with the exception of seven indicators, where the date is obtained through a sample collected from the main urban areas.
- Where possible, the indicators include a graphic representation of the evolution, making it possible to evaluate the progression in each specific area.
- The collected data and information is as up to date as possible, according to current availability.

FACTS AND FIGURES
BARCELONA 2017

Facts and Figures Barcelona 2017

GEOGRAPHICAL ENVIRONMENT

Surface area (km²)	102.2
Population	1,628,936
Foreign population (% of total)	18,5%
Density (inhabitants/km²)	15,936.2
Climate (Can Bruixa Observatory)	
Average monthly temperature	18.4 °C
Annual rainfall (mm)	438,5
Hours of sun	2,924.8

ECONOMIC ENVIRONMENT

MACRO ECONOMIC DATA

GDP (var/ yr %) - Catalonia	3.4
GDP (var/ yr %) - Barcelona	3.,3
Social Security membership	1,087,344
Unemployment rate 16-64 years old (%)	10.0
Employment rate 16-64 years old (%)	72.1
Activity rate 16-64 years old (%)	80.2
CPI (average var. %) - Barcelona province	2.1
Exports (million €) - Barcelona province	54,771.6
Imports (million €) - Barcelona province	68,232.9
Outbound foreign investment (million €) - Catalonia	6,543.4
Inbound foreign investment (millions €) - Catalonia	3,093.0
Companies - Barcelona province	468,777
Foreign companies in Catalonia	8,642

COMMERCE AND TOURISM

Retail premises - Barcelona province	67,937
Open-air shopping areas	22
Municipal markets (umber and surface area [m²])	43/260,941
Hotels	
Numbers	650
Beds	79,288
Tourists	7,656,747

INFRAESTRUCTURE

Airport	
Runways (number and length [m])	3/3,352;2,660;2,528
Passengers	47,284,500
International passengers (%))	73.1
Port	
Land surface area (ha)	1,082.2
Docks and moorings (km))	22.2
Total traffic (thousands of tonnes)	60,070.1
Trade fair and congress activity	
Trade fairs	77
Visits to Fira de Barcelona	2,500,000
Hall surface area taken up by fairs (m²)	1,039,000
International meetings	1,000

TRAINING AND CITY OF KNOWLEDGE

Catalan universities	12
University students in Catalonia (course 2016/2017)	248,173
Foreign schools (Barcelona province)	40
Innovative companies in Catalonia*	3,602

QUALITY OF LIFE

Beaches (number and metres)	10; 4,703
Bike lanes (km and bicing members)	126; 102,353
Public libraries (number and users)	40; 6,376,796
Museums, collections and exhibition spaces (number and users)	54; 27,573,977
Public sports facilities (number and users)	1,890; 190,100
Theatre, music and cinema spectators	9,693,288

Note: Data for 2017 except *2016
Source: AENA, Barcelona City Council, Fira de Barcelona, Generalitat of Catalonia, Idescat, INE, State Ports, Secretary of State for Trade, Turisme de Barcelona, Institute of Culture of Barcelona.

RESULTS

Hub of economic activity

OBSERVATORI BARCELONA

Introduction

The city of Barcelona's economy was in good form in 2017 in terms of economic and job market activity, with an overall real growth of 3.3% in GDP, driven by the reactivation of internal demand, in particular family consumption, the increase in business investment and good export figures. The forecasts for 2018 are for continued economic growth, with an increase in private consumption and investment, as well as good momentum for exports, despite a certain amount of deceleration in activity due to political uncertainty and risks on a global scale that may affect these prospects. The Eurochambres survey on business prospects for 2019 shows positive results for Catalonia, especially for external sales.

Within this economic context, Barcelona remains among the top 25 most globally competitive cities for the third year running, according to the Mori Memorial Foundation report *Global Power City Index*, which ranks it 24th in the world and 11th in Europe. For the fifth year running, the *City RepTrak* report lists it among the top 15 cities with the best reputation in the world, and while it has gone down a few places in the 2018 edition, it is still above cities like London, Madrid and Amsterdam. In Resonance Consultancy's World's Best Cities 2019 ranking, which evaluates the quality and reputation of a city from different perspectives, Barcelona is placed 5th in the world, behind only London, Paris, New York and Tokyo, having risen 3 places since the previous year.

Other indicators reaffirm Barcelona's appeal for doing business and the city's positive image abroad. In particular, Barcelona generates confidence in the area of international investment, ranking 9th among the main urban areas of the world for attracting foreign investment projects in 2017, according to KPMG. In fact, Barcelona is the European city with the best strategy for promoting and attracting foreign investment for the period 2018/19, according to the FDi report *Cities and Regions of the Future 2018/19* (Financial Times Group), and is the second city in Southern Europe with the best future prospects.

Regarding international fairs and congresses, Barcelona is the world leader for the first time in both the number of meetings organised and the number of participants, in the ranking provided by the International Congress and Convention Association (ICCA).

In terms of entrepreneurship, in 2017 the rate of entrepreneurial activity (TEA) in the Province of Barcelona rose to 8.5%, surpassing countries like Sweden (7.3%), Germany (5.3%) and Italy (4.3%), while the rate for women entrepreneurs in the province (7.4%) is clearly above the European Union average (6%). The Barcelona Chamber of Commerce and Barcelona City Council are both working in this area to promote entrepreneurism and help to create high quality jobs in the city.

In 2017, Barcelona was world leader for the first time in the number of international congresses it hosted and the total number of participants

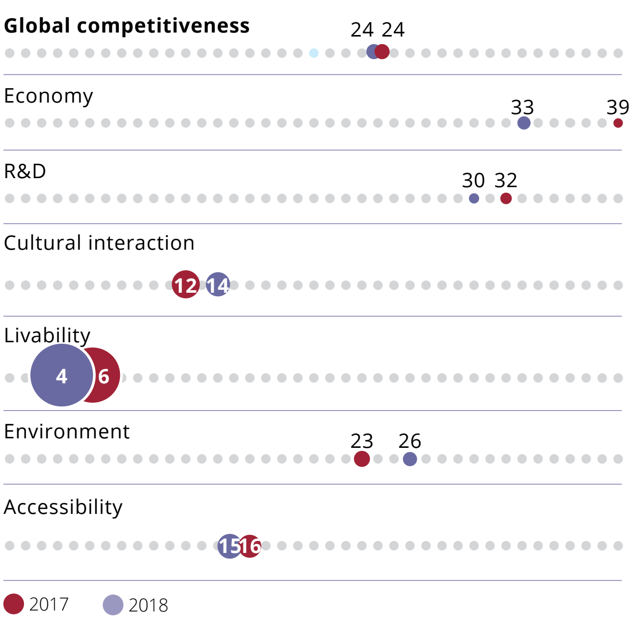
Global competitiveness of cities in 2018

For the third year running, Barcelona is among the top 25 cities for global competitiveness

In 2018, the *Global Power City Index* report, which compares 44 major world cities, ranked Barcelona 24th in the world and 11th in Europe for its global competitiveness. In a classification led by the grand metropolises of London, New York, Tokyo, Paris and Singapore, Barcelona's score is similar to Beijing and Boston's, and higher than Geneva, Shanghai and Milan's. Barcelona therefore maintains its position in the world and European rankings, placed among the leading 25 world cities for the third year running and improving on last year's score, despite the difficult events that unfolded in the city in 2017.

Since 2008, the Japanese Mori Memorial Foundation, with the collaboration of renowned universities and think tanks, has compiled the *Global Power City Index* report based on the results of seventy indicators divided into six categories of urban competitiveness. In the 2018 edition, Barcelona is ranked 4th in the world for livability, 14th for cultural interaction, 15th for accessibility and 26th for the environment, rising to 30th and 33rd places for R+D and economy, respectively, since last year. In both cases, the stakeholders consulted, visitors and artists rank Barcelona 9th, whereas city residents, research personnel and executives rank it 22nd, 30th and 27th, respectively.

Categories of urban competitiveness
(Positioning of Barcelona)



Source: *Global Power City Index 2018*. Institute for Urban Strategies. The Mori Memorial Foundation.

Global competitiviness of world cities. 2018

Position	City	European ranking
1	London	1
2	New York	
3	Tokyo	
4	Paris	2
5	Singapore	
6	Amsterdam	3
7	Seoul	
8	Berlin	4
9	Hong Kong	
10	Sydney	
11	Stockholm	5
12	Los Angeles	
13	San Francisco	
14	Toronto	
15	Frankfurt	6
16	Zurich	7
17	Vienna	8
18	Copenhagen	9
19	Chicago	
20	Boston	
21	Vancouver	
22	Madrid	10
23	Beijing	
24	**Barcelona**	**11**
25	Brussels	12
26	Shangai	
27	Washington DC	
28	Osaka	
29	Dubai	
30	Geneva	13
31	Milan	14
32	Kuala Lumpur	
33	Moscow	15
34	Istanbul	16
35	Taipei	

Source: *Global Power City Index 2018*. Institute for Urban Strategies. The Mori Memorial Foundation.

World cities with the best reputation in 2018

For the fifth year running, Barcelona is one of the top 15 cities with the best reputation

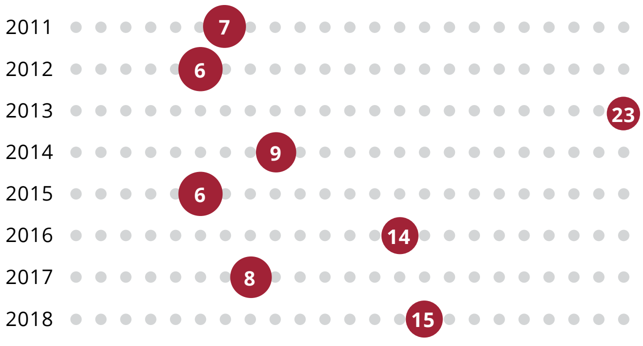
The Reputation Institute's *City RepTrak* report ranks Barcelona as the 15th world city with the best reputation in 2018 out of the 56 cities with the largest GDP, population and recognition, based on an online survey of 12,044 people from the most influential countries in the world (G-8). For the fifth year running, and despite a difficult time for the city's image due to the terrorist attack in La Rambla on 17 August and the difficulties arising from the political situation, Barcelona has remained among the top 15 world cities with the best reputation.

Tokyo, Sydney and Copenhagen lead the 2018 ranking, with Barcelona one of a group of twenty cities including Munich, Montreal and Helsinki with similar scores (within a range of -2/+2 points), something that causes a certain amount of volatility in the positions from one year to the next.

Within a context of a general loss of reputation among cities, the report states that six of the top ten cities in 2017 have dropped out of the top ten in 2018. Barcelona has dropped seven places compared to 2017, but it not only has a similar result to 2016 (14th), but it remains ahead of cities like London, Madrid and Amsterdam.

Meanwhile, Resonance Consultancy's World's Best Cities 2019 ranking, which evaluates the quality and reputation of cities from different perspectives, including location, product, programming, people, prosperity and promotion, and includes data from digital channels, places Barcelona 5th in the world (behind only London, Paris, New York and Tokyo), a significant improvement since 2018 when it came 8th.

Barcelona's positioning in the *City RepTrak* (2011-2018)



Source: *City RepTrak*. Reputation Institute.

World cities with the best reputation. 2018

Position	City	Contents
1	Tokyo	81.8
2	Sydney	81.5
3	Copenhagen	81.0
4	Vienna	80.9
5	Stockholm	80.8
6	Venice	80.3
7	Rome	79.2
8	Zurich	78.5
9	Munich	78.2
10	Montreal	78.2
11	Helsinki	77.7
12	Melbourne	77.7
13	Toronto	77.6
14	Milan	77.1
15	**Barcelona**	**76.5**
16	Vancouver	76.4
17	London	76.4
18	Dublin	76.1
19	Madrid	76.1
20	San Francisco	75.9
21	Edinburgh	75.7
22	Amsterdam	75.5
23	Frankfurt	75.5
24	New York	75.0
25	Prague	74.4
26	Paris	73.3
27	Singapore	73.1
28	Gold Coast	73.0
29	Seattle	72.9
30	Brussels	72.1

Note: The index takes a value between 0 and 100.

Source: *City RepTrak 2018*. Reputation Institute.

Main world urban areas receiving international investment projects in 2017

Barcelona, ninth global urban area for foreign investment projects

KPMG's *Global Cities Investment Monitor 2018* report places Barcelona in 9th position as it did in 2016 among the main urban areas in the world for attracting greenfield foreign investment projects in 2017, with 135 projects. Regarding investment projects in strategic functions, Barcelona is also among the top ten, taking 9th place with a total of 72 projects from 2013 to 2017. During this period, 44% of all foreign investment projects allocated to the main investment regions of Spain were in the Barcelona area, attracting 591 projects and creating 44,061 direct jobs, placing it 4th in Europe for the number of jobs created.

Furthermore, Barcelona is the European city with the best strategy for promoting and attracting foreign investment for the period 2018/19, according to the FDi report *Cities and Regions of the Future 2018/19* (Financial Times Group). This prestigious source states that Catalonia has the best future prospects out of all the Southern European regions – ahead of the Community of Madrid – and ranks Barcelona as the second Southern European city in the same category.

Last, productive foreign investment in Catalonia in 2017 was €3,093 million, while 8,642 foreign companies located there, coming mainly from Germany, France and the United States.

Main urban areas in the world receiving international investment projects. 2017

Position	Urban area	Projects 2017
1	London	390
2	Singapore	354
3	Paris	338
4	Dubai	248
5	Shanghai	173
6	Hong Kong	161
7	New York	156
8	Bangalore	137
9	**Barcelona**	**135**
10	Dublin	132
11	Amsterdam	124
12	Sydney	121
13	Toronto	114
14	Tokyo	112
15	São Paulo	101
16	Madrid	95
17	Frankfurt	94
18	Munich	91
19	Beijing	79
20	Ho Chi Minh	79

Note: *Greenfield* projects.

Source: *Global Cities Investment Monitor 2018.* KPMG.

Entrepreneurial activity in countries around the world, 2017

Barcelona achieves its highest rate since 2007

According to *Global Entrepreneurship Monitor* (GEM) data, the 2017 entrepreneurial activity rates (TEA) for the resident population of the Barcelona area and for Catalonia as a whole are 8.5% and 8%, respectively, with both increasing by 1.5 and 1 per cent compared to the previous year and achieving the highest values since 2007.

This evolution in 2017 means that the TEAs for Barcelona and Catalonia are better than those for Sweden (7.3%), Germany (5.3%) and Italy (4.3%). Furthermore, Catalonia has the highest entrepreneurial activity rate out of all the autonomous communities, ranking above the Balearic Islands, Madrid and Andalusia, and above the average for both Spain (6.2%) and the European Union, where the TEA decreased slightly to 7.9%.

Regarding the TEA for women, the rate for Barcelona (7.4%) beats those of both Catalonia and the EU (7.1 and 6%, respectively), and is significantly higher than the figure for both Spain as a whole (5.6%) and countries such as the United Kingdom (5.3%), Switzerland (5.8%) and Germany (3.9%).

Regarding the quality of entrepreneurial activity, the data for 2017 confirm the recovery of opportunity entrepreneurism – which is the main motivation of more than half the people who undertake entrepreneurism in Barcelona Province (56.5%), while 26.6% do so out of necessity – and show that nearly half of all new entrepreneurs (47%) have a degree or a postgraduate qualification.

Entrepreneurial activity rate in various countries around the world. 2017

(% population 18-64 years old)

Female TEA	Country	Total TEA
20.7	Brazil	20.3
14.4	Estonia	19.4
15.0	Canada	18.8
11.0	Latvia	14.1
10.7	United States	13.6
9.8	Slovakia	11.8
9.0	South Africa	11.0
9.4	Netherlands	9.9
9.2	China	9.9
6.2	Ireland	8.9
7.7	Poland	8.9
4.7	Morocco	8.8
6.2	Taiwan	8.6
5.8	Switzerland	8.5
7.4	**Barcelona**	**8.5**
5.3	United Kingdom	8.4
7.1	**Catalonia**	**8.0**
6.0	**EU Average***	**7.9**
5.7	Sweden	7.3
5.6	**Spain**	**6.2**
5.4	Argentina	6.0
3.9	Germany	5.3
3.9	Greece	4.8
2.4	Italy	4.3
2.4	France	3.9

Nota: Entrepreneurial activity includes nascent companies (less than 3 months of activity) and new companies (between 3 and 42 months of activity).
The original database contains 63 countries, although the table only includes a selected sample of countries for reference.
* Average referring to EU economies based on innovation.

Source: *Global Report* and *Informe Executiu Catalunya 2017-2018.* Global Entrepreneurship Monitor (GEM).

Entrepreneurial activity in Europe. 2017

(% population 18-64 years old)

Source: *Global Report and Executive Report Catalonia 2017-18.* Global Entrepreneurship Monitor (GEM)

Business prospects for 2019

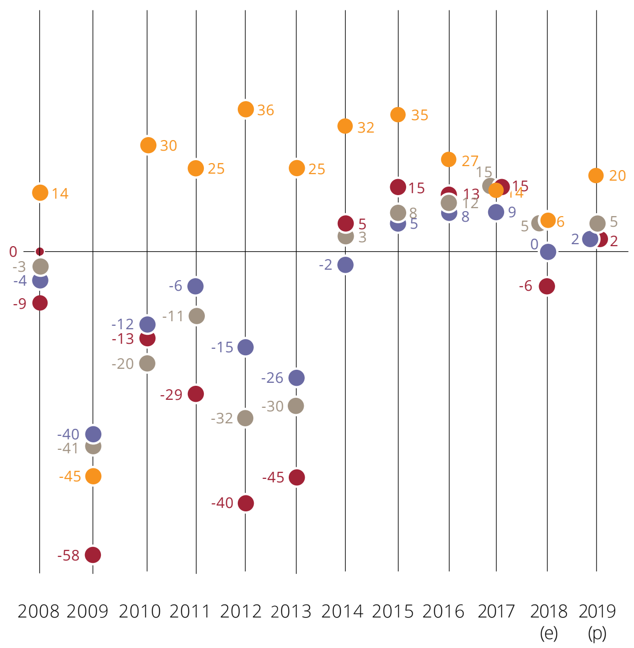
Growth prospects are favourable, especially for exports

Business prospects for 2019 in Catalonia are positive in the four variables analysed (domestic sales, exports, employment and investment), according to the Eurochambres survey carried out in September 2018 and based on the opinions of over 45,000 European companies, 1,200 of which are located in Catalonia. Sales outside Catalonia is the variable with the most positive result for 2019: 26.4% of business people in Catalonia forecast that export sales will increase, compared to 6.7% who forecast the opposite, giving an overall balance of 19.7%. The other variables have positive but more moderate balances, mainly because the vast majority of business people forecast that the situation will remain stable, producing balances of 2.0% for domestic sales, 1.4% for employment and 1.9% for investment.

The comparative results between Catalan and European companies[1] show that apart from exports, economic prospects are less favourable for Catalonia. These results confirm the current change in economic expectations, which will be especially evident in the 2019 figures for GDP growth. In fact, most international bodies have revised their forecasts for growth in the Eurozone for 2018 and 2019 downwards, as the Barcelona Chamber of Commerce has done for Catalonia. Specifically, the Chamber of Commerce puts the predicted GDP growth at around 3% for 2018 and 2.5% for 2019, although these forecasts may be revised downwards in the coming months.

Business prospects in Catalonia

(Balances in percentages)



Domestic sales · Exports · Employment · Investment

(e) estimation (p) forecast

Source: Idescat and Barcelona Chamber of Commerce, based on Eurochambres

[1]The data for Europe refers to the weighted average for the balances of the 26 European countries taking part in the survey.

Business prospects in Europe. 2019

Country	Domestic sales (Balance in p.p.)	Country	Exports (Balance in p.p.)	Country	Employment (Balance in p.p.)	Country	Investment (Balance in p.p.)
Portugal	60.8	Portugal	60.0	Finland	70.0	Finland	61.0
Finland	58.0	Ireland	58.0	Malta	44.3	Romania	58.0
Romania	52.0	Poland	53.8	Poland	43.8	Portugal	50.4
Cyprus	50.7	Austria	47.9	Sweden	41.2	Malta	49.6
Ireland	49.5	Turkey	47.0	Romania	41.0	Cyprus	49.3
Sweden	49.3	Finland	43.0	Turkey	39.0	Ireland	40.1
Croatia	47.4	Malta	42.6	Portugal	36.8	Poland	39.4
Poland	45.6	Estonia	39.3	Estonia	35.5	Sweden	36.1
Luxembourg	42.7	Luxembourg	38.9	Ireland	32.0	Slovakia	30.4
Malta	42.1	Hungary	36.5	Cyprus	31.8	Bulgaria	26.7
Turkey	41.0	Croatia	36.0	Luxembourg	30.9	Estonia	25.1
Hungary	36.5	Bulgaria	35.5	Croatia	27.6	Hungary	25.0
Netherlands	31.1	Sweden	35.5	Bulgaria	23.9	Croatia	23.8
Estonia	31.0	Romania	33.0	Hungary	19.5	Turkey	23.0
Austria	29.9	Cyprus	25.8	Austria	18.7	Luxembourg	22.0
Bulgaria	28.7	**Europe**	**23.5**	**Europe**	**15.3**	Germany	19.0
Europe	**22.1**	**Catalonia (BCN)**	**19.7**	Netherlands	15.1	Austria	16.1
Czech Republic	11.3	Italy	18.5	Germany	11.0	**Europe**	**16.0**
Italy	6.6	Germany	17.0	**Catalonia (BCN)**	**4.8**	Italy	8.6
Slovakia	4.4	Netherlands	15.7	France	4.0	Netherlands	6.9
France	4.0	Slovakia	4.3	Czech Republic	3.7	Czech Republic	6.5
Catalonia (BCN)	**2.0**	Czech Republic	3.2	Italy	2.2	**Catalonia (BCN)**	**1.9**
Germany	---	France	2.0	Eslovàquia	0.0	France	0.0

Notes: Spain data are not published until the Cambra de España does not make public them in its page web.
The data for Europe refer to the average of the 26 European countries that have participated in the survey.
The data from Serbia, Slovenia, Lithuania and Greece are not presented, because they have a sample of responses less than 80.
The balance is calculated as the difference between the percentage of responses indicating an *increase* and the percentage of responses indicating a *decrease*.

Source: Idescat, Chamber of Commerce of Barcelona and Chamber of Spain for a Catalonia, and Eurochambres Survey for European countries.

Main cities in the world for the number of international congresses and delegates in 2017

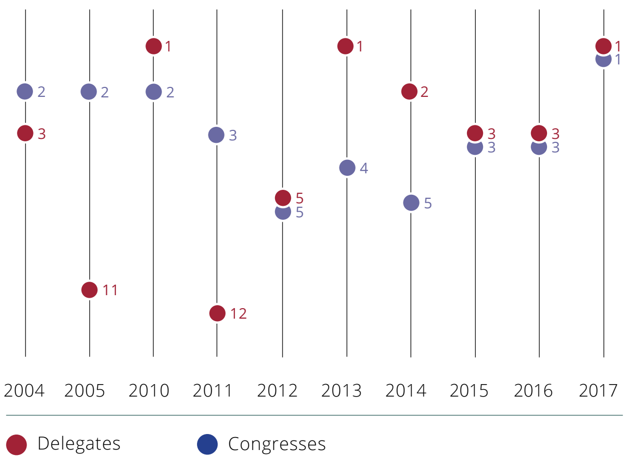
Barcelona is the first world city for holding international congresses

In 2017, Barcelona took first place in the rankings of cities in the world for both the number of international congresses held and the number of delegates attending, the first time this has happened since this ranking began in 2004, according to the International Congress and Convention Association (ICCA). Barcelona held a total of 195 international congresses in 2017, 14 more than in the previous year, surpassing Vienna and Paris with 190 conferences each. The most notable movements in the top ten ranking are Prague's appearance, having climbed three positions to 8th place, and Amsterdam's drop to 16th place.

According to the ICCA, 148,624 people took part in international congresses in the city of Barcelona in 2017, placing it first above Vienna and Seoul. It must be highlighted that this figure is almost 50% higher than the previous year (99,468 attendees). Madrid, Prague, Berlin and Lisbon all entered the top ten, in detriment to the four cities that dropped out: Rome, Beijing, Copenhagen and Seoul.

It should be noted that the ICCA bases its ranking on participant registrations in congresses with a minimum of fifty delegates and which rotate between at least three different countries. It therefore does not include such important events for the city as the Mobile World Congress, which has its fixed headquarters in Barcelona and attracts over 100,000 participants. According to the Union of International Associations (UIA) classification, Barcelona came 10th in the 2017 ranking, behind Berlin. This means it dropped one place compared to 2016, although the number of meetings held rose from 182 to 193.

Barcelona's position



Source: International Congress and Convention Association (ICCA).

Top cities in the world in terms of delegate numbers and international congresses held. 2017

Cities	Variation 2017/2016 (%)	Congresses 2017
Barcelona	**7.7**	**195**
Paris	2.2	190
Vienna	8.0	190
Berlin	-5.6	185
London	15.7	177
Singapore	6.0	160
Madrid	6.3	153
Prague	19.8	151
Lisbon	8.0	149
Seoul	3.6	142

Cities	Variation 2017/2016 (%)	Delegates 2017
Barcelona	**49.4**	**148,624**
Vienna	-5.2	113,624
Paris	47.6	111,725
Madrid	n.a.	110,438
Berlin	n.a.	97,549
Singapore	36.7	83,762
London	-14.1	78,811
Lisbon	n.a.	76,549
Amsterdam	-2.7	75,578
Prague	n.a.	66,790

Source: International Congress and Convention Association (ICCA).
n.a.: not available

Quality of life, sustainability and social cohesion

OBSERVATORI BARCELONA

Introduction

Barcelona aspires to become a benchmark in the transition towards a new economic, social and environmental model that promotes measures to combat poverty and inequalities and to mitigate and adapt to climate change. The city, recognised internationally for its quality of life, its creative and cultural capacities and technological innovation, now faces the challenge of ensuring the well-being of its citizens and that any opportunities generated contribute to the socio-economic development of all.

With regard to the aspects associated with a good quality of life, Barcelona is considered to be the 13th safest city in the world according to the Safe Cities Index 2017. The city is also an international benchmark in the field of sport – coming 7th in the Ranking of Sports Cities 2017 – an activity that, as well as contributing directly to the quality of life of the city's residents, also has a significant economic and social impact.

The economic crisis that began in 2008 has led to high levels of inequality, poverty and social exclusion in many countries and regions of Europe. In Barcelona, average incomes have fallen and inequalities within the city have increased, although since 2015 growth in these differences has stalled. More specifically, in 2016, the quotient between the highest and lowest disposable incomes of households in the city's neighbourhoods was around 7.1 and the percentage of the population with a high, medium and low income was 16.6%, 47.9% and 35.5% respectively. In Catalonia as a whole, the percentage of the population at risk of poverty or social exclusion is lower than the European Union average. However, 2017 saw an increase in the rate in Catalonia while the European average remained unchanged.

The fight against inequality and poverty is a priority for Barcelona City Council. Within the framework of the Citizen Agreement for an Inclusive Barcelona, the Council has drawn up the city's new plan for social inclusion, the Strategy for Inclusion and the Reduction of Social Inequalities in Barcelona. The aim of this strategy is to bring together the social inclusion actions of all the city's stakeholders and all municipal areas, with a 10-year time frame. The most recent measures include those aimed at combating energy poverty, increasing the social housing stock, carrying out public procurement with social criteria, tackling job insecurity and promoting a local economy that is more rooted in the area, fairer and more cooperative.

Barcelona is recognised internationally for technological advances associated with improving the quality of life, as can be seen from the PwC Index of Cities' Readiness 2017 on the cities that are most prepared for the technological future, where it is ranked 4th in the world, and it is also a point of reference for its cultural and creative vitality, according to the results of The Cultural and Creative Cities Monitor, produced by the European Commission, where it is ranked 9th in the cultural intensity index.

In the field of sustainability, Barcelona is recognised for its sustainable mobility model, ranked 15th in Europe and 21st in the world in the Sustainable Mobility Index 2017. In 2018, and for the first time, the city hosted the meeting of the C40 Cities Climate Leadership Group, a high-level meeting of local authorities and world experts with the aim of setting the climate agenda for the coming years. The Barcelona Climate Plan has recently been recognised as one of the best European initiatives in this area. It is a plan aligned with the Paris objectives, which will enable a 45% reduction in emissions by 2030 and will make the city an emission-neutral space before 2050.

Barcelona, among the five cities in the world most prepared for the technological future

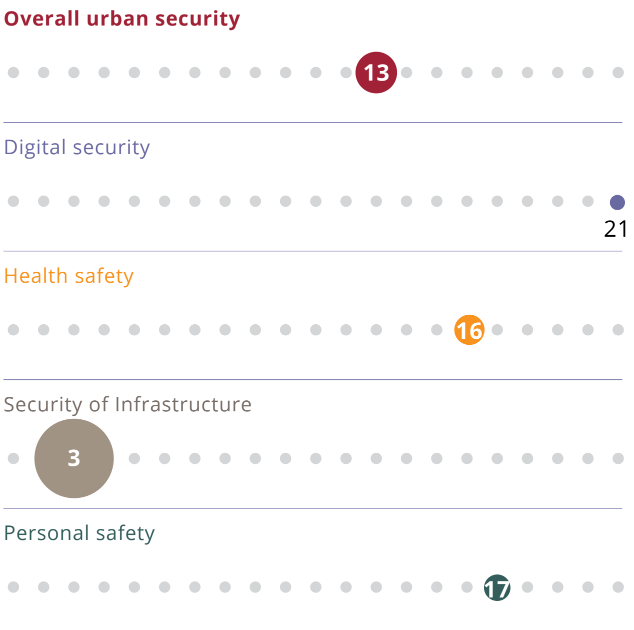
Safety in cities round the world in 2017

Barcelona is one of the 15 safest cities in the world

According to *The Safe Cities Index 2017*, a report produced by the British magazine *The Economist*, Barcelona went up two places in relation to the 2015 results to 13th out of 60 cities across all continents in a ranking topped by Tokyo, Singapore and Osaka. It came 6th among European cities, behind Amsterdam, Stockholm, Zurich, Frankfurt and Madrid, and ahead of Brussels, London and Paris.

The report's results are based on 49 indicators covering digital security, health security, infrastructure security and personal security. It should be noted that Barcelona is ranked 3rd in terms of infrastructure security, an area in which the city climbed 11 positions in relation to the 2015 ranking and which takes into account aspects like investment and management of the city's infrastructures and its vulnerability to natural disasters. In relation to all the other aspects analysed, the city is ranked 17th in terms of personal security, 16th in relation to health security and 21st for digital security.

Positioning of Barcelona on urban security categories. 2017



Source: *The Safe Cities Index 2017*. The Economist Intelligence Unit.

Safety in cities around the world. 2017

Position	City	Index o/100
1	Tokyo	89.8
2	Singapore	89.6
3	Osaka	88.9
4	Toronto	87.4
5	Melbourne	87.3
6	Amsterdam	87.3
7	Sydney	86.7
8	Stockholm	86.7
9	Hong Kong	86.2
10	Zurich	85.2
11	Frankfurt	84.9
12	Madrid	83.9
13	**Barcelona**	**83.7**
14	Seoul	83.6
15	San Francisco	83.6
16	Wellington	83.2
17	Brussels	83.0
18	Los Angeles	82.3
19	Chicago	82.2
20	London	82.1
21	New York	81.0
22	Taipei	80.7
23	Washington DC	80.4
24	Paris	79.7
25	Milan	79.3

Source: *The Safe Cities Index 2017*. The Economist Intelligence Unit.

Sport in cities round the world 2017

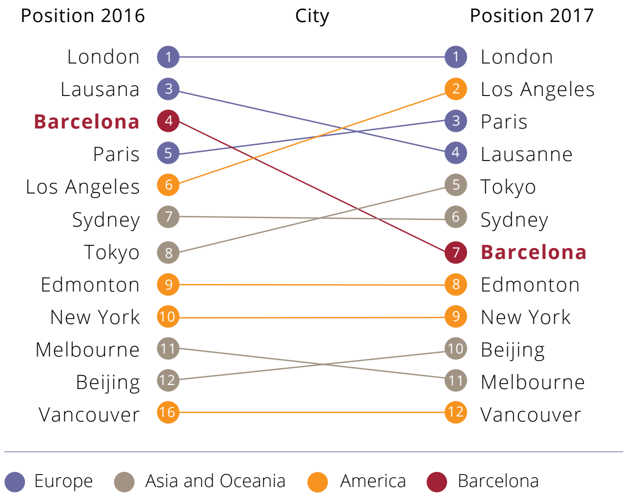
Barcelona, the 7th city most associated with sport

Barcelona is ranked 7th among the 50 cities evaluated in the Ranking of Sports Cities 2017 produced by Around the Rings and TSE Consulting and based on a vote where specialist opinion leaders and the general public decide which cities are most strongly associated with sport.

The city has maintained a position among the top ten since the first edition in 2012, a record shared only by other Olympic cities such as London, Sydney and Tokyo. The importance of Barcelona as a city for international sport stems from the fact that it periodically hosts high level international sports events, the legacy of the 1992 Olympic Games and Paralympic Games and the attention generated by major clubs in the city, all of which make Barcelona a sports tourism destination.

Sport contributes directly to improving people's quality of life and has a major economic and social impact on the city. According to the Study on the Impact of Sport on the City of Barcelona: economic, employment and social indicators, promoted by Barcelona City Council, in 2013 there were around 2,000 companies and more than 2,500 organisations operating in this sector which generated a turnover of more than €2.1 billion, employed 27,600 people and had 35,000 unpaid volunteers.

Sport in cities worldwide. 2017



Source: *Ranking of Sports Cities 2017*. Around the Rings and TSE Consulting.

Population at risk of poverty or social exclusion in the European regions in 2017

The percentage of people at risk of poverty or social exclusion in Catalonia, lower than that of the European Union

According to Eurostat figures, the percentage of the population at risk of poverty or social exclusion (AROPE) in Catalonia was 19.4% in 2017 and is lower than the rate for Spain (26.6%) and the European Union (22.5%). Regions with higher rates include Budapest, Dublin and Berlin, and among the regions with lower or similar values are Copenhagen and Amsterdam. Regions such as Prague and Helsinki have the lowest rates in the sample, with values between 9% and 12%. It should be noted that the rate in Catalonia has increased by 1.5 percentage points in relation to the previous year – due to the increase in the number of people living in households with very low work intensity, as there has been a slight fall in the severe material deprivation rate – while the European average went down compared to that for 2016 (23.4%).

If we calculate the percentage of the population at risk of poverty based on the specific threshold for Catalonia (60% of the average annual disposable income, after social transfers, of the Catalan population, rather than the state-wide average), the AROPE rate stands at 23.8%, above the European Union average. Based on this threshold, in the Barcelona Metropolitan Area, the AROPE rate was 22.6% in 2017.

The economic crisis that began in 2008 has led to a notable increase in levels of poverty and social exclusion in many European countries. Reducing the number of people at risk of poverty or social exclusion in the European Union is one of the key objectives of the Europe 2020 strategy, which proposes the promotion of a smart, sustainable and inclusive growth model.

Population at risk of poverty or social exclusion. 2017

Country	Region (main city)	AROPE rate (%)
Slovakia	Bratislavský kraj (Bratislava)*	8.6
Czech Republic	Prague (Prague)	9.4
Finland	Helsinki-Uusimaa (Helsinki)	11.8
Sweden	Stockholm (Stockholm)	14.4
Poland	Centralny region (Warsaw)	15.5
Norway	Oslo og Akershus (Oslo)	16.1
Germany	Bavaria (Munich)*	16.2
Netherlands	Netherlands - West (Amsterdam)	18.0
Denmark	Hovedstaden (Copenhagen)	18.4
Spain	**Catalonia (Barcelona)**	**19.4**
Italy	Lombardy (Milan)	19.7
Switzerland	Mittelland space (Bern)*	20.6
Spain	Community of Madrid (Madrid)	20.6
Hungary	Central Hungary (Budapest)	22.3
EU28 average		**22.5**
Ireland	Ireland - south and east (Dublin)*	22.7
Germany	Berlin (Berlin)*	24.8
Romania	Bucuresti - Ilfov (Bucharest)	25.0
Austria	Vienna (Vienna)*	26.0
Spain		**26.6**
Italy	Laci (Rome)	28.9
Bulgaria	Bulgaria - south-west (Sofia)	29.3
Greece	Attica (Athens)	31.1

*Data from 2016

NB: The 'At Risk of Poverty or Social Exclusion' rate (AROPE) indicates the percentage of the population that is in at least one of the following circumstances: at risk of poverty, in a situation of severe material deprivation or living in households with very low work intensity.

Source: Eurostat

Cities ready for the future in 2017

Barcelona, ranked 4th in the world for its capacity to adopt new technologies

According to the PwC Index of Cities' Readiness 2017, Barcelona is ranked 4th among the cities that are most prepared for the future with regard to new technologies. The report – which offers an overall ranking and others by area of activity – analyses the existence of strategies, regulations and the creation of prototypes or examples of the application of innovative solutions, the social readiness of citizens to use innovative solutions and products, and the availability of transmission sources and networks and data management tools.

In the global ranking, only Singapore, London and Shanghai are ahead of Barcelona, which ranks above global cities such as Moscow, New York, Toronto, Tokyo, Hong Kong and Sydney.

By area of activity, Barcelona ranks highest for smart housing, digitalisation of culture and tourism, and smart healthcare. Also worth noting is the fact that Barcelona comes third in infrastructure readiness and social readiness, fourth for virtual city and fifth for virtual services. With regard to digital economy and proactive security, it is in eighth position, and ninth for driverless transport and open adaptive learning. Among other projects carried out in Barcelona, the report highlights the creation of smart city networks for managing power and water consumption, the availability of advanced applications for tourists, the development of telemedicine services and the creation of a unified platform for analysing and managing municipal data.

Cities' readiness for the future in 2017

Position	City	% readiness
1	Singapore	64
2	London	59
3	Shanghai	55
4	**Barcelona**	**54**
5	Moscow	53
6	New York	53
7	Toronto	52
8	Tokyo	50
9	Hong Kong	50
10	Sydney	47

Source: *Index of Cities' Readiness 2017*. PwC.

Positioning of Barcelona by categories. 2017

Smart housing and activities	1
Digitisation of culture and tourism	1
Unmanned transport	9
Digital economy	8
Smart healthcare	1
Open adaptive learning	9
Proactive security	8
Virtual services	5
Virtual city	4
Infrastructure readiness	3
Social readiness	3

Source: *Index of Cities' Readiness 2017*, PwC.

Sustainable urban mobility in cities

Barcelona among the top 25 cities in the world for the most sustainable urban mobility

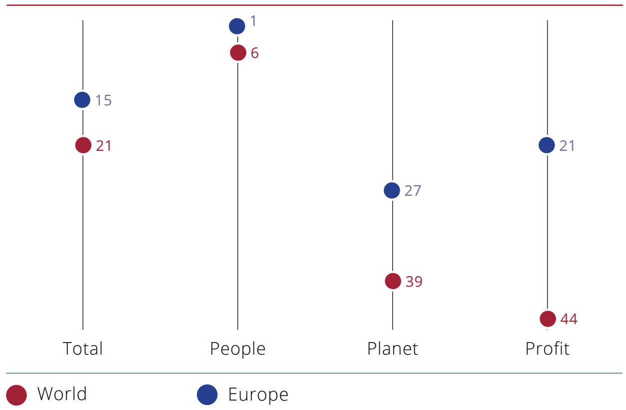
According to the *Sustainable Cities Mobility Index 2017*, Barcelona is ranked 21st in the world and 15th in Europe in the global ranking of sustainable urban mobility and comes ahead of cities such as Berlin, New York and Madrid in a classification headed by Hong Kong, Zurich and Paris.

The ranking is based on the analysis of indicators covering three areas: people, planet and profit. The first area reflects the social and human implications of the mobility systems based on indicators such as transport coverage. The second area considers the environmental impact and measures the current levels of greenhouse gas emissions and atmospheric pollution, efforts to reduce these emissions, bicycle and e-vehicle infrastructures, road congestion and efforts to increase green space. Lastly, the third area analyses the efficiency and reliability of the mobility system for growth and supporting businesses.

Barcelona is ranked 6th in the world and 1st in Europe in the people sub-index, 39th in the world and 27th in Europe in the planet sub-index – where the first ten positions go to European cities, and 44th in the world and 21st in Europe in the profit sub-index. Barcelona's results can improve in the future, given its compact city model which favours ecomobility and its firm commitment to sustainable public transport which can be seen in Barcelona City Council's Mobility Plan for 2013-2018.

For its part *The Deloitte City Mobility Index 2017*, which analyses mobility in global cities, considers Barcelona to be a proactive city which offers few barriers. Among its positive aspects, it highlights accessibility, the progressive extension of the integrated fare system on the public transport network, the geographic coverage of the public transport network and the policies for creating more space for pedestrians. It also highlights the 15 million public transport users and says that the "high level of satisfaction" with the system is a revealing piece of data. Among the challenges that need to be overcome, it proposed identifying plans to test out compact driverless vehicles that are suitable for the dense urban fabric, stepping up investment in traffic management technologies to reduce congestion, improving cyber security and collaborating with the private sector to convert urban structures into green spaces.

Positioning of Barcelona. 2017



Source: *Sustainable Cities Mobility Index 2017*, Arcadis

Sustainable urban mobility. 2017

European ranking	City	World ranking
	Hong Kong	1
1	Zurich	2
2	Paris	3
	Seoul	4
3	Prague	5
4	Vienna	6
5	London	7
	Singapore	8
6	Stockholm	9
7	Frankfurt	10
8	Amsterdam	11
9	Copenhagen	12
	Tokyo	13
10	Munich	14
11	Lyon	15
	Beijing	16
12	Edinburgh	17
13	Milan	18
	Shenzhen	19
14	Hamburg	20
15	**Barcelona**	**21**
16	Berlin	22
	New York	23
17	Madrid	24
18	Rotterdam	25

Source: *Sustainable Cities Mobility Index 2017*, Arcadis

Creative and cultural cities of Europe, 2017

Barcelona among the top ten creative and cultural cities in Europe

Barcelona holds 9th place in the European index of creative intensity, according to the *Cultural and Creative Cities Monitor 2018*, an instrument created by the European Commission which includes a wide range of indicators for 168 cities in 30 European countries that are actively committed to promoting culture and creativity. With this tool, the Commission seeks to emphasise the importance of culture and creativity for life in cities, for their resilience and also their development, since a clear correlation has been detected between cultural activity, in its broadest sense, and economic growth.

The report presents the results by groups of cities based on population size and analyses aspects relating to cultural vibrancy, the creative economy and an enabling environment, and groups them in a global index of creative vibrancy which is headed by Paris, Munich and Prague, among the cities with more than one million inhabitants.

Barcelona stands out in the section on cultural vibrancy, taking 3rd place for cultural venues and facilities, just behind Prague and Paris. In this section it came 1st for cinema seats, 3rd for concerts and shows, 4th for museums and 5th for museum visitors, and is in 5th place for sights and landmarks and 6th place for theatres.

As regards the creative economy, Barcelona scored well in jobs in creative sectors – ahead of London and Berlin, and behind Amsterdam and Munich – and scored less well in intellectual property and innovations. In the enabling environment section, Barcelona came second in Human Capital and Education, just behind Paris, among the cities of more than one million inhabitants.

The report on Barcelona highlights the city's museums, which receive millions of visitors each year – the Picasso Museum, the Joan Miró Foundation and Museum of Contemporary Art – and also mentions the more than 170 cultural festivals held each year, many of international standing, such as the Sónar Festival and the Primavera Sound Festival. It also mentions the fact that the city designs strategies and measures to support a creative city model – the Creation Factories programme – in order to promote creative entrepreneurship – here it mentions the Canòdrom Creative Industries Research Park – and to use public space as a cultural venue – as in the case of the La Mercè Arts de Carrer street art festival and the Llum Barcelona Light Festival.

Creative and Cultural Cities. 2017

Position	City	Creative intensity index
1	Paris	63
2	Munich	42
3	Prague	38
4	Milan	38
5	Brussels	35
6	Vienna	36
7	London	35
8	Berlin	35
9	**Barcelona**	**33**
10	Budapest	30

Source: *Cultural and Creatives Cities Monitor 2017.* Joint Research Centre of the European Commission.

Positioning of Barcelona by categories. 2017

Sights and landmarks	5
Tourists overnight stays	3
Museums	4
Museums visitors	5
Cinema seats	1
Concerts and shows	3
Theatres	6

Note: Cities with more than one million inhabitants.

Source: *Cultural and Creatives Cities Monitor 2017.* . Joint Research Centre of the European Commission.

Labour market and training

OBSERVATORI BARCELONA

Introduction

Following the trend towards recovery across the whole European Union economy, Catalonia's employment market has evolved positively, ending 2017 with a year-on-year increase in employment of more than 110,000 people and a year-on-year decrease in the unemployed population of nearly 80,000 people, according to the Active Population Survey published by the National Institute of Statistics (INE). However, as the figures for 2017 presented in the report show, the employment rate in the region is below the European average and the unemployment rate is clearly above the EU average, despite having decreased since 2013.

In this context, Barcelona created net employment for the fourth consecutive year in 2017, following the adjustment resulting from the labour market crisis. In fact, the city closed the fourth quarter of the year with 26,200 more people in work than in the previous year, an activity rate (among those aged 16 to 64) of 80.2% and an employment rate of 72.1% – which exceed the European averages by 6.7 and 4 percentage points, respectively – while the unemployment rate was down 10%, reaching the lowest figure since 2008 and reducing the difference with the EU-28 rate.

The part-time employment rate in Catalonia stood at 14.3% in 2017, which puts it 6 points below the EU average (20.3%) and slightly below the Spanish average of 15%. The female employment rate is higher in all cases, with a lower indicator in Catalonia, and a greater difference in relation to the rest of the territorial areas. The increase in the part-time employment rate since the start of the crisis is a widespread trend in Europe, in an international context in which the impact that the crisis has had on job quality is particularly marked.

By means of the Barcelona Employment Strategy 2016-2020, Barcelona City Council promotes quality jobs for everyone and in agreement with all the players involved in the city. Based on four priority lines of intervention, an action plan is being implemented for employment which promotes an increase in the coordination and agreement of policies to foster employment and an increase in the actions that address the social diversity in the city. At the same time, employment has been placed at the heart of municipal policy, and the council has made employment a priority across all departments along with its focus on adapting the city's services to the specific needs of its citizens.

One of the key assets that the area of Barcelona has is an important critical mass of skilled human capital. In this area it should be noted that in 2017, the percentage of the working population with a university level education in Catalonia grew to 45.8% and, in the case of female workers, for the third time the figure was above 50%, values that are clearly above the European Union average. Barcelona is the fourth most attractive city in the world for working abroad according to the report *Decoding Global Talent 2018* from the Boston Consulting Group, just behind London, New York and Berlin, and has moved up three places compared to 2014.

Lastly, Barcelona continues to be a benchmark as a city of excellence for business training, as it is the only city in Europe with two teaching institutions (IESE and ESADE) among the five best business schools on the continent, according to the Financial Times.

Barcelona, the fourth most attractive city to work abroad

Attractiveness for work of cities around the world 2018

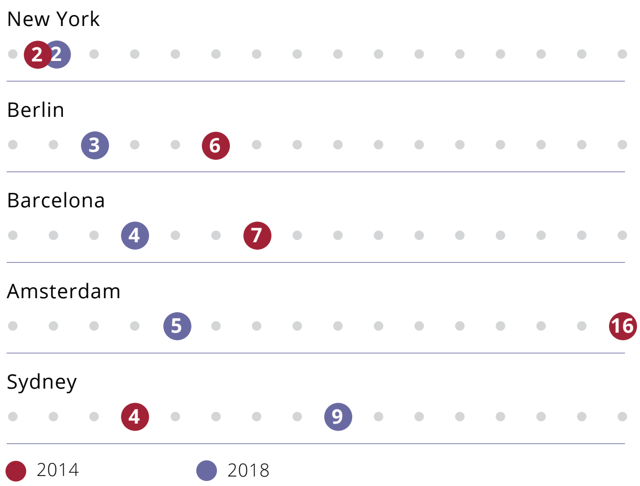
Barcelona among the top five cities to work abroad

According to the Boston Consulting Group's report *Decoding Global Talent 2018*, Barcelona is the fourth most attractive place to work abroad in the world and is just ahead of Amsterdam, Dubai and Los Angeles in a classification headed by London and New York, two global business and cultural centres that, at the same time, are the most cosmopolitan and open cities on the planet.

Barcelona has moved up three positions in relation to the 2014 survey and is now one of the top five cities most favoured by global talent, four of which are in Europe. Also improving their positioning were cities from other continents, such as Los Angeles, Dubai and Tokyo, which are among the top ten preferred locations.

This research on the workforce and its preferences in a globalised world is based on an extensive online survey (the Global Talent Survey) with responses from 366,000 people in 197 countries. The report notes that 57% of those surveyed would be prepared to work in another country – a percentage which is high albeit 7 points lower than the figure four years ago – and that seeking professional career opportunities and improving quality of life were the top reasons given for the change. Among young people and professionals from countries with political stability, the desire to expand their horizons and life experiences continues to be the key motivating factor.

Positioning of cities. 2014-2018



Source: *Decoding Global Talent* Boston Consulting Group.

Attractiveness as a place to work for global talent

City	Position 2014	Position 2018
London	1	1
New York	2	2
Berlin	6	3
Barcelona	**7**	**4**
Amsterdam	16	5
Dubai	11	6
Los Angeles	12	7
Paris	3	8
Sydney	4	9
Tokyo	13	10
Madrid	5	11
Toronto	8	12
Vienna	17	13
Abu Dhabi	n.a.	14
Singapore	9	15
Melbourne	27	16
Brussels	25	17
Zurich	20	18
Rome	10	19
Washington DC	n.a.	20
Miami	15	21
Genova	30	22
Munich	14	23
Vancouver	23	24
Chicago	n.a.	25
Hong Kong	n.a.	26
Boston	n.a.	27
Stockholm	19	28
San Francisco	18	29
Montreal	21	30

Source: *Decoding Global Talent*. Boston Consulting Group

n.a. not available

Employment rate in European regions in 2017

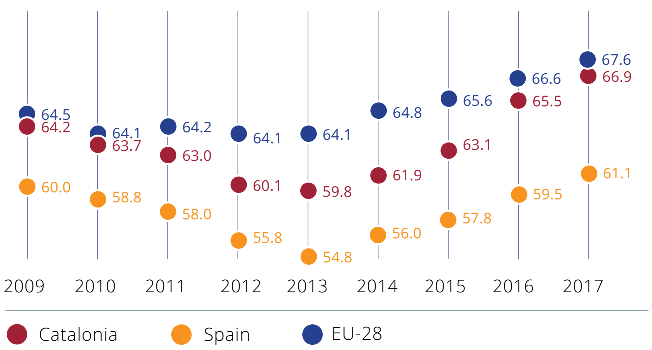
The employment rate rises in Catalonia

In 2017 the employment rate in the European Union grew by one percentage point compared to 2016 as a result of moderate increases in most of the regions analysed.

Along the same lines, the employment rate in Catalonia and Spain increased for the third consecutive year – by 1.4 and 1.6 percentage points respectively – thereby exceeding the average EU growth rate. However, employment rates here are still among the lowest on the continent due to the sharp decrease experienced from 2008 to 2013. In fact, the employment rate in Catalonia was 66.9% in 2017, placing it below the European average for the ninth consecutive year, although it is much higher than the rate for Spain (5.8% higher) and is also above that of regions such as Vienna, Rome and Brussels. The female employment rate was also up by 1.4 points to 62.8% in Catalonia in 2017, placing it slightly above the European average (62.4%) and much higher than the Spanish average (55.7%) as well as that of regions such as Lombardy, although it is still way behind the regions with the highest rates on the continent (where the figure is over 70%) and also below the global rate.

In the 4th quarter of 2017, the employment rate stood at 72.1% in Barcelona, an increase of 0.7 percentage points compared to the same period in 2016. The female employment rate in the city (69.2%) is more than 6 percentage points above the European average following a year-on-year increase of 1.1 percentage points. During the first half of 2018, the employment rate in Barcelona seems to have stabilised while it has continued to increase in Catalonia as a whole (69.6%).

Employment rate (%)



Source: Eurostat and Idescat

Employment rate in European regions. 2017

Female employment rate (%)	Region (CITY)	Employment rate (%)
75.8	Upper Bavaria (MUNICH)	80.2
77.9	Stockholm (STOCKHOLM)	79.2
73.5	Stuttgart (STUTTGART)	78.3
70.5	Prague (PRAGUE)	78.2
73.7	North Holland (AMSTERDAM)	77.5
74.2	Denmark (COPENHAGEN)	76.2
74.4	Oslo (OSLO)	75.8
70.7	Darmstadt (FRANKFURT)	74.9
71.1	Eastern Scotland (EDINBURGH)	74.0
68.5	South Holland (ROTTERDAM)	73.8
70.9	Southern Finland (HELSINKI)	73.3
67.0	London (LONDON)	73.3
70.2	Greater Manchester (MANCHESTER)	73.0
69.7	Berlin (BERLIN)	72.8
64.8	Central Hungary (BUDAPEST)	71.9
70.2	Lithuania (VILNIUS)	70.4
64.5	Mazowsze (WARSAW)	70.1
67.7	Lisbon (LISBON)	69.3
64.6	Rhône-Alpes (LYON)	68.6
62.8	Ireland - south and east (DUBLIN)	68.2
62.4	**EUROPEAN UNION**	**67.6**
59.3	Lombardy (MILAN)	67.3
63.7	Île-de-France (PARIS)	67.2
63.0	Community of Madrid (MADRID)	66.9
62.8	**Catalonia (BARCELONA)**	**66.9**
60.9	Basque Country (BILBAO)	65.4
62.4	Vienna (VIENNA)	65.3
55.7	**Spain**	**61.1**
52.9	Lazio (ROME)	60.9
55.7	Languedoc-Roussillon (MONTPELLIER)	60.0
50.5	Brussels (BRUSSELS)	56.2

NB: Active population between the ages of 15 and 64.
The original database contains around 450 regions but the table only shows a selection of benchmark regions.

Source: Eurostat

Part-time employment rate in European regions in 2017

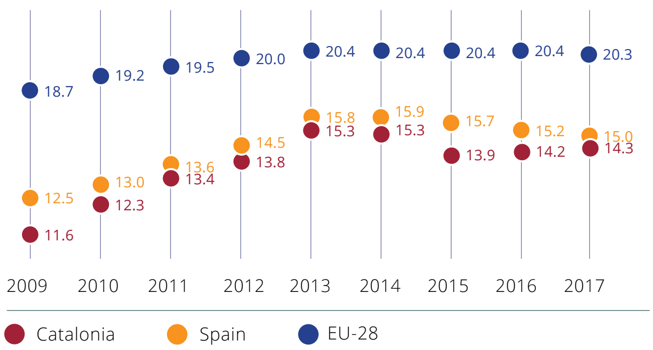
Part-time employment rates in Catalonia are below the European average

In Catalonia the part-time employment rate, which measures the weight of people working part-time out of the total working population, stood at 14.3% in 2017, placing it 6 points below the EU average (20.3%), slightly below the Spanish average (15%) and far below the regions with the highest levels (Holland, Austria, Germany and Denmark), although it is above regions such as Paris, the Community of Madrid and Lisbon. As regards the female part-time employment rate (which in all the regions analysed is higher than the figure for men, and the total), in Catalonia this stands at 22.2% and is 10.1 percentage points below the EU average (32.3%), 2 points below the rate for the Spanish state (24.2%) and again, far below the regions of the countries at the top of the ranking (Holland, Austria, Germany and Denmark) where the rate of voluntary part-time work among women is very high.

In terms of the evolution over time, since the start of the crisis, the part-time employment rate has increased both in the European Union and in Spain and Catalonia, with accumulated increases since 2007 of around 3 percentage points in the three territorial areas. This is one of the forms that the flexibilisation of the labour market has taken, and in the majority of European countries, there has also been an increase in the percentage of involuntary part-time workers.

With regard to Barcelona, in 2017 the total part-time employment rate stood at 13.3%, very similar to the figure for Catalonia (14.3%) and therefore, below the Spanish and EU averages. In the case of women, the city rate (19.2%) is 3 percentage points below the Catalan figure, which means it is also below the percentage for Spain as a whole and that of the EU.

Part-time employment rate in European regions. 2009-2017 (%)



Source: Eurostat

Part-time employment rate in European regions. 2017

Female part-time employment rate (%)	Region (CITY)	Part-time employment rate (%)
70.2	North Holland (AMSTERDAM)	50.1
73.2	South Holland (ROTTERDAM)	48.8
42.4	Vienna (VIENNA)	29.9
46.5	Darmstadt (FRANKFURT)	28.1
49.4	Stuttgart (STUTTGART)	28.0
37.0	Berlin (BERLIN)	27.5
42.8	Eastern Scotland (EDINBURGH)	27.0
33.8	Denmark (COPENHAGEN)	26.7
40.0	Hamburg (HAMBURG)	25.9
44.0	Upper Bavaria (MUNICH)	25.8
38.4	Greater Manchester (MANCHESTER)	25.3
30.2	Oslo (OSLO)	22.7
35.6	Languedoc-Roussillon (MONTPELLIER)	22.7
29.2	Stockholm (STOCKHOLM)	22.0
32.8	London (LONDON)	21.9
34.1	Rhône-Alpes (LYON)	20.9
31.6	Ireland - south and east (DUBLIN)	20.7
30.8	Brussels (BRUSSELS)	20.7
32.3	**EUROPEAN UNION**	**20.3**
31.9	Laci (ROME)	19.2
32.3	Lombardy (MILAN)	18.5
27.7	Basque Country (BILBAO)	17.2
20.4	Southern Finland (HELSINKI)	15.8
24.2	**Spain**	**15.0**
22.2	**Catalonia (BARCELONA)**	**14.3**
21.2	Île-de-France (PARIS)	14.2
17.1	Bucuresti - Ilfov (BUCHAREST)	13.9
19.0	Community of Madrid (MADRID)	12.9
14.6	Attica (ATHENS)	10.9
16.9	Prague (PRAGUE)	10.6
13.3	Lisbon (LISBON)	10.3
10.6	Lithuania (VILNIUS)	8.6
9.3	Mazowsze (WARSAW)	6.7
6.7	Central Hungary (BUDAPEST)	4.5

Source: Eurostat

Unemployment rate in European regions in 2017

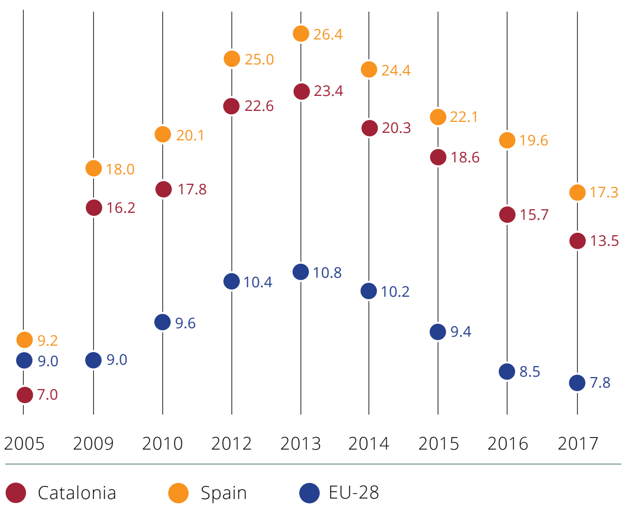
The rate of unemployment in Catalonia is down, but is still much higher than the European average

The economic recovery in the European Union meant that it ended 2017 with an unemployment rate of 7.8%, which is 0.9 percentage points lower than in 2016. Unemployment is still being felt more acutely in the territories of southern Europe, such as Spain and Catalonia, although the differential in relation to the European average has decreased compared to 2016, with an annual fall of 2.4 and 2.3 percentage points respectively.

Thus the average annual unemployment rate in Catalonia stood at 13.5% in 2017, 5.7 percentage points above the European average and still far higher than in the main benchmark regions, although it remains below the Spanish average. At the same time, the female unemployment rate stood at 14.4%, some 2.5 points lower than in 2016, although it is above the overall average.

In the fourth quarter of 2017, the unemployment rate in Barcelona stood at 10% – the lowest figure since 2008 – following a year-on-year decrease for the fifth consecutive year (1.6 percentage points). With this downward trend – which has continued in the first quarters of 2018 – the city's unemployment rate is now closer to the European Union average than that of Spain.

Unemployment rate (%)



Source: Eurostat

Unemployment rate in European regions. 2017

Female unemployment rate (%)	Region (CITY)	Unemployment rate (%)
2.1	Prague (PRAGUE)	1.7
2.0	Upper Bavaria (MUNICH)	2.2
3.0	Central Hungary (BUDAPEST)	2.8
2.9	Stuttgart (STUTTGART)	3.0
2.8	Darmstadt (FRANKFURT)	3.5
3.4	Eastern Scotland (EDINBURGH)	3.9
3.7	Greater Manchester (MANCHESTER)	4.0
3.9	Hamburg (HAMBURG)	4.3
4.7	North Holland (AMSTERDAM)	4.6
4.1	Oslo (OSLO)	4.8
5.8	London (LONDON)	5.4
6.1	South Holland (ROTTERDAM)	5.6
5.5	Estonia (TALLINN)	5.9
6.5	Denmark (COPENHAGEN)	6.2
6.6	Stockholm (STOCKHOLM)	6.5
6.2	Ireland - south and east (DUBLIN)	6.6
4.2	South-west Scotland (GLASGOW)	6.7
6.5	Berlin (BERLIN)	7.1
5.9	Lithuania (VILNIUS)	7.3
7.5	Rhône-Alpes (LYON)	7.3
8.0	**EUROPEAN UNION**	**7.8**
7.9	Southern Finland (HELSINKI)	7.8
8.8	Île-de-France (PARIS)	8.8
9.9	Lisbon (LISBON)	9.6
9.0	Vienna (VIENNA)	10.5
11.8	Lazio (ROME)	10.8
12.2	Basque Country (BILBAO)	11.4
12.5	Languedoc-Roussillon (MONTPELLIER)	12.3
14.0	Community of Madrid (MADRID)	13.4
14.4	**Catalonia (BARCELONA)**	**13.5**
14.9	Brussels (BRUSSELS	15.0
19.1	**Spain**	**17.3**
24.8	Attica (ATHENS)	21.6

NB: Population over the age of 15.
The original database contains around 450 regions but the table only shows a selective sample.

Source: Eurostat

Working population with tertiary education in European regions in 2017

More than half of workers in Catalonia have a university degree

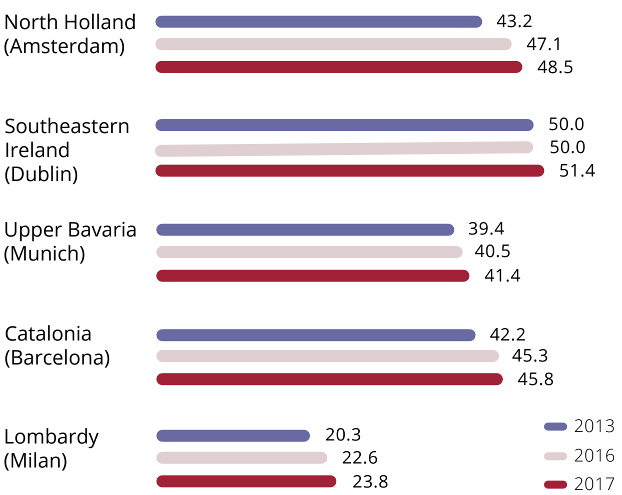
According to figures from Eurostat, in 2017 45.8% of the working population in Catalonia had a university degree, which is an increase of 0.5 percentage points on the previous year. This is much higher than the average for the European Union (36.1%) and higher than that of benchmark regions such as Manchester, Munich, Lyon and Berlin, as well as being above the average for Spain (43.2%).

The percentage of Catalan female workers with a university-level education was above 50% for the third year running, standing at 51.1% which means it has been stable since 2015. This rate, which again is higher than the total, is much higher than the European Union rate (40.1%) as well as that of the benchmark European regions mentioned above and the Spanish average (48.9%).

These results highlight the progressive increase in the number of people with higher education qualifications in Catalonia in recent years, which we need to continue working on to reach the level of the workforce in the regions of northern Europe.

Working population with a university degree

(percentatge sobre ocupació total)



Source: Eurostat

Working population with a university education in European regions. 2017

Women workers with university degree (%)	Region (CITY)	Total number of working people with university degree (%)
63.8	London (LONDON)	61.6
64.8	Oslo og Akershus (OSLO)	59.1
61.9	Brussels Region - capital (BRUSSELS)	57.5
60.4	Basque Country (BILBAO)	56.9
63.3	Southern Finland (HELSINKI)	55.8
59.4	Eastern Scotland (EDINBURGH)	54.7
58.1	Stockholm (STOCKHOLM)	53.3
55.6	Île-de-France (PARIS)	53.3
56.0	Community of Madrid (MADRID)	52.8
58.1	Denmark capital (COPENHAGEN)	51.4
57.4	Ireland - south and east (DUBLIN)	51.4
52.7	Vienna (AT)(VIENNA)	49.4
51.9	North Holland (AMSTERDAM)	48.5
51.7	South-west Scotland (GLASGOW)	47.0
56.1	Mazowsze (WARSAW)	46.6
46.1	Prague (PRAGUE)	46.5
54.4	Lithuania (VILNIUS)	46.3
51.9	Attica (ATHENS)	46.2
51.1	**Catalonia (BARCELONA)**	**45.8**
47.3	Berlin (BERLIN)	45.2
48.1	Rhône-Alpes (LYON)	43.5
48.9	**Spain**	**43.2**
48.1	Bucuresti - Ilfov (BUCHAREST)	43.2
50.8	South-west Bulgaria (BG) (SOFIA)	42.7
44.8	Greater Manchester (MANCHESTER)	42.3
47.0	Provence-Alps-Cote d'Azur (MARSEILLE)	42.3
43.7	South Holland (THE HAGUE)	42.0
37.1	Upper Bavaria (MUNICH)	41.4
44.3	Community of Valencia (VALENCIA)	38.7
41.7	Central Hungary (BUDAPEST)	38.6
41.5	West Midlands (BIRMINGHAM)	36.7
40.1	**EUROPEAN UNION**	**36.1**

NB: Percentage (%) of the population between 25 and 64 years of age with university qualification.
The original database contains around 450 regions but the table only shows a selection of benchmark regions.

Source: Eurostat

Best European business schools in 2018

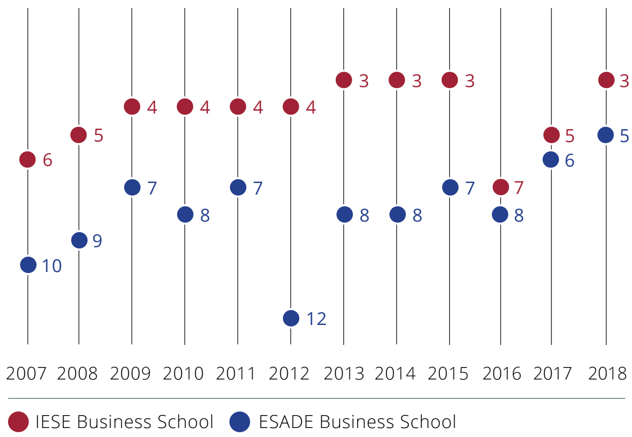
Barcelona is the only city with two schools in Europe's top five MBA business schools

According to the Financial Times ranking of the top 100 full-time MBA programmes, which it has been compiling for the last 18 years, the Barcelona IESE and ESADE business schools are ranked 3rd and 5th in the European ranking, above such well-known schools as the HEC in Paris and the University of Oxford Saïd Business School. This means that, for the first time, Barcelona is the only city with two teaching centres in the top five best MBA business schools in Europe in 2018, and is in the top ten for the sixth year running. Furthermore, these two institutions are among the twenty top schools on a global scale, with the IESE in 11th place and ESADE in 20th place. In relation to the results for the previous year, the IESE and ESADE have gone up two and one positions respectively in the European ranking, while they have gone down slightly, by one and three positions respectively, in the world ranking.

Also, according to the full-time MBA ranking from *Which MBA?* for 2018, published on a yearly basis by The Economist Intelligence Unit for the last 15 years, the IESE takes the top spot in the European ranking and is 6th in the world, while the ESADE is ranked 11th in Europe and 46th in the world.

Year after year these indicators consolidate Barcelona's position as a city of excellence and as a pole of attraction for business training on the international stage.

Positioning in the European ranking

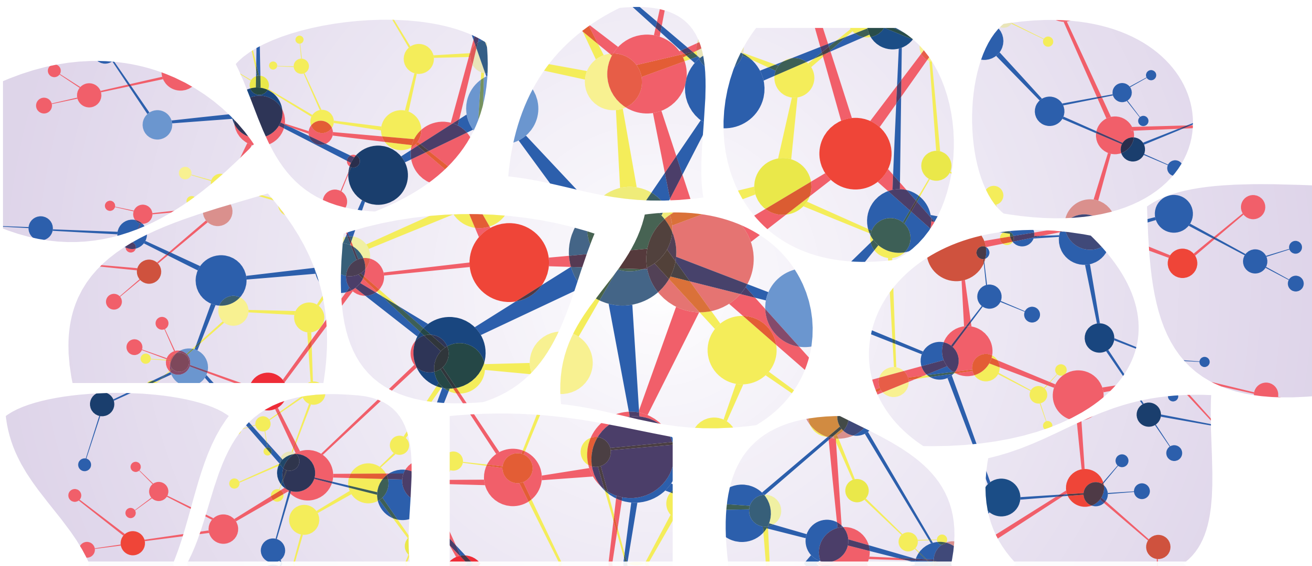


Source: *Global MBA Ranking*, Financial Times.

Best European business schools. 2018

European ranking	Business school	City	World ranking
1	Insead	Fontainebleau	2
2	London Business School	London	4
3	**IESE Business School**	**Barcelona**	**11**
4	University of Cambridge: Judge	Cambridge	13
5	**Esade Business School**	**Barcelona**	**20**
6	HEC Paris	Paris	21
7	IMD	Lausanne	24
8	University of Oxford: Saïd	Oxford	27
9	SDA Bocconi	Milan	29
10	Alliance Manchester Business School	Manchester	36
11	Rotterdam School of Management, Erasmus University	Rotterdam	37
12	Warwick Business School	Coventry	41
13	City University: Cass	London	46
14	Imperial College Business School	London	51
15	Universität St. Gallen	St. Gallen	60
16	Mannheim Business School	Mannheim	61
17	Cranfield School of Management	Cranfield	61
18	Durham University Business School	Durham	64
19	Lancaster University Management School	Lancaster	70
20	EDHEC Business School	Roubaix	75
21	The Lisbon MBA	Lisbon	80
22	ESMT - European School of Management and Technology	Berlin	88
23	Leeds University Business School	Leeds	92
24	WHU - Otto Beisheim	Dusseldorf	94
25	University College Dublin: Smurfit	Dublin	94
26	ESSEC Business School	Paris	96
27	University of Strathclyde Business School	Glasgow	98

Source: *Global MBA Ranking 2018*. Financial Times.



Knowledge society

OBSERVATORI BARCELONA

Introduction

Barcelona has demonstrated that it is a leader and driver in the smart cities movement, both in Europe and worldwide, with its top positions in various rankings. Juniper Research measures 'how smart a city is' considering such aspects as mobility, public security, health and productivity. In 2017, Barcelona was 9$^{\text{th}}$ in the selection of the 20 smartest cities in the world (and 3$^{\text{rd}}$ in the classification for Europe). According to the study, Barcelona is among the first ten cities in mobility (5$^{\text{th}}$), productivity (7$^{\text{th}}$) and health (9$^{\text{th}}$). These results are in line with the Cities in Motion 2017 smart cities ranking compiled by IESE, which placed Barcelona 26$^{\text{th}}$ out of a total of 165 cities, positioning the city well in mobility and transport (12$^{\text{th}}$), governance (15$^{\text{th}}$) and urban planning (16$^{\text{th}}$).

Barcelona is ready to play a prominent role in the Smart City 3.0 wave, in which the concept goes beyond technological and citizen leadership, focusing on citizen co-creation to link business creativity and social capital, democracy and inclusion.' Within the framework of the "2017-2020 Digital Barcelona Plan: transition towards technological sovereignty", the city is working towards being more efficient and effective in digital education, democratising data, improving urban mobility, modernising the administration and public-private cooperation for its "intelligent" development, and to achieve an active, participative, urban democracy that prioritises the digital rights and freedoms of city residents.

Barcelona has also established itself as a hive of technological entrepreneurship and a leader in e-Commerce. 34% of all Spanish start-ups are located in Barcelona, a percentage that represents 1,100 technological start-ups and 58% of the investments made in Spain in 2017. In fact, according to the *Startup Heatmap Europe Report 2018*, Barcelona is the 3$^{\text{rd}}$ most popular city among the 93 European cities for establishing a start-up. The *Digital Startup Ecosystem Overview 2017* confirms that e-Commerce attracts 24.7% of investment, beaten only by the mobile sector with 54.6% of the total investment. Barcelona's strength as a technological hub is also evidenced in the technological congresses held there and the projects set up to keep these synergies active. In terms of congresses, 4YFN stands out for its unstoppable growth and high profile, thanks to which a new firm has been set up this year, GSMA 4YFN Event Management, which aims to manage the administration and provide support, as well as organise conferences and events in other areas. With regard to projects, a good example is "The Collider", a programme promoted by Mobile World Capital Barcelona (MWCB), which aims to create future technological companies and connect entrepreneurs and talent to transform scientific knowledge into technological solutions.

In terms of talent, the Catalan labour market is characterised by its rich fabric in added value sectors. In 2017, more than 810,000 people with a higher education were working in the area of science and technology in Catalonia, which held on to its 4$^{\text{th}}$ position for European regions with the largest population employed in high and medium-high technological manufacturing, and its 6$^{\text{th}}$ position for employment in intensive services in knowledge and cutting-edge technology. 29% of the employees in these activities are women. These positive results are produced within a context in which, according to the *Tech Cities 2018* report, compiled by the consultants Manpower and Experis IT, the city has the highest salaries in the technologies sector in Spain, ranging from 35,000 euros a year for a systems administrator to 47,000 euros for a cyber-security specialist. Regarding this aspect, the city must find a balance between producing its own talent – with projects like IT Academy de Barcelona Activa, which offers technological training to people under 40 who would like to work in the world of ICTs – and retaining this talent, designing the conditions to compete on the international stage.

Competing metropolises evidenced in the results in the area of innovation. On a world scale, Barcelona has gone from 13$^{\text{th}}$ in 2017 to 30$^{\text{th}}$ in 2018 in the Innovation Cities Index due to the improvement of North-American cities. On a European scale, the city is 8th, remaining in the top ten with the second best result in Europe in this historic series and its potential to become a benchmark in sectors like genomics, virtual and augmented reality and blockchain.

Barcelona, Europe's 3$^{\text{rd}}$ most popular city for establishing a start-up

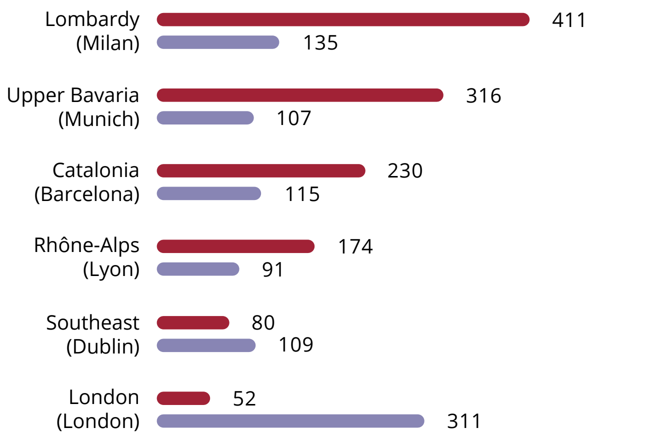
Population employed in technological manufacturing and services in the European regions in 2017

Catalonia, 4th European region for the population employed in manufacturing and 6th in technological services

In 2017, Catalonia retained its 4th position among the European regions with the highest figures for the population employed in high and medium-high technology manufacturing, with a total of 230,000 people working in this sector, according to Eurostat. The number of jobs in these sectors has risen by 10,000 (4.5% more than the previous year), keeping Catalonia in 4th position for the second consecutive year behind only the regions of Stuttgart, Lombardy and Upper Bavaria. Almost a third of this employed population are women (74,100), an increase of 13.1% compared with the previous year. Consequently, Catalonia has a relative employment weighting of 7% in high and medium-high technology manufacturing sectors, a percentage that puts it in the medium-high band among the 319 European regions. These data and the weighting of the industry in terms of gross added value (21.4% in 2017), which is above the European Union average (19.6%), make Catalonia one of the continent's regions with a high potential for the development of industry 4.0.

Catalonia takes 6th place among the European regions for employment in intensive services in knowledge and high technology, with a total of 114,700 employees in 2017. Compared with the previous year, employment figures in these activities rose by 16,500 (17%), placing Catalonia three positions higher among the European regions. The weighting of these activities in the overall employed population increased by 0.4 percentage points up to 3.5%, placing the region in the medium-high band of European regions. The female population employed in these activities increased by 7.2% compared with 2016, a total of 32,900 women (29% of the total). Social Security figures show that the weighting of these sectors in the overall number of jobs in the city of Barcelona reached 6.6% in December 2017.

Population employed in knowledge-intensive and high-tech services and those employed in high and medium-high intensity manufacturing technology. 2017



Population employed in high and medium-high intensity technology manufacturing (in thousands)

Population employed in knowledge-intensive and high-tech services (in thousands)

Source: Eurostat

Population employed in technology manufacturing and technology services in European regions. 2017

Knowledge-intensive and high technology services				High and medium-high intensity technology manufacturing		
% workers over total working population	Female workers (thousands)	Total working population (thousands)	Region (CITY)	% workers over total working population	Female workers (thousands)	Total working population (thousands)
2.2	15	49	Stuttgart (STUTTGART)	19.8	96	435
3.1	40	135	Lombardy (MILAN)	9.4	109	411
4.2	38	107	Upper Bavaria (MUNICH)	12.4	76	316
3.5	**33**	**115**	**Catalonia (BARCELONA)**	**7.0**	**74**	**230**
3.3	16	48	Karlsruhe (KARLSRUHE)	14.4	46	207
1.9	23	107	Istanbul (ISTANBUL)	3.7	43	207
2.4	16	44	Piedmont (TURIN)	10.5	46	190
2.3	15	45	Emilia-Romagna (BOLOGNA)	9.3	41	183
2.0	10	38	Upper Silesia (KATOWICE)	9.6	64	181
2.2	18	56	Düsseldorf (DÜSSELDORF)	7.2	42	180
3.2	29	91	Rhone-Alps (LYON)	6.1	53	174
3.7	23	76	Darmstadt (FRANKFURT)	8.1	41	164
6.3	109	336	Island of France (PARIS)	3.0	45	160
3.7	26	80	Colònia (COLÒNIA)	7.1	35	156
5.0	20	71	Central Hungary (BUDAPEST)	6.6	34	94
2.7	14	43	Country of the Loire (NANTES)	5.8	25	91
4.5	44	112	Masovia (WARSAW)	3.4	30	84
4.3	15	54	Midi Pyrenees (TOULOUSE)	6.5	19	83
7.8	77	226	Community of Madrid (Madrid)	3.1	28	90
5.7	36	109	South-east Ireland (DUBLIN)	4.2	27	80
5.5	38	99	Berlin (BERLIN)	4.0	21	72
9.0	33	113	Berkshire, Buckinghamshire and Oxfordshire (OXFORD)	4.9	20	61
3.0	20	58	Provence-Alps-Cote d'Azur (MARSEILLE)	2.8	11	55
6.8	106	311	London (LONDON)	1.1	16	52
5.1	35	122	Lazio (ROME)	2.8	15	66
4.1	13	39	Hamburg (HAMBURG)	5.9	14	56
4.5	14	57	Gloucester, Wiltshire and north Somerset	4.5	10	57
5.7	16	54	Region capital (COPENHAGEN)	4.7	17	44
4.5	15	55	East Anglia (EAST ANGLIA)	4.2	17	50
5.3	21	78	Surrey, East Sussex and West Sussex (BRIGHTON)	3.7	14	53
2.1	9	29	Schleswig-Holstein (KIEL)	4.7	13	67

NB: The original database contains a total of 281 European regions, although the table collects the top 10 in the subject and the remaining 20 is a selected sample of regions of interest.

Source: Eurostat

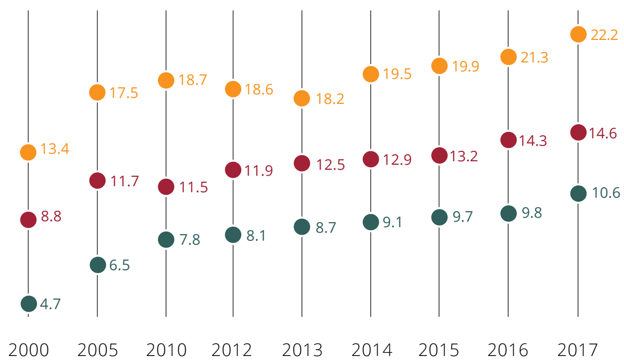
Population employed in science and technology in 2017, and research and development expenditure in the European regions for 2016

Catalonia, 5th European region in employment in science and technology

Catalonia recorded 814,700 people with a higher education employed in science and technology in 2017. This figure places the region in 5th position in the ranking of European regions for the second consecutive year, behind only Paris, London, Madrid and Istanbul, and ahead of cities like Lyon, Milan, Warsaw, Munich and Berlin, according to Eurostat. Compared with the previous year, the number of people employed in this sector has increased by 26,400 (3.3%). The weighting of the employed population in science and technology in the overall population in Catalonia is 14.6% (14.3% in 2016), a percentage that places the region in the medium-high band among the 319 European regions.

In 2016, intensity in research and development (R+D) in the principality was 1.45% of the Gross Domestic Product, a percentage that beats regions like London and Lombardy, as well as the Spanish average (1.19%). Nonetheless, Catalonia is still a long way behind leading European areas like Copenhagen, Stuttgart and Stockholm, and is below both the European average (2.04%) and the target of 3% set by the European strategy for 2020.

Population employed in science and technology
(as a percentage of the total population*)



Catalonia (Barcelona) North Holland (Amsterdam) Lombardy (Milan)

Source: Eurostat
*Population between 15 and 74 years old.

Note: working people who have a degree in science and are employed as professionals or technicians.

Population employed in science and technology in 2017, and spending on research and development in the regions of Europe in 2016

Total R&D domestic expenditures (% GDP) 2016	Domestic expenditures in the business sector on R+D (% GDP) 2016	Region (CITY)	Employees in science and technology (% population) 2017	Employees in science and technology (thousands) 2017
2.90	1.99	Ile de France (PARIS)**	20.7	1,826
1.07	0.50	London (LONDON)	25.4	1,695
1.66	0.94	Community of Madrid (MADRID)	20.5	1,001
		Istanbul (ISTANBUL)**	8.3	919
1.45	**0.83**	**Catalonia (BARCELONA)**	**14.6**	815
2.77	1.83	Rhone-Alps (LYON)**	16.7	792
1.30	0.96	Lombardy (MILAN)	10.6	788
1.74	0.75	Masovia (WARSAW)	19.7	780
4.35	3.33	Upper Bavaria (MUNICH)**	20.2	713
0.91	0.34	Andalusia (SEVILLE)	9.5	606
3.54	1.46	Berlin (BERLIN)**	21.4	588
1.10	0.80	South-East Ireland (DUBLIN)*	17.3	531
2.49	1.52	Provence-Alps-Cote d'Azur (MARSEILLE)***	14.1	520
2.79	1.13	Cologne (COLOGNE)*	15.4	519
1.68	0.67	Lazio (ROME)	11.5	510
6.17	5.71	Stuttgart (STUTTGART)*	16.4	508
3.13	2.48	Darmstadt (FRANKFURT)*	16.9	507
2.03	1.08	Holanda Sud (ROTTERDAM)**	18.2	498
1.75	1.31	Düsseldorf (DÜSSELDORF)*	12.6	494
1.76	0.80	South Holland (ROTTERDAM)**	22.2	471
3.78	2.82	Stockholm (STOCHOLM)*	27.1	462
0.53	0.35	Upper Silesia (KATOWICE)	12.7	427
1.49	1.19	Surrey, East Sussex and West Sussex (BRIGHTON)	20.2	423
		Ankara (ANKARA)	10.5	420
1.15	1.15	Attica (ATHENS)*	14.3	414
0.99	0.41	Valencian Community (VALENCIA)	11.1	413
1.77	1.35	Central Hungary (BUDAPEST)	18.0	409
3.67	2.30	Berkshire, Buckinghamshire, and Oxfordshire (OXFORD))	23.0	392
1.23	0.79	Country of the Loire (NANTES)***	14.2	379
0.91	0.44	Nord-Pas-de-Calais (LILLE)***	12.8	377

NB: workers who have a higher degree in science-related training and are employed as professionals or technicians. Domestic expenditure includes spending on capital, expenses and labour flows (both researchers and administrative staff) related to research activities in proportion to GDP.
* Data for 2015 on domestic expenditures in R+D (total and business).
** Data for 2013 on total domestic expenditures in R+D and 2014 on business expenditures in R+D.
*** Data for 2013 on domestic expenses in R+D (total and business).

Source: Eurostat

Top cities in the world for scientific academic production 2017

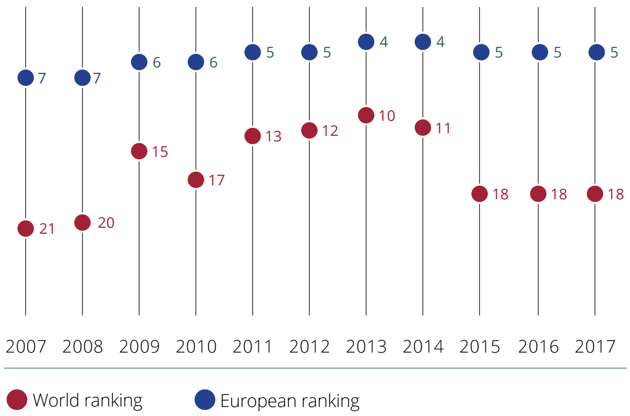
Barcelona is 18th among the world's cities and 5th in Europe

Barcelona, with 18,167 scientific publications, is the 5th European city and the 18th in the world in terms of scientific academic production, according to Knowledge Cities Ranking 2017, compiled by the Centre of Land Policy and Valuations (CPVS) of the Polytechnic University of Catalonia (UPC). The city increased its number of publications by 3.9% compared with the previous year, enabling it to retain 18th place in the world ranking and 5th in the European ranking. Barcelona produced more publications than such important cities as Hong Kong, Berlin, Cambridge (UK) and Oxford, although it was still far behind the leading cities in the ranking (Paris, London and Shanghai).

Furthermore, of the 269 Advanced Grants given to researchers by the European Research Council in 2017, eight were for Catalan institutions, almost half of the total grants given to Spain (18).

Top cities in the world for scientific academic production

(Barcelona's position in the world and European rankings)



Source: Centre of Land Policy and Valuations (CPVS) of the Polytechnic University of Catalonia (UPC), based on data from the Science Citation Index (SCI).

Top cities in the world for scientific academic production. 2017

World ranking 2016	City	World ranking 2017	European ranking 2017	Publications 2017*
1	Beijing	1		84,538
2	London	2	1	45,602
3	Shanghai	3		41,901
4	New York	4		36,984
5	Boston	5		35,885
6	Seoul	6		34,699
8	Tokyo	7		33,623
7	Paris	8	2	33,373
9	Madrid	9	3	20,652
11	Moscow	10	4	19,765
12	Chicago	11		19,457
13	Baltimore	12		19,451
14	Philadelphia	13		18,873
10	Cambridge (USA)	14		18,838
15	Houston	15		18,790
16	Toronto	16		18,465
17	Los Angeles	17		18,325
18	**Barcelona**	**18**	**5**	**18,167**
19	São Paulo	19		17,706
20	Melbourne	20		17,312
21	Rome	21	6	16,927
22	Milan	22	7	16,020
24	Singapore	23		15,646
23	Berlin	24	8	15,365
26	Hong Kong	25		15,231
25	Cambridge (UK)	26	9	14,408
28	Montreal	27		14,001
29	Oxford	28	10	13,873
27	Munich	29	11	13,665
30	San Francisco	30		13,596
31	Amsterdam	31	12	12 906

*Provisional data for September 2018.
Source: Polytechnic University of Catalonia-Centre of Land Policy and Valuations. http:/*/www-cpsv.upc.es/KnowledgeCitiesRanking/*

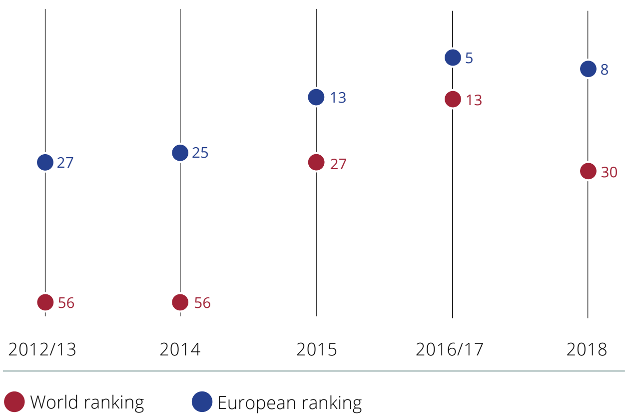
Innovation in cities around the world 2018

Barcelona ranks as the 8th most innovative city in Europe and 30th in the world

According to the 10th edition of the Innovation Cities Index (2018), Barcelona is positioned as the 8th European city and the 30th world city among the 500 cities analysed by the consultants 2thinknow for innovation. In a world ranking led by Tokyo and followed by London, San Francisco and New York, Barcelona has fallen 17 positions since last year due to a notable improvement in various North American cities, among which are Chicago, San Diego and Seattle. Within Europe, Barcelona remains in the top ten most innovative cities behind Paris, Berlin and Stockholm. The city has stood out for having climbed into the top positions in just a few years, and even though it has dropped from 5th to 8th place in a year, this is still the city's second best result of the series in continental Europe. The index classifies the cities into four categories for innovation, according to their scores in 162 indicators that measure the conditions conducive to creating innovation in metropolises. Barcelona is in the highest category, "Nexus", together with 52 other cities, which is followed by the categories "Hub", "Node" and "Upstart". These 162 indicators are grouped into 31 segments that cover all the economic, industrial and social functions of an economy, which are then summarised into three factors: cultural, human infrastructure and interconnected markets.

Furthermore, according to *State of European Tech 2017* — the report about technological trends compiled by the British investment firm, Atomico — Barcelona is positioned 10th out of 30 leading European cities for the development of blockchain. In a classification led by London, Paris and Moscow with 914, 298 and over 200 projects linked to blockchain, respectively, Barcelona enters the ranking with 88 projects, just behind Munich (89) and ahead of Warsaw (78). Barcelona also stands out for having an active ecosystem in the area of cryptocurrency, together with Berlin, Paris and Lisbon. The city is a welcoming metropolis for quite an active technological community, with 29.4% of Spain's total, and it also has a strong commitment to meetings and activities linked to technology. In just two years, it has gone from 20,981 attendees to almost 50,000 in 2017, a figure that places it in the top ten cities with the most participants in technological meetings.

Barcelona's position



Source: *Innovation Cities™ Index*. 2thinknow.

Innovation Cities Index

City	World ranking 2018	City	European ranking 2018
Tokyo	1	London	1
London	2	Paris	2
San Francisco - San Jose	3	Berlin	3
New York	4	Amsterdam	4
Los Angeles	5	Vienna	5
Singapore	6	Munich	6
Boston	7	Stockholm	7
Toronto	8	**Barcelona**	**8**
Paris	9	Manchester	9
Sydney	10	Oslo	10
Chicago	11	Madrid	11
Seoul	12	Copenhagen	12
Dallas-Fort Worth	13	Milan	13
Berlin	14	Hamburg	14
Seattle	15	Helsinki	15
Melbourne	16	Rome	16
Houston	17	Moscow	17
Amsterdam	18	Dublin	18
Vienna	19	Istanbul	19
Atlanta	20	Frankfurt	20
Munich	21	Stuttgart	21
Montreal	22	Athens	22
San Diego	23	Prague	23
Washington DC	24	Düsseldorf	24
Vancouver	25	Lyon	25
Miami	26	Leipzig	26
Hong Kong	27	Cologne	27
Stockholm	28	Budapest	28
Austin	29	Brussels	29
Barcelona	**30**	Zurich	30

Source: *Innovation Cities™ Index 2018*. 2thinknow. www.innovation-cities.com

Most popular European cities for establishing a start-up in 2018

Barcelona is the third most popular city for establishing a start-up

According to the third edition of *Startup Heatmap Europe Report*, 20% of founders of start-ups would choose Barcelona if they had to embark on a new business project, placing the city in 3rd position out of 93 European cities for the second year running. In first place is London, where 41% of those surveyed would start a business venture tomorrow, with access to capital as the city's most valued atrribute. Second is Berlin, the city mentioned by 40% of those surveyed, with quality of the business environment giving it its special appeal. Compared with the first edition, Barcelona's position has remained the same, but there was a change regarding votes. While in 2016, 7% of founders would have chosen the city, two years later this percentage has increased to 20%. By quite a large margin, Barcelona is the leader in e-Commerce and consumer platform start-ups.

These results are based on the annual survey carried out among founders of start-ups and members of the technological community. Those surveyed were asked, "Where would you start a company tomorrow" and they could vote for three of the European cities considered as *start-up hubs* according to different factors such as access to capital, talent and costs, among others. 1,500 people took part in this edition. Other notable results of the study carried out by the consultants Atomico are Barcelona's 4th place in obtaining funding for start-ups, with 722 million dollars in 2017, and the city's 14th position in the number of professional developers.

The city's popularity has also been demonstrated in the Digital City Index, carried out by Bloom Consulting. In 2017, Barcelona moved up one position as Europe's 2nd most searched for city on the Internet behind London, and ahead of benchmark cities such as Paris and Berlin. The index considers the total number of searches for a particular city made by citizens from all over the world, analysing a total of 136 cities. The Internet searches are classified into three areas: investment, tourism and talent. According to these three areas, Barcelona is the 4th most searched for city on matters of investment behind London, with almost 50% of the searches linked to the business environment of the city. Regarding tourism, Barcelona is in 2nd position behind London, with 41% of the searches focusing on accommodation. Lastly, regarding talent, the city is classified 2nd after London with 43% of the searches related to courses of study being taken.

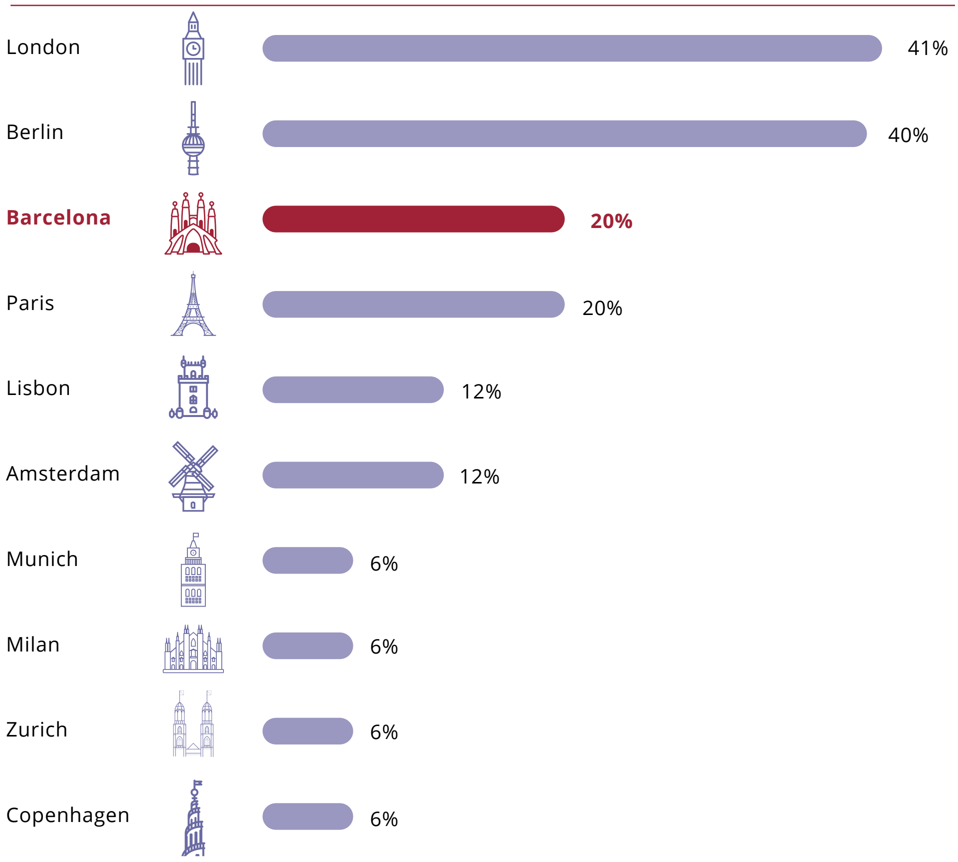
Top 10 Start-ups in Europe

Ranking 2017	City	Ranking 2018
1	London	1
2	Berlin	2
3	**Barcelona**	**3**
4	Paris	4
8	Lisbon	5
5	Amsterdam	6
9	Munich	7
10	Milan	8
20	Zurich	9
11	Copenhagen	10

Source: Startup Heatmap Europe - Atomic.

Percentage of entrepreneurs who cite the city to locate a new start-up

(with a maximum of 3 votes per entrepreneur)



Source: Startup Heatmap Europe - Atomic.

Tourism

OBSERVATORI BARCELONA

Introduction

The tourism sector continued to be one of the key economic drivers in Barcelona in 2017, and the balance of tourist activity remained positive throughout the year. Thus, the number of tourists who stayed overnight in hotels in Barcelona reached almost 7.7 million (7,656,747), an increase of 2.3% on 2016, while the total number of overnight stays in hotels was up 0.5% to 19,688,076. In a year that was complicated by the terrorist attack in August and the political conflict of October, following a period of strong expansion, tourist activity entered a period of more moderate growth.

Barcelona's good position as an international tourist destination is reflected in the key benchmark rankings for the sector. For the second consecutive year, Barcelona maintained its position as the 23rd favourite city destination in the world for international visitors and the 6th in Europe, according to the Top Cities Destination Ranking 2017, produced by Euromonitor International. With regard to the total number of international and domestic tourists, Barcelona slipped down one place in the ranking of European cities with the most overnight stays in 2017, overtaken by Madrid, and is now ranked 6th after London, Paris, Berlin, Rome and Madrid, according to the European Cities Marketing Benchmarking Report 2018. In the area of congress tourism, Barcelona is well established, with the number of delegates and meetings held in the city increasing in 2017 in relation to the previous year (up 8.1% for meetings and 14.2% for the number of delegates). As has happened in previous years, the Mobile World Congress, held between the end of February and early March, was the main source of congress tourism with 108,000 delegates, an increase on the numbers for 2016 (101,000). Also worth noting, albeit with much fewer delegates, is the 2017 ESC Congress, organised by the European Society of Cardiology, with 31,680 delegates.

The main routes of entry to the city for international tourists also experienced a slowdown in growth, but continued to register record figures. Barcelona's El Prat airport set a new passenger traffic record with more than 47 million passengers, although passenger numbers grew at a slower rate in 2017 than the previous year (up 7.1% compared to 11.2% in 2016), according to figures from the Airport Traffic Report. Despite this slowdown in the rate of growth in passenger numbers, El Prat airport achieved the second highest growth rate among the top ten European airports. With regard to origin and destination of cruise passenger traffic, the Port of Barcelona held onto its position as the number one port in Europe and the Mediterranean for the 17th consecutive year, although it slipped down one place in the world ranking, being overtaken by Shanghai, and is now ranked 5th in the world according to MedCruise statistics. Over the course of 2017, 2.71 million cruise passengers passed through the Port of Barcelona, a figure that sets a new record and which represents a 1.1% increase on the previous year.

The tourism sector in Barcelona continues to make a positive contribution to activity in the city

Main European airports by passenger volume in 2017

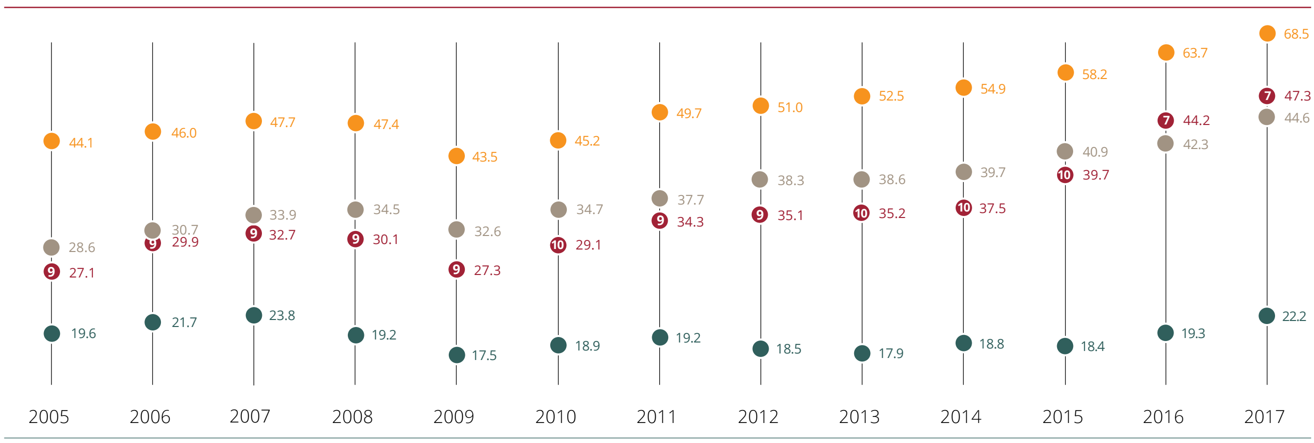
Barcelona airport remains 7th in the ranking of the main European airports

In 2017, Barcelona - El Prat airport achieved a new passenger traffic record with 47,284,500 passengers. El Prat experienced the second fastest growth of the top 10 European airports in 2017, just behind Amsterdam, increasing from 44.2 million passengers in 2016 to 47.3 million in 2017, a 7.1% rise, according to figures from the Airport Traffic Report. As a result of this evolution, Barcelona's airport holds onto its 7th place spot in the European ranking for passenger volume, just behind London Heathrow, Paris Roissy, Amsterdam, Frankfurt, Istanbul and Madrid.

The annual evolution of passenger traffic was positive in Europe's 25 main airports, with the exception of Roma-Fiumicino (-1.1%). However, the rate of growth varied widely from 0.5% in Copenhagen to 38.4% in Antalya. El Prat, with annual growth of 7.1% (3.1 million more passengers) had the 9th highest growth rate in 2017 out of the 25 main airports in Europe, and ranked 2nd among the top 10. International traffic was the main driver of this growth at El Prat in 2017, with 34.6 million passengers (almost three quarters of the total) and an increase of 6.9% in relation to 2016. What is notable in this segment is the evolution of intercontinental passenger traffic (from outside Europe) which was up 18.5% with 4.7 million passengers in 2017. Nevertheless, domestic air passenger traffic grew more than international traffic in relative terms: by 7.7% (905,000 more passengers) up to 12.7 million passengers (27% of the total traffic at El Prat airport).

Passengers

(millions)



Barcelona (BCN) Amsterdam (AMS) Munich (MUC)
X Barcelona's position in the ranking Milan (MXP)

NB: In 2010, the Airport of Barcelona dropped one position with the entry of Istanbul Airport in the data statistics of the ACI. If it had not been included, Barcelona would have maintained the ninth position.

Source: Airport Traffic Reports. Airports Council International, ACI Europe, and the Barcelona Air Route Development Committee (CDRA).

Main European airports in terms of passenger volumes. 2017

	City (airport)	Variation 2017/2016 (%)	Passengers 2017
1	Londres Heathrow (LHR)	3.0	78,010,074
2	Paris Roissy (CDG)	5.4	69,472,922
3	Amsterdam (AMS)	7.7	68,515,425
4	Frankfurt (FRA)	6.1	64,500,386
5	Istanbul (IST)	6.0	63,727,448
6	Madrid (MAD)	5.9	53,402,506
7	**Barcelona (BCN)**	**7.1**	**47,284,500**
8	London-Gatwick (LGW)	5.7	45,554,606
9	Munich (MUC)	5.5	44,573,176
10	Rome-Fiumicino (FCO)	-1.1	41,281,749
11	Moscow-Xeremetievo (SVO)	17.1	39,837,650
12	Paris-Orly (ORY)	2.6	32,040,890
13	Istanbul-Sabiha Gökçen (SAW)	6.1	31,385,841
14	Moscow-Domodedovo (DME)	7.6	30,657,854
15	Dublin (DUB)	6.0	29,582,321
16	Zurich (ZHR)	6.2	29,383,196
17	Copenhagen (CPH)	0.5	29,177,833
18	Palma de Mallorca (PMI)	6.5	27,970,655
19	Manchester (MAN)	8.5	27,810,674
20	Oslo (OSL)	6.5	27,475,749
21	Lisbon (LIS)	18.8	26,663,385
22	Stockholm-Arlanda (ARN)	7.9	26,622,916
23	Antalya (AYT)	38.4	25,931,659
24	London-Stansted (STN)	6.5	25,902,830
25	Brussels (BRU)	13.6	24,775,370

Source: *Airport Traffic Report 2017*. Airports Council International and the Barcelona Air Route Development Committee (CDRA).

International tourists in cities around the world 2017

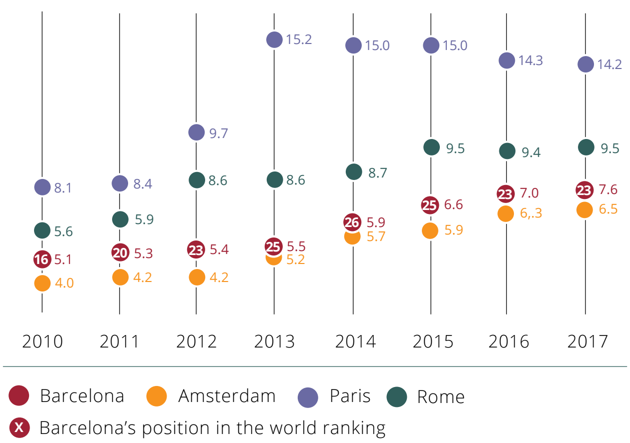
Barcelona is the 6th most popular international tourist destination in Europe and the 23rd most popular destination in the world for the second consecutive year

For the second year running, Barcelona is ranked the 6th most popular city in Europe and 23rd in the world in terms of international visitor numbers, out of a total of 100 cities, according to the report Top Cities Destination Ranking 2017, WTM London Edition, produced by Euromonitor International. The number of international tourists that chose Barcelona as a tourist destination stood at 7.6 million in 2017, 8.3% more than the previous year. This figure puts Barcelona ahead of Moscow, Beijing, and Los Angeles on a global scale, and ahead of Amsterdam, Vienna and Budapest on a European scale. Barcelona holds on to its position in the world ranking from the previous year and also in the European ranking, coming behind London, Paris, Rome, Istanbul and Prague.

At the same time, the European Cities Marketing Benchmarking Report 2018 ranks Barcelona as the 6th most popular city in Europe in terms of tourist overnight stays, behind London, Paris, Berlin, Rome and Madrid, dropping one place in relation to the previous year after being overtaken by the latter. However, when measuring international tourist overnight stays, Barcelona comes 5th, behind London, Paris, Rome and Prague. Finally, according to the latest edition of the Global Destination Cities Index from Mastercard, Barcelona is ranked 20th in the world in terms of international tourism spending.

International tourists

(thousands)



Source: *Top Cities Destination Ranking*. Euromonitor International.

International tourists in cities around the world. 2017

	City	Variation 2017/2016 (%)	International tourists (thousands) 2017
1	Hong Kong	-3.2	25,695.8
2	Bangkok	9.5	23,270.6
3	London	3.4	19,842.8
4	Singapore	6.1	17,618.8
5	Macau	5.9	16,299.1
6	Dubai	7.7	16,010.0
7	Paris	-0.9	14,263.0
8	New York	3.6	13,100.0
9	Shenzhen	3.1	12,962.0
10	Kuala Lumpur	4.5	12,843.5
11	Phuket	14.0	12,079.5
12	Delhi	37.7	10,257.0
13	Tokyo	4.8	9,713.5
14	Rome	1.8	9,565.5
15	Taipei	1.0	9,318.9
16	Guangzhou	5.3	9,075.5
17	Mumbai	23.5	8,884.9
18	Mecca	9.8	8,745.0
19	Istanbul	-5.8	8,642.3
20	Prague	4.5	8,550.7
21	Miami	3.1	8,075.8
22	Seoul	-14.9	7,659.1
23	**Barcelona**	**8.3**	**7,624.1**
24	Pattaya	4.2	7,313.5
25	Shanghai	4.3	7,201.2
26	Milan	2.8	6,882.5
27	Las Vegas	-0.8	6,687.8
28	Amsterdam	3.6	6,570.4
29	Antalya	4.6	6,457.4
30	Vienna	3.0	6,043.7

NB: International arrivals include both foreign visitors coming to the city as a first point of entry and people who come to the city via another entry point. Visitor is understood to mean any person who is in the city for at least 24 hours and less than 12 months, and who stays in a private establishment or collective accommodation.
People who travel to the city for day trips and domestic tourists are excluded from these figures.

Source: *Top 100 City Destinations Ranking*. WTM London 2017 Edition. Euromonitor International.

Cruise ships in Europe's main ports in 2017

The Port of Barcelona sets a new cruise passenger traffic record and holds on to its position at the top of the European ranking

The Port of Barcelona maintains its position for the 17th consecutive year as the main base port in the Mediterranean and Europe for cruise passenger traffic. Moreover, in 2017 it set a new record for cruise passenger numbers, with 2.7 million, according to statistics from MedCruise. However, on a global scale, the Port of Barcelona was ranked as the 5th busiest base port, falling one place after being overtaken by Shanghai, which saw passenger numbers increase by a spectacular 61.3% in relation to the previous year. The top three positions continue to be occupied by the great enclave ports of Florida (Miami, Port Canaveral and Port Everglades), according to the magazine *Cruise Insight* (autumn 2018).

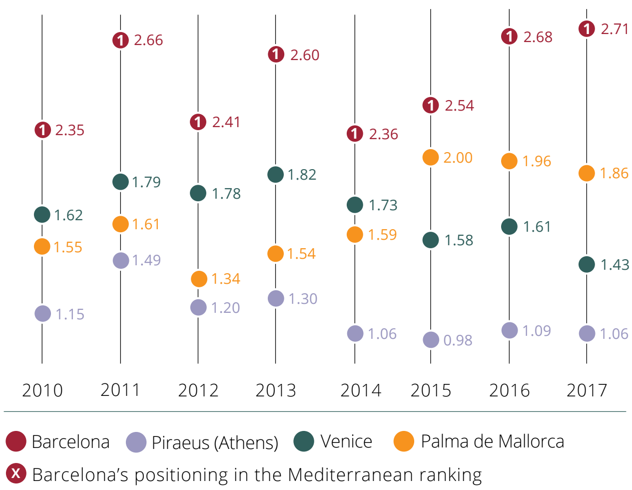
The number of cruise passengers that passed through the Port of Barcelona over the course of 2017 increased by 1.1% in relation to the previous year. Unlike the previous two years, this slight increase was a result of an increase in the number of passengers in transit (12.2%, almost 1.3 million people), while the number of passengers that embarked or disembarked in Barcelona was down (around 7%). The seasonal nature of demand in the cruise market is even more marked, with minimum passenger numbers during the winter months (above all in January and February) and maximum numbers in the summer months (July to October). However, the relative increase in cruise passenger numbers was greater in the months considered to be the low season –January, February, March, November and December– with an annual growth of 13% compared to the rest of the year, which saw an accumulated decrease of 2%.

The main cruise ports in the Mediterranean. 2017

	City	Variation 2017/2016 (%)	Passengers (thousands) 2017
1	**Barcelona**	**1.1**	**2,712**
2	Civitavecchia	-5.8	2,204
3	Palma	8.0	1,858
4	Marseille	-6.9	1,487
5	Venice	-11.1	1,428
6	The Piraeus	3.5	1,056
7	Naples	-29.0	927
8	Genoa	-9.1	925
9	Savona	-6.1	854
10	Valletta	13.9	778
11	Dubrovnik	-10.0	749
12	Livorno	-13.5	699
13	Mykonos	-3.3	699
14	Corfu	-9.2	680
15	Santorini	-20.8	621
16	Katakolon	12.3	567
17	Kotor (Montenegro)	0.7	541

Source: Cruise Insight, autumn 2018

Cruise passengers (millions of people)



Source: MedCruise and Ports de l'Estat

Prices and costs

OBSERVATORI BARCELONA

Introduction

The past year has confirmed an upward trend in rental prices in the city of Barcelona for offices, logistics land and housing, which began in 2015 with the economic recovery. In addition to this, inflation in 2017 was 2.1% in the province of Barcelona, after three years of growth close to zero. Despite this upward trend, the rankings covering this area show that Barcelona continues to be a competitive city in terms of costs on an international scale, given that its price and salary levels are situated at the medium-low end of those for large European cities, making it an attractive city for conducting business.

2018 was the first year where a clear upward trend was observed in the cost of living in Barcelona in worldwide rankings since the start of the economic crisis, according to Mercer Human Resource Consulting. However, if the comparison is made with other European cities that share the euro (28 cities), Barcelona ranks 14th among the cities with the highest cost of living, the same as in 2017. This is because, even though the new scenario of economic expansion is raising consumer prices, house prices and rental prices in Barcelona, the same increases have also taken place in other comparable European cities, so it has kept the same place in the ranking.

According to statistics for 2018 conducted by UBS, the salary level in Barcelona continues to be at the medium-low end when compared with other European cities, only higher than cities like Lisbon, Athens, Prague and Budapest, but way below other similar cities such as Dublin, Munich, Amsterdam and Milan. Compared with three years ago, the situation has not changed, because the salary increase that materialised in Barcelona is in line with that of other cities around the world. From a gender perspective, it should be mentioned that the annual income of women in 2016 was €25,669, while for men it was €32,819. This means that the pay gap in Barcelona was 21.8%, slightly narrower than in previous years (22.8% in 2015). This salary gap is narrower than the gap in Catalonia and Spain (25.3% and 24.4% respectively).

In terms of taxation, since 2016 when the second decrease in the corporation tax rate came into force, from 28% to 25%, there have been no significant changes in the tax burden on companies, which continues to be above the European average. As regards the social contributions tax rate, Spanish is characterised by having a low rate for social contributions paid by workers compared with other European countries and instead a high rate for contributions paid by businesses. When the two contributions are added together, the average tax rate is very much in line with the European average.

Barcelona is experiencing an upward trend in prices, in line with its European counterparts

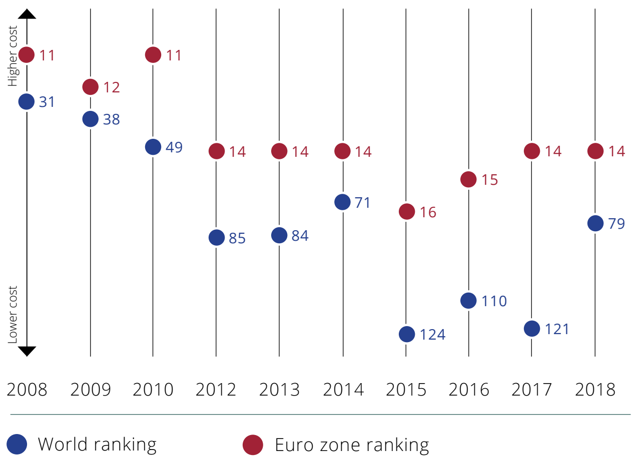
Cost of living in cities in the world 2018

Barcelona moves up in the ranking of cities with the highest cost of living

According to the *Worldwide Cost of Living Survey* by Mercer, based on an analysis of more than 200 essential services and products in 209 cities around the world, Barcelona moved up 42 places in the ranking of cities with the highest cost of living in 2018 (climbing from 121st to 79th place) and it is now in a similar place to what it was in 2012, 2013 and 2014. 2018 was the first year where a clear upward trend was observed in the cost of living in Barcelona in worldwide rankings since the start of the economic crisis. This is due to the increase in inflation and house prices as well as the appreciation of the euro which took place in 2017 and early 2018, given that the comparison is made with New York and, therefore, American dollars.

However, if the comparison is made with other European cities that share the euro (28 cities), Barcelona ranks 14th among the cities with the highest cost of living, just like in 2017. Therefore, Barcelona now holds the place it held in 2012, 2013 and 2014. This is because, even though the new scenario of economic expansion is raising consumer prices, house prices and rental prices in Barcelona, the same increases have also taken place in other comparable European cities, so it has kept the same place in the ranking.

Position of Barcelona



NB: 2011 data does not appear in the chart because they are not available to include in the European ranking..

Source: *Worldwide Cost of Living Survey, City Rankings*. Mercer Human Resource Consulting.

Cost of living in cities around the world

Ranking 2017	City	Ranking 2018	Ranking 2017	City	Ranking 2018
2	Hong Kong	1	19	Dubai	26
3	Tokyo	2	24	Taipei	27
4	Zurich	3	21	San Francisco	28
5	Singapore	4	24	Sydney	29
6	Seoul	5	37	Tianjin	29
1	Luanda	6	46	Chengdu	31
8	Shanghai	7	66	Dublin	32
15	N'Djamena	8	71	Milan	33
11	Beijing	9	62	Paris	34
10	Bern	10	23	Los Angeles	35
7	Geneva	11	45	Tsingtao	36
12	Shenzhen	12	17	Kinshasa	37
9	New York	13	42	Shenyang	38
27	Copenhagen	14	78	Vienna	39
18	Guangzhou	15	22	Abu Dhabi	40
16	Tel Aviv	16	34	Nagoya	41
13	Moscow	17	28	Lagos	42
32	Libreville	18	57	Ashgabat	43
30	Brazzaville	19	70	Yaounde	43
29	London	19	52	Riyadh	45
13	Victoria	21	80	Rome	46
42	Nouméa	22	48	Oslo	47
20	Osaka	23	84	Bangui	48
42	Abidjan	24	35	St. Petersburg	49
32	Nanjing	25	**121**	**Barcelona**	**79**

Source: *Cost of Living Survey, City Ranking 2018*, Mercer Human Resource Consulting

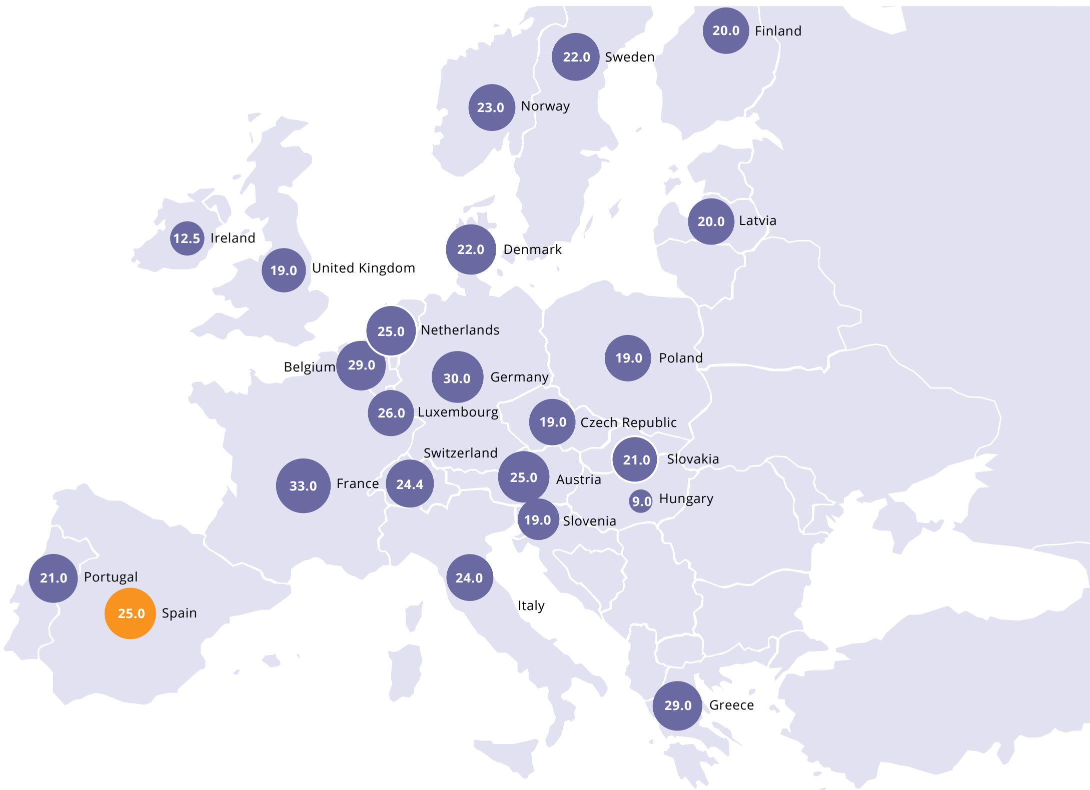
Corporation Tax, VAT and Social Security contributions in countries in the world 2018

The general VAT rate is at the medium end when compared with European countries

Spain continues to be at the medium-high end of Europe regarding the tax rates of the main tax categories, according to the comparison published by KPMG. On the one hand, the VAT rate of 21% is below that of the Nordic countries (Denmark, Norway and Sweden, which is 25%), and also Ireland and Portugal (23%) and Italy (22%), but above Germany (19%) and France (20%). The situation has not changed compared with the previous year, because there have been very few modifications of this tax rate in any country except in India, which increased from 15% to 18%. On the other hand, the nominal rate of corporation tax in Spain is currently 25%, very much in line with the European average, although it would be more appropriate to compare the effective tax rate after deductions and credits, which may be significantly lower than the nominal rate. This year, there were downward changes made in the United States, Argentina and Belgium, and upward changes in India and South Korea, among others. Finally, if Social Security contribution rates are compared, it can be observed that the tax rate of contributions paid by workers (6.4%) is a lot lower than the other European countries, while the rate paid by businesses is at the high end (around 30%). As a whole, the average rate of all contributions in Spain is in line with the European average.

According to the *Paying Taxes 2018* study by PwC and the World Bank Group, Spanish companies have a total tax rate of 46.9% (data from 2016). This rate is above the average of the European countries and EFTA (39.6%), although it has seen reductions in recent years, as two years ago it was 58.2%.

Corporation tax. 2018 (%)



Source: *Tax Rate Online 2018*. KPMG.

Corporation tax, VAT and social security payments in countries around the world. 2018

Country	Base VAT rate (%)	Country	Base Corporate tax rate (%)	Country	Social security rates workers (%)	Country	Social security rates companies (%)
Hungary	27.0	India	35.0	Netherlands	27.7	France	45.0
Denmark	25.0	France	33.0	France	23.0	Slovakia	35.2
Norway	25.0	Japan	30.9	Slovenia	22.1	Czech Republic	34.0
Sweden	25.0	Germany	30.0	Germany	20.6	China	32.9
Finland	24.0	Argentina	30.0	Hungary	18.5	Sweden	31.4
Greece	24.0	Australia	30.0	Austria	18.1	Italy	30.0
Ireland	23.0	Belgium	29.0	Argentina	17.0	**Spain**	**29.9**
Poland	23.0	Greece	29.0	Greece	16.0	Belgium	27.5
Portugal	23.0	South Africa	28.0	Japan	14.5	Argentina	26.7
Slovenia	22.0	United States	27.0	Poland	13.7	Greece	25.1
Italy	22.0	Canada	26.5	Slovakia	13.4	Latvia	24.1
Argentina	21.0	Luxembourg	26.0	Belgium	13.1	Portugal	23.8
Belgium	21.0	Austria	25.0	Luxembourg	12.5	Finland	22.1
Spain	**21.0**	South Korea	25.0	India	12.0	Austria	21.5
Latvia	21.0	**Spain**	**25.0**	Israel	12.0	Hungary	21.0
Netherlands	21.0	Netherlands	25.0	Latvia	11.0	Poland	21.0
Czech Republic	21.0	Tunisia	25.0	Portugal	11.0	Germany	19.4
Austria	20.0	China	25.0	Czech Republic	11.0	Netherlands	19.0
Slovakia	20.0	Italy	24.0	China	10.5	Tunisia	16.6
France	20.0	Israel	23.0	Finland	9.8	Slovenia	16.1
United Kingdom	20.0	Norway	23.0	Italy	9.5	Luxembourg	15.0
Germany	19.0	Denmark	22.0	Tunisia	9.2	Japan	14.9
Cyprus	19.0	Sweden	22.0	South Korea	8.4	Norway	14.1
India	18.0	Slovakia	21.0	Norway	8.2	United Kingdom	13.8
Tunisia	18.0	Portugal	21.0	Cyprus	7.8	India	12.0
Israel	17.0	Finland	20.0	United States	7.7	Ireland	10.9
Luxembourg	17.0	Latvia	20.0	Sweden	7.0	South Korea	9.4
China	17.0	Slovenia	19.0	Canada	6.6	Israel	8.0
South Africa	14.0	Poland	19.0	**Spain**	**6.4**	Cyprus	7.8

*Data for 2017
NB: The original database contains 138 countries, although the table shows a sample of selected countries of reference.

Source: KPMG, *Tax Rate Online 2017*

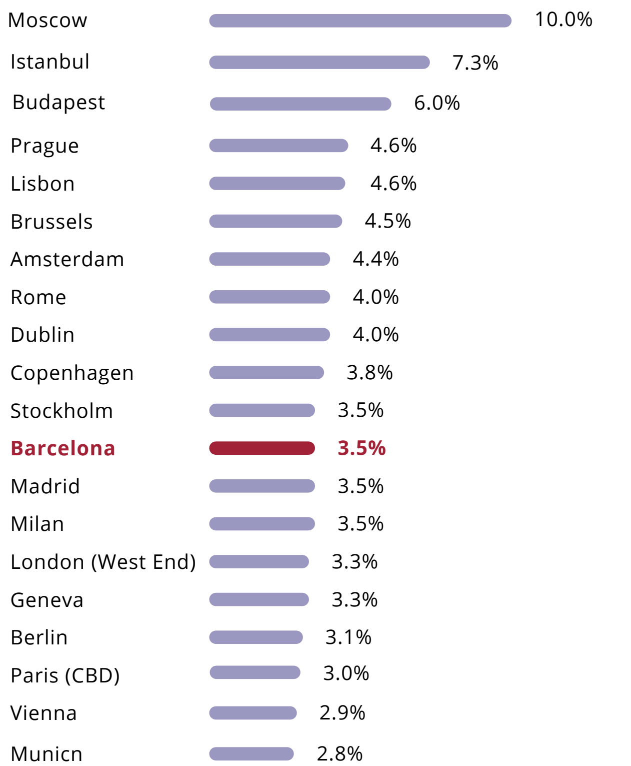
Office rental price in European cities 2017

The price in Barcelona increased by 7% in 2017, but continues to be below benchmark cities such as Milan and Amsterdam

The annual price per square metre for office rentals in Barcelona was €276 in 2017, 7% more than the previous year, according to a report produced by Cushman & Wakefield Research. Barcelona is ranked 37th out of a total of 47 cities selected in the European area and, therefore, is at the medium-low end, with lower prices than the large European capitals. The city of Barcelona continues to be at the medium-low end of the ranking, with much lower prices than the large European capitals such as London, Paris, Stockholm, Geneva and Moscow, and also considerably lower than benchmark cities like Milan, Amsterdam and Munich, all three with annual prices of €430 per square metre. The annual price per square metre in Barcelona is between the €240 of Lisbon and the €300 of Lyon and Brussels. By contrast, Madrid is higher in the ranking (in 22nd place), with an annual office rental price of €393 per square metre, and an increase of 9.2% compared with the previous year

As regards the profitability of office rental, Barcelona obtains a tax rate of 3.5%, only three-tenths lower than the previous year and identical to that of cities like Madrid, Milan and Stockholm. The highest profitability can be observed in the cities of Moscow, Istanbul and Budapest (over 6%), while on the other hand, the lowest profitability is in Paris, Vienna and Munich, at 3% or lower.

Yields on offices in European cities. 2017



NB: Yields refer to the return on investment in the office sector for each city.

Source: Cushman & Wakefield Research, *The DNA of Real State, 4T 2017 (Europe).*

Rental prices for offices in cities in Europe. 2017

Ranking 2017	City	Var. year-on-year 2017/2016 (%)	office rentals 2017 (€/m²/any)	Ranking 2017	City	Var. year-on-year 2017/2016 (%)	office rentals 2017 (€/m²/any)
1	London (WE)	-8.3	1,351	24	Leeds	11.1	368
2	London (City)	-1.5	829	25	Glasgow	0.0	362
3	Paris (CBD)	2.5	810	26	Berlin	11.5	348
4	Stockholm	12.0	727	27	Düsseldorf	1.9	324
5	Geneva	-2.5	702	28	Vienna	4.0	312
6	Zurich	0.0	675	29	Hamburg	4.0	312
7	Moscow	0.0	620	30	Gothenburg	5.3	311
8	Dublin	0.0	619	31	Cardiff	0.0	307
9	Luxembourg	8.7	600	32	Brussels	10.9	305
10	Paris (La Défense)	0.0	540	33	Lyon	1.7	300
11	Milan	8.0	540	34	Newcastle	2.2	289
12	Frankfurt	13.5	504	35	Budapest	9.1	288
13	Oslo	7.5	461	36	Warsaw	0.0	285
14	Amsterdam (South Axis)	5.9	450	**37**	**Barcelona**	**7.0**	**276**
15	Helsinki	2.9	432	38	Marseille	0.0	260
16	Munich	4.3	432	39	Malmo	2.1	254
17	Manchester	3.1	411	40	Prague	0.0	252
18	Edinburgh	1.5	411	41	Copenhagen	0.0	249
19	Birmingham	3.1	405	42	Lisbon	5.3	240
20	Rome	0.0	400	43	Rotterdam	4.4	235
21	Bristol	14.0	399	44	Bucharest	0.0	222
22	Madrid	9.2	393	45	The Hague	0.0	210
23	Istanbul	-14.6	372	46	Sofia	3.8	162

Source: Cushman & Wakefield Research, *The DNA of Real State, last quarter. 2017 (Europe).*

Commercial premises rental price in cities in the world 2018

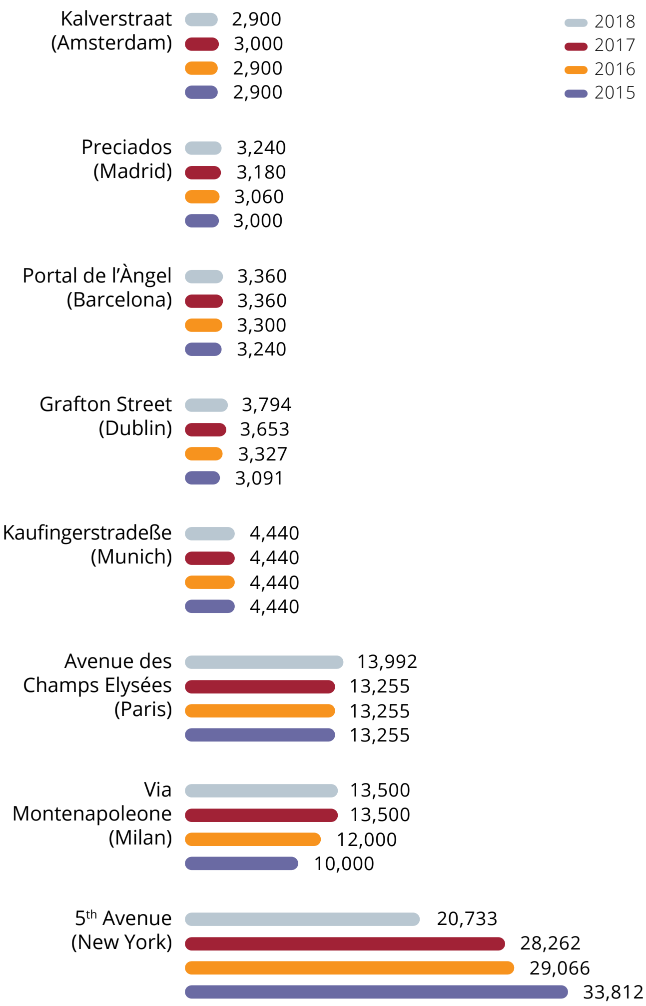
Portal de l'Àngel is one of the top 20 most expensive shopping streets in Europe

According to the *Main Streets Across the World 2018* report by Cushman & Wakefield, Portal de l'Àngel continues to be the most expensive street in Spain, with an annual rent of €3,360 per square metre in the second quarter of 2018, ahead of C/Preciados in Madrid which has an annual rent of €3,240 per square metre. According to the Cushman & Wakefield report which analyses the prices of 445 markets in 65 countries, Portal de l'Àngel is still in 14th place in the worldwide ranking conducted using only the most expensive street of each country. The price level is comparable to the most exclusive streets of Amsterdam, Dublin and Berlin, but is way below the €16,071 of New Bond Street in London, the more than €13,000 of the Avenue des Champs-Élysées in Paris, and the Via Montenapoleone in Milan. However, if the ranking were conducted using all the exclusive streets of each country, and not only the most expensive, Portal de l'Àngel would be ranked 18th in Europe and 67th worldwide.

In 2018, the average price for commercial premises on Portal de l'Àngel remained stable compared with the previous year, while the price of C/Preciados in Madrid increased by 1.9%, in line with inflation. The attraction of Barcelona as a shopping destination for tourists and its good image and reputation at a global level is reflected in the fact that Barcelona continues to hold its place in the worldwide ranking of the most exclusive shopping streets.

Rental prices for retail premises

($€/m^2$/year)



Source: *Main Streets Across the World.* Cushman & Wakefield.

Rental prices for retail premises in cities around the world. 2018

2018	2017	Country	City	Street	Rentals retail premises (€/m²/any)
1	2	Hong Kong (China)	Hong Kong	Causeway Bay (main street shops)	24,606
2	1	USA	New York	Upper 5th Avenue (49th-60th Sts)	20,733
3	3	United Kingdom	London	New Bond Street	16,071
4	5	France	Paris	Avenue des Champs Élysées	13,992
5	4	Italy	Milan	Via Montenapoleone	13,500
6	6	Japan	Tokyo	Ginza	11,232
7	7	Australia	Sydney	Pitt Street Mall	8,882
8	8	South Korea	Seoul	Myeongdong	8,364
9	9	Swiss	Zurich	Bahnhofstrasse	7,872
10	10	Austria	Vienna	Kohlmarkt	4,740
11	11	China	Beijing	Wangfujing	4,532
12	12	Germany	Munich	Kaufinger/Neuhauser	4,440
13	13	Ireland	Dublin	Grafton Street	3,794
14	**14**	**Spain**	**Barcelona**	**Portal de l'Àngel**	**3,360**
15	19	Greece	Athens	Ermou	3,000
16	15	Netherlands	Amsterdam	Kalverstraat	2,900
17	17	Singapore	Singapore	Orchard Road	2,842
18	16	Russia	Moscow	Stoleshnikov	2,749
19	21	Czech Republic	Prague	Na Příkopě street	2,640
20	18	Norway	Oslo	Karl Johan	2,632
21	20	Luxembourg	Luxembourg	Grand Rue	2,160
22	24	Canada	Toronto	Bloor Street	2,106
23	23	India	New Delhi	Khan Market	2,105
24	26	Malaysia	Kuala Lumpur	Suria KLCC	2,058
25	27	Belgium	Antwerp	Meir	2,000
26	30	Sweden	Stockholm	Biblioteksgatan	1,942
27	28	Taiwan	Taipei	Ximen	1,887
28	29	Denmark	Copenhagen	Stroget (including Vimmelskaftet)	1,842
29	22	Turkey	Istanbul	Centre - Istiklal Street	1,746
29	25	Vietnam	Ho Chi Minh	Best Achieved Shopping Mall (GF)	1,746

NB: This ranking only includes the most expensive shopping street in each country.

Source: *Main Streets Across the World 2018*. Cushman & Wakefield. Data for the second quarter of 2018.

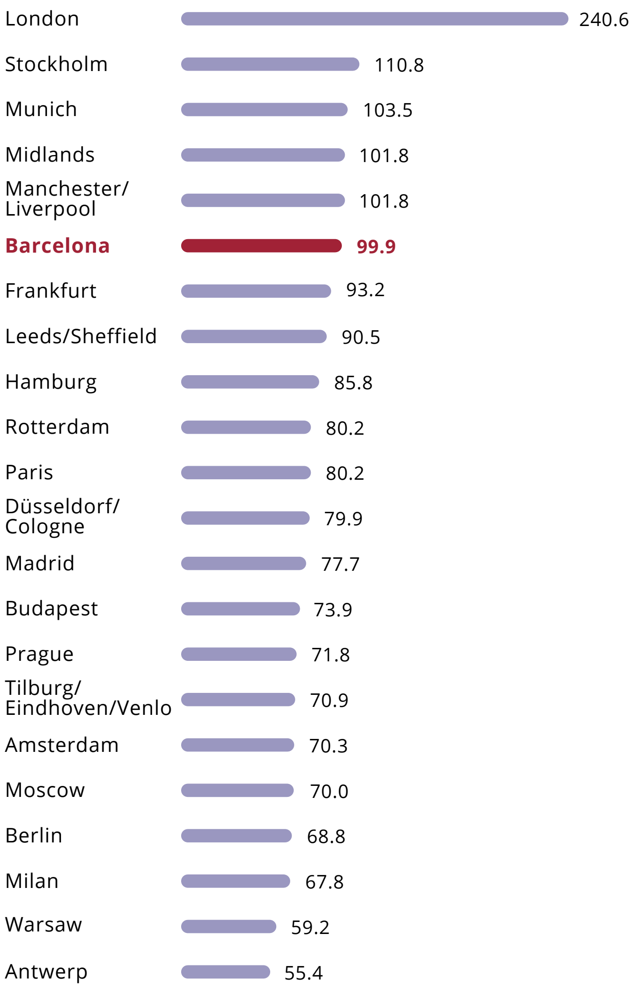
Rental price of premium logistics land in the main urban areas in the world 2018

Barcelona ranks 6th for the highest price of logistics land in European urban areas

The rental price of premium logistics land in Barcelona is practically $100 per square metre, which is 3.8% higher than the previous year, according to the *Global Industrial and Logistics Prime Rents 2018* report by CB Richard Ellis (CBRE). Barcelona is at the medium-high end of the ranking of 71 cities worldwide analysed for the highest prices, mainly due to the scarce supply of logistics land available in the area of Barcelona and the recent increase in demand.

When compared with other European urban areas, Barcelona is ranked 6 out of 22 countries for the highest price for logistics land. To be specific, the price in Barcelona is similar to that of European cities of reference such as the Midlands area and Manchester/Liverpool in the United Kingdom (approximately $100 per square metre), but it is higher than cities like Madrid ($77.7 per square meter), Paris, Rotterdam and Frankfurt.

Yields on prime land for logistics in cities in Europe. 2018 ($/m²/year)



Source: 2018 *Global Industrial & Logistics Prime Rents*. CBRE, july 2018 (Data for the first quarter of 2018).

Rental price of prime logistics land. 2018

Ranking	Urban area	Country	Rental logistics land ($/m²/year)	Ranking	Urban area	Country	Rental logistics land ($/m²/year)
1	Hong Kong	Hong Kong	333.6	26	Seattle	United States	81.4
2	London	United Kingdom	240.6	27	Guangzhou	China	81.3
3	Tokyo	Japan	214.8	28	Suzhou	China	81.3
4	Shanghai	China	113.1	29	South Florida	United States	80.6
5	Stockholm	Sweden	110.8	30	Rotterdam	Netherlands	80.2
6	Singapore	Singapore	109.4	31	Paris	France	80.2
7	Oakland	United States	107.2	32	Düsseldorf / Cologne	Germany	79.9
8	Beijing	China	105.3	33	Madrid	Spain	77.7
9	Munich	Germany	103.5	34	Perth	Australia	74.2
10	Sydney	Australia	103.4	35	Budapest	Hungary	73.9
11	Midlands	United Kingdom	101.8	36	Prague	Czech Republic	71.8
12	Manchester /Liverpool	United Kingdom	101.8	37	Adelaide	Australia	71.7
13	**Barcelona**	**Spain**	**99.9**	38	Tilburg / Eindhoven / Venlo	Netherlands	70.9
14	Auckland	New Zealand	99.1	39	Amsterdam	Netherlands	70.3
15	Shenzhen	China	97.7	40	Moscow	Russia	70.0
16	Los Angeles / Orange County	United States	95.6	41	Berlin	Germany	68.8
17	Frankfurt	Germany	93.2	42	Hangzhou	China	68.1
18	Seoul	South Korea	92.8	43	Wuhan	China	67.9
19	Leeds / Sheffield	United Kingdom	90.5	44	Milan	Italy	67.8
20	New Jersey	United States	88.9	45	Santiago de Chile	Chile	67.3
21	Brisbane	Australia	87.6	46	Calgary	Canada	66.7
22	Hamburg	Germany	85.8	47	Ningbo	China	65.7
23	Canberra	Australia	83.7	48	Melbourne	Australia	64.8
24	Buenos Aires	Argentina	81.8	49	Chongqing	China	63.7
25	Vancouver	Canada	81.4	50	Chengdu	China	63.1

Source: *2018 Global Industrial & Logistics Prime Rents*. CBRE, July 2018 (Da for the first quarter of 2018).

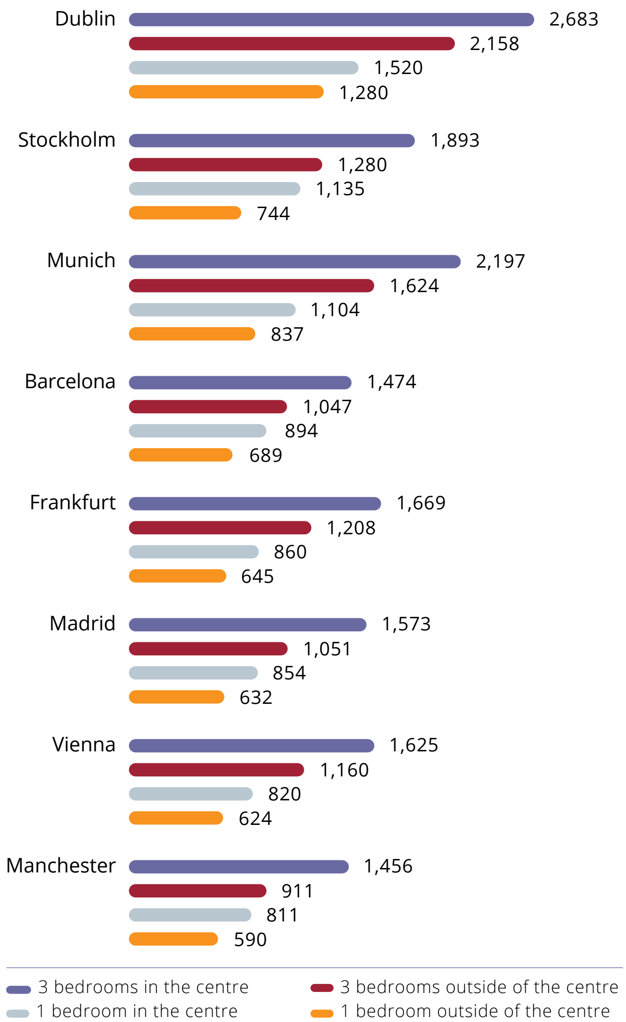
Housing rental price in the main European cities 2018

Barcelona is situated at the medium end of housing prices in Europe

According to the Numbeo database, the average rent for a one-bedroom property in the centre of Barcelona city is €894 per month, 6.7% higher than the data indicated for the previous year. Barcelona is ranked 35th for housing rental prices out of 203 European cities analysed. If the same one-bedroom property was located outside the city centre, the average rental price would be €689 per month.

If a family home has three bedrooms and is located in the city centre, the rent is €1,474 per month, and in this case, Barcelona is positioned lower in the ranking, in 42nd place, similar to cities like Manchester, Stuttgart and Berlin. If this property was outside the city centre, the average price would be €1,047 per month. The fact that Barcelona has a higher quality offer in the city centre for medium-sized properties than small properties in comparison with other cities such as Madrid, Brussels and Edinburgh, means it is ranked higher for the rental of a one-bedroom property than for a three-bedroom property.

Price of housing rentals. 2018
(€/month)



Source: Numbeo. Data for the first half of 2018.

Price of housing rentals in the centre (€/month). 2018

Ranking	City	Country	3 rooms	1 room	Ranking	City	Country	3 rooms	1 room
1	London	United Kingdom	3,407	1,827	26	Rome	Italy	1,896	967
2	Genoa	Switzerland	3,157	1,681	27	The Hague	Netherlands	1,632	963
3	Zurich	Switzerland	3,001	1,574	28	Reading	United Kingdom	1,776	950
4	Amsterdam	Netherlands	2,554	1,525	29	Bern	Swiss	1,913	931
5	Dublin	Ireland	2,683	1,520	30	Helsinki	Finland	1,679	930
6	Luxembourg	Luxembourg	2,890	1,484	31	Bristol	United Kingdom	1,650	920
7	Reykjavík	Iceland	2,341	1,479	32	Milton Keynes	United Kingdom	1,431	916
8	Copenhagen	Denmark	2,308	1,310	33	Eindhoven	Netherlands	1,557	915
9	Oslo	Norway	2,118	1,247	34	Sliema	Malta	1,731	903
10	Lausanne	Switzerland	2,365	1,238	**35**	**Barcelona**	**Spain**	**1,474**	**894**
11	Lugano	Switzerland	2,458	1,193	36	Galway	Ireland	1,481	891
12	Oxford	United Kingdom	2,215	1,164	37	Frankfurt	Germany	1,669	860
13	Paris	France	2,438	1,148	38	Edinburgh	United Kingdom	1,571	857
14	Cambridge	United Kingdom	1,939	1,139	39	Espoo	Finland	1,443	856
15	Stockholm	Sweden	1,893	1,135	40	Madrid	Spain	1,573	854
16	Munich	Germany	2,197	1,104	41	Hamburg	Germany	1,800	853
17	Basel	Switzerland	2,185	1,096	42	Stuttgart	Germany	1,465	848
18	Bergen	Norway	1,663	1,087	43	Leiden	Netherlands	1,390	845
19	Brighton	United Kingdom	1,901	1,083	44	Birmingham	United Kingdom	1,459	827
20	Utrecht	Netherlands	1,809	1,063	45	Bournemouth	United Kingdom	1,510	826
21	Trondheim	Norway	1,717	1,047	46	Vienna	Austria	1,625	820
22	Cork	Ireland	1,698	1,031	47	Göteborg	Sweden	1,374	819
23	Rotterdam	Netherlands	1,653	1,028	48	Berlin	Germany	1,550	814
24	Stavanger	Norway	1,681	984	49	Brussels	Belgium	1,378	813
25	Milan	Italy	2,012	977	50	Manchester	United Kingdom	1,456	811

Source: Numbeo. Query conducted in September 2018.

Salary levels in cities in the world 2018

Barcelona maintains positions in the salary level ranking

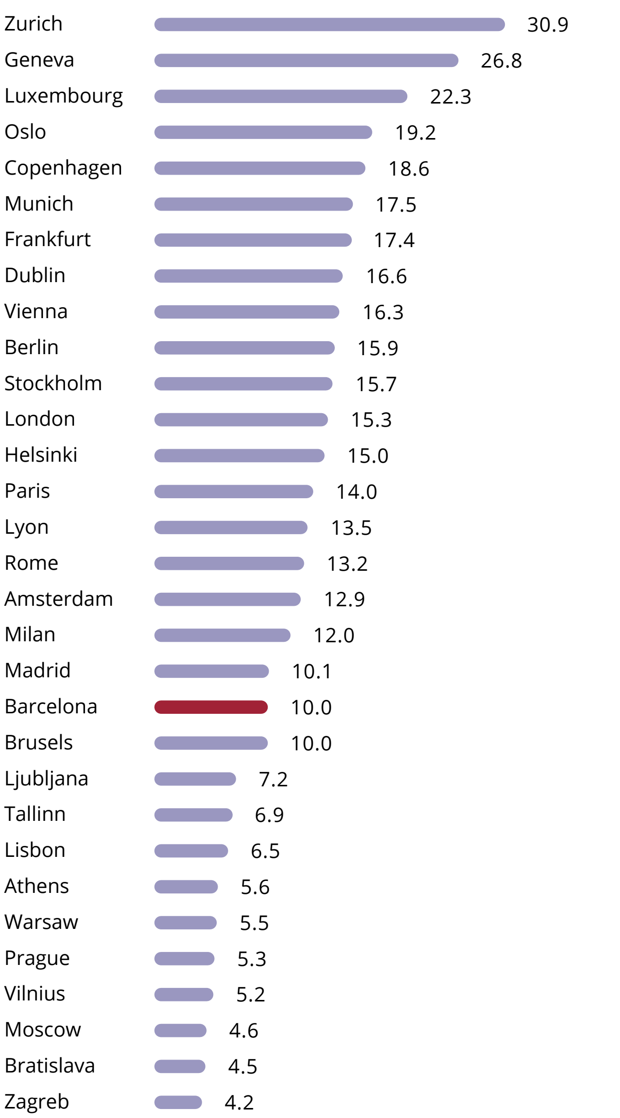
According to the *Prices and Earnings Around the Globe 2018* report, which UBS conducts every three years and compares the salary levels of 77 cities around the world, Barcelona is ranked 30th for gross salary. However, if the net salary is taken into account, Barcelona drops to 35th place, with a net salary of $10 per hour, identical to cities like Madrid and Brussels.

Between 2015 and 2018, the gross salary level in Barcelona increased in relation to the city of reference, which is New York, a trend that is shared with the main European cities of reference, as a consequence of the economic recovery, increase in inflation and appreciation of the euro. The result is that Barcelona holds the same place in the worldwide ranking for salary level that it had in 2015 (30th in worldwide ranking), and 20th if only the 37 European cities analysed are taken into account. Therefore, Barcelona is at the medium-low end in Europe, below Munich, Berlin, Dublin, Amsterdam, Lyon and Milan, and many others, but is above cities like Lisbon and Prague, and very much in line with Madrid.

The increase in the net salary in Barcelona in the period analysed (i.e. after taxes and contributions to the Social Security) has been less significant than if it is analysed in terms of gross salary, differentiated by the income tax, compared with the city of reference (New York).

Wage costs per hour. 2018

(€)



NB: The net salary is calculated after taxes and contributions to Social Security.

Source: *Prices and Earnings 2018*, UBS.

Salary levels in cities around the world. 2018

Ranking	City	Net salary	Gross salary
1	Geneva	133.1	131.5
2	Zurich	153.8	129.8
3	Luxembourg	110.9	111.3
4	Los Angeles	107.8	101.7
5	Copenhagen	92.3	101.3
6	Oslo	95.4	100.6
7	New York	100.0	100.0
8	Miami	103.1	91.8
9	Vienna	81.2	89.7
10	Chicago	94.9	89.6
11	Toronto	87.3	86.7
12	Munich	87.0	86.3
13	Stockholm	78.1	85.8
14	Frankfurt	86.4	85.7
15	Montreal	73.5	80.9
16	Sydney	90.8	80.2
17	Tokyo	85.3	79.2
18	Berlin	79.0	77.3
19	Dublin	82.5	76.9
20	Helsinki	74.5	75.2
21	Amsterdam	64.2	73.9
22	Rome	65.9	72.2
23	Paris	69.4	68.6
24	London	76.0	68.5
25	Auckland	78.4	67.1
26	Lyon	67.0	66.5
27	Milan	59.5	65.2
28	Brussels	49.5	61.9
29	Hong Kong	72.4	60.3
30	**Barcelona**	**49.6**	**58.4**

Ranking	City	Net salary	Gross salary
31	Madrid	50.0	58.3
32	TelAviv	61.8	55.5
33	Taipei	62.8	50.6
34	Nicosia	62.7	50.3
35	Manama	66.8	50.1
36	Dubai	56.0	41.1
37	Ljubljana	35.7	40.7
38	Seoul	46.0	40.0
39	Riyadh	43.9	34.0
40	Lisbon	32.4	32.1
41	Doha	46.0	32.1
42	Tallinn	34.5	30.5
43	Sao Paulo	34.5	30.2
44	Athens	28.1	30.0
45	SantiagodeXile	34.7	29.5
46	Warsaw	27.1	26.7
47	Prague	26.4	26.7
48	Panama	31.2	26.4
49	Zagreb	20.8	25.3
50	RiodeJaneiro	29.5	25.2
51	Johannesburg	27.8	25.0
52	BuenosAires	23.7	24.1
53	Vilnius	26.1	24.0
54	Bratislava	22.6	21.5
55	Bucharest	17.8	21.2
56	Kuala Lumpur	24.0	20.5
57	Budapest	18.8	19.7
58	Shanghai	22.1	19.3
59	Lima	20.7	18.6
60	Riga	18.9	18.5

NB: The net salary is calculated after taxes and contributions to Social Security, and is written as an index number considering New York's value as a 100.

Source: *Prices & Earnings 2018.* UBS.

SUMMARY OF RESULTS

Summary of results

In 2017, the Catalan economy and that of the Barcelona city continued to grow at a good pace, in spite of the periods of uncertainty and instability they experienced towards the end of the year. In fact, the city's GDP continued to grow at above 3% for the third year running and the unemployment rate continued to fall, getting closer and closer to pre-crisis figures. For 2018, the forecasts are for continuity in economic growth, although a certain amount of deceleration of activity has been detected, in a context with risks on a global scale that may affect these prospects. In this environment, Barcelona city has managed to maintain a good international and European economic and business position in most of the indicators listed in the Barcelona Observatory's *2018 Report*.

For 2019, the Eurochambres survey on business prospects shows positive results, especially in terms of export sales. In addition to these expectations, the indicators analysed in the chapter on the **focus of economic activity** also reaffirm Barcelona's attractiveness and the city's good image abroad. In this sense, the city remains among the world's 25 main metropolises in terms of global competitiveness for the third year running, according to the Mori Memorial Foundation's *Global Power City Index 2018*, and it is ranked among the top 15 world cities with the best reputation in *City RepTrak*, and although it is ranked lower than in the 2017 edition, it still comes above cities such as London, Madrid and Amsterdam. Barcelona also generates confidence in the area of international investment, which is shown by the fact that it remained among the 10 major world urban areas for attracting foreign investment projects in 2017, according to KPMG. Regarding the activity of international fairs and congresses, for the first time, Barcelona leads the ranking for the number of meetings organised and the number of people taking part, according to the ICCA. Similarly, the Catalan capital also stands out for its entrepreneurial spirit and the business opportunities it offers, with an entrepreneurial activity rate (TEA) that increased to 8.5% in 2017 for the Province of Barcelona, which is above the EU average (7.9%). The entrepreneurial rate for women for the same region was 7.4%, which is also above the EU average (6%).

This year, the report's chapter on **quality of life, social cohesion and sustainability** is revamped with the inclusion of two new indicators, one concerning cities' readiness for the future and the other concerning creative and cultural European cities. Regarding the factors associated with a good quality of life, Barcelona in ranked the 13th safest city in the world, according to the *The Safe Cities Index 2017* –where it also comes 3rd for safety in infrastructures–, 7th in the area of sport, according to the *Ranking of Sports Cities 2017*, the 4th most prepared city for the future in terms of new technologies, according to PwC's *Index of Cities' Readiness 2017* and 9th among Europe's most creative and cultural cities, according to the *The Cultural and Creative Cities Monitor 2018*, published by the European Commission's Joint Research Centre. In terms of social cohesion, the *At Risk of Poverty or Social Exclusion (AROPE)* rate for Catalonia is below that of the EU. Regarding the indicator concerning sustainability, Barcelona comes 21st for cities of the world with the most sustainable urban mobility, and 15th in Europe, according to the *Sustainable Cities Mobility Index 2017*.

Regarding the **job market**, the positive trend initiated in 2014 continued in 2017. In fact, Catalonia closed 2017 with a year-by-year increase in employment of over 110,000 people and a year-by-year decrease in the unemployed population of nearly 80,000 people. However, the unemployment rate is still above the European average, while the employment rate remains below the European average for the ninth year running. The part-time employment rate (overall and for women) has shown a general upward trend since the beginning of the crisis, although it is still below the European and Spanish averages. Meanwhile, the part-time employment rate for women is above the total for Catalonia (22.2 and 14.3%, respectively), but comes below the EU average (32.3%).

In the area of higher **education**, Barcelona continues to be a leading city for business education, as it is the only European city with two educational centres (IESE and ESADE) ranked among the top five business schools in the European continent in 2018, according to the Financial Times. Barcelona also stands out for its **qualified workforce**. In 2017, the proportion of the working population with university studies in Catalonia rose to 45.8% and it remained above 50% among women workers for the third year running. These values are clearly above the figures for the EU as a whole, according to Eurostat data. Furthermore, according to the new indicator included in this chapter, Barcelona is ranked the 4th most attractive city in the world for working abroad, according to *The Boston Consulting Group's Decoding Global Talent 2018*, behind only London, New York and Berlin.

In the area of **knowledge and technology**, Barcelona remains in a good position in Europe and is making progress as a leader in technological entrepreneurism and innovation. In terms of entrepreneurism, in a list of 93 European cities, Barcelona is the 3rd most preferred place for establishing a start-up business, according to the new indicator analysed by *Startup Heatmap Europe*

2018. Regarding scientific production, its strategy of promoting research means that Barcelona is ranked 5th among European cities and 18th in the world for scientific production, according to the annual report produced by the Polytechnic University of Catalonia. These favourable results in knowledge lead to significant employment in high added-value sectors. In 2017, over 810,000 people with higher education worked in the field of science and technology in Catalonia, which has remained the 4th European region with the highest number of workers in high and medium-high technology manufacturing, and 6th in terms of knowledge-intensive high-technology services. According to the tenth edition of *Innovation Cities Index*, Barcelona is ranked 8th in Europe and 30th in the world for innovation. Therefore, although it drops 17 places in the world ranking, due to the outstanding improvement in various US cities, it remains among the top ten European cities and shows outstanding potential in areas such as blockchain.

The **tourism** sector continues to be one of the main driving forces for the city's economy. With a favourable but more moderate evolution, Barcelona was well positioned as a leading city for attracting tourism in 2017, both in Europe and worldwide. The City of Barcelona's position as a leading tourist destination is reflected in the report *Top 100 City Destinations Ranking: WTM London 2017 Edition*, where Barcelona is ranked the 6th city in Europe and the 23rd in the world in terms of the number of international visitors. Furthermore, according to the *European Cities Marketing Benchmarking Report 2018*, Barcelona is the 6th European city with the most overnight stays, only behind London, Paris, Berlin, Rome and Madrid. The evolution of tourism is reinforced by good results in the main entry pathways for tourists, by air and sea, which recorded record annual figures once more. Barcelona-El Prat airport continues to be the 7th ranked European airport for the number of passengers, with a new record (47.3 million) and 2nd out of the top ten European airports that has grown the most. For the sixteenth year running, the Port of Barcelona remains the leading European and Mediterranean port for the transit of cruise-ship passengers (2.7 million), but it drops one place in the world ranking, having been overtaken by Shanghai, and is now ranked 5th in the world, according to MedCruise statistics.

The Catalan capital remains competitive worldwide in terms of **prices and costs**, because it has prices and salaries that are in the medium-low band in terms of the big European cities. This favours Barcelona's attractiveness as a city for doing business, in spite of rising prices, a trend that began with the economic recovery. In effect, Barcelona's improving economic situation and increasing attractiveness in global markets is also causing an increase in rental prices in the city, in terms of both housing and commercial establishments and offices, but it still retains a competitive position, as other European cities have also suffered a similar increase. Regarding logistics land, among leading European cities, Barcelona falls into the medium-high price band, according to CB Richard Ellis. In terms of the cost of living in Barcelona, 2018 is the first year since the start of the economic crisis in which there has been a clear rising tend in the world ranking, according to Mercer Human Resource Consulting. However, the fact that this rising trend has also occurred in other Eurozone cities means that Barcelona has held on to 14th place in the ranking for cities with the highest cost of living, the same position as in 2017.

For the eighth year running, the Barcelona Observatory's *2018 Report* presents the monograph ***Business climate in the Barcelona Metropolitan Area (AMB)***, which analyses the evolution of activity in the first three quarters of 2018 and the business forecast for the fourth quarter of the same year. According to the results of the *Business Climate Survey in the AMB*, which is carried out jointly by Idescat and the Barcelona Chamber of Commerce, the business situation in the AMB continued to evolve positively in all the variables analysed during the first three quarters of 2018, although business performance is beginning to show signs of deceleration, while employment registered the most positive data since the beginning of the crisis. Meanwhile sales prices are no longer falling, and are becoming stable. By sectors, the evolution has been generally positive, but catering and other services show the most positive business progression, although catering is also the sector that shows greater moderation compared to the previous year. It should be noted that, for the first time, employment is showing a positive trend in all sectors, with very similar results, except for catering, where it has remained more or less the same. For the fourth quarter of 2018, business people forecast that business performance will remain stable in comparison with the previous quarter and positive in all sectors.

Summary of results

	Global competitiveness 2018	Best reputation 2018	Foreign investment projects 2017	Rate of entrepreneurial activity[1,3] 2017	Organization of international congresses 2017	Safe cities 2017	Cities of sports 2017	Risk of poverty or social exclusion[1,2,4] 2017
1	London	Tokyo	London	Brazil	**Barcelona**	Tokyo	London	Bratislava
2	New York	Sydney	Singapore	Estonia	Paris	Singapore	Los Angeles	Helsinki
3	Tokyo	Copenhagen	Paris	Canada	Vienna	Osaka	Paris	Prague
4	Paris	Vienna	Dubai	Latvia	Berlin	Toronto	Lausanne	Stockholm
5	Singapore	Stockholm	Shanghai	United States	London	Melbourne	Tokyo	Warsaw
6	Amsterdam	Venice	Hong-Kong	Slovakia	Singapore	Amsterdam	Sydney	Oslo
7	Seoul	Rome	New York	South Africa	Madrid	Sydney	**Barcelona**	Munich
8	Berlín	Zurich	Bangalore	Netherlands	Prague	Stockholm	Edmonton	Amsterdam
9	Hong Kong	Munich	**Barcelona**	China	Lisbon	Hong Kong	New York	Copenhagen
10	Sydney	Montreal	Dublin	Ireland	Seoul	Zurich	Beijing	**Barcelona**
11	Stockholm	Helsinki	Amsterdam	Poland		Frankfurt	Melbourne	Milan
12	Los Angeles	Melbourne	Sydney	Morocco		Madrid	Vancouver	Bern
13	San Francisco	Toronto	Toronto	Taiwan		**Barcelona**		Madrid
14	...	Milan	Tokyo	Switzerland		Seoul		Budapest
15	**24 Barcelona**	**Barcelona**	São Paulo	**Barcelona**		San Francisco		Dublin

[1] The ranking refers to a selected sample [2] The ranking refers to regions or provinces [3] The ranking refers to countries [4] Ranking runs from low to high values

Cities' readiness for the future 2017	Creative and cultural cities of Europe 2017	Sustainable urban mobility 2017	Global talent attractiveness 2018	Employment rate[1,2] 2017	Part-time employment rate[1,2] 2017	Unemployment rate[1,2,4] 2017	Workers with tertiary education[1,2] 2017
Singapore	Paris	Hong Kong	London	Munich	Amsterdam	Prague	London
London	Munich	Zurich	New York	Stockholm	Rotterdam	Munich	Oslo
Shanghai	Prague	Paris	Berlin	Stuttgart	Vienna	Budapest	Brussels
Barcelona	Milan	Seoul	**Barcelona**	Prague	Frankfurt	Stuttgart	Bilbao
Moscow	Brussels	Prague	Amsterdam	Amsterdam	Stuttgart	Frankfurt	Helsinki
New York	Vienna	Vienna	Dubai	Copenhagen	Berlin	Edinburgh	Edinburgh
Toronto	London	London	Los Angeles	Oslo	Edinburgh	Manchester	Stockholm
Tokyo	Berlin	Singapore	Paris	Frankfurt	Copenhagen	Hamburg	Paris
Hong Kong	**Barcelona**	Stockholm	Sydney	Edinburgh	Hamburg	Amsterdam	Madrid
Sydney	Budapest	Frankfurt	Tokyo	Rotterdam	Munich	Oslo	Copenhagen
	Lyon	Amsterdam	Madrid	Helsinki	Manchester	London	Dublin
	Hamburg	Copenhagen	Toronto	London	Oslo	Rotterdam	Vienna
	Madrid	Tokyo	Vienna	Manchester	Montpellier	Tallinn	Amsterdam
	Cologne	...	Abu Dhabi	...	...	...	...
	Bucharest	**21 Barcelona**	Singapore	**Barcelona**	**Barcelona**	**Barcelona**	**Barcelona**

[1] The ranking refers to a selected sample [2] The ranking refers to regions or provinces [3] The ranking refers to countries [4] Ranking runs from low to high values

	Business schools MBA ranking 2018	Population employed in high and medium-high technology manufacturing[2] 2017	People working in science and technology[2] 2017	Scientific production 2017	Innovative cities 2018	Most popular European cities for establising a start-up 2018	Airport passengers 2017	International tourists 2017
1	Fontainebleau Insead	Stuttgart	Paris	Beijing	Tokyo	London	London Heathrow (LHR)	Hong Kong
2	London London Business School	Milan	London	London	London	Berlin	Paris-Roissy (CDG)	Bangkok
3	**Barcelona IESE Business School**	Munich	Madrid	Shanghai	San Francisco – San Jose	**Barcelona**	Amsterdam (AMS)	London
4	Cambridge University of Cambridge: Judge	**Barcelona**	Istanbul	New York	New York	Paris	Frankfurt (FRA)	Singapore
5	**Barcelona ESADE Business School**	Karlsruhe	**Barcelona**	Boston	Los Angeles	Lisbon	Istanbul (IST)	Macao
6	Paris HEC Paris	Istanbul	Lyon	Seoul	Singapore	Amsterdam	Madrid (MAD)	Dubai
7	Lausanne IMD	Turin	Milan	Tokyo	Boston	Munich	**Barcelona (BCN)**	Paris
8	Oxford University of Oxford: Saïd	Bologna	Warsaw	Paris	Toronto	Milan	London-Gatwick (LGW)	New York
9	Milan SDA Bocconi	Katowice	Munich	Madrid	Paris	Zurich	Munich (MUC)	Shenzhen
10	Manchester Alliance Manchester Business School	Düsseldorf	Seville	Moscow	Sydney	Copenhagen	Rome-Fiumicino (FCO)	Kuala Lumpur
11	Rotterdam Rotterdam School of Management	Lyon	Berlin	Chicago	Chicago		Moscow Xeremétievo (SVO)	Phuket
12	Coventry Warwick Business School	Frankfurt	Dublin	Baltimore	Seoul		Paris-Orly (ORY)	Delhi
13	London City University Cass	Paris	Marseille	Philadelphia	Dallas-Fort Worth		Istanbul (SAW)	Tokyo
14	London Imperial College Business School	Cologne	Cologne	...	...		Moscow Domodédovo (DME)	...
15	St. Gallen Universität St Gallen	Budapest	Rome	**18 Barcelona**	**30 Barcelona**		Dublin (DUB)	**23 Barcelona**

[1] The ranking refers to a selected sample [2] The ranking refers to regions or provinces [3] The ranking refers to countries [4] Ranking runs from low to high values

Cruise passengers in Europe 2017	Cost of living 2018	Corporate Tax[1,3] 2018	Office rental prices 2017	Retail premises rental prices 2018	Rental price for prime logistics land 2018	Rental price of housing 2018	Salary levels 2018
Barcelona	Hong Kong	India	London (WE)	Hong Kong Causeway Bay	Hong Kong	London	Geneva
Civitavecchia	Tokyo	France	London (City)	Nova York Upper 5th Avenue	London	Genoa	Zurich
Palma	Zurich	Japan	Paris (CBD)	Londres New Bond Street	Tokyo	Zurich	Luxembourg
Marseille	Singapore	Germany	Stockholm	Paris Avenue des Champs-Élysées	Shanghai	Amsterdam	Los Angeles
Venice	Seoul	Argentina	Geneva	Milan Via Montenapoleone	Stockholm	Dublin	Copenhagen
The Piraeus	Luanda	Australia	Zurich	Tokyo The Ginza	Singapore	Luxembourg	Oslo
Naples	Shanghai	Belgium	Moscow	Sydney Pitt Street Mall	Oakland	Reykjavík	New York
Genoa	N'Djamena	Greece	Dublin	Seoul Myeongdong	Beijing	Copenhagen	Miami
Savona	Beijing	South Africa	Luxembourg	Zurich Bahnhofstrasse	Munich	Oslo	Vienna
La Valletta	Bern	United States	Paris (La Défense)	Vienna Kohlmarkt	Sydney	Lausanne	Chicago
Dubrovnik	Geneva	Canada	Milan	Beijing Wangfujing	Midlands	Lugano	Toronto
Livorno	Shenzhen	Luxembourg	Frankfurt	Munich Kaufinger/Neuhauser	Manchester/ Liverpool	Oxford	Munich
Mykonos	New York	Austria	Oslo	Dublin Grafton Street	**Barcelona**	Paris	Stockholm
Corfu	...	South Korea	...	**Barcelona Portal de l'Àngel**	Auckland	...	...
Santorini	**79 Barcelona**	**Barcelona**	**37 Barcelona**	Athens Ermou	Shenzhen	**35 Barcelona**	**30 Barcelona**

[1] The ranking refers to a selected sample [2] The ranking refers to regions or provinces [3] The ranking refers to countries [4] Ranking runs from low to high values

Positioning of Barcelona in international cities rankings

Global competitiveness. 2018

1	2	3	4	5	6	7	8	9	10	11	12	13	14	24
London	New York	Tokyo	Paris	Singapore	Amsterdam	Seoul	Berlin	Hong Kong	Sydney	Stockholm	Los Angeles	San Francisco	...	**Barcelona**

Best reputation. 2018

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Tokyo	Sydney	Copenhagen	Vienna	Stockholm	Venice	Rome	Zurich	Munich	Montreal	Helsinki	Melbourne	Toronto	Milan	**Barcelona**

Foreign investment projects. 2017

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
London	Singapore	Paris	Dubai	Shanghai	Hong Kong	New York	Bangalore	**Barcelona**	Dublin	Amsterdam	Sydney	Toronto	Tokyo	São Paulo

Safe cities. 2017

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Tokyo	Singapore	Osaka	Toronto	Melbourne	Amsterdam	Sydney	Stockholm	Hong Kong	Zurich	Frankfurt	Madrid	**Barcelona**	Seoul	San Francisco

Attractive cities to work abroad. 2018

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
London	New York	Berlin	**Barcelona**	Amsterdam	Dubai	Los Angeles	Paris	Sydney	Tokyo	Madrid	Toronto	Vienna	Abu Dhabi	Singapore

European Business Schools MBA ranking. 2018

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Fontainebleau Insead	London London Business School	**Barcelona** IESE Business School	Cambridge University of Cambridge: Judge	**Barcelona** ESADE Business School	Paris HEC París	Lausanne IMD	Oxford University of Oxford: Saïd	Milan SDA Bocconi	Manchester Alliance Manchester Business School	Rotterdam Rotterdam School of Management	Coventry Warwick Business School	London City University Cass	London Imperial College Business School	St. Gallen Universität St. Gallen

Scientific Production. 2017

1	2	3	4	5	6	7	8	9	10	11	12	13	14	18
Beijing	London	Shanghai	New York	Boston	Seoul	Tokyo	Paris	Madrid	Moscow	Chicago	Baltimore	Philadelphia	...	**Barcelona**

Most popular European cities for establishing a start-up. 2018

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
London	Berlin	**Barcelona**	Paris	Lisbon	Amsterdam	Munich	Milan	Zurihc	Copenhagen	...	...	...	...	...

Innovative cities. 2018

1	2	3	4	5	6	7	8	9	10	11	12	13	14	30
Tokyo	London	San Francisco-San Jose	New York	Los Angeles	Singapore	Boston	Toronto	Paris	Sydney	Chicago	Seoul	Dallas-Fort Worth	...	**Barcelona**

European airports in terms of number of passengers. 2017

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
London Heathrow (LHR)	Paris Roissy (CDG)	Amsterdam (AMS)	Frankfurt (FRA)	Istanbul (IST)	Madrid (MAD)	**Barcelona** (BCN)	London Gatwick (LGW)	Munich (MUC)	Rome Fiumicino (FCO)	Moscow Xerémétievo (SVO)	Paris Orly (ORY)	Istanbul (SAW)	Moscow Domodédovo (DME)	Dublin (DUB)

Cost of living. 2018

1	2	3	4	5	6	7	8	9	10	11	12	13	14	79
Hong Kong	Tokyo	Zurihc	Singapore	Seoul	Luanda	Shanghai	N'Djamena	Beijing	Bern	Geneva	Shenzhen	New York	...	**Barcelona**

Salary levels. 2018

1	2	3	4	5	6	7	8	9	10	11	12	13	14	30
Geneva	Zurich	Luxembourg	Los Angeles	Copenhagen	Oslo	New York	Miami	Vienna	Chicago	Toronto	Munich	Stockholm	...	**Barcelona**

SPECIAL REPORT

Business Climate in the Metropolitan Area of Barcelona

Evolution 2018

OBSERVATORI BARCELONA

Executive summary

The good results continue during 2018

On average, in the first three quarters of 2018, the positive evolution has continued in all the variables analysed in the AMB *Business Climate Survey*:

- The upward trend has continued although at a slightly slower pace than in 2017.
- The downward trend in sale prices has bottomed out and prices have stabilised.
- Employment shows a positive balance for the first time since the start of the crisis.
- In comparison with Catalonia as a whole, the AMB has achieved more moderate results.
- The second quarter of 2018 was the most positive of the three quarters analysed in 2018.

Positive results in all sectors and above all in the other services sector

The good results achieved on average in the first three quarters of 2018 are spread across all the sectors analysed in the survey with some differences that are worth noting:

- Hotels and restaurants and other services are the sectors that have achieved the most positive business performance results but hotels and restaurants are also the sector with the most pronounced slowdown in relation to the previous year.
- For the first time, employment is positive in all sectors with very similar results, except in the hospitality sector, where there is little change.
- The other services sector stands out because it has the best result in business performance, the second best result in employment and the most pronounced increase in prices.

Factors that limit good business performance

The factors limiting good business performance in 2017:

- Weak demand continues to be the most important factor for businesses but is less important for the fifth consecutive year.
- Also of less importance is the increase in competition, the second most important factor, after three consecutive years on the rise.
- The third factor, financial constraints, is less important too and closer to the fourth factor, the lack of a suitable workforce, which is the only factor that maintains its importance.

Conditions forecast to remain stable in the fourth quarter

- The forecasts for business performance in the fourth quarter of 2018 are positive for all sectors and stable in relation to the previous quarter.
- Compared to the third quarter, industry and the hotel trade are the sectors whose prospects look set to worsen in the fourth quarter, although they remain positive. By contrast, construction, commerce and other services look set to improve slightly.

State and evolution of the business climate in 2018

In the first three quarters of 2018, business performance in the AMB evolved positively, albeit it at a more moderate pace than the year before

Business performance

During the first three quarters of 2018[1], the **business performance** in both the Barcelona Metropolitan Area (AMB) and Catalonia as a whole evolved positively for the fourth consecutive year, albeit it at a more moderate pace than the previous year, according to the *Business Climate Survey* conducted by the Barcelona Chamber of Commerce and Idescat, which provides results for the AMB based on an average sample of 973 businesses per quarter. However, behaviour has not been uniform in every quarter in the AMB, as business performance was more sluggish in the first and third quarters of 2018 (at around 8%) than in the second quarter (16%).

These results show that the expansive phase which began in 2014 is still under way, but alert us to a weakening in the growth rate since 2018. In fact, according to the latest forecasts from the Barcelona Chamber of Commerce[2], GDP growth in Catalonia at the end of 2018 is likely to be around 3%, slightly below the figure of 3.4% for 2017. This slowdown in the rate of growth is above all the result of the less positive contribution of the overseas sector, due to the change in prospects on a global scale and the increase in trade protectionism. Despite that, the growth rate in Catalonia is set to remain high and above the rate forecast for Spain as a whole (around 2.6%) or the Eurozone (around 2%).

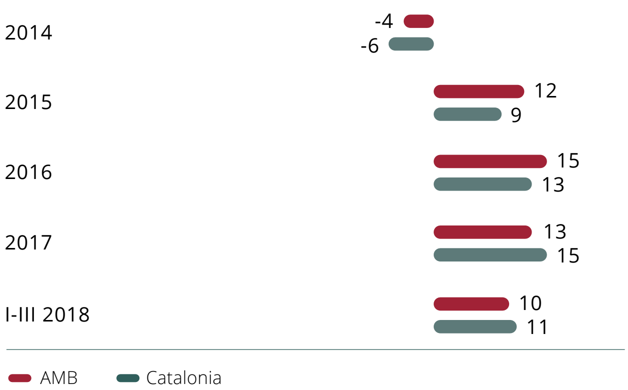
Compared to Catalonia as a whole, the AMB recorded a less positive evolution in business performance both in 2017 and in the first three quarters of 2018, the reverse of the situation in 2015 and 2016 when it was the AMB that recorded the highest positive balance. Likewise, the intensity of the slowdown in relation to 2017 is slightly less in the AMB than in Catalonia as a whole.

1. At the time of writing, the 4th quarter figures were still not available.

2. Published in October 2018.

Business performance across the whole of the economy[3]. Comparison with Catalonia

(balances[4], in %)



Source: Chamber of Commerce of Barcelona and Idescat

3. The results for the economy as a whole are the aggregation of the results for industry, construction, commerce, hotels and restaurants and other services, which represent about 80% of Catalonia's GDP.

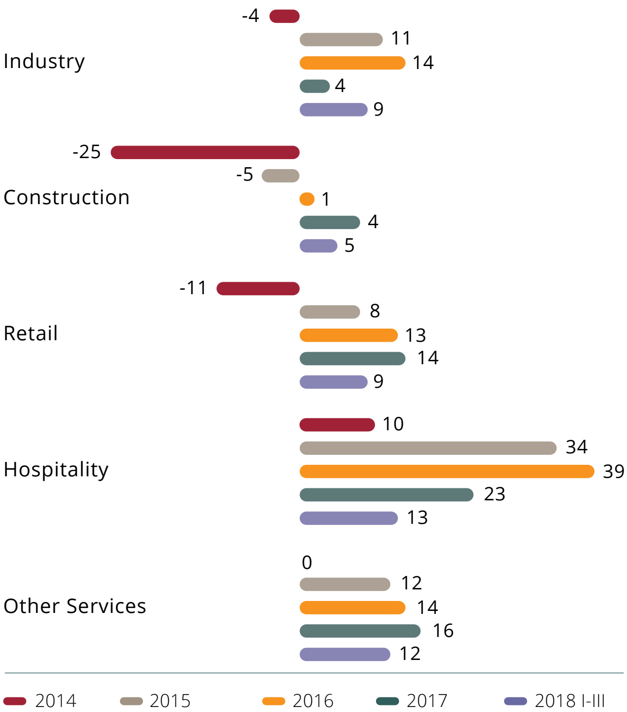
4. The balance is the difference between the percentage of business establishments which state that the variable analysed has been positive and the percentage of establishments that state that it has been negative. It should be noted that, in the case of the hotels and restaurants sector, the balances present seasonal differences, but the series are too short to divide by season.

Business performance has been positive in all sectors and hotels and restaurants and other services are the sectors with the best evolution. However, despite the positive behaviour, hotels and restaurants is also the sector where the improvement in business performance has slowed down the most compared to the previous year.

Sale prices

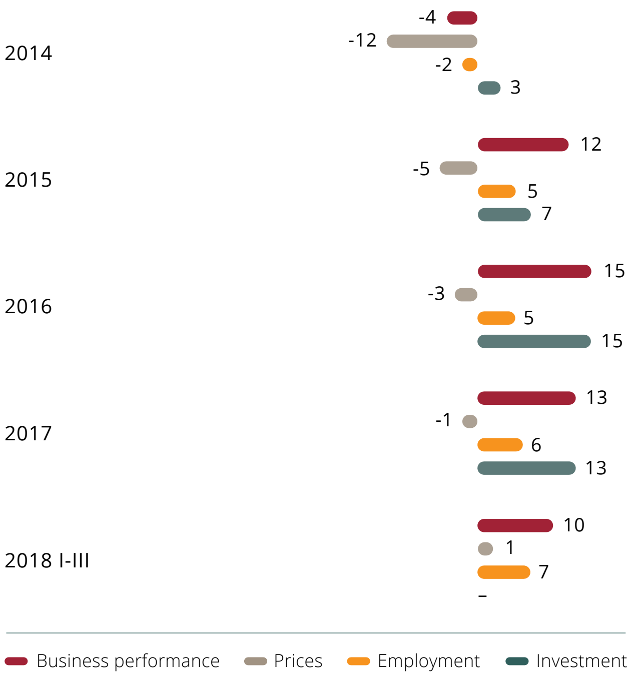
Sale prices of businesses in the AMB show a slight upward trend on average in the first three quarters of 2018, for the first time since the start of the crisis, but the quarterly tendency is downward. Specifically, the balance between positive responses (increase in prices) and negative ones (decrease in prices) was 1.1%, which means it was almost

Evolution of business performance by sector
(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

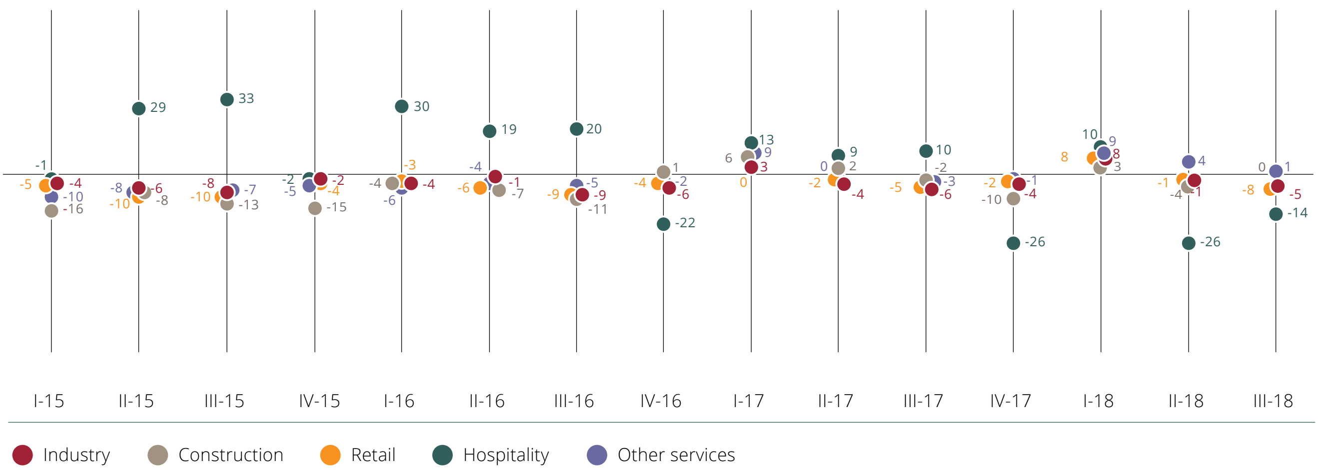
Evolution of the business climate across the whole economy in the AMB
(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

unchanged. By sub-sector, the prices of industry, construction and commerce all remained stable, there was a slight increase in the other services sector, and a significant decrease in the hotels and restaurants sector, although it should be noted that this is the sector with the greatest volatility in the evolution of prices.

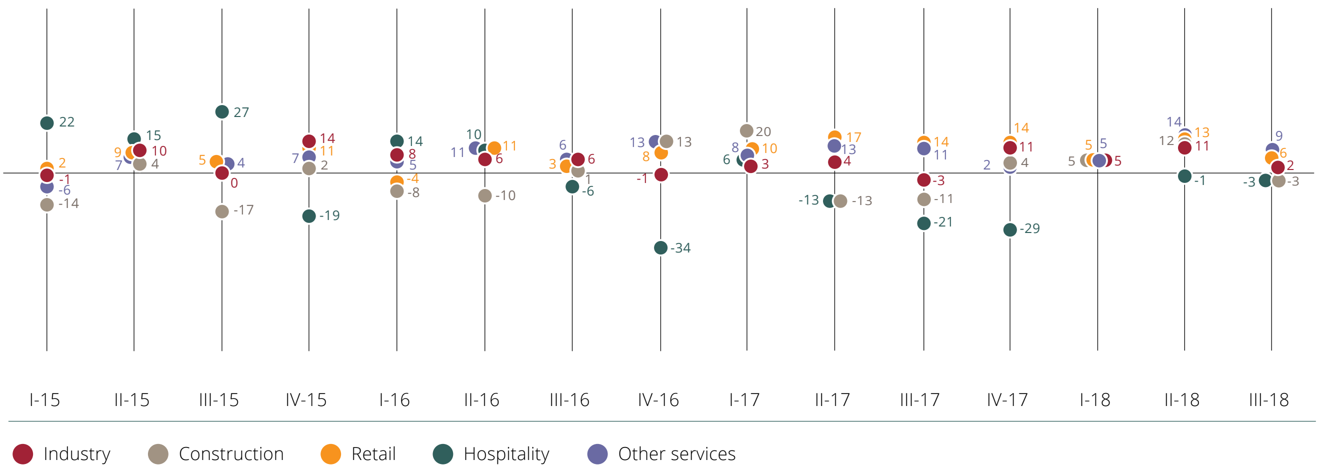
Evolution of sale prices by sector
(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

Evolution of the employment situation by sector

(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

Employment

Employment in the AMB behaved well over the first three quarters of 2018 in line with the average of the three previous years, but slightly less positively than in Catalonia as a whole. So the percentage of positive responses for employment (growth in the number of people employed) remained the same as in 2017 at 17% while there was a decrease in the percentage of negative responses (decrease in the number of people employed) from 11% to 10%. The quarterly results highlight the improvement in the evolution of employment over the course of the three quarters of the year for which information is available. This good result confirms the importance of creating jobs in the current expansive cycle and, as a consequence, the rapid reduction in the unemployment rate which has been taking place since the start of the economic recovery in 2014.

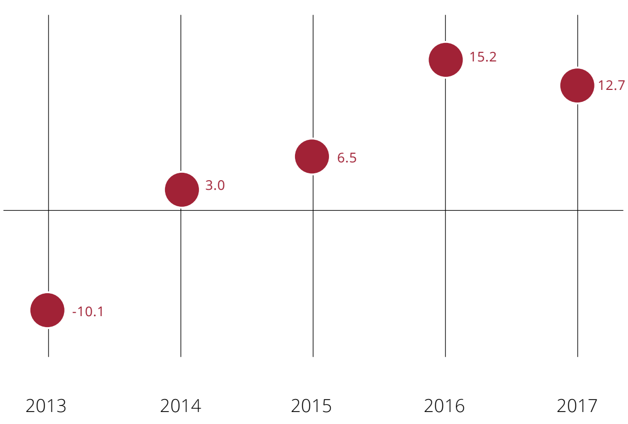
Employment has evolved positively across all the sectors analysed, for the first time, but to varying degrees. Thus, the sectors that have performed the best in the first three quarters of 2018 are other services and commerce, followed by industry and construction. The slowest positive growth is in the hotels and restaurants sector. In comparison with the situation in 2017, there has been a clear improvement in the hotels and restaurants sector and a worsening of the situation for commerce. In industry and construction there has also been an improvement in relation to the previous year, but not as marked as hotels and restaurants, while other services remain almost the same as in 2017.

It is not possible to carry out the analysis of **investment** for 2018 as this variable is only covered in the survey of the fourth quarter of the year. The latest figures corresponding to the fourth quarter of 2017 show that investment has evolved highly positively (balance of 12.7%) although not as positively as in 2016 (15.2%).

As we have already mentioned, the evolution of both business performance and employment were slightly more positive in Catalonia than in the AMB on average, during the

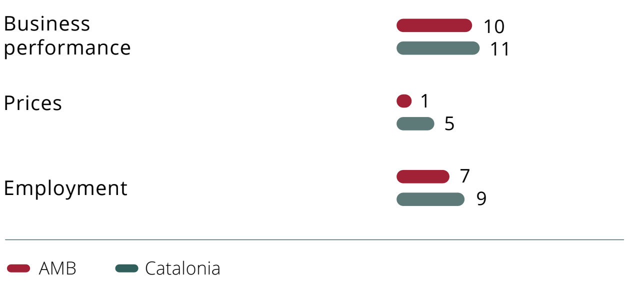
Evolution of the investment situation

(balances in %)



Source: Cambra de Comerç de Barcelona and Idescat

Business climate across the whole economy. I-III, 2018
(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

first three quarters of 2018. On the other hand, sale prices have started to increase in Catalonia while in the AMB they remain almost stable.

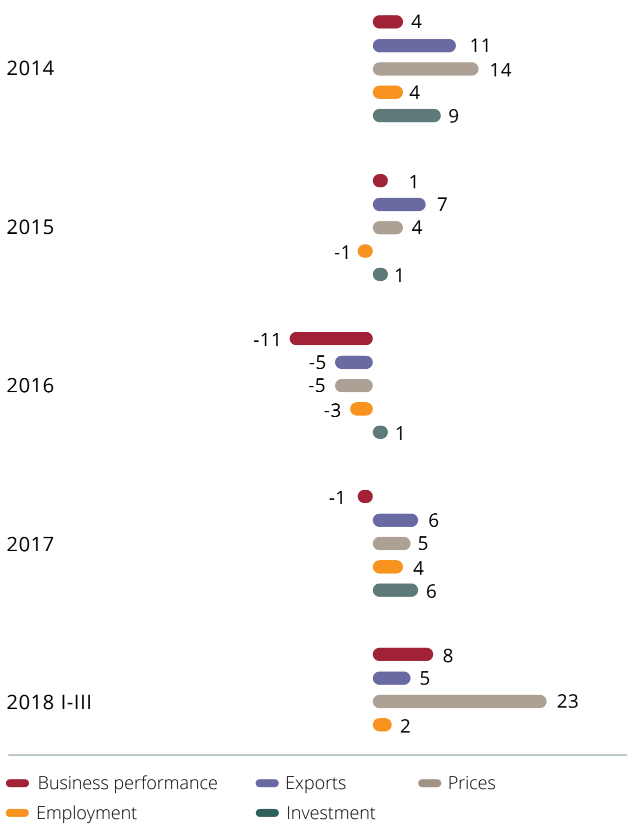
Results by sector

In the first three quarters of 2018, companies located in the AMB performed well across all the sectors analysed in the Business Climate Survey, but hotels and restaurants and other services stand out as the sectors with the most positive results. Despite that, in the case of hotels and restaurants there has been a very notable slowdown in relation to the previous year. The rest of the sectors (commerce, industry and construction) also evolved positively and quite uniformly. However, while construction improved on the previous year, commerce and construction had slightly less positive results than in 2017.

Industry

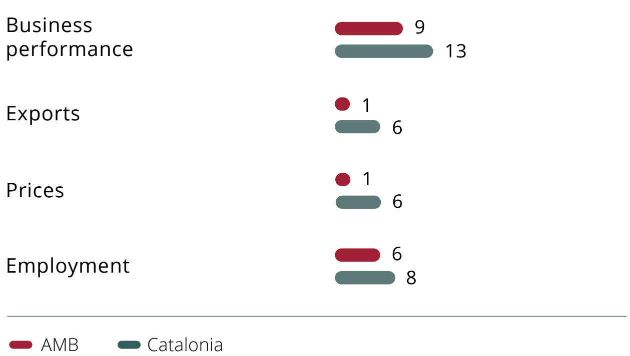
The industrial sector in the AMB show good results for 2018 with positive balances across all the variables analysed. **Business performance** is the variable with the most favourable evolution and improved in relation to the 2017 result. The figures for industrial production published by the INE also highlight the positive dynamic of industry this year: the industrial production index (IPI) for Catalan industry recorded accumulated growth of 2.4% up to September 2018, against an average of 3.7% for 2017.

Trends in the business climate in the industrial sector in the AMB
(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

Business climate in the industrial sector. I-III 2018 Comparison with Catalonia
(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

This improvement in business performance in industry has translated into a very positive performance for **employment**, in line with the average result achieved in the previous three years (2015-2017).

In contrast, industrial **exports** experienced minimum growth (1%) but despite this weak increase, it is an improvement on the previous year, when the balance of responses was negative (-1%). This means the return of positive turnover in overseas exports which according to business opinion was broken in 2017. The weak growth in exports is also demonstrated in the figures from the Spanish Tax Agency's Department of Customs and Special Taxes, which show nominal growth in the export of goods in the province of Barcelona of 4.5% between January and August 2018, in relation to the same period the previous year.

With regard to the **sale prices** of industrial products, these have risen slightly, in contrast to the situation in the last few years. So, up to the third quarter of 2018, the percentage of businesses that recorded price growth remained constant at 9% but there was a slight decrease in falling prices, from 11% to 8%, which means that the negative balance of 3 percentage points recorded in 2017 becomes a positive balance of 1 percent in 2018.

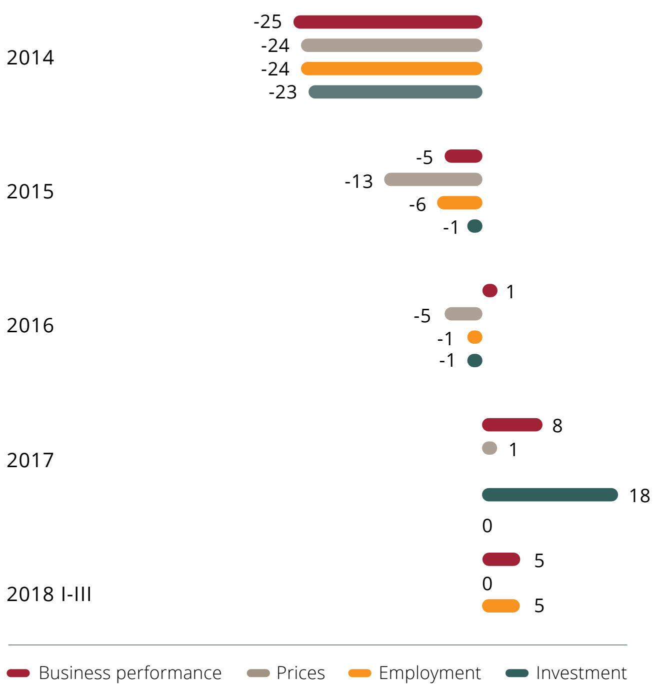
The *Business Climate Survey* results show slightly less positive balances in the industrial sector in the AMB than in Catalonia as a whole across all the variables analysed. Particularly noteworthy is the fact that the AMB recorded less dynamism in industrial exports, sales performance and sale price increases. This difference is also noted in employment albeit to a lesser degree.

Construction

The construction sector is still the sector making the slowest economic recovery, despite significant growth in the last two years. However, it seems that this trend has moderated in 2018 as some of the variables, such as business performance, have experienced something of a slowdown. Despite all of that, figures for employment and business performance remain positive and sale prices remain stable. These results are in line with other indicators which also show a weakening in the pace of growth following three very positive years, such as, for example, the number of houses under construction, which at the end of August 2018, only achieved accumulated growth of 1.9%, far below the 25% recorded for the whole of 2017. The same trend can be observed in the labour market, where, according to the EPA, the number of workers in the construction industry re-

Trends in the business climate in the construction sector in the AMB

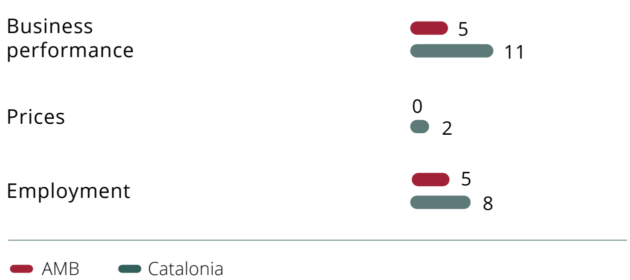
(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

Business climate in the construction sector. I-III 2018 Comparison with Catalonia

(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

corded year-on-year growth of just 0.2% in the third quarter of 2018, a figure that contrasts with the growth of 12.6% achieved in the same quarter in 2017.

With regard to **business performance**, the percentage of businesses that recorded a favourable evolution (19%) is higher than the percentage recording unfavourable evolution (14%) and the result of this is a positive balance for the third consecutive year, although of a smaller magnitude than in 2017. Nevertheless, the balance for the construction industry is still less positive than the balance for the group of sectors analysed as a whole. It should also be noted that the quarterly evolution was particularly favourable in the second quarter of 2018, while a negative figure was recorded in the first quarter.

Sale prices, which since 2013 have been experiencing an increasingly moderate decrease, have stabilised in 2018. So only 7% of businesses say they have increased their prices, while 8% say they have dropped them. Most businesses (85%) claim their prices have remained stable.

As regards **employment**, 2018 is the first year since the start of the crisis that a clear improvement has been observed, which is also in line with the average for the rest of the economic sectors. Thus, the percentage of businesses stating that employment will go down is 13% while 18% say it will increase. The upward quarterly trend observed in the first two quarters of 2018 came to a halt in the third quarter.

The results of the *Business Climate Survey* for the construction sector, as for industry, show less positive balances in the AMB that in Catalonia as a whole up to the third quarter of 2018 in the three variables analysed (business performance, employment and sale prices).

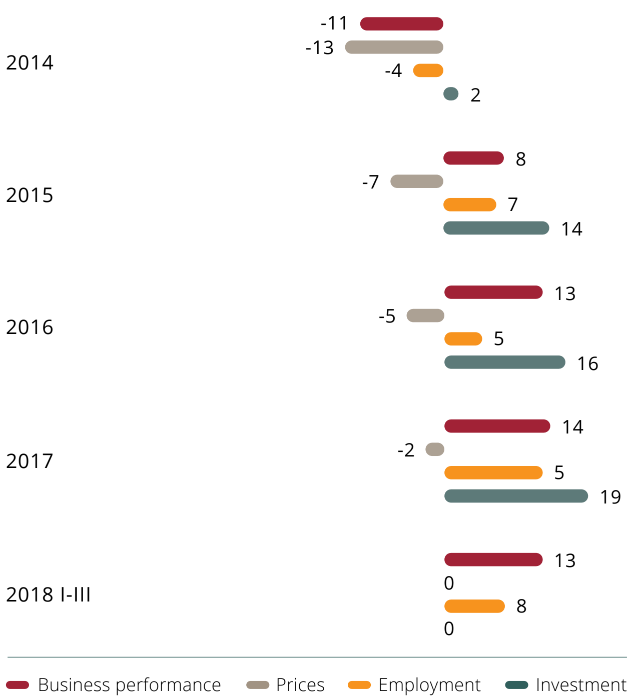
Commerce

The commercial sector recorded positive results for the fourth consecutive year but for the first time a slowdown in growth can be observed, both in business performance and employment. Sale prices, for their part, stabilised following a long period of ever smaller decreases.

The commercial sector in the AMB recorded a positive balance of 9% on average in **business performance**, in the first three quarters of 2018, following two consecutive years with balances of around 13%. Despite the slowdown, this is a positive figure since 26% of businesses recorded a improvement in business performance with 16% recording a

Trends in the business climate in the retail and commerce sector in the AMB

(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

Business climate in the retail and commerce sector. I-III 2018. Comparison with Catalonia

(balances in %)

Source: Chamber of Commerce of Barcelona and Idescat

worsening performance. The positive trend has continued throughout the year but the best results were achieved in the second quarter.

Average annual **sale prices** were more or less stable despite the fact that, when analysed by quarter, an increase can be observed in the first quarter and a decrease in the second and third quarters. Over the year as a whole, sale price evolution has been similar to that in 2017 when the balance of responses was -2%, the smallest drop since the start of the crisis.

With regard to **employment**, the balance is positive for the second consecutive year, but loses the intensity experienced in 2017. This behaviour is due to the fact that the percentage of responses that indicated an increase in employment was down (from 22% in 2017 to 18% on average in the first three quarters of 2018), while the percentage of responses that indicated a decrease in employment remained almost the same as last year, at 10%.

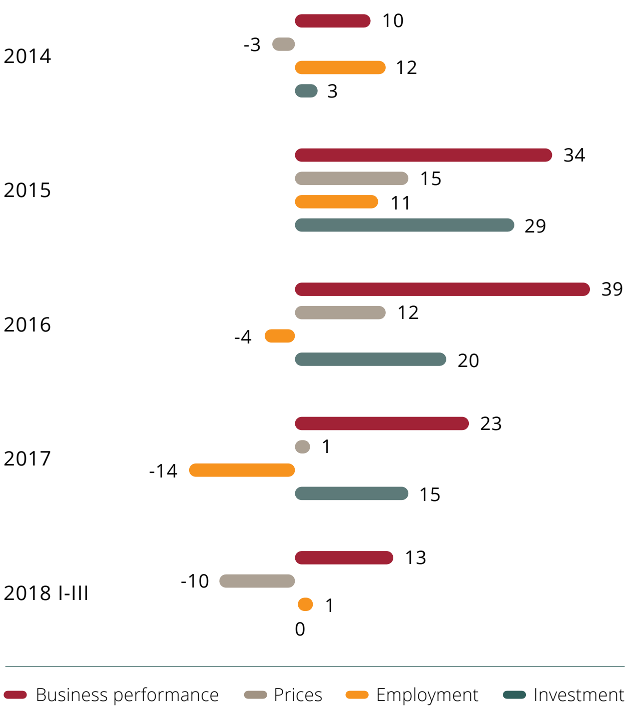
Unlike industry and construction, the balances for the variables analysed in the *Business Climate Survey* for commerce are more positive in the AMB than in Catalonia as a whole and, most notable is the improvement in the evolution of business performance. With regard to sale prices, while they have remained almost stable in the AMB, in Catalonia as a whole they have risen quite substantially.

Hotels and restaurants

Hotels and restaurants is the sector that has recorded the best results in terms of business performance in the *Business Climate Survey* for most of 2018, but at the same time, it is also the sector where growth has slowed the most in relation to the previous year. The indicators for the tourism sector in Barcelona confirm this result, as the number of overnight stays in hotels recorded an accumulated year-on-year decrease of 0.5% up to September 2018, almost identical to the average drop recorded for 2017 (-0.4%).

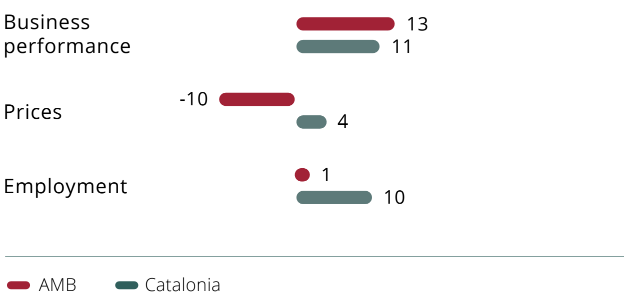
The **business performance** in hotels and restaurants has continued to present a positive balance with the percentage of businesses rating their business performance as favourable standing at 21%, much higher than the 9% who rate it as unfavourable, and as a result the balance is 13%, which, despite being high, is the lowest balance in the last four years. The year in which the sector achieved its best result was 2016, with a balance of 39%, and since then, there has been a downturn in the evolution of business perfor-

Trends in the business climate in the hospitality sector in the AMB
(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

Business climate in the hospitality sector. I-III 2018 Comparison with Catalonia
(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

mance which can largely be explained by the downturn in the fourth quarter of 2017 and by the intense moderation of the positive balance in the third quarter of 2018.

The **sale prices** in hotels and restaurants experienced negative growth, unlike in all the other economic sectors analysed. The fall in prices becomes more evident as the year progresses, as it is in the second and third quarters of 2018 when prices began to fall. This could be related to the increase in competition due to the recovery of Mediterranean countries that suffered a marked fall as a result of political conflicts years before.

The number of **people employed** in hotels and restaurants increased slightly, on average, in the first three quarters of 2018, following the negative balances recorded in 2016 and 2017. Despite everything, it is the sector that recorded the weakest result in terms of employment.

According to the *Business Climate Survey* for the first three quarters of 2018, the business performance for hotels and restaurants in the AMB was slightly more positive than in Catalonia as a whole, but this result has not translated into a more favourable evolution in terms of employment in the AMB, as in Catalonia the balance is 10% compared to 1.1% in the AMB. With regard to prices, these are falling sharply in the hotels and restaurants sector in the AMB, in contrast to the increase observed in Catalonia as a whole.

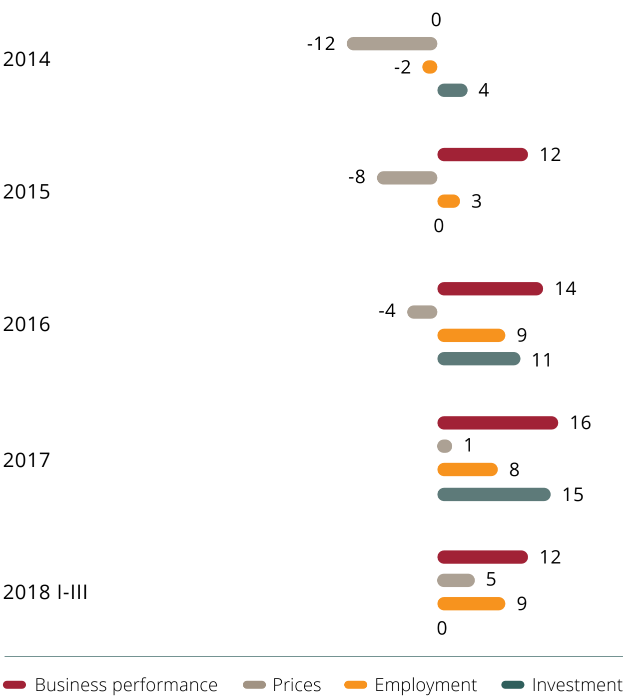
Other services

The other services sector (ICTs, legal activities and accounting, R&D, advertising and scientific activities, and administrative activities) obtained the second most positive results with regard to business performance after hotels and restaurants, the best result in terms of employment and also the sharpest price increase of all the sectors analysed.

For the fourth consecutive year, **business performance** evolved very favourably and was the most positive of all the sectors, although the 2018 result was slightly down compared to the previous two years. Looking at the quarterly results, the sector evolved very favourably in the second quarter of 2018 and more moderately in the first and third quarters.

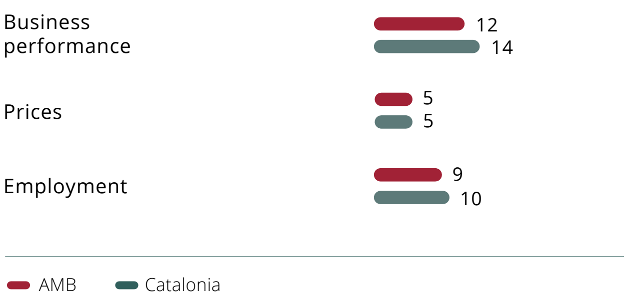
For the second consecutive year, **sale prices** on average have experienced an upward trend in 2018, although this has become more moderate as the year has progressed due to the slowdown in private consumption. In relation to

Trends in the business climate in the other services sector in the AMB
(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

Business climate in the other services sector. I-III 2018. Comparison with Catalonia
(balances in %)



Source: Chamber of Commerce of Barcelona and Idescat

2017, the percentage of businesses that stated that their sale prices has increased was up from 6% to 8% while the percentage who stated that their prices had fallen was down from 5% to 4% and, as a result, the positive balance increased from 1.1% in 2017 to 5% in 2018 (up to the third quarter).

Employment in the other services sector recorded a significant rise from the start of 2018, similar to the rise in the previous two years (2016 and 2017). So the percentage of businesses that indicated an increase stood at 18%, higher than the 9% that recorded a fall. Consequently, the result is a positive balance of 9%, the highest of all the sectors covered in the survey. It should be noted that, in quarterly terms, there was a positive evolution in the first three quarters of 2018, which was particularly noticeable in the second quarter of the year.

The results for other services are very similar for both Catalonia and the AMB, although, both in business performance and employment, the balances obtained are slightly higher in Catalonia. In contrast, sale prices present a mixed result in both territories.

Factors that limited good business performance in 2017

Widespread decrease in the factors that limit good business performance, except the lack of suitable employees, which remained stable

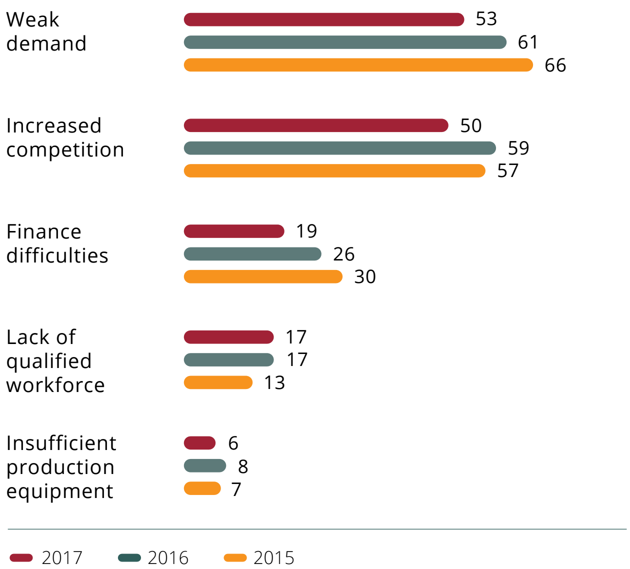
As in the case of investment, the analysis of factors that limit good business performance are variables that are only available for 2017 as the survey for these is only carried out once a year in the fourth quarter.

Weak demand continued to be the most important factor for limiting good business performance in 2017 (reason given by 53%) but for the fifth consecutive year, it lost weight in comparison with the other factors as a result of the recovery in private consumption. For its part, the increase in competition, the second most important factor given as a hindrance to good business performance, mentioned by 50% of respondents, which has been gaining ground in recent years, has lost importance practically to the same degree as the weak demand factor.

In parallel, the continuous improvement in the conditions of the financial markets has meant that financial constraints have lost importance as a limiting factor following the increase recorded during the years of the crisis, although it is still the third most important factor. However, this is moving progressively closer to the fourth limiting factor, which is the lack of a suitable workforce. In fact, this fourth factor, related to workforce, is the only one that maintains its importance as a limiting factor, indicated by 17% of businesses, as all the other factors have diminished in relation to the previous year. The last factor is lack of production equipment, which was given as a reason by only 6% of businesses.

Factors that limit business performance across the whole economy. Comparison 2014-2017

(in %)



Source: Chamber of Commerce of Barcelona and Idescat

Business situation and prospects for the fourth quarter of 2018

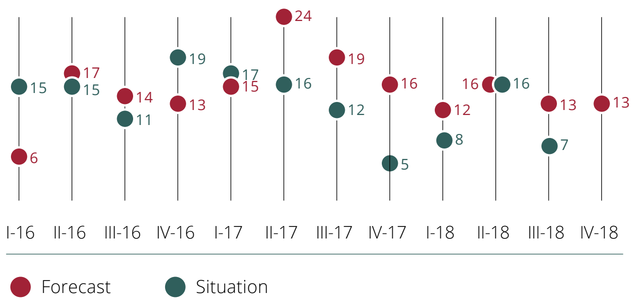
Stable prospects for the fourth quarter of 2018; which means the positive evolution of the last three quarters is set to continue

According to the *Business Climate Survey*, the situation in relation to business performance in the AMB has continued to be positive in the three quarters of the year analysed, but there has been a general slowdown in the pace of growth compared to the previous year, although the figures are still good. Forecasts suggest that in the fourth quarter this positive evolution is set to continue. Thus, 23% of businesses think their situation will improve and 10% think it will get worse, giving a balance of 13%, identical to the forecast obtained for the three previous quarters.

By activity sector, business performance forecasts for the fourth quarter of 2018 are positive in all sectors, but particularly so in commerce (17%), in other services (15%) and in industry (11%). The two sectors with the most moderate forecasts are hotels and restaurants (5%) and construction (7%), precisely the two sectors that have seen a sharp rise in gross added value (GAV) in recent years. If these results are compared with those obtained in the third quarter, we see that prospects have only taken a downward turn in industry due to the slowdown in exports, and in hotels and restaurants, due to the recovery in competitor markets, among other seasonal factors linked to tourism.

Business performance across the whole economy

(balances[5], in %)

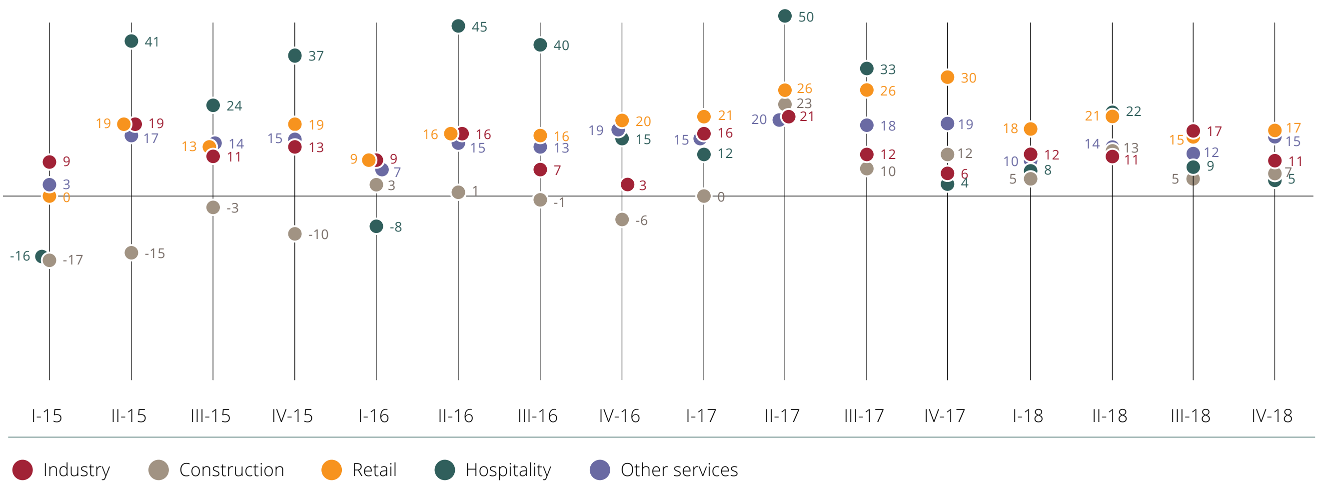


Source: Chamber of Commerce of Barcelona and Idescat

This evolution in prospects is associated with the fact that, during the fourth quarter of 2018, the Catalan economy has shown clear signs of slowing down, fundamentally because of weakening external demand due to the forecasts of a global slowdown in growth and the impact of trade protectionism, to which we can add a weakening in domestic demand due to the reduced positive impact of tailwinds (removal of stimuli from monetary policy, increase in the price of oil and appreciation of the euro).

Business performance outlook by sector

(balances[5], in %)



Source: Chamber of Commerce of Barcelona and Idescat

5. The balance is the difference between the percentage of business establishments that state that business performance has been positive and the percentage of establishments that state that it has been negative. In the case of prospects, this is the difference between the percentage of business establishments that expect business performance to be favourable and the percentage of establishments that expect it to be unfavourable.

Appendix on methodology

Sectors featured in the *Business Climate Survey*

Industry

01 Food, beverages and tobacco (CCAE-2009: 10 to 12)

02 Textiles, clothes manufacturing, leather and footwear (CCAE-2009: 13 to 15)

03 Wood and cork industries, paper and graphic arts (CCAE-2009: 16 to 18)

04 Chemical industries, rubber and other non-metal mineral products (CCAE-2009: 20 to 23)

05 Metalworking and manufacture of metal products (CCAE-2009: 24 and 25)

06 Production of machinery and mechanical and electrical equipment, and IT, electronic and optical products (CCAE-2009: 26 to 28)

07 Other industries (CCAE-2009: 05 to 09, 19, 29 to 33, 35 to 39)

Construction

The whole of Section F of the CCAE-2009 is taken into account:

41 Real-estate construction

42 Civil engineering construction

43 Specialist construction activities

Commerce

01 Retail trade in food, beverages and tobacco products in specialist establishments (CCAE-2009: 472)

02 Retail trade in domestic, cultural and recreational products in specialist establishments (CCAE: 475 and 476)

03 Other types of retail trade (CCAE-2009: 473, 474, 477, 478, 479)

04 Retail trade in non-specialist establishments (CCAE-2009: 471)

05 Sale and repair of motor vehicles and motorcycles (CCAE-2009: 45)

06 Wholesale and intermediaries (CCAE-2009: 46)

Hotels and restaurants

CCAE-2009: 55 and 56

55 Accommodation services

56 Food and drink services

Other services

01 Information and communications (CCAE-2009: 58 to 63)

02 Legal and accountancy activities (CCAE-2009: 69)

03 R&D, advertising and market studies and scientific and technical activities (CCAE-2009: 71 to 75)

04 Administrative activities and auxiliary services (CCAE-2009: 77 to 82)

05 Other services (CCAE-2009: 49 to 53, 64 to 66, 68, 92, 93 and 96)

Sampling errors. Metropolitan Area of Barcelona 2018*

Sectors	Sample	Error[6]
Industry	130	9%
Construction	75	11%
Commerce	193	7%
Hotels and restaurants	70	12%
Other services	495	4%
Total	**963**	**3%**

* Average for quarters I-III.

Source: Barcelona Chamber of Commerce and Idescat

6. Maximum possible error calculated on the basis of a single random sample.

Ajuntament de Barcelona

Cambra de Comerç de Barcelona