

France

Some useful economic indicators

June 2018

This memorandum is intended as a tool in the analysis of real estate markets in France.

It begins with a brief comparison of France and some other important economies, using some available indicators. It then looks within France to compare different cities and regions. It does not analyze real estate prices, but is intended as a background for eventual analysis.

The underlying hypothesis is that real estate values eventually follow the fundamentals. Through speculation, depression, overbuilding and shortage, real estate prices reflect the longer-term trends of economics, wealth creation, and population and employment growth. Of course, there are other determining factors. These include a preference for predictable legal and tax systems and long-term preferences for certain countries and cities, where markets are considered to be desirable, reliable and liquid. Nevertheless, underlying economic trends are more than a starting point for considering alternative markets.

France in its international context

The following international comparisons are based on data published by the World Bank.¹ The zeros added to each figure are to better illustrate the relative size of national economies. The comparisons made are not entirely random. Denmark is small and wealthy, and Nordic countries have been an attractive destination for foreign real estate investors. Poland is a relatively inexpensive place to do business and has profited from its proximity to Germany. It too has attracted considerable investment. Vietnam is becoming a small industrial powerhouse, benefiting from much less expensive labor than China's.

GDP in current US\$

	2000	2008	2009	2016	Cmp.* %chg. 2000- 2016	Cmp. %chg. 2009- 2016
France	1,368,000,000,000	2,923,000,000,000	2,694,000,000,000	2,465,000,000,000	3.75	-1.26
UK	1,648,000,000,000	2,891,000,000,000	2,383,000,000,000	2,651,000,000,000	3.01	1.53
Germany	1,950,000,000,000	3,752,000,000,000	3,418,000,000,000	3,478,000,000,000	3.68	0.25
Denmark	164,159,000,000	353,361,000,000	321,241,000,000	306,900,000,000	3.99	-0.65
Poland	171,886,000,000	533,816,000,000	440,347,000,000	471,364,000,000	6.51	0.98
USA	10,285,000,000,000	14,719,000,000,000	14,419,000,000,000	18,624,000,000,000	3.78	3.72
China	1,211,000,000,000	4,598,000,000,000	5,110,000,000,000	11,199,000,000,000	14.92	11.86
Vietnam	31,173,000,000	99,130,000,000	106,015,000,000	205,276,000,000	12.50	9.90

*Compound annual growth rate (nominal)

¹ World Bank Open Data, data.worldbank.org

Global Economic Prospects, Forecast, Annual GDP Growth (%)

	2018	2019
France	1.432	1.432
UK	1.54	1.54
Germany	1.6	1.4
Denmark	1.7	1.8
Poland	4.0	3.5
USA	2.161	1.892
China	6.406	6.257
Vietnam	6.463	6.521

Measuring GDP in nominal US dollars does not account for either inflation or exchange-rate fluctuation. Nevertheless, from 2000 to 2016, France’s nominal growth rate compared favorably with that of its highly-developed peers, averaging 3.75%. Within this time period, however, it lost both absolute and relative ground following the 2008-2009 financial crisis. More recent figures, indicated here as forecasts, indicate positive growth in France for 2018 and 2019, but not at impressive levels relative to the other countries shown.

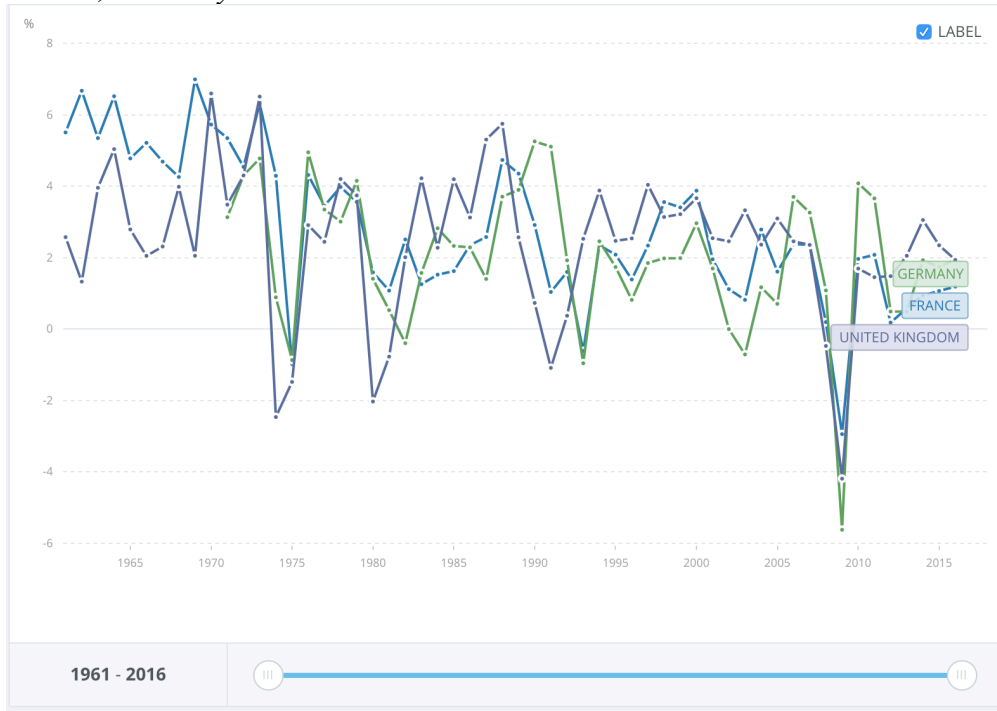
For those who generally read near-term annual growth rates in the newspapers, the stunning takeaway is the growth of the less-developed nations indicated. China, whose GDP was less than that of France in 2000, was catching up with the United States in 2016. As we have all read elsewhere, it’s GDP is projected to exceed that of the United States in the next few years. This is an absolutely remarkable achievement. Whatever we read about real estate bubbles in Chinese cities, it is likely that underlying values have increased accordingly.

GDP growth (annual %)

The % growth tables on the following tale are also based on data taken from the World Bank’s open data site. Beneath each table is the relevant link, and where not indicated here, these graphs also show individual annual growth rates.

These rates are more meaningful than the nominal rates indicated above, as they are calculated based on both a conversion of local currencies into constant 2010 dollars and a least square method of regression analysis. (The writer is not a statistician, so for further detail on method, see <https://datahelpdesk.worldbank.org/knowledgebase/articles/114952-how-are-aggregate-growth-rates-computed-for-nation>.)

France, Germany and the UK



<https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2016&locations=FR-DE-GB&start=1961&view=chart>

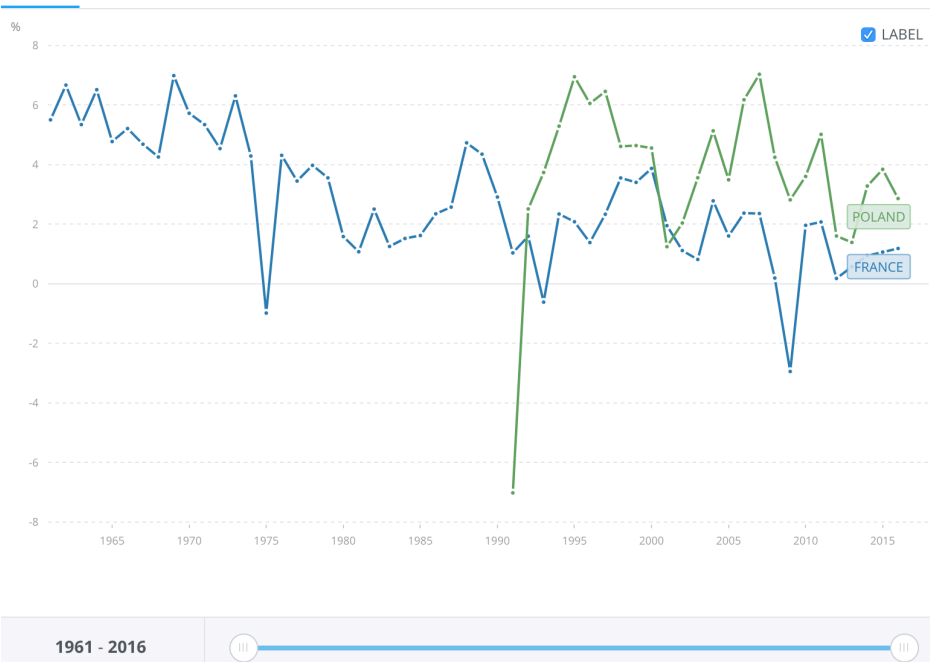
Generally, the growth rates of France, Germany and have moved in tandem, but Germany’s growth rates tend to have been more extreme, -5.62% in 2009, 4.08% in 2010. In this century, France and Germany’s growth rates have been significantly less than the 3+% nominal rates and have averaged 1.30% and 1.33% respectively, which is interesting since Germany is often considered to be the stronger economy. Great Britain’s average growth since 2000 has been higher, at 1.86%, although these figures do not reflect the recent impact of Brexit.

Recent numerical growth rates

Year	'00	'01	'02	'03	'04	'05	'06	'07	'08
France	3.875	1.954	1.118	0.82	2.786	1.608	2.375	2.361	0.195
Germany	2.962	1.695	0	-0.71	1.17	0.707	3.7	3.261	1.082
UK	3.664	2.544	2.458	3.326	2.364	3.096	2.456	2.357	-0.473

Year	'09	'10	'11	'12	'13	'14	'15	'16	Avg.
France	-2.941	1.966	2.079	0.183	0.576	0.948	1.067	1.188	1.30
Germany	-5.619	4.08	3.66	0.492	0.49	1.93	1.743	1.944	1.33
UK	-4.188	1.695	1.453	1.481	2.052	3.054	2.346	1.936	1.86

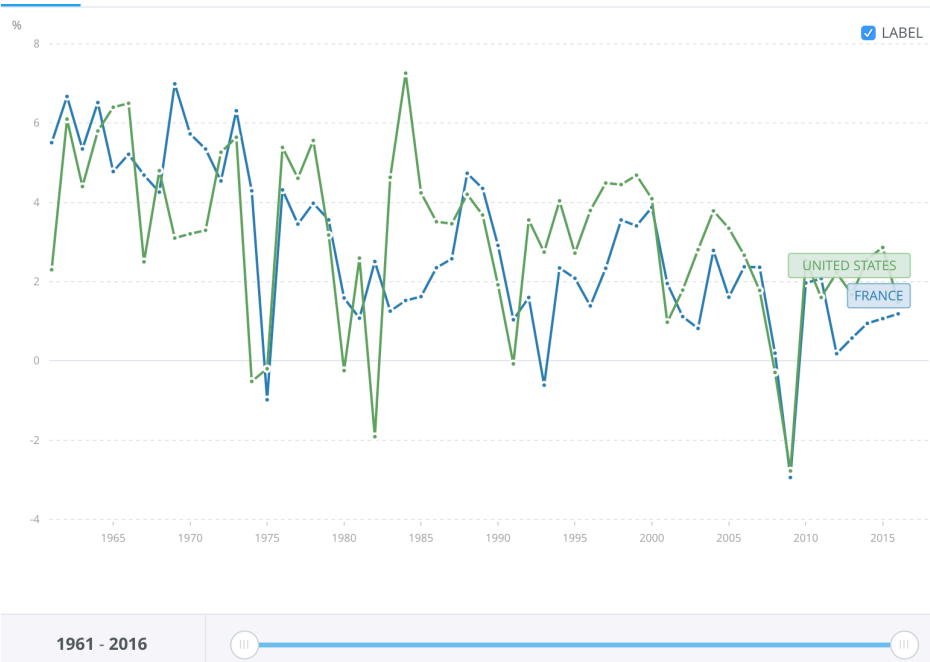
France and Poland



1961 - 2016 III

<https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2016&locations=FR-PL&start=1961&view=chart>

France and the United States

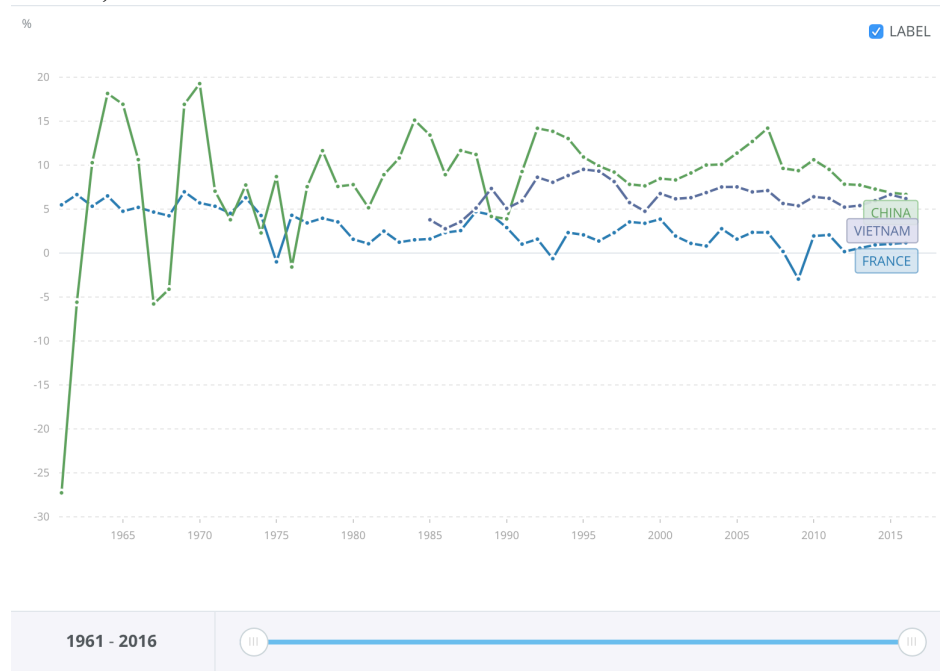


1961 - 2016 III

<https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2016&locations=FR-US&start=1961&view=chart>

Poland's growth rate has been much higher than that of France, reflecting its much lower costs. The highs and lows of US and French growth rates either coincide or follow each other. Mostly, however, the United States has maintained a faster rate of GDP growth. As referenced in the press, this is due to more a more business-friendly regulatory system in the US, and frequently lower labor costs. The trade-off has been a substantial increase in US inequality. France's current effort to deregulate, in order to restart its economic growth, should be viewed against this trade off.

France, China and Vietnam



<https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2016&locations=FR-CN-VN&start=1961&view=chart>

China, in particular, but also Vietnam, have grown at much faster rates than France or other developed economies. They continue to benefit from much lower labor costs, and in China, from an increasingly advanced manufacturing economy.

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Population

	2000	2008	2009	2016	% avg. annual chg. 2000-2016	% avg. annual chg 2009- 2016
France	60,912,500	64,374,989	64,707,044	66,892,205	0.61	0.48
UK	58,892,514	61,806,995	62,276,270	65,595,565	0.71	0.76
Germany	82,211,508	82,110,097	81,902,307	82,487,842	0.02	0.10
Denmark	5,339,616	5,493,621	5,523,095	5,728,010	0.45	0.53
Poland	38,258,629	38,125,759	38,151,603	37,970,087	-0.05	-0.06
USA	282,162,411	304,093,966	306,771,529	323,127,513	0.91	0.76
China	1,263,000,000	1,318,000,000	1,331,000,000	1,379,000,000	0.57	0.52
Vietnam	80,285,562	86,707,801	87,565,407	94,569,072	1.11	1.14

China's population in 2016 was double the total of the remaining countries on this table. Inevitably, a rapidly growing economy, with a huge population, is going to have a lot of economic impact.

Interestingly, the UK has had a higher rate of population growth than Germany or France, which may be a factor in its faster GDP growth rate indicated above.

Poland is losing population, perhaps to migration elsewhere in Europe. So its high growth rates are not dependent on population growth. Neither are China's, where relatively slow population growth has perhaps been due to the government's one-child policy.

In France, population growth has been relatively slow, and significantly slower than its GDP growth rate. Nevertheless, the population grew by nearly 6 million people from 2000 to 2016, a significant number.

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GDP (gross domestic product, per capita in constant 2010 US\$

	2000	2008	2009	2016	Cmp.* %chg. 2000- 2016	Cmp. %chg. 2009- 2016
France	38,522	41,545	40,116	42,016	.54	.66
UK	35,577	40,536	38,546	42,040	1.05	1.25
Germany	37,998	42,365	40,086	45,846	1.18	1.94
Denmark	55,851	60,505	57,229	60,670	.52	.84
Poland	8,525	11,800	12,125	15,066	3.62	3.15
USA	45,056	49,365	47,576	52,364	.94	1.38
China	1,772	3,805	4,142	6,894	8.86	7.55
Vietnam	762	1,192	1,244	1,735	5.28	4.87

GNI (gross national income) per capita (Atlas Method) in current US\$

	2000	2008	2009	2016	Cmp.* %chg. 2000- 2016	Cmp. %chg. 2009- 2016
France	25,150	43,510	43,760	38,720	2.73	-1.73
UK	28,880	48,420	43,940	42,370	2.42	-0.52
Germany	26,210	43,870	43,810	43,940	3.28	0.42
Denmark	32,660	60,390	60,090	56,990	3.54	-0.75
Poland	4,660	11,970	12,540	12,680	6.46	0.16
USA	36,070	49,330	48,050	56,850	2.88	2.43
China	940	3,100	3,690	8,250	14.54	12.18
Vietnam	410	980	1,100	2,060	10.62	9.38

GNI is GDP plus inflows from abroad and minus outflows to foreign countries. In these two tables, however, GDP is calculated in 2010 constant dollars, whereas GNI is indicated in nominal dollars.

In dollar terms, GDP per capita for France is very similar to that for the UK and Germany, but it's growth rate since 2000 has been slower, so that it's ranking has reversed from the highest of the three to the lowest.

Comparing the three countries' GNI figures, the conclusion is somewhat different. The per capital figures for France were lower, but the growth rate is no longer the lowest, due either to differences in inflation or different capital inflow/outflows.

Denmark has generated the highest GDP and GNI per capita, followed by the United States.

Poland, although European, is a relatively poor country, as are China and Vietnam on a per person basis.

Since the GNI figures are in current US dollars, they do not reflect purchasing power. However, they may be helpful to the international investor, whose international property holdings are likely to be evaluated as a function of their dollar value, or value in another reserve currency.

France

Urban and Regional Comparison

Although national economies are relevant, real estate investment is local. France has been a wealthy economy, with steady growth over the longer term, some relative weakness in recent years, and improving prospects under the current government. If choosing to invest in France, where is the economic opportunity?

Population and growth rate for France's fastest growing regions²

<u>Region</u>	<u>Population, January 2018</u>	<u>Average annual change 18/10</u>
Auvergne-Rhone-Alpes	8,037,100	0.7
Corsica	337,800	1.1
Bretagne	3,336,600	0.5
Ile de France	12,246,200	0.5
Nouvelle-Aquitaine	5,994,300	0.5
Occitanie	5,903,200	0.8
Pays de la Loire	3,787,400	0.7
Metropolitan France	65,018,100	0.4

Since 2016, metropolitan France has been divided into 13 administrative regions.

As indicated above, the Ile de France, which includes Paris, is by far the most populated region, followed by Auvergne-Rhone-Alpes, which includes Lyon and Grenoble.

Corsica is the smallest region in metropolitan France; however, it is the fastest growing. Following, as measured by growth, are Occitanie, which includes Toulouse and Montpellier, Auvergne-Rhone-Alpes, and the Pays de la Loire, which includes Nantes and Angers.

² "Population par region", Insee References, edition 2018

*Population and growth rate for France's fastest growing departments (>= 1%)*³

<u>Department</u>	<u>Region</u>	<u>Associated Cities</u>	<u>Population, 1/18</u>	<u>Avg. Annual Chg.18/10</u>
Ain	Auv. Rhone Alpes	Lyon/Geneva	649,700	1.1
Corse-du-Sud	Corsica		159,900	1.4
Haute-Garonne	Occitanie	Toulouse	1,388,400	1.4
Gironde	Nouvelle Aquit.	Bordeaux	1,610,800	1.3
Herault	Occitanie	Montpellier	1,160,000	1.3
Loire Atlantique	Pays de la Loire	Nantes	1,413,300	1.2
Rhone	Auv. Rhone Alpes	Lyon	1,878,100	1.1
Haute-Savoie	Auv. Rhone Alpes	Geneva	829,700	1.5
Paris	Ile de France	Paris	2,168,500	-0.4
Tarn et Garonne	Occitanie	Montauban-Toulouse	262,600	1.0
Essonne	Ile de France	Paris	1,313,700	1.0
Seine-St.-Denis	Ile de France	Paris	1,646,100	1.0

The departments are older and smaller administrative units that date from the French revolution. The fastest growing departments are also located in France's fastest growing regions (see above), and excepting Corsica, they contain or are adjacent to important cities, Paris, Toulouse, Bordeaux, Montpellier, Lyon and Geneva. Note that the fastest growing department, the Haute-Savoie, is adjacent to Geneva, with departments associated with Toulouse, Bordeaux and Montpellier having grown at slightly slower rates.

The average growth rates for the fastest growing departments have been equal to or greater than 1%. Whereas the fastest growing regions, excepting Corsica, have only grown at average rates of .5 to .8%.

When compared to the national population growth statistics, local population growth rates over 1% are significant. Population growth is frequently an important factor in economic growth.

³ "Population par region", Insee References, edition 2018

*French Metro Per Capita Income and Population Growth*⁴

<u>Metropolitan Area</u>	<u>2014 Euros (000)</u>	<u>Income Avg % chg. 2009-2014</u>	<u>Income Avg % chg. 2004-2014</u>	<u>Population 2014</u>	<u>Population 2014</u>	<u>Population Avg. % Chg. 2009-2014</u>	<u>Population Avg% Chg. 2004-2014</u>
Lille	18.28	1.83	2.66	2.60	2.56	0.16	0.16
Paris	24.00	1.71	1.85	12.06	11.44	0.46	0.54
Nantes	20.68	2.20	3.10	1.36	1.22	1.25	1.15
Toulouse	22.45	2.13	3.24	1.33	1.17	1.45	1.37
Marseille	20.81	1.89	2.46	2.00	1.92	0.30	0.42
Rouen-Le Havre	20.73	0.94	2.46	1.26	1.24	0.08	0.16
Lyon	23.92	1.64	2.50	1.81	1.66	0.92	0.90
Bordeaux	20.90	1.64	2.58	1.53	1.38	1.10	1.09
Grenoble	19.12	1.58	2.06	1.25	1.16	0.66	0.78
Rennes	21.66	2.07	2.97	1.04	0.93	1.01	1.18
Toulon	17.76	1.90	2.44	1.04	0.97	0.59	0.72
Nice	20.36	1.90	2.43	1.09	1.06	0.18	0.28
Angers	18.74	1.79	2.54	0.81	0.76	0.77	0.66
Strasbourg	20.48	1.67	1.78	1.11	1.07	0.18	0.37
Montpellier	19.35	1.50	2.73	1.12	0.99	1.54	1.31
St. Etienne	17.87	1.40	2.04	0.76	0.74	0.27	0.27
Mulhouse	17.55	1.03	1.24	0.76	0.73	0.27	0.41

This table is based on data taken from a larger table prepared by Anna Zabrodzka of Moody's Analytics in 2015. While the data is not as current as on the preceding tables, it provides very important data on per capita income, per capita income growth and population figures for France's largest metropolitan areas.

Comparing these metro areas to each other, the cities with the fastest growing per capita incomes were among those with the fastest growing populations, over a 10-year period. These were Nantes and Toulouse, with income growth averaging over 3%, and average population growth at or over 1.15%. Rennes is in third position, with slightly lower figures. Two cities, with strong population growth, Bordeaux and Montpellier, had somewhat lower income growth averages. Montpellier had a fast-growing population, the fastest growing from 2009-2014, despite more modest income growth.

⁴ Data from Table 1: Ranking of European Metropolitan Areas by Tiers and Income Growth, "Patterns of Income Across Europe", June 2015, Anna Zobrodzka, Moody's Analytics.

Income growth in French cities has been more rapid than population growth, by significant margins.

For all the cities, income growth in the more recent 5 years, was less rapid than in the entire 10-year period 2004-2014, reflecting slowing growth after the international financial crisis in 2008-2009.

Comparing this table to the department population-growth tables on the prior page, some of the same areas are turning up—that is the departments that include Bordeaux, Toulouse and Nantes.

This table's focus on French metro areas, however, so it overlooks departments near Geneva, that is Ain and Haute Savoie. Geneva is an affluent and expensive city, suggesting that these areas merit further attention.

Employment and employment growth in France's 40 largest urban areas⁵

Tableau 1. Emploi total dans les 40 plus grandes aires urbaines AU	Emploi en	TCAM 1999-	TCAM 2006-	TCAM 1999-
	2013	06	13	13
Paris	5795950	1.3	0.4	0.8
Lyon	994261	1.8	1.0	1.4
Marseille - Aix-en-Provence	688003	2.1	0.6	1.3
Toulouse	584042	3.3	1.6	2.4
Lille*	515045	1.3	0.5	0.9
Bordeaux	513601	2.4	1.2	1.8
Nantes	412042	2.6	1.4	2.0
Nice	392802	2.1	0.2	1.2
Strasbourg*	340421	1.3	0.2	0.8
Rennes	313949	2.6	1.0	1.8
Grenoble	302823	1.8	0.5	1.2
Rouen	263432	1.1	0.1	0.6
Montpellier	243495	3.1	1.7	2.4
Toulon	216063	2.2	0.4	1.3
Tours	203369	1.8	0.3	1.0
Clermont-Ferrand	203022	1.5	0.4	1.0
Avignon	197782	1.9	0.2	1.1
Saint-Étienne	195383	1.1	-0.3	0.4
Orléans	184486	1.4	-0.1	0.6
Nancy	181163	1.1	0.0	0.5
Douai - Lens	172622	1.6	0.0	0.8
Caen	169157	1.9	0.2	1.1
Angers	168966	1.7	0.4	1.0
Dijon	166831	1.6	0.1	0.8
Metz	163166	1.6	-0.6	0.5
Le Mans	139076	1.4	-0.2	0.6
Reims	132780	1.4	-0.3	0.5
Brest	130502	1.3	0.4	0.8
Valenciennes*	121517	2.3	-0.2	1.1
Amiens	119779	1.6	0.0	0.8
Le Havre	119539	1.1	-0.4	0.3
Bayonne*	116559	2.2	1.2	1.7
Limoges	114402	1.3	-0.2	0.6
Poitiers	110701	2.2	0.7	1.4
Mulhouse	110490	0.6	-0.5	0.1
Perpignan	109620	2.8	0.7	1.8
Besançon	105108	1.8	0.3	1.0
Béthune	105106	0.9	-0.8	0.1
Pau	103081	1.9	0.6	1.2
Annecy	101680	1.8	0.9	1.3
Nîmes	100855	2.2	0.8	1.5
Moy. des 15 AU > 200 000 sauf Paris	2.1	0.7	1.4	
Moy. des 22 Métropoles	1.8	0.5	1.2	
Moy. des 25 AU [100 000;200 000]	1.6	0.1	0.9	
Moy. des 27 AU [50 000;100 000]	1.6	0.3	0.9	
AU de moins de 50 000	1.3	-0.1	0.6	

Moy. = Average

⁵ “Comment expliquer les disparités de croissance d’emploi des aires urbaines Françaises? », Maurice Catin and Christophe Van Huffel, LEAD, Université de Toulon, paper presented at ASRDLF conference, Athens, July 2017

Employment and employment growth in France's 40 largest urban areas

The prior table is copied without modification from a paper presented by two Toulon academics in 2017. The purpose of the paper was to analyze the nature of French urban employment growth.

As indicated in the table, the largest metropolitan areas (with employment exceeding 200,000 in 2013, but excluding Paris) have generally had faster employment growth than smaller cities, as measured by average annual growth rates.

For all of the urban areas, employment growth was much more rapid in the earlier years 1999-2006, than the later years, 2006-2013, affected by the international economic crisis. The growth advantage of the larger cities was stronger in the later years, of relative economic difficulty.

In the earlier years, employment growth grew most rapidly in Toulouse and Montpellier (both averaging over 3%), followed by Nantes, Rennes and Bordeaux (in the mid 2's%).

Later, from 2006 to 2014, employment growth slowed, but grew most rapidly in Toulouse (1.6%) and Montpellier (1.7%), followed by Nantes (1.4%) and Bordeaux (1.2%). However, the two faster growing cities suffered a greater drop in average growth.

While total employment in the Paris metropolitan area is many times larger, average growth has been much slower than in many other larger cities and slower even than in some of the smaller employment centers.

The Toulouse academics focus not only on employment growth in the various French cities, but also on the composition of employment. The Institut National de la Statistique et des Etudes Economiques (INSEE), divides employment into three sectors, metropolitan, presentielles, and productive.

Presentielle activities, the largest proportion of employment, focus on local services, including education, health and local services. Productive activities are directly or indirectly related to export, including manufacturing, transportation and logistics. The third sector, metropolitan employment, includes management, research, intellectual services, culture and leisure.

The growth and importance of the metropolitan employment sector is associated with the largest cities. Metropolitan employment accounts for 38.4% of the total in Paris and 29.4% of employment in the remaining urban areas with more than 200,000 employees. The percentage falls to 23% and 19% in smaller cities.

Metropolitan sector employment is also growing fastest in the cities with the fastest employment growth. In the early growth years 1999-2006, employment growth in this sector averaged 4.6% in Toulouse, 4.1% in Nantes, 4.7% in Rennes, 4.2% in Montpellier, and interestingly 4% in Brest (which was not distinguished in its overall employment growth). These growth rates were also

higher than for total employment growth. In Paris, the growth in metropolitan employment was 1.7%, although the smaller percentage increase hides the city's huge importance in absolute numbers. For 2006-13, the percentages were significantly lower.

Summary

The indicated data is mostly a few years outdated, so its utility is in clarifying longer term comparisons.

France has performed reasonably, relative to other developed economies in Europe, and pro-business government initiatives, under Emmanuel Macron, may improve its slightly weaker relative position.

Investors looking to purchase real estate in high growth economies will not focus on developed countries. If they have the organization and the funds to invest elsewhere, they will likely focus on Asia or eastern Europe.

Strategies in developed countries focus on sectors that have prospects for faster growth than the national economies as a whole. To this end, investors focus on logistics, on student housing and on senior care.

An alternate focus is on areas with relatively faster population and/or income growth. In France, the underlying economic data points, not to Paris, but to several smaller, important urban areas, including Toulouse, Bordeaux, Montpellier, Nantes, Rennes and France-near-Geneva.

Of course, these markets should also be compared based on other factors, including relative pricing.

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