

France's Economy and its Real Estate

June 2018

The project

Following is a brief paper on a large topic: a preliminary effort to understand France's economy and its connection to its real estate markets. This is a review of some research and thoughts for future investigation.

The following are considered:

- France's economy
- the economic sectors that drive French growth
- France's urban economies
- current real estate investment activity
- housing prices
- comparing regional economies to the real estate data

An introduction

France's is an advanced post-industrial economy with a heavy emphasis on services and on a unique blend of cultural and high-tech-industrial production.

During its long history, it has developed a strong central government, with significant state participation in the economy, a large concentration of population and economic activity in around Paris (Ile de France), a strong social safety net, and relatively high taxes. The current government has initiated efforts to loosen employment restrictions and to lower taxes, both in an effort to stimulate the economy and increase France's competitiveness.

While Paris is by far the largest of the nation's cities, the French have retained and invested in their provincial cities, and some of these have competitive, growing economies. Due to their importance and my interests, this research focuses on Lyon, Marseille-Aix-en-Provence, Toulouse, Bordeaux and possibly Nantes and Montpellier.

A review of a number of article and data sources, much of it summarized below, indicates that each of these cities (or more precisely their urban areas) has a different history, a different mix of economic activity, different rates of population and employment growth, different income levels, and differing real estate prices and rates of return.

It is clear that investors and home buyers are responsive to the relative importance of these cities—the prime example Paris having the highest prices and lowest returns. However, due to their complexity, it is not clear that the differences in prices and returns actually reflect the differing economies or economic prospects of these cities.

The following explores the basis for this hypothesis and probable areas for further investigation.

Preliminary observations--relating real estate to local economies

The information cited here is incomplete, and some of the data needs to be updated. (See full discussion and footnotes following this section.) More focused information is needed in order for its geographical and real estate market impact to be fully explored, but interesting comparisons can be made.

Paris is by far the largest of France's cities, but its population growth (annual average 0.5% from 2010 to 2015) has been substantially lower than in Toulouse (1.6%) or Bordeaux (1.5%). Its annual rate of employment growth, 0.8% from 1999 to 2013, was also lower than in Toulouse (2.4%) and Bordeaux (1.8%).

The average per capita income of the Paris metro area, 24,000 euros in 2014, was the highest, although not by a large margin relative to Lyon (23,920) or Toulouse (22,450). The average growth rate in this income (from 2009-2014) was 1.65% in Paris, but it was much higher in Nantes and Toulouse (both over 2%) and was higher even in Marseille (1.82%), a city which many view as unsafe and problematic.

Real estate prices in Paris are much higher than in the provincial cities, and investment yields are lower. While these differences may reflect the importance of Paris as a capital and international city, the differences are greater than these economic indicators would suggest.

The population of the Paris region (Ile de France), is 18.8% of the total for metropolitan France, yet it received 77% of real estate investment capital in 2016 and 2017.

For the first quarter of 2018, office rents in Paris were 1.75x higher than in Lyon, the next most expensive city. Yet the growth rate of office rents in Lyon, over the past five years, has been substantially higher, as were the employment growth rates for the indicated provincial cities, from 1999 to 2013.

Prime retail rents are hugely higher in Paris than in the provincial cities, which may make sense in tourist-frequented areas, but a similar or even lesser premium in domestic neighborhoods may not reflect differences in purchasing power as reflected in annual per capita incomes.

While Paris median house prices are not terribly high—but there are so few of them—older apartment prices were 1.48x higher than in Lyon and 1.30x higher than in Bordeaux, the next two most expensive cities (based on 4th quarter 2017 data). Again, while there are more international buyers in Paris, this does not reflect much lesser differences in per capita income.

Comparing provincial cities to each other, those that most favorably combine the fastest growing populations and employment with the highest and fastest growing incomes are Toulouse, Bordeaux, Nantes and Lyon, with the first three growing faster than Lyon, but with lower average income. Are these differences reflected in provincial real estate markets?

Lyon's office rents are substantially more expensive than in Toulouse or Bordeaux, its office building cap rates are lower, and its retail rents again, substantially higher. Yet population and employment in Toulouse and Bordeaux grew more rapidly.

Average apartment prices in Bordeaux are somewhat higher than in Lyon and have grown more rapidly, but its per capita income has been lower.

Toulouse, appears to dependent on one very important industry, aerospace, and attracts a higher level of research relative to GDP. Are these advantages, given their proven value-added potential, or is the lack of diversification a disadvantage? Is real estate investment risk higher, and has this been reflected in capitalization rates? Why are Toulouse office rents so much lower than in Lyon, and how might they evolve over the longer term?

What is the impact of wine production in Bordeaux? Is the focus on quality in wine production increasing regional income? Has reduced production lessened employment? How much has wine culture and infrastructure improvements to central Bordeaux added to the city's appeal as a lifestyle location for households and businesses? Is Bordeaux, with aerospace and wine, better diversified than Toulouse?

The following pages have further detail, with further questions and additional research needed.

France's economy (March 2018)

France has followed the general trend of advanced industrial societies, although in its own way. Agriculture is now a tiny portion of gross national product (GDP), although it is culturally important. Manufacturing, built up extensively in the 19th century, particularly in the north, has declined as a source of wealth and employment. It has now primarily a service economy, consisting of both quotidian services and expertise that extends beyond its domestic market. France has also developed important value-added industries in specialized manufacturing, research and development, aeronautics and engineering. Many of these have strong, though not unassailable, competitive advantages.

France's business climate is improving, reflecting better economic growth in Europe, and economic reforms in France. French GDP in 2017 was much stronger than expected, estimated at 1.6%, which is higher than 2016's 1.1%. And the strength is expected to continue in 2018.¹

¹ "French economic fanfare belies challengers ahead", Pierre Briancon, *Politico*, February 4, 2018
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This is partly due to the European Central Bank, which has held down interest rates down, even as the US Federal Reserve continues a round of increases², but it also follows the changed economic policies of Emmanuel Macron, who was elected on promises to reform and revitalize France's somewhat centralized and social-democratic economy. These include:

- new labor rules in the private sector since September 2017, allowing firing of employees without financial penalty
- abolition of the wealth tax, excepting on property assets, which include real estate.
- Brexit, which is drawing companies to Paris, Frankfurt, etc. to run their European operations
- corporate tax reduction, previously among the highest in Europe, which will now gradually decrease from 33.3% to 25% by 2022

Paralleling these changes, employment grew by 268,000 jobs in 2017, compared to 236,000 jobs in 2016 and 103,100 in 2015 (per l'Institut National de la Statistique et des Etudes Economiques (INSEE); unemployment dropped to 8.6% in the 4th quarter of 2017 from over 10% a year earlier according to the Huffington Post.

There are however substantial challenges:

Mr. Macron's decision to change employment policy at the national railway company, SNCF, is opposed by the powerful public sector unions, and there are now air and railway strikes that may run through June.³ Macron however has a huge advantage in his control of the French legislature.⁴

France's improving growth rate is relative and predates Macron. GDP rose last year everywhere in Europe and France's growth was below the Eurozone average of 2.5%; it was also below national growth rates in 2010 and 2011, which were closer to 2% (per Eurostat, European Commission). Much or most of the recovery may be due to reforms initiated by the government of former President Francois Hollande in 2014, including significant cuts in labor costs. Rising labor costs have reduced France's industrial base, prompting businesses to cut investment spending and making them less competitive in international markets, according to an economist at COE-Rexecode, a business-financed think tank. French products are seen as too expensive, and the stronger euro has made European goods more expensive abroad.⁵

² "European Central Bank keeps policy on hold as economy grows", David McHugh, The Associated Press, January 25, 2018

³ "French Labor Strikes Pose a Test to Macron's Overhauls", *The Wall Street Journal*, William Horobin, March 22, 2018.

⁴ "Emmanuel Macron Becomes France's Answer to Strongman Populism", *The New York Times*, Adam Nossiter, March 22, 2018.

⁵ "French economic fanfare . . .", *Ibid.*

France remains heavily indebted, although Macron delivered on a commitment to abide by the EU's stability and growth pact which limits public budget deficits to 3% of GDP. The 2017 fiscal deficit was just announced at 2.6% of GDP.⁶ Macron has appointed a commission to recommend budget cuts, and a report is expected within the next few months. Proposed cuts are expected to central and local government spending, healthcare and unemployment benefits. This will be tough, however, in a country where public spending accounts for 56% of GDP.⁷

The economic sectors that drive French growth

Most industrialized nations have a very high percentage of local service jobs, but these are not the drivers of economic growth. Due to changes in technology, it is the innovation sector that now improves productivity and salary growth. Innovation has a multiplier effect, increasing employment and salaries, in both the innovation and service sectors. For each new high tech job, roughly five additional jobs are created, both in skilled and unskilled occupations.⁸

Specializing in high-value added jobs, France's major cities have benefited from these changes, whereas businesses, in rural areas and in cities that have specialized in routine work, have turned to computers and automation, resulting in declining employment. These changes are magnified by offshoring. The sectors most affected include textiles, clothing, furniture, tools and electronics. The least affected are luxury goods, chemicals and pharmaceuticals.⁹ But it would be a mistake to assume that the drivers of the French economy are limited to high tech industry and information services. There are other value-added economic sectors that have created and sustain France's wealth.

French production and export data

This French production and export data for 2016 was prepared by INSEE (Institut National de la Statistique et de Etudes Economiques).¹⁰ The entire table is posted in the INSEE website.

France's production by sector, 2016, in billions of euros

Agriculture, forestry and fishing	83.3
Manufacturing, mining, etc.	888.2
of which:	
<i>Mining, energy, water, waste disposal, environmental clean-up</i>	<i>145.4</i>
<i>Machines, electronic and electrical equipment</i>	<i>81.5</i>
<i>Food, drink and tobacco products</i>	<i>157.4</i>

⁶ "French deficit below 3% of GDP for first time in decade", Michel Rose, March 26, 2018, Reuters

⁷ "French economic fanfare . . .", Ibid.

⁸ *The New Economy of Jobs*, Enrico Moretti, Mariner Books, copyright 2012.

⁹ « Commentaire : L'impact de la mondialisation et de la technologie sur les marchés du travail locaux », January 14, 2018, Farid Toubal, INSEE Economie et Statistique.

¹⁰ *Importations- Exportations*, Insee References, edition 2018, Echanges extérieurs, 14.1

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<i>Production of transport materials</i>	132.8	
<i>Other industrial products</i>	338.6	
Construction		272.2
Services-Commercial		2,039.7
of which:		
<i>Shops, transports, hotels and restaurants</i>	701.4	
<i>Information and communication</i>	193.7	
<i>Finance and insurance</i>	215.5	
<i>Real estate</i>	310.5	
<i>Scientific and technical activities</i>	517.9	
<i>Other services</i>	100.6	
<i>Non-commercial services (public administration education, health care, and social services)</i>		590.7
Total all sectors		3,874.1

France exports by sector in 2016, in billions of euros

Total exports of goods and services		652.2
of which:		
<i>Agriculture, forestry and fishing</i>	14.8	
<i>Food, drinks, tobacco products</i>	45.2	
<i>Electrical, electronic equip., computers, machines</i>	86.4	
<i>Transportation materials</i>	117.0	
<i>Other industrial products</i>	185.7	
<i>Transport and entrepots</i>	31.7	
<i>Information and communication</i>	15.7	
<i>Finance and insurance</i>	13.5	
<i>Scientific and technical activities</i>	73.5	

It may be surprising to outsiders, but the French economy is not primarily about fashion, wine, or cheese. Transportation and other industrial products dominate French exports and are extremely important components of GDP.

Following is a brief discussion of a few economic activities.

Research and Development, a leading indicator?

Research and development expenditure in France reached 49.839 billion euros in 2015, an increase of .8% relative to 2014. These represented 2.3% of GDP, a lower level than in some other countries; however, due to the size of its economy, France's expenditure was second in Europe.¹¹

¹¹ « Recherche & Developpement », INSEE, TEF, edition 2018

These research expenditures, both public and private, are spread out among a number of industries, with the largest commitments in the automobile (4,368 million euros), pharmaceutical (3,023), aeronautic/space (3,571), computer/information services (2,161), and specialized scientific and technical (2,148) sectors. There has been steady growth in the number of full-time equivalent researchers in France, from 1985 to 2015. The actual numbers are not consistent in the source cited, but appear to have doubled over this time period.¹²

Research in France has had varying regional impacts. As of 2012, research and development accounted for 2.2% of GDP in France, but in the Midi-Pyrenees region (Toulouse), it represented 4.8% of regional GDP, in Ile de France (Paris) 3.0%, in Franche Comte (Besancon, 2.9%), in Rhone Alpes (Lyon, 2.7%).¹³

The Midi-Pyrenees devotes 70% of its 2,869 million euro research and development expenditure to the aeronautic and space sectors. The Isle de France has by far the largest research expenditures, with 43% of its 12,699 million euro expenditure devoted to the automobile sector, and Rhone Alpes also has a high spending level, at 3,699 million euros, of which 39% is in components, electronic chips, computers and peripheral equipment.¹⁴

Within regions, research activity is typically concentrated in urban areas. This is particularly the case in the Midi-Pyrenees, where 85% of conception research employment is in Toulouse, although Toulouse accounts for only 50% of total regional employment.¹⁵

Manufacturing in decline, but not all of it.

From 2006 to 2015 in France, the number of salaried employees in manufacturing declined by 530,000 or 16%, as did the number of employees in construction (100,000—a decline of 7%). The decline affected the textile and clothing industries, automobile production, metallurgy, and furniture. The food and beverage industries better resisted this decline, with a loss of only .4% of its workforce. By way of contrast, the number of jobs in specialized scientific and technical activities increased by 386,000 as did hotel (+13,300) and restaurant (+124,000) employment.¹⁶

Manufacturing is in retreat throughout France, but the most affected regions are in and around Paris, the north, the east and the center of the country.¹⁷

¹² Ibid.

¹³ « L'effort de recherche dans les regions », Insee Premiere, No. 1559, Juin 2015

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ “L’industrie manufacturiere de 2006 to 2015: l’agroalimentaire et la construction aeronautique et spatiale resistant au repli du secteur”, INSEE Premiere, No. 1689, February 2018.

¹⁷ Ibid.

However, the aeronautics and space industries has grown (according to INSEE).¹⁸ From 2006 to 2015, aeronautic and space construction grew by 21,700 employees or 24%. At the end of 2015, there were 114,000 salaried workers in these sectors. With much smaller numbers, there has also been impressive percentage growth in the fabrication of metal structures, the installation of machinery and mechanical equipment, the fabrication of pharmaceuticals, leather crafts and saddlery.

The aeronautics and space industry and its regional impact

According to US government data¹⁹, France's total non-consolidated aerospace and defense aerospace revenue in 2016 was 60.4 billion euros, an increase of 4.1% over 2015, of which the French civil aerospace industry reported 47.1 billion euros. Approximately 86% of consolidated revenue was exported.

Production of the Airbus A320 will increase to 60 aircraft per month in 2019, from its current production level of 46 per month. The Airbus A350 will be produced at a rate of 120 per year in 2018. By March 2017, there will be a backlog of 6,744 Airbus aircraft, equivalent to about 10 years' production. The increased production will also be more fuel efficient, so that this is a strong and innovative industry for years to come. This success is in contrast to declining demand in the business and heavy helicopter sectors.²⁰

This production is driving both employment and investment in new technologies, including robotization, new methods of collaborative work, and digital sharing platforms. Five aircraft manufacturers account for most of the French market: Airbus (large commercial aircraft), Airbus Helicopters, Dassault Falcon Jet (high end business jet), ATR (passenger and cargo turboprop aircraft for regional transport), and Daher (SOCATA light aircraft and business turboprops). Except for Daher, these are all owned entirely or in part by Airbus.²¹

The French government encourages prime contractors to support local jobs and technical know-how. This is nevertheless a globalized industry.²²

These industries are of great importance in two adjacent, southwest regions, that is the Nouvelle-Aquitaine (capital Bordeaux) and l'Occitanie (capital Toulouse). Together they employed 146,000 at the end of 2016, comprising 6% of non-agricultural commercial employment and 20% of industrial employment. Two thirds of the jobs in these industries are industrial. Other jobs are in company headquarters, project management, computer services, engineering, and

¹⁸ “L’industrie manufacturiere de 2006 to 2015: l’agroalimentaire et la construction aeronautique et spatiale resistant au repli du secteur”, INSEE Premiere, No. 1689, February 2018.

¹⁹ « France—Civil Aircrafts and Parts », France Country Commercial Guide, export.gov, US Embassy, US Commercial Service Specialist, Cara.Boulesteix@trade.gov, published August 3, 2017

²⁰ Ibid.

²¹ Ibid.

²² Ibid.

other scientific or technical disciplines. Two thirds of this employment is in the Occitanie region; the remaining third is in Nouvelle Aquitaine.²³

Employment in this sector is heavily concentrated in large companies. Other than the large aircraft manufacturers (Airbus, Dassault, ATR, Daher-Socata), there are project management and engine manufacturers (Thales, Alenia Space, Safran) and equipment suppliers (Liebherr, Aerospace, Latecoere, Ratier-Figeac, Creuset Aeronautique, Goodrich).

Employment in this sector is also heavily concentrated in Toulouse (59%) and Bordeaux (13%). In 2016, aeronautic and space employment in Nouvelle Aquitaine grew by 2.5% (1,000 jobs) as opposed to a slower 1.6% growth rate in the entirety of the private sector, while in Occitanie, the same growth rates were both at 2.3%.

The success of the French aeronautical sector is impressive, but it is not guaranteed, according to Pierre-Andre Buiges of the Toulouse Business School (based on data through 2014).²⁴

France's share of world exports dropped from 6.1% in 1995 to 3.1% in 2013. In 2003, the French automotive sector had a trade surplus 12.6 billion euros; in 2014 it had turned into a deficit of 6.9 billion euros. According to economists, costs increased faster than productivity in France, and its products were not considered as giving sufficiently high value for the money, particularly when compared with German production.

French aeronautics and space productions, per Mr. Buiges, are the exceptions, both civilian and military, with over 23 billion euros in surplus over the few years prior to this article. France is the second largest exporter in aeronautics with 22% of the worldwide market, after the US (35%), but ahead of Germany (14%). The French share of this market has increased by 8% within ten years. Airbus alone accounts for 50% of French aeronautic exports. In France aeronautics employs 320,000 people directly. Its position is built on strong R&D and technological expertise, an efficient, well-structured national sector, and integration with a European consortium.

However, the French position is not unassailable. China accounts for an increasing proportion of air transport and would like to enter this market. To maintain its access, Airbus has increased its purchase of Chinese components and set up an assembly plant in China, but this does not help France's export position, particularly since France tends to specialize in the assembly of complete aircraft. At the same time, Germany has begun assembly of A320's in Hamburg.

France invests over 3 billion euros in aeronautical R&D annually, but R&D leadership is shifting to Germany. Furthermore, while the French educational system is very good at preparing

²³ "La filiere aeronautique et spatiale dans le Grand Sud-Ouest: Un emploi industriel sur cinq en 2016", INSEE Analyses, No. 59, March 2018

²⁴ "The aeronautical industry: France's main export asset.", tbssearch, Pierre Andre Buiges, not dated, but the data indicated is through 2014.

engineers and managers, it is poor at providing technicians, welders, and metal workers. Small and medium sized sub-contractors have difficulty recruiting. Finally, each new aircraft requires huge investment, but commercial success is not guaranteed.

Finally, although not cited here, a conversation with an investment banker who follows the aeronautics industry has indicated a trend to vertical consolidation, between the companies that assemble airplanes and those that manufacture its component parts. The impacts of this trend in France and on French employment merit further investigation.

Tourism

According to the World Travel and Tourism Council²⁵ tourism contributed about 80 billion euros a year to the French economy, from 2011 to 2017, accounting for between 3.6% and 3.8% of GDP. Including indirect economic activity, tourism is estimated to contribute about 9% of GDP. France is nevertheless, less dependent on tourism than Greece, Portugal, Spain, Turkey, or even Germany.

French is the most visited county in the world with 89 million visitors in 2017. Based on 2011 data from l'INSEE, half of tourist expenditures are in the Paris, Provence-Alpes-Cote d'Azur, and Rhone Alpes regions.

There was a decline in tourist receipts in 2015 and 2016 following the Paris terrorist attacks in November 2015, and the July 2016 attack in Nice, and the potential for new attacks is the major risk of this sector.²⁶ According to data cited in Statista, direct contributions of travel and tourism were 82.5 billion euros in 2014, then declined to 79.9 and 80.6 billion euros in 2015 and 2016, before recovering to 82.7 billion euros in 2017.²⁷

According to INSEE, tourist consumption in France was 158.9 billion euros in 2016. (Not sure how these numbers are being counted and why they are so different.) Two thirds of this expenditure was domestic and one third was by foreign visitors. Tourism was less vibrant than the economy as a whole, due to the above-referenced slowing of foreign visits. However, the French actually increased their hotel expenditures by 3.3% in 2016, with a focus on three-star plus hotels. Renting between individuals (internet driven) increased by 4.6%, and camping revenues increased by 2.6%.

It was foreign lodging expenses which dropped by 4.4% in 2016. As measured by overnight stays, the largest percentage decreases were in tourism from Japan, Russia, Italy, Central and South America and China. But these countries contribute relatively few visitors. Smaller

²⁵ *Travel & Tourism Economic Impact 2017*, World Travel & Tourism Council,

²⁶ *Travel & Tourism Economic Impact 2017*

²⁷ "Direct contribution of travel and tourism to GDP in France from 2012 to 2028", Statista

percentage losses in visitors from Germany, Netherlands and the United Kingdom may have been more significant in absolute numbers.²⁸

Comparing international tourism in France to other countries: as measured by the average annual growth rate of total international tourist receipts from 1990 to 2016, Thailand (11.3%), Hong Kong (10.1%), Macao (13.7%) and India (11.1%) have grown the most rapidly. International tourism expenditure in the US is by far the largest (186.1 billion euros in 2016), and has added the most to absolute expenditure since 1990, followed by Spain, Thailand and China. France is in fifth position, with an annual average annual growth rate of .5% from 1990 to 2016, and total international tourist expenditures of 38.4 billion euros in 2016.²⁹

According to INSEE, but cited in another publication, the increase in tourism, reported in the third quarter of 2017, was primarily driven by the return of foreigners to the Paris region, an increase of 15%, although not yet at the level of 2015. There has also been stronger demand for high end hotels, with an increase of 10% for those with 4 and 5 stars.³⁰

The French hotel market continues to attract significant investment. Best Western is launching a new brand, which will focus on 2 to 3 star “quality budget” hotels. The goal is to open 100 hotels over the next six years. Regional destinations are increasingly popular. Transportation connections continue to improve—Air France and Vietnam Air have announced a joint venture, and Jet Airways is opening a new connection between Paris and Chennai, India.³¹

Wine

French wine and spirit exports reached a new record of 12.91 billion euros in 2017, an 8.5% increase over 2016. Export growth was driven primarily by sales in the United States and China, the first and third largest markets.³² (Culturally important, but a tiny portion of the economy.)

To the US, sales rose by 9.5% and exceeded 3 billion euros for the first time, boosted by cognac, which accounted for 40% of the value. To Britain, sales rose by 2.7% to 1.33 billion euros, although Champagne sales fell by 4-5%. But to China, sales grew by 24.5% to 1.2 billion euros.³³

In total, cognac exports rose by 10.8% to 2.07 billion euros. Wine sales grew by 9.6% to 8.67 billion euros, including a 7.4% increase in champagne sales to 2.82 billion euros.³⁴

²⁸ « Tourisme 20.6 », Insee References, edition 2018, commerce - services

²⁹ Ibid.

³⁰ “La fréquentation touristique de la France poursuit son embellie”, le Figaro. Fr, September 11, 2017.

³¹ *France Tourism Report*, BMI Research, a FitchGroup Company, published January 1, 2018.

³² “French wine and spirits exports hit new record in 2017”, Reuters, February 14, 2018

³³ Ibid.

³⁴ Ibid.

France does not have the most vineyards planted. As of 2015, there were more hectares of vineyard in Spain and even in China, which is investing heavily in viniculture and education while importing expertise from the United States and Europe. Europe, by contrast, has been purposefully shrinking its production, in an effort to push up quality and prices. France has reduced its wine growing areas by 10% over the past decade, but is still the most productive nation with 47 million hectoliters in 2014.³⁵

There are over 38,000 wine producers in France, with about 8,650 in the Bordeaux area, including Petrus, Yquem, Cheval Blanc, Margot, etc and 300 wine trading firms.³⁶

In France, the wine industry is highly regulated, and the attributes of the better wines are regulated under the existing AOC (appellation d'origine controlee) scheme. This is now viewed as a constraint in the global market as it impedes innovation. Furthermore, the production of emerging wine producing countries has been growing rapidly, so that the share of world wine exports from France, as measure by value, has been declining. France, nevertheless, has been exporting a larger share of its production and wines of higher quality.

France's urban economies

Population growth

Since 1990, the population of French cities has increased by 12%, with Paris containing over 20% of the total urban population. The increase is due to both enlarged city limits and increased density. There are 14 cities with populations exceeding 400,000. The cities with growing populations tend to be in regions that are also growing, that is Ile de France, the Atlantic coast, the Rhone valley, and the south/Mediterranean coast. Cities in the remaining regions are losing ground, that is the north, the east and the center of France. The growing cities are benefiting from employment opportunities, and for the past 50 years, the greatest growth has been focused on the "couronne" or edges of growing urban areas. These "crowns" are growing more rapidly than the center cities.³⁷

Following are the populations and growth rates of the 7 largest urban areas, plus two others that are fast-growing.

<i>Urban Area</i>	<i>Population 2015</i>	<i>Annual % growth rate 2010-2015</i>
Paris	12,532,901	0.5
Lyon	2,291,763	1.1
Marseille-Aix-en-Provence	1,752,398	0.4
Toulouse	1,330,954	1.6
Bordeaux	1,215,769	1.5

³⁵ "How France shapes up in the global wine industry", The Local fr, April 27, 2015

³⁶ "The french wine industry", MBA Captital, Isabelle Arnaud-Despreaux, December 16, 2016

³⁷ "Tableau de l'Economie Francaise", Collections INSEE references, collection 2018

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Lille	1,184,708	0.5
Nice	1,005,891	0.1
Nantes	949,316	1.5
Rennes	719,840	1.5
Montpellier	599,365	1.8

Population, Jan. 2018

France metropolitaine	65,018,100	
Ile de France	12,246,200	18.8%

*Total employment in the largest urban areas³⁸
7 largest cities plus three others*

<i>Aire Urbaine</i>	<i>Emploi en 2013</i>	<i>Taux de Croissance Annuelle Moyenne 1999-2013</i>
<i>Paris</i>	<i>5,795,950</i>	<i>0.8</i>
<i>Lyon</i>	<i>994,261</i>	<i>1.4</i>
<i>Marseille-Aix</i>	<i>688,003</i>	<i>1.3</i>
<i>Toulouse</i>	<i>584,042</i>	<i>2.4</i>
<i>Lille</i>	<i>515,045</i>	<i>0.9</i>
<i>Bordeaux</i>	<i>513,601</i>	<i>1.8</i>
<i>Nantes</i>	<i>412,042</i>	<i>2.0</i>
<i>Rennes</i>	<i>313,949</i>	<i>1.8</i>
<i>Montpellier</i>	<i>243,495</i>	<i>2.4</i>

France's urban economies in a European context

A very interesting analysis of patterns of nominal disposable income across Europe was prepared by Moody's Analytics in 2015. Metro areas were divided into Tier categories by population, although there was little or no correlation between size and income.³⁹ The following data and tables are taken from that report.

³⁸ "Comment expliquer les disparites de croissance d'emploi dans les aires urbaines francaises », Maurice Catin et Christophe van Huffel, l'Universite de Toulon, juillet 2007

³⁹ "Patterns of Income Across Europe", Moody's Analytics, Anna Zabrodzka, June 2015

As measured by income per capita, Scandinavian and Swiss cities took the top seven spots in 2014. All of these are smaller cities. Zurich ranked first, with average income of 42,480 euros and a compound average income growth rate of 4.62% from 2009 to 2014.

Metropolitan areas in central and eastern Europe have had the strongest income growth from 2009 to 2014, while metro areas in the south, Spain, Italy and Greece, still have lower nominal incomes than they did five years ago. Some of the strong growth in eastern Europe is due to its low wages, which have attracted information and communications technology employment. Poland is the biggest draw. Hundreds of foreign corporations including IBM, Google, HP and Microsoft have opened offices in Warsaw (2009-2014 compound growth rate, 5.97%). Other capitals such as Budapest and Tallinn have also seen an influx. (This report dating from 2014, it is not clear whether right-tilting politics in Hungary and Poland have had any impact on this trend.)

Paris had a per capita income of 24,000 euros in 2014 and a compound average growth rate in income of 1.65% from 2009 to 2014. The following data is for some of France's largest provincial cities.

<i>Metro area</i>	<i>per capita (2014)</i>	<i>change in per capita income 2009-2014, compound annual growth rate</i>
<i>Tier I</i>		
Paris	24,000 euros	1.65%
<i>Tier II metros</i>		
Lille	18,280 euros	1.75%
Nantes	20,689 euros	2.11%
Toulouse	22,450 euros	2.05%
Marseille	20,810 euros	1.82%
Rouen-Le Havre	20,730 euros	1.82%
Lyon	23,920 euros	1.59%
Bordeaux	20,900 euros	1.58%
Grenoble	19,120 euros	1.53%
<i>Tier III</i>		
Montpellier	19,350	1.45%

Toulouse

High on the list in population growth is Toulouse, the center of France's competitive aeronautics and space industries. Also, as noted earlier, per capital income in Toulouse closely followed income Paris and Lyon in 2014, and compound growth rate of income, was second only to Nantes.

In as indicated above, the Midi-Pyrenees region, of which Toulouse is the capital, is way ahead of other French regions in the percentage of GDP spent on research and development, which is concentrated in Toulouse.

The history of how Toulouse achieved its technological position and consequent economic success is summarized in a 2010 book entitled *Making Competitive Cities*.⁴⁰ Since the early 1900's, the city has focused on education and research and an early specialization in electricity. State policy was critical to decentralizing space activities to Toulouse (1950-75) and to fostering cooperation between companies and academic institutions. In the late 1880's, following reform of the French higher education system which granted universities greater autonomy, Toulouse academics and researchers focused on electricity as a leading technology, and with significant financial support from the municipality, became an important academic center in this discipline. Between 1950 and 1970, state policies, pushed by the local prefecture, further developed existing research institutions in automatics and succeeded in transferring aeronautical and space activity to Toulouse. The Laboratory for Electrical Engineering was established by splitting an earlier laboratory in 1955. The Laboratory for Automatics and System analysis dates from 1967. A university center for numerical calculation dates from 1957. The National Centre for Space Studies was transferred from Paris to Toulouse in 1968. The National Office of Aeronautic Studies and Research and the National Institute for Applied Sciences date from the 1960's. These centers were facilitated by the decentralization of other institutions from Paris to Toulouse in the 1960's including the National School of Civil Aviation, the National Higher School of Aeronautics, and the National Higher School for Aeronautical Engineering.

From the mid 1970's, the state focused on promoting cooperation between these academic institutions and industry. Its goal was to enhance France's competitiveness in aeronautics, space and the computer industries. This resulted also in spin off industries in software engineering, information storage, artificial intelligence, communications and biotechnology, followed by firms specializing in integration, assemblage, and the testing of satellite decks. And most of Toulouse's highly qualified workforce was trained in its local academic system.

In the 1980's the regional government took part in financing theoretical and applied research through the Centre Regional d'Innovation et de Transfert de Technologie. Financing and support was provided by a number of overlapping agencies, although there have been more recent attempts at coordination. The state, in coordination with the Midi Pyrenees Region, implements industrial development policies and, technology transfer and financial support. But number of

⁴⁰ "Strategic Economic Policy: Milan, Dublin, and Toulouse, by Silvia Mugnano, Enda Murphy, and Helene Martin-Brelot, *Making Competitive Cities*, Edited by Sako Musterd and Alan Murie, Wiley Blackwell, 2010
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different public agencies and entities are involved. Private public partnerships often promote planning of business parks such as those specializing in aeronautics or incubators for innovative firms. Since 2005, this system for fostering technological innovation in Toulouse has been furthered by a policy of coordination with other *poles de competitivite* in Aquitaine and the Midi Pyrenees regions.

However, while it has been extremely successful, France's position in aeronautics and space is not unassailable, as has been indicated above.

Bordeaux

According to the earlier-cited statistics, average income per capita in 2014 was below that of Paris, Toulouse and Lyon, and slightly below that of Rennes, but roughly on par with Nantes, Marseille, Nice, etc. Income growth is at the lower end of the cities indicated. The average annual population change for 2009 to 2014, however, was 1.09%, exceeded only by those of Toulouse and Montpellier.

While the focus on innovative industries, almost perfectly describes Silicon Valley or Toulouse, it should be reinterpreted when applied to Bordeaux. As previously described, aerospace is important to the economy of the Nouvelle Aquitaine (capital Bordeaux), which has roughly one third of the southwest's 146,000 employees in this sector. Dassault produces airplanes in Bordeaux. Airbus, Ariane Espace, Boeing, Bombardier, Nasa, Cessna, and Eurocopter are present in the region. In addition Bordeaux has active sectors in telecommunications, health care and biotechnology. And as earlier indicated, it has significant clusters in optics, photonics and bioresource materials.

However, the city has also emphasized its cultural importance. It is commercial center for the region's wine production, and Bordeaux is still the most prestigious and arguably the finest wine producing region in the world. Wine is an innovation industry, although a very old one, and France has succeeded in maintaining its strong commercial position in wine by focusing on high-quality production, despite increasing and significant international competition. The good Bordeaux wines are a strong value-added sector, reflecting many centuries of cultural and scientific development, and its market has been internationalized for several centuries. The region also has complementary businesses in the production of foie gras, caviar, and related products. Wine has a strong cultural and historical presence in Bordeaux, creating a setting which is arguably viable to the growth of what Richard Florida would term, its "creative class".

Bordeaux was the premier Atlantic port of France in imperial (Napoleonic?) times, focusing on the slave trade with Africa and the Americas. This together with the wine trade, brought huge profits to its merchants and an architectural legacy that is exceeded only by that of Paris. It was named a World Heritage site in 2007. Its mayor, Alain Juppe, began a modernization program twenty years ago.⁴¹

⁴¹ « Bordeaux : the once fusty, grime covered town is now a beacon of French culture », Keith Bundy, July 26, 2016, Post Magazine, South China Morning Post

The limestone center city has been scrubbed clean and the walled-off port area has been opened up with a broad esplanade. The visiting ships are now cruise liners. Disused industrial docks have been transformed into destination, including a new wine museum, called Le Cite du Vin, and the Chartrons district, formerly the center of the wine trade, has been revived with quirky shops, bar-restaurants and the CAPC, a contemporary art center.⁴²

The city has redone its transportation system, with three tram lines and a fourth planned. The downtown area has been pedestrianized and is no longer choked with traffic. And a high-speed train line now connects the city to Paris.⁴³

According to a 2015 study by PriceWaterhouse Coopers, Bordeaux ranks first among larger French cities for the various factors contributing to its quality of life. With the second largest historic district, after Paris, and an active policy encouraging residential construction, Bordeaux ranks highest for its urban infrastructure. It also ranks highest for easy access to healthcare, environment (parks and sanitation). Its cultural and entertainment ranking is respectable, but not the highest.⁴⁴

Regarding its economic importance, the study ranks Bordeaux in third position, after Paris and Lyon. Regarding its innovation and economic attractiveness, Bordeaux is ranked fourth, after Paris, Lyon and Toulouse. However, it is not highly ranked for its international networks or intellectual infrastructure, or steady, available employment, and its cost of living is high. By all of the studies measures, Bordeaux ranks fourth, after Lyon, Paris, and Toulouse.⁴⁵

INSEE, the source of demographic and statistical data, published an article on the Gironde Departement in 2016.⁴⁶ With 10,000 square kilometers, the Gironde is the largest department in metropolitan France, and at the date of the article, its population was growing twice as fast as those of the other departments in its region (averaging 1.5% from 2008 to 2015), L'Aquitaine-Limousin-Poitou-Charentes. Its economy is composed primarily of small enterprises, with about 668,000 employees at the end of 2013. About a quarter of the department is used for agriculture, with about 10% of the department devoted to viticulture. Forests cover about 40%, mostly along the maritime coast. However, there are three important industries, including aeronautics, food production and wood and paper production. Two thirds of its salaries come from the service sector, of which tourism is an important component. About one third of employment is for large companies.

Infrastructure improvements include faster links to Paris—formerly 3 hours on the TGV, but only two hours as of 2017. The bridge Jean-Jacques-Chaban-Delmas was opened in 2013, and

⁴² Ibid.

⁴³ Ibid.

⁴⁴ “Villes d’aujourd’hui, metropoles de demain”, Pwc, decembre 2015

⁴⁵ Ibid.

⁴⁶ « La Gironde a grands traits », INSEE Analyse, L'Aquitaine, Limousin, Poitou-Charentes, No. 16, March 2016
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another bridge, Jean-Jacques-Bosc, scheduled to open in 2018, as part of the redevelopment of the area around the St. Jean train station. A 7th terminal has been added to the port, which is the 7th largest port in France (although I am told that the traffic is now largely cruise ships, as the river access is too shallow for access by the largest freighters.) A vast building complex is also planned for the area near the Bordeaux airport. A new stadium was opened in 2015 as were the new wine museum in 2016 and a Maison de l'economie creative de l'Aquitaine in 2017.

Wine accounts for 4.2% of employment in the Gironde, and the vineyards account for 240,000 hectares in 2014, about a quarter of the department. Wine accounts for 80% of agricultural production, but there are other sectors, including oystering in the Arcachon bay.

At the end of 2013, about 10% of the Gironde's employment was industrial, accounting for 60,000 jobs. Three major industries account for 40% of this sector, aeronautics, food production and paper/printing/wood production.

Construction accounts for 6.6% of employment, while commerce accounts for 13%. Two thirds of employment is in the service sector, with half of this sector in public administration, teaching social action and health care. The University Hospital of Bordeaux is the largest employer in the department, with 16,000 employees. Scientific and technical activities, with their associated support, account for 18% of the service sector, including those that are linked to *poles de competitivite*.

Tourism accounted for 22,300 employees in 2011, about 4% of Girondin employment. Bordeaux and the surrounding area account for 70% of Girondin hotel stays, of which about a quarter are foreigners, most frequently from England and Spain.

Lyon

Lyon is not only France's second largest city, but also the second wealthiest, as measured by average per capital income (see above). The average income's compound annual growth rate, from 2009 to 2104, was not among the highest, however, although the average annual percentage growth of its population, at .90%, was significant, and significantly higher than that of Paris (.50%). As indicated earlier, it's region is also an important center for R&D and for innovation businesses.

According to Wikipedia (the weakness of the source explained by the preliminary nature of this research), in 2014 Lyon was the headquarters of 950 firms having more than 100 employees. The city has a strong commercial tradition that dates from the settlement of Italian bankers during the Renaissance. It also has an important manufacturing industry, focusing on the fabrication and treatment of silk. The city is still active in textiles, transportation, chemicals (growing out of silk dye activities) and pharmaceuticals. It is also a center of nuclear engineering and information services. And above all, Lyon is noted for its cuisine.

According the 2015 study by Price Waterhouse Coopers, Lyon ranked first, ahead of Paris, for its long-term potential, totaling high, if not the highest score, across a number of indicators, and beating Paris largely, as measured by cost of living and quality of life. While Lyon lacks the global city advantages of Paris, its economic weight and performance on national economic indicators is roughly equivalent, as indicated by work, employment and the length of unemployment.⁴⁷

Here are a couple of examples of the specifics:

Lyon ranks behind Toulouse, Rennes, Grenoble and Lille as an intellectual center, as measured by the employment rate of its educated population, scientific grants relative to population, proportion of the population with advanced degrees, etc.

Lyon ranks behind only Paris in culture and leisure as measured by museums, libraries, movies and venues for events.

Real Estate Investment Activity

The following data was published by BNP Paribas.⁴⁸ The figures are in millions of euros.

What is interesting in the first table is the increase in office investment, and the decline in retail and service investment.

	Q1 2016	Q1 2017	Q1 2018
Total amount invested in France	4,422	3,667	3,784
Offices	1,552	2,686	2,945
Warehouses	317	239	143
Industrial Premises	108	98	71
Retail	1,280	467	497
Services	1,165	176	128

What is interesting in the first table is the increase in office investment, and the decline in retail and service investment.

The dollar volume of deals over 100 million euros, accounted for about 44% of the total in 2016 and 2017 and 52% in the first quarter of 2018.

Regarding types of investors, funds accounted for about a third of investment volume in 2016 and 2017. REIT and SCPI's (another collective investment vehicle) accounted for 31% of

⁴⁷ “Villes d’aujourd’hui, metropoles de demain”, Pwc, decembre 2015

⁴⁸ At a Glance, Investment in France, April 2018, BNP Paribas Real Estate

investments in 2016 and 37% in 2017. Insurance companies accounted for 16% of volume in 2016 and 10% in 2017.⁴⁹

The Île-de-France accounts for 77% of investment in the first quarter of 2018, vs. 74% in 2016 and 2017. There were two office deals for over € 300m in Q1 2018: the acquisition by Generali of the entire Coeur Marais – Fhive for a total of € 377m and the MSH building bought by CBRE GI for € 304m. In the regions, Aix-Marseille was comfortably in the lead attracting € 296m, notably thanks to the sale of the Corail building in Euroméditerranée. Lyon was in second place with just under € 100m invested, a fall compared to Q1 2017.⁵⁰

According to CBRE research, cap rates in Paris range from 2.5 to 3%, in Ile de France from 2.90 to 3.50% and in the regional markets from 3.90 to 4.50 %. Prices for old buildings increased in 2017, but the focus has been on dynamic urban center. Paris, Lyon and Bordeaux have seen prices reach record levels, but the majority of large cities have not seen price increases.⁵¹

Regarding sectors, the office sector is attracting renewed interest because of the positive economic indicators, and because France is well positioned to benefit from Brexit-related opportunities. Office markets are characterized by active absorption, rising rents and reduced incentives in central locations. Retail markets are being restructured, due to e-commerce, with hyper-selective investors focused on prime streets in large cities and in certain large commercial centers. Institutional investors are rebuilding their housing portfolios.⁵² Regarding actual rents and yields, the following data is provided by Cushman & Wakefield.⁵³

Prime Office rents-March 2018⁵⁴

	<i>Euros/Sq.M/Yr</i>	<i>Growth% CAGR 5yrs</i>
<i>Paris (CBD)</i>	<i>825</i>	<i>0.1</i>
<i>Paris- La Defense</i>	<i>540</i>	<i>-0.7</i>
<i>Lyon</i>	<i>300</i>	<i>3.1</i>
<i>Marseille</i>	<i>260</i>	<i>-0.8</i>
<i>Bordeaux</i>	<i>180</i>	<i>0.0</i>
<i>Toulouse</i>	<i>190</i>	<i>0.5</i>

⁴⁹ BNP Paribas, Ibid.

⁵⁰ BNP Paribas, Ibid.

⁵¹ 2018 EMEA Real Estate Market Outlook France, CBRE

⁵² CBRE Ibid.

⁵³ France, Office Market Snapshot, Retail Market Snapshot, First Quarter 2018, Cushman & Wakefield

⁵⁴ France, Office Market Snapshot, Retail Market Snapshot, First Quarter 2018, Cushman & Wakefield

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Prime Office Yields

	<i>Current Quarter</i>	<i>Last Year</i>
<i>Paris CBD</i>	3.0	3.0
<i>Paris La Defense</i>	4.0	4.25
<i>Lyon</i>	3.9	4.5
<i>Provinces</i>	4.9	5.0

Prime Retail Rents

<i>High Street Shops</i>	<i>Zone A/Euros/Sq.M.</i>	<i>Euros/Sq.M.</i>	<i>Growth %/5yr CAGR</i>
<i>Paris (Champs Elysees)</i>	18,000	13,255	0.0
<i>Lyon</i>	2,500	1,841	2.6
<i>Marseille</i>	1,400	1,031	-6.9
<i>Bordeaux</i>	2,400	1,767	1.8
<i>Toulouse</i>	2,200	1,620	0.0

Prime Retail Yields

<i>High Street Shops</i>	<i>Current Quarter</i>	<i>Last year</i>
<i>Paris (Champs Elysees)</i>	2.5	2.75
<i>Lyon</i>	3.85	3.85
<i>Marseille</i>	5	4.75
<i>Bordeaux</i>	3.85	4.0
<i>Toulouse</i>	3.80	3.80

Residential Property Prices

The following statistics are prepared by the Notaires de France.⁵⁵

Median Prices per Square Meter for Older Apartments in Select Cities,
Plus percentage increase from the prior year's quarter
4th Quarter, 2017

	Euros/Sq.M.	Pct. Change
Paris	9,040	8.6%
Lyon	3,650	6.5%
Marseille-Aix	2,290	2.4%
Bordeaux	3,930	16.1%
Toulouse	2,620	6.2%
Montpellier	2,500	-1.2%
Nantes	2,800	8.0%
Rennes	2,530	3.9%
Lille	3,130	6.5%

Median Selling Prices for Older Houses in Select Cities,
Plus percentage increase from the prior year's quarter
4th Quarter, 2017

	Euros/Sq.M.	Pct. Change
Paris	303,000	3.3%
Lyon	325,400	1.2%
Marseille-Aix	318,500	1.1%
Bordeaux	319,400	14.1%
Toulouse	270,600	1.8%
Montpellier	309,900	6.2%
Nantes	275,000	11.1%
Rennes	no data	
Lille	190,500	4.7%

⁵⁵ French property market report, Notaires de France, April 2018

The Increasing Appeal of Paris Apartments to Foreign and Foreign Resident Buyers per Daniel Feau Immobilier⁵⁶

“In the market for housing selling for more than 4 million euros, our foreign resident purchasers (be they French nationals or foreign) grew from 26% of buyers [in 2016} to 40% in 2017, an increase of 53%. This percentage grew to over 50% for assets above 7 million euros.”
(translated)

⁵⁶ « Le marché immobilier parisien de haut de gamme connaît depuis le début de 2017, et en particulier depuis le premier tour des élections présidentielles, une évolution notable », Daniel Feau, Belles Demeures de France, conférence de presse Juin 2017.