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France's Attractiveness for Company Decision-Making Centres

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In an open world, competition between countries regarding the location of company headquarters and decision-making centres is even more intense than for other segments of productive activity. Indeed, this issue involves high value added activities, possibly resulting in major spillover effects for the local economy and business demand (consulting, auditing, and banking services, etc.).

It is difficult to identify decision-making centres in the data. This Note draws upon clear criteria and a well-informed database, notably in terms of addresses and shareholding structures, as a basis for a location assessment of foreign held decision-making centres in fifteen European countries, including France. Over a thirty-year period an overall decline in France's position can be observed, losing ground to Germany and Belgium. When weighting the data by size, the United Kingdom and the Netherlands appear to be the European giants. In France, foreign groups' decision-making centres are smaller in size and concentrated in the Île-de-France region. However, the declining performance of France and the Paris metropolitan area appears to be attributable to less dynamic sectoral specialisations rather than a lack of "pure" attractiveness which is an issue of public policy. Econometric analysis highlights quality of airport infrastructures, abundant supply of higher education graduates, the region's size, quality of governance, not excessively high top marginal income tax rates, and a certain fiscal stability as decisive elements in location decisions.

In our estimation, Île-de-France still has numerous assets to face competition between major cities. At the local level, the Paris Roissy Charles-de-Gaulle Airport airline hub (and its accessibility from Paris) needs to be maintained and improved. Further, world level universities are key for the region's attractiveness, as well as capacities for provision of education to non-French-speaking children in international secondary schools. At the national level, reduction of tax uncertainty, the development of a company tax consulting culture and further coordination with our European partners regarding high income taxation can only have a positive influence. Attention needs to be given to the corporate income tax, whose impact is low due to the French rules adopted in terms of territoriality, but which could become crucial in the future (*cf.* the proposal for a European ATAP directive against tax avoidance practices), as well as to the price of business premises. However, these recommendations are not specific to the objective of establishing decision-making centres in France. They would have a positive impact, both regarding French companies' business activities and in terms of attracting new decision-making centres, which should not go through the extension of exceptional measures.

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According to Business France, "decision-making centres" can be defined as "internal structures of which the manager and the team are responsible for making strategic decisions that have an impact on all or parts of the company, particularly regarding investment and jobs".[1] These decision-making centres may belong to French or foreign groups. In 2015, more than one out of five investment decisions[2] by foreign groups on French territory concerned decision-making centres. This is therefore far from being a minor issue. Nevertheless, little research has been undertaken concerning France's attractiveness in this field.[3] The existing reports are in most cases based upon surveys rather than actual figures for establishments set up in France.[4] This *Note* gives a detailed analysis of the relative position of France and, more particularly, of the Île-de-France region within Europe, on the basis of international data for establishments covering the 1980-2012 period. Then, factors affecting the "pure" attractiveness of regions are identified: transport, higher education, quality of institutions, moderation of taxation and low tax uncertainty. Finally, we set out a batch of recommendations directly connected to this original empirical research.

Attracting company headquarters or decision-making centres?

The recurrent revelations concerning the "double non-taxation" systems of digital technology giants, and of business activities involving high levels of intangible elements more generally, have highlighted the key impact of taxation on the location of multinational companies' international and regional headquarters.[5] For governments, maintaining or even attracting new headquarters is above all a tax issue: it involves both maintaining the corporate income tax base and limiting competition distortions between companies that have the means to offshore their profits and those that do not. However, the issues involved have only a moderate impact in terms of employment, when these head offices are not also "decision-making centres" according to the definition given above. Although numerous company headquarters are also decision-making centres, this is not always the case and, conversely, numerous decision-making centres (such as Airbus in Toulouse) are not company headquarters (see box 1).

The location of decision-making centres produces major spillover effects *via* high value-added business service markets (legal and financial services, accountancy, media, marketing and advertising, etc.). The presence of numerous senior executives, and therefore of persons likely to take part in boards of directors, also increases the density of the local network. Finally, decision-making centres pay high salaries, thus stimulating the local economy and personal services in particular (culture, sport, education, health, transport, etc.). According to Moretti (2010), one additional highly-skilled job leads to the creation of 2.5 local jobs on average.[6]

Conversely, the establishment of new decision-making centres in a town may increase the costs for companies and households already based there. One might mention increased real estate prices and the congestion costs connected to the overloading of transport and public services. In both cases, inhabitants will demand compensatory wage increases, increasing in turn the cost of labour for the companies already present.

With a maximum corporate income tax (CIT) rate of 38% in 2015, and despite the reduction announced within the framework of the Responsibility Pact (*Pacte de responsabilité*),[7] France is in a structurally defensive position in terms of the location of company headquarters. A radical reduction in CIT taxation in order to attract headquarters would lead to major loss of earnings, insofar as a reduction of this kind would also affect all previously-established companies, with limited gains in terms of business activity and employment.

In the case of decision-making centres, location decisions depend upon a much wider range of factors (see *infra*). In our view, for a country such as France, it therefore appears both more realistic and more advantageous to seek attracting decision-making centres rather than simply company headquarters. For this reason we focus only on decision-making centres, while of course being aware that the two concepts are not unconnected.

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[1] Business France, Report 2015, p. 27.

[2] 207 out of a total of 962, *cf.* Business France, *op. cit.*

[3] The report presented to the French Senate by Christian Gaudin in 2007 is a notable exception, *cf.* Gaudin C. (2007): "La notion de centre de décision économique et les conséquences qui s'attachent, en ce domaine, à l'attractivité du territoire national", *Rapport d'Information du Sénat*, no 347.

[4] See, for example, the EY France attractiveness survey (*Baromètre annuel EY*) as well as the numerous international ratings such as the World Bank *Doing Business* report. Business France provides an analytical interpretation of the various different existing ratings in its *Livre blanc de l'attractivité de la France : Pour se repérer entre réalités et perceptions. Classements économiques internationaux 2014*.

[5] Major steps forward have been made recently in the field of international fiscal cooperation, in particular via the OECD BEPS (*Base Erosion and Profit Shifting*) initiative, which still need to be implemented rapidly.

[6] Moretti E. (2010): "Local Multipliers", *American Economic Review Papers and Proceedings*, no 100, pp. 1-7.

[7] Abolition of exceptional contributions in 2016, followed by progressive reduction of the normal rate of taxation from 33.3 to 28% between 2017 and 2020.

1. Identification of decision-making centres

A decision-making centre is defined as a place where strategic functions are located (financial management, marketing, communication, R&D, etc.). This place often differs from the group's official address (the headquarters). Nevertheless it is often complicated to establish an entirely objective criteria enabling proper definition of decision-making centres.[a]

We have based this study on the Amadeus database compiled by Bureau van Dijk for the 1980-2012 period. This database, which is regularly used by researchers in France and abroad, provides very good cover of European countries except Germany and Belgium. These differences in coverage quality for different countries prompt us to focus our analysis on changes over time, more than upon observed levels in 2012. Here we only take decision-making centres held by foreign groups into account.

The definition adopted for the econometric study combines a criterion of shared ownership (the fact of holding subsidiaries) and an accounting consolidation criterion (the fact of being able to submit consolidated accounts). Establishments located in a particular place for tax purposes *via* holding companies will thus not normally be counted as decision-making centres, but rather as headquarters. The given identification criterion is therefore more economic and strategic than fiscal. This filter often leads to several decision-making centres being taken into account for the same group on European territory. This is illustrated by the example of Airbus. The unit showing the group's largest turnover (61 billion euros in 2012) is located in Leiden (Netherlands). However, this legal entity has a very small number of employees (3). On the other hand, Airbus SAS and Airbus Operations, located in Blagnac and Toulouse, whose operating incomes are 28 and 10 billion respectively, total almost 26,000 employees. In its official communication, the Airbus Company itself considers the Blagnac unit to be its operational headquarters.

We find a total of 285,736 decision-making centres present in 2012, for which we know the location (country and region), name and nationality of the parent company, date of creation, the four digit NACE Classification for economic activities code, as well as the accounting data for 2012 with regard to total assets and very fragmentary data on workforces, net turnover and value-added. Since assets constitute the element with the most complete data (more than 95%), we assess the size of units on the basis of this dimension.

[a] Summary Report to the French Senate no. 347 stresses the difficulty of identifying this term: "No systematic definition of the notion of a decision-making centre or exhaustive list of criteria making it possible to characterise a company's nationality is to be found anywhere in this report" (p. 14), *cf.* Gaudin C. (2007): "La notion de centre de décision économique et les conséquences qui s'attachent, en ce domaine, à l'attractivité du territoire national", *Rapport d'Information du Sénat*, no 347.

Where are decision-making centres set up?

The location of decision-making centres is the result of a joint choice on the part of companies (optimising their strategy) and their high-ranking executives (geared to work at the new establishment). Companies compare the costs and advantages of each location. The cost side principally involves labour costs for high-ranking executives, the tax system and the cost of business premises. Advantages include the quality of the local economic ecosystem in terms of business services and decision-making networks, the availability of a high-skilled workforce and the quality of local, national and international transport networks.

Like companies, executives are sensitive to the cost of real estate and taxation. However, they also take into account the amenity of the town, the possibility of spouses to find a good job and the quality of schools for their children.

In order to quantify the impact of these various elements, we have drawn upon an original empirical analysis based on individual company data, focusing upon decision-making centres held by foreign group parent companies (box 1).[8]

France is losing ground to Germany

Table 1 shows the share of the six biggest European host countries in terms of foreign groups' decision-making centres in 1980, 1996 and 2012, in number and size (measured by total assets in 2012).[9] The table shows a high level of concentration in four countries: Germany, Belgium, France and the United Kingdom, which alone represented almost 72% of locations in

[8] In particular, elimination of centres held by national group parent companies makes it possible to neutralise the fact that the major economic powers, which own major national groups, have a more natural tendency to set up decision-making centres in their own country. However, when these major groups have a head office abroad, the latter is considered a foreign shareholder of the decision-making centres in question (see the case of Airbus, *cf.* Text box 1).

[9] For 1980 (and 1996), this is the total number of decision-making centres created before 1981 (or 1997) and still present, since they were carried forward in the base in 2012. Decision-making centres present in 1980 (or 1996) but which have since disappeared (or been taken over by a national group) are therefore not shown. Conversely, decision-making centres may be included in 1980 (or 1996) which were held by national groups at that time, but were then taken over by foreign groups.

1. The principal host countries of decision-making centres in Europe

	1980		1996		2012	
In % of the total number[a] (ranking in brackets)						
Germany	14.9	(4)	16.1	(4)	19.0	(1)
Belgium	17.0	(3)	17.3	(3)	17.9	(2)
United Kingdom	19.3	(2)	19.8	(1)	17.9	(3)
France	**20.5**	**(1)**	**18.5**	**(2)**	**16.8**	**(4)**
Spain	11.1	(5)	12.0	(5)	11.9	(5)
Austria	4.7	(6)	4.7	(6)	5.6	(6)
Netherlands	2.9	(8)	2.3	(9)	2.2	(9)
In % weighted by size of assets in 2012[b] (ranking in brackets)						
United Kingdom	36.1	(1)	38.3	(1)	34.2	(1)
Netherlands	4.6	(6)	6.0	(6)	18.6	(2)
Belgium	14.1	(2)	17.9	(2)	13.3	(3)
Germany	9.8	(5)	9.0	(5)	8.6	(4)
Spain	12.6	(3)	9.9	(4)	7.9	(5)
France	**12.4**	**(4)**	**10.2**	**(3)**	**7.2**	**(6)**

Notes: [a] In 1996, Germany hosted 16.1% of the decision-making centres established in Europe; [b] In 2012, the United Kingdom hosted 34.2% of the total assets of decision-making centres established in Europe.

Source: Calculation made by the authors using the Amadeus database.

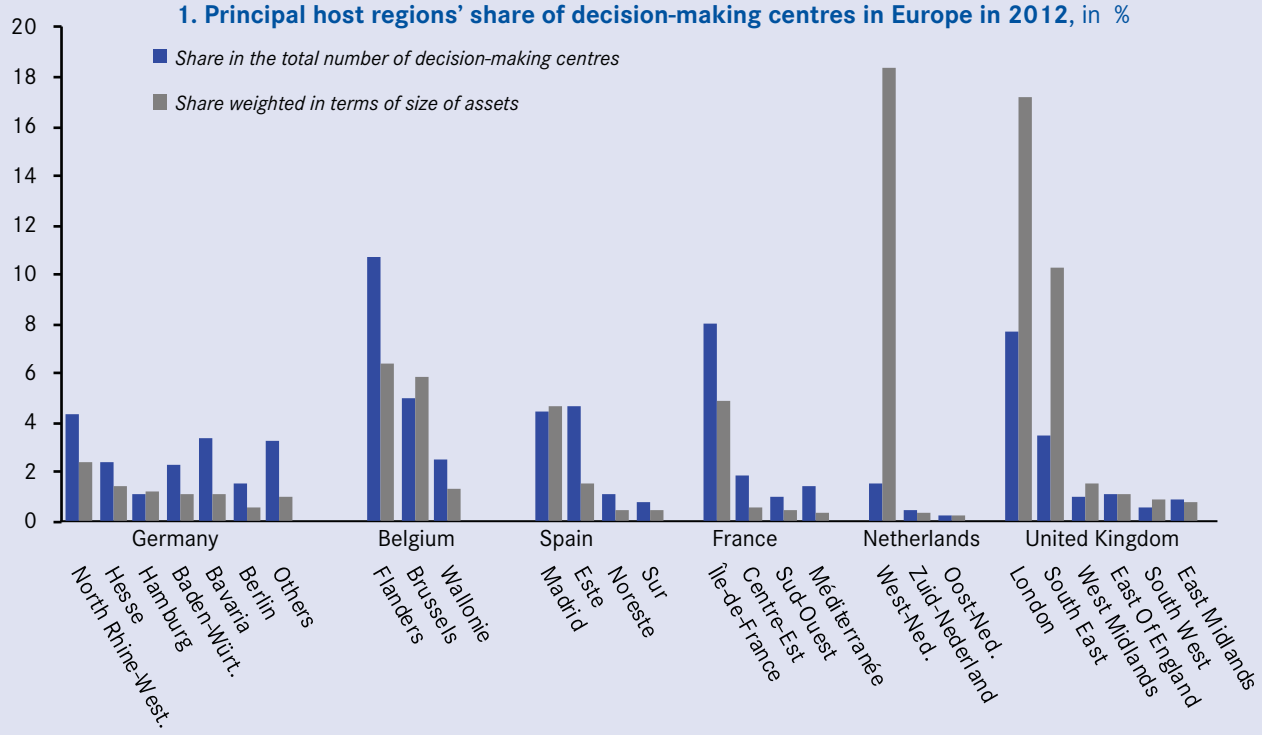
2012.[10] Between 1980 and 2012, France fell from the 1st to the 4th place, whereas Germany progressed from the 4th to the 1st. When the size of decision-making centres is taken into account, the United Kingdom clearly holds the 1st place over the whole period. France only held the 6th place in 2012, a clear decline in comparison with 1980, whereas the Netherlands climbed from the 6th place in 1980 to the 2nd in 2012.[11]

Concentration of decision-making centres in Île-de-France

Graph 1 sets out the distribution of decision-making centres by European region in 2012. The London region accounted for almost 8% of the total number of decision-making centres held by foreign groups and over 18% when weighted in terms of assets (28% taking London and the South East region together). Île-de-France was slightly ahead in terms of number of centres but far behind (less than 5%) when weighted in terms of assets: Paris attracts numerous centres, although of relatively modest size.[12] Flanders and the Brussels-Capital Region alone account for 16% of decision-making centres and 12% of assets.[13] The western region of the Netherlands (which includes Amsterdam, Rotterdam and The Hague) attracts fewer centres (about 2%), although the latter represent a very large share of assets (19%).

Two models clearly emerge: a concentrated model in the United Kingdom, France, the Netherlands and Spain; and

1. Principal host regions' share of decision-making centres in Europe in 2012, in %



Source: Calculation made by the authors using the Amadeus database.

[10] This concentration is still underestimated due to the fact that coverage of Germany and Belgium is fragmentary (see text box 1).

[11] The fact that Netherlands' share increased fourfold suggests that, in spite of our vigilance in tracking down real decision-making centres rather than letterboxes, a proportion of decision-making centres only have a legal and fiscal purpose (taxation on holding companies for the Netherlands).

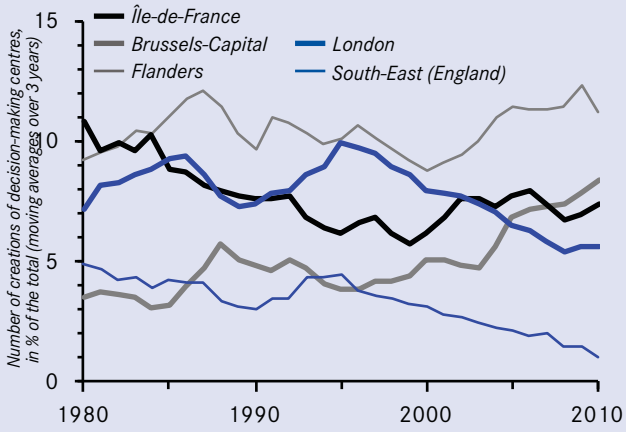
[12] For an overview of major Parisian establishments in 2011, see *Chambre de Commerce et d'Industrie (CCI) de Paris* (2011): *Les grands établissements parisiens : état des lieux et perspectives d'évolution*, Report, March. However, this report includes wholly national decision-making centres, which are excluded from the analysis produced in this *Note*.

[13] Since the Brussels-Capital region is both small in terms of surface area and enclosed within Flanders, it is difficult to entirely separate the attractiveness of these two regions.

a dispersed model in Germany and, to a certain extent, in Belgium, the latter country showing very high performance in relation to its size, with equal weight for Brussels and Flanders.

In terms of location decisions, Île-de-France's relative position gradually declined until the middle of the 1990s, before evening out (graph 2). London and the South-East region experienced a converse pattern of evolution: stability until the middle of the 1990s, followed by rapid decline. Flanders maintained a large share throughout the period. Finally, the Brussels-Capital Region's share increased while that of London declined. These opposite patterns of evolution between London and Brussels, as well as the stabilisation of Île-de-France, coincide with the establishment of the euro.

2. Share of five European regions in the establishment of new decision-making centres, 1980-2012



Source: Calculation made by the authors using the Amadeus database.

Observation 1. The location of decision-making centres in France is declining. France attracts centres of smaller size than other countries (United Kingdom and Netherlands). The centres are concentrated in Île-de-France.

The United States remain the leading investor in France

The principal countries with decision-making centres located in France are developed countries, with the United States in the lead (15% of foreign centres established in France, 22% of assets). Germany and Luxembourg also constitute a major presence while, when taking size into account, Switzerland tops Germany and the Netherlands.

The major emerging countries are far behind in this ranking. China, the leading emerging investor, ranks 17th in percentage of assets. In fact, France is far from being the emerging countries' preferred destination in Europe. Apart from language considerations (Brazil in Portugal, Mexico in Spain), the emerging countries prefer Germany and above all the United Kingdom (table 2).

2. Share of each host country in decision-making centres held by non-European countries in Europe, in 2012

Country of origin	Host country	In % of the total number of centres	Ranking	In % of assets	Ranking
Brasil	**France**	**13.7**	**3**	**3.0**	**6**
	Portugal	23.5	1	11.1	4
	Netherlands	2.0	8	43.1	1
China	**France**	**13.7**	**2**	**15.9**	**2**
	Germany	39.8	1	7.1	4
	United Kingdom	13.7	2	55.8	1
India	**France**	**8.9**	**5**	**1.4**	**5**
	United Kingdom	32.4	1	80.7	1
Japan	**France**	**15.5**	**3**	**8.0**	**4**
	Germany	23.8	1	18.6	2
	United Kingdom	21.0	2	36.4	1
Mexico	**France**	**16.7**	**2**	**1.7**	**4**
	Spain	44.4	1	61.5	1
Qatar	**France**	**23.5**	**2**	**3.3**	**2**
	United Kingdom	52.9	1	93.7	1
Russia	**France**	**7.3**	**5**	**19.7**	**3**
	Germany	47.7	1	33.8	1
USA	**France**	**15.4**	**3**	**4.1**	**5**
	United Kingdom	32.4	1	35.4	2
	Netherlands	3.3	6	42.0	1

Reading: In 2012, 13.7% of the Brazilian decision-making centres in Europe were established in France.

Source: Calculation made by the authors using the Amadeus database.

Observation 2. Advanced economies remain the principal source of decision-making centres located in France. Emerging countries mainly establish their major groups in the United Kingdom.

Determinants of the location of decision-making centres

Quantitative research rarely covers the location of decision-making centres, in particular due to the measurement difficulties mentioned above. However, the existing literature mentions the quality of the transport network (air and rail in particular), agglomeration forces related to the local ecosystem, the tax system and the price of real estate as important factors for the location of decision-making centres (see box 2).

Here we follow a twofold approach. First, we try to isolate the "pure attractiveness" component of the different European regimes' "market shares" depicted in graph 2. We then attempt to explain this "pure" regional attractiveness based on factors commonly put forward in academic research.

"Pure" Attractiveness of European Regions

The decline, followed by the stability of Île-de-France as a host region for decision-making centres belonging to foreign groups does not necessarily mean that the Paris region specifically declined and then stagnated in terms of attractiveness. The region's sectoral specialisation (in particular the importance of wholesale trade) and the traditional origin of foreign investments (United States and Europe rather than emergent countries) could explain Île-de-France's lower performance. It is of course desirable for a region to position itself in expanding sectors and establish strategic partnerships with dynamic investors. It is nevertheless important to break down changes in "market share" in order to isolate factors attributable to a region's "pure" attractiveness, since it is at this level that public policy can have an impact.

A breakdown has been made on the basis of a succession of "fixed effects", each of which isolates one of the dimensions of change in market share (box 3). This method makes it possible to distinguish factors pertaining to a region's "pure" relative attractiveness from those pertaining to developments "specific" to the country of origin, to the business sector concerned, or to the bilateral relationship between the country of origin and the destination country. Graph 3 sets out the results for four of the five regions shown in graph 2. Because of the method used, this graph should be interpreted in terms of changes rather than levels, since the latter are dependent upon factors that are invariable over time and are not depicted in the graph.

Whereas graph 2 shows a sizeable decline of Île-de-France until the middle of the 1990s, graph 3 shows that the region's "pure" attractiveness remained stable in the course of this

2. The results of academic research

According to Defever (2006),[a] decision-making centres do not necessarily follow functional units (production, marketing, etc.), and vice versa. However, the option of "offshoring" headquarters or decision-making centres increases the cost of communication between strategic units and production units, with problems of supervision. Transport facilities then become a key factor. For example, Bel and Fageda (2008)[b] show that the quality of airport infrastructures, and in particular the frequency of direct flights connecting a city to other major world cities, is a positive factor in attracting companies to locations. Moreover, in a recent article, Charnoz, Lelarge and Trevien (2016)[c] show that the extension of the French high-speed rail network facilitates movement of decision-makers (and therefore information) between decision-making centres and subsidiaries. Combining these different results, the quality of transport networks appears to be a key element in the attractiveness of major cities for the establishment of decision-making centres.

The economic geography literature mentions several agglomeration forces explaining the geographic concentration of decision-making centres in a small number of major cities, connected with the size of the market and greater facility in the sharing of information. Davis and Henderson (2008), Henderson and Ono (2008) and Strauss-Kahn and Vives (2009) show that the possibility of exchanging information has a positive impact on US companies' decisions concerning the location of decision-making centres.[d] Lovely *et al*. (2005)[e] show that these effects are more marked in the case of companies exporting to markets about which it is particularly difficult to obtain information due, for example, to their distance.

The costs of congestion, the corporate income tax and the personnal income tax have a negative influence on location choices of decision-making centres. The latter are intensive business activities in terms of skilled workforce, and sensitive to the level as well as the progressiveness of taxation, see Strauss-Kahn and Vives (2009) and Egger *et al*. (2013).[f]

Labour costs and real estate prices should also have a negative influence in terms of attracting centres. However, both of these variables are to a large extent endogenous to attractiveness: the greater a major city's attractiveness, the greater the cost of skilled labour and real estate. In fact, the econometric relation between labour and real estate costs and the location of companies is generally fragile.[g]

[a] Defever F. (2006): "Functional Fragmentation and the Location of Multinational Firms in the Enlarged Europe", *Regional Science and Urban Economics*, vol. 36, no 5, pp. 658-677.

[b] Bel G. and X. Fageda (2008): "Getting There Fast: Globalization, Intercontinental Flights and Location of Headquarters", *Journal of Economic Geography*, vol. 8, no 4, pp. 471-495.

[c] Charnoz P., C. Lelarge and C. Trevien (2016): "Communication Costs and the Internal Organization of Multi-Plant Businesses: Evidence from the Impact of the French High-Speed Rail", *Document de Travail de l'INSEE, Direction des Études et Synthèses Économiques*, no G 2016/02, January.

[d] Davis J. and J.V. Henderson (2008): "The Agglomeration of Headquarters", *Regional Science and Urban Economics*, vol. 38, no 5, pp. 445-460. Henderson J.V. and Y. Ono (2008): "Where do Manufacturing Firms Locate Their Headquarters?", *Journal of Urban Economics*, vol. 63, no 2, pp. 431-450. Strauss-Kahn V. and X. Vives (2009): "Why and Where do Headquarters Move?", *Regional Science and Urban Economics*, vol. 39, no 2, pp. 168-186.

[e] Lovely M., S. Rosenthal and S. Sharma (2005): "Information, Agglomeration, and the Headquarters of US Exporters", *Regional Science and Urban Economics*, vol. 35, no 2, pp. 167-191.

[f] Egger P., D. Radulescu and N. Strecker (2013): "Effective Labor Taxation and the International Location of Headquarters", International Tax and Public Finance, vol. 20, no 4, pp. 631-652.

[g] See, for example, Head K. and T. Mayer (2004): "Market Potential and the Location of Japanese Firms in the European Union", The Review of Economics and Statistics, vol. 86, no 4, pp.959-972. Roback (1981) uses the data on wages and rent for 98 American cities in order to calculate attractiveness indexes for each of them. The cost of labour therefore constitutes both a hindrance to and a sign of attractiveness. See Roback J. (1981): "Wages, Rents, and the Quality of Life", Journal of Political Economy, vol. 90, no 6, pp. 1257-78.

3. Changes in "market share"

We aggregate individual data along five dimensions: country of origin *o* (group parent company located in a country other than the destination country), country in which the centre is established *d*, region of establishment *r*, sector *k*, year *t*. The sample is composed of 78 countries of origin, 15 countries of establishment, 55 regions of establishment, 351 sectors and 33 years, that is to say an unbalanced sample group comprising 31,788 observations each representing a number of location decisions noted $N_{odrkt.}$ The objective of the exercise is to break down this number between factors specific to bilateral relations between the country of origin and the country of establishment (such as the fact of speaking the same language or having a shared border), factors connected with observed developments in the country of origin (such as financial opening up, or an economic crisis), features of the development of the sector under consideration (expanding or declining sector) and, finally, factors pertaining to the region's "pure" attractiveness over time. The breakdown is as follows:

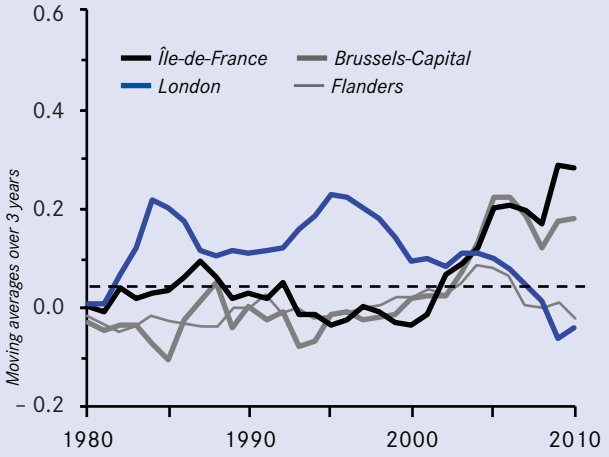
$$N_{odrkt} = \mu_{od} + \mu_{ot} + \mu_{kt} + \mu_{rt} + \varepsilon_{odrkt}$$

where each term μ is a fixed effect in the dimensions shown as index, and ε_{odrkt} is the residual of the equation (unexplained part of the number of decision-making centres).

A region's "pure" attractiveness over time is therefore measured by the fixed effect $\mu_{rt.}$ This fixed effect refers to national (such as GDP and taxation) and regional (such as infrastructures and transport) developments. Since the average of fixed effects μ_{rt} is inherently null, each fixed effect μ_{rt} shows changes in the region's relative attractiveness in relation to the average for all regions. This method makes it possible to take into account all of the elements that contribute to relative changes in a region's attractiveness, even when they are not observable. It does not give us any information about a region's absolute level of attractiveness in a given year, since this absolute level is also dependent upon the fixed effects μ_{od} which characterise the importance of the ties between each country of origin and the destination country, on average during the 1980-2012 period.

period, and then increased (in an erratic manner) from 2000 onwards. This indicates that the loss of Île-de-France's "market share" shown on graph 2 is caused by structural factors: the region was badly positioned during this period in terms of country of origin of foreign investments and, above all, in terms of business sectors.[14] The region's "pure" attractiveness, which depends upon national and local factors, did not decline; it even increased during the 2000s. The Brussels-Capital Region experienced the same positive change at the end of the period, whereas the respective positions of London and Flanders tended to decline.

3. Changes in the "pure" relative attractiveness of four host regions



Source: Authors calculations (*cf.* box 3).

Determinants of "pure" attractiveness

In order to specify the determinants of Île-de-France's attractiveness in relation to competing regions, we now examine the number of decision-making centres established in France in relation to a range of factors specific to the destination country or region, while other elements likely to influence location are taken into account using fixed effects (box 4).

The comparison here is limited to Île-de-France, London and Brussels, which constitute the three closest competitor regions in terms of attracting decision-making centres. Germany is in a strong position when taken as a whole, but due to its dispersion and greater distance from Île-de-France, the competition is more indirect. The results show that air transport infrastructures have important positive effects. Although, during the period considered, Île-de-France was the best-positioned European region after London in terms of air traffic, the number of destinations operated declined.[15] In fact, four airports might claim the role of gateway to Europe:

[14] The sectors with a higher than average presence in the Île-de-France region (energy, hotel and catering) are less dynamic sectors than those with a higher than average presence in Brussels and London (holding companies, consulting, property development), see Berenberg-Gossler P., A. Eyquem and F. Toubal (2016): "Les centres de décision d'entreprises étrangères en France : une analyse comparée", *Focus du CAE*, no 13, June.

[15] The London airports transported 142 million passengers in 2014, as compared with 92 million for the Paris airports. The total annual number of flights from Paris CDG in 2014 (435,000) is clearly behind London Heathrow (468,000) and Frankfurt (441,000), and just ahead of Amsterdam (427,000). The network declined by 1.1% in 2014, while that of Amsterdam progressed by 2.8%. Brussels is far behind with 202 destinations. *Cf.* Eurostat: http://ec.europa.eu/eurostat/statistics-explained/index.php/Air_transport_statistics

4. Factors explaining "pure" attractiveness

We present a regression of the number of decision-making centres belonging to a country of origin *o*, established in a country *d*, a region *r*, a sector *k* and at a date *t*, N_{odrkt}, in relation to explanatory variables specific to the country *d* and to the region *r* or over time *t*. The factors specific to the country of origin, to the sector and to the bilateral relationship *od* are still captured by the fixed effects, as in box 3.

At the regional level the selected variables are as follows:[a]

- air transport infrastructures: Air_{rt} index ranking the regions in terms of number of passengers transported during the year. A higher quality airport infrastructure is considered to be strongly correlated with the number of passengers passing through it;
- human capital at the regional level: Edu_{rt} is the percentage of the regional population holding a tertiary degree;
- the size of the region, measured by the logarithm of its population POP_{rt}.

The variables concerning decision-making centres' countries of establishment are as follows:[b]

- the nominal corporate income tax rate (CIT_{dt});
- the upper marginal personal income tax rate (PIT_{dt});
- the proportion of social security contributions in GDP (SSC_{dt});
- quality of governance: average of the QoG (*Quality of Government Institute*) index on corruption, public order and bureaucracy (QoG_{dt}) (a high indicator signals a good level of governance);
- a residential property price index ($PROP_{dt}$) as a proxy for the price of business premises.

As stated above, the list of explanatory variables is supplemented by the fixed effects *ot*, *kt* and *od*. The scarcity of regional data obliges us to limit the sample to the 1999-2012 period. The assessment sample is composed of 72 countries of origin, 12 destination countries and 60 regions. It comprises 11,463 observations. The results are described by the following equation, in which the terms between brackets designate the Student statistics and div_{odrkt} represents the whole set of fixed effects, as well as the residual:

$$N_{odrkt} = \underset{(3,96)}{0,001}\, Air_{dt} + \underset{(2,36)}{0,124}\, Edu_{rt} + \underset{(1,97)}{0,035}\, \ln Pop_{rt} + \underset{(0,77)}{0,003}\, CIT_{dt}$$
$$- \underset{(-2,42)}{0,894}\, PIT_{dt} + \underset{(1,15)}{0,012}\, SSC_{dt} + \underset{(1,80)}{0,305}\, \ln QoG_{dt}$$
$$- \underset{(-1,09)}{0,001}\, PROP_{dt} + div_{odrkt}$$

The CIT rate, social security contributions and real estate prices do not have a significant impact on the number of decision-making centres. On the other hand, the positive impact of airport infrastructures, level of education, quality of governance, the size of the market, and the negative impact of the upper PIT rate are all the more striking as all other aspects of attractiveness –in particular the different countries' average relative attractiveness over the period of the study– are taken into account by means of the (sectoral, bilateral and country of origin) fixed effects. However, it should be noted that the estimated coefficients cannot be entirely interpreted as relations of causality, as the explanatory variables may be partly endogenous (for example, air traffic).

[a] *Cf. OECD Regional Statistics and Indicators*, data available at http://www.oecd.org/gov/regional-policy/regionalstatisticsandindicators.htm

[b] The tax and social data are taken from the OECD online platform *cf.* https://data.oecd.org/. The quality of government indicator is drawn from Teorell J., S. Kumlin, S. Dahlberg, S. Holmberg, B. Rothstein, A. Khomenko and R. Svensson (2016): *The Quality of Government OECD Dataset, University of Gothenburg, The Quality of Government Institute*, 16 January, available on http://qog.pol.gu.se/data/datadownloads/qogoecddata

Heathrow, Frankfurt, Paris CDG and Amsterdam Airport Schiphol. It is important for Paris not to lose ground compared to those three competitors.

The proportion of tertiary education graduates in the regional population also has a positive impact on attractiveness. Regarding this criterion, Île-de-France clearly ranks behind London (– 26%) and at the same level as Brussels. The size of the market, measured by population, also has a positive influence. Île-de-France's population is 45% higher than London's and 57% higher than the combined population of Brussels and Flanders. But it is 30% lower than London and the South-East, when counted together.

The results are informative regarding taxation. On the one hand, the CIT rate does not have any significant impact upon the establishment of decision-making centres, although this would probably not apply to headquarters. On the other hand, the upper personnal income tax rate has a significant negative impact. With regard to this criterion, France is of course in a weaker position, although the gap is not huge compared to the United Kingdom (9%) and above all Belgium (1%) in 2016.[16] Although the weight of social security contributions does not appear to have any significant impact on the number of decision-making centres, additional estimates show that variability of these contributions (as well as of other tax variables) has a significant negative impact. Therefore, tax instability tends to reduce the number of new decision-making centres established in a given location. This is also consistent with the significant impact of quality of governance, a criterion which places France behind the United Kingdom and Belgium.

[16] For France, the upper marginal rate includes the CSG supplementary social security contribution (*Contribution sociale généralisée*) and the CRDS social security debt retirement contribution (*Contribution au remboursement de la dette sociale*).

Finally, real estate prices have a negative but relatively insignificant impact, which is not very surprising considering that high prices are also the sign for high levels of attractiveness (see box 2). Moreover, the selected price index –of residential properties– is not necessarily the most suitable for assessing major cities' attractiveness with regard to decision-making centres (see *infra*).[17]

Attracting and keeping decision-making centres

The conclusions from academic research and econometric estimates set out above are clear: companies locate their decision-making centres considering the size of the region, the airport infrastructures, the availability of a skilled workforce, the quality of public governance, advantages connected with the presence of other decision-making centres and moderate taxation of high incomes.

Although competition for leading the Anglo-Saxon capitalism network in Europe has naturally been won by London (and Dublin), a second battle appears to be more open: becoming the economic capital of the Eurozone. Germany, Belgium and the Netherlands are well-placed in this respect. Germany, which could easily establish itself by virtue of its sheer mass, presents the disadvantage of dispersion of its centres due to its federal structure. Brussels is a major competitor in the long term, but the city's size is still relatively small. Île-de-France has every chance, given that it does not waste its opportunities.

Rather than attempting to attract decision-making centres from abroad, the objective should be above all to improve the business climate in France. This will be at the advantage of French businesses as much as decision-making centres of foreign origin. From this point of view, efforts are welcome in terms of simplification, as well as increased competition in the field of legal, accounting and notarial services (which is likely to lower the price of these services). First, we focus on taxation, a recurring theme in debates concerning attractiveness.

Taxation

Corporate income tax

The CIT rate is not a major determining factor with regard to the location of decision-making centres. However, this does not mean that rules governing this tax are neutral. In territorial terms, an exemption system is applicable to corporate groups in France: the profits of foreign subsidiaries of decision-making centres located in France are taxed in the host country, except from a share for expenses and charges equal to 5% of the dividend paid by the subsidiary to the parent company. This system encourages decision-making centres to settle in France, in spite of the country's high CIT rate. Although the CIT rate does not encourage the establishment of production centres in France, the territoriality principles enable firms to build foreign subsidiaries from France.

However, the influence of the CIT tax on attractiveness for decision-making centres could substantially increase with the implementation of the Anti-Avoidance Tax Package (ATAP) Directive.[18] Admittedly, by reducing the possibilities of deduction of interest payments and offshoring of profits *via* patent royalties, the ATAP is likely to re-establish a certain tax justice between companies of different sizes, thus promoting renewal of the productive fabric.

Nevertheless, ending the current exemption applicable to profits of subsidiaries located in non-European Union countries, if the CIT rate is 40% lower than the legal rate applied in the parent company's Member State, will inevitably reinforce tax competition within the European Union, which would be contrary to economic efficiency.[19] A clearly preferable solution would be to compare the CIT rate in the non-European country with a single rate for the Member States as a whole, that is to say the average of the rates applicable within the European Union.

Recommendation 1. Attracting foreign decision-making centres should not be the major criterion guiding decisions concerning the corporate income tax, although changes to the latter should be followed attentively. This applies in particular to the implementation of the ATAP.

Personnal income tax

Although the CIT rate does not appear to have a direct impact on the location of decision-making centres, the upper marginal personnal income tax (PIT) indeed has a significant negative impact. France has been aware of this since 2003, when the "impatriate" tax regime was introduced. This measure enables

[17] Comparable data on business premises is not available on a regional basis. Other determinants, such as the quality of the local economic ecosystem, were not included in this estimate due to a lack of comparable data between countries.

[18] Presented by the European Commission on 28th January 2016, the text contains a "package" of measures aimed at providing a more coordinated response by the European Union with regard to aggressive fiscal practices on the part of companies, in particular by means of imposing limits upon the deductibility of interest payments and on profit tax exemptions for subsidiaries.

[19] To take the example of a group with business activities in a non-European Union country where the corporate tax rate is 12%, the tax rate on a subsidiary's repatriated profits (repatriated to the decision-making centre in the European Union) will be 12% if the CIT in the parent company's Member State is lower than 30% (i.e. 0.12/0.4) but equal to the legal rate of CIT in the parent company's Member State if this tax rate is greater than 30%. A difference of two percentage points in corporate tax (29% as against 31%) would thus lead to a difference in the rate of taxation of the subsidiary's income of 19 percentage points (12% as against 31%).

employees, who previously resided abroad, to have their expatriation bonuses exempted from PIT and their liability for wealth tax (*Impôt sur la fortune*) limited to property located in France. This applies for a period of five years.[20]

It is admittedly justified for impatriates, who are subject to high costs due to location change, to benefit from tax relief for a few years. However, entering into a race to the bottom in matters of taxation would carry the risk of harming the principles of vertical (between households with different levels of income) and horizontal (between well-off households, depending on whether or not they are impatriates) equity. Additionally, this approach can only lead to similar measures in other countries and, finally, to a situation where the most skilled mobile households, which are already the winners of European integration and globalisation, escape from taxation. Aggressive tax competition, as in the case of CIT, has not yet begun regarding the PIT. It is therefore not too late to initiate the debate in order to establish far-reaching cooperation in Europe regarding this issue.

Recommendation 2. The time period of the "impatriate" regime should not be extended. Discussions with our European partners with regard to the taxation of high incomes in order to maintain tax equity between European taxpayers should be started.

From tax inspection to tax consulting

Tax uncertainty hinders the establishment of decision-making centres in new locations. In addition to this uncertainty, the European Commission estimates the cost of bringing companies into line with tax regulations at around 2% of the total paid in CIT by major European Union companies.[21] Reducing uncertainty and supporting companies in bringing themselves into line would thus be advantageous in terms of attractiveness.

In the United Kingdom, the tax administration provides services to companies within the framework of a targeted strategy, encouraging the establishment of foreign companies in the country. This strategy includes the appointment of a single tax inspector, who clarifies tax problems which companies faced in real time, and the provision of information on the tax system applicable to a transaction or event.

Moreover, in order to attract new companies, the administration places a specific team at the disposal of foreign multinationals wishing to settle in the United Kingdom. This service provides written confirmation of the applicable tax laws connected with a transaction or specific event and guarantees a full response within 28 days of filing a case.

In France, considerable efforts have been made to improve relations between companies and the tax administration, in particular with the extension of advance tax rulings and non-retrospective effects. However, obstacles remain from the point of view of companies, which deplore the heavy procedural formalities and waiting times, which are scarcely compatible with business life and give rise to fears that advance tax ruling procedures may ultimately lead to tax inspections.[22] The "Relation of Trust" experiment launched in 2013, a project aimed at making companies' tax positions secure and ensuring that they cannot subsequently be called into question, represents a new step forward. The companies taking part in this experiment (of various sizes and on a voluntary basis) are guaranteed the confidentiality of information passed on to the tax administration, including the tax inspection departments. They benefit from informal validation of their accounts within six months of their closure, as well as from a formal pledge by the administration that, provided no further points give rise to objection, no subsequent inspection will be undertaken.[23] It is important to complete this experiment and to draw all its necessary conclusions, while also using feedback from various OECD countries.

Recommendation 3. A business consulting culture should be developed within the tax administration in order to help companies understand the applicable rules. This should be based on an initial assessment of the "relation of trust" experiment, which is to be made public.

Improving the attractiveness of Paris and Île-de-France

In view of the very high level of concentration of decision-making centres in Île-de-France, policy for attracting these centres is specifically targeted at this region.[24]

[20] An exemption of 50% is also applicable to unearned capital investment income.

[21] This cost is connected in particular to differences in tax legislation between countries where subsidiaries are established. See European Commission (2011): *Impact Assessment Accompanying the Document Proposal for a Council Directive on a Common System of Financial Transaction Tax and Amending Directive 2008/7/EC*, September.

[22] *Cf.* Cour des comptes (2012): *Les relations avec l'administration fiscale*, Thematic Report.

[23] *Cf.* www.economie.gouv.fr/files/dp_relation_de_confiance_avec_administration_fiscale_0.pdf

[24] At this stage, there is no sign that another regional major city could attract numerous decision-making centres. The Lyon and Marseille Airports are respectively rated 56th and 58th in Europe for passenger traffic.

The Paris airport platform

Numerous studies stress the importance of air transport for decision-making centres. In this respect, Île-de-France's good position should not lead to inaction. Firstly, the national airline is experiencing operational problems and could reduce its coverage of destinations, in particular direct intercontinental lines. As shareholder, the government could play a role in order to determine the company's strategy and maintain these lines. Secondly, Paris Charles-de-Gaulle (CDG) Airport has a poor rating in terms of passenger services. A ranking established on the basis of user surveys placed Roissy airport in 33rd position at the international level, whereas Heathrow was ranked 8th (Munich 3rd and Amsterdam 13th).[25] The principal criticisms facing the Paris International airport concern its distance from the city centre (23 km), as well as the absence of a fast rail link[26] and traffic congestion on the motorway for access by taxi. An express line is henceforth planned within the framework of the Grand Paris project, but will not be ready until 2023 at best. The completion of a fast Roissy-Paris connection should be treated as a national investment priority. In the meantime, temporary remedies need to be found.

Recommendation 4. Paris Roissy Charles-de-Gaulle Airport's strong points need to be reinforced, while maintaining the direct international lines. Its transport connection with the capital city need to be improved.

International secondary schools

The number of secondary schools with international sections is limited in Paris. Admittedly, there are private schools, but the fees are high (from 6,000 to 15,000 euros per school year). In our estimation, there appears to be a lack of public institutions with international sections in inner Paris. A more detailed examination reveals that Île-de-France has 10,081 places, taking both private and public secondary schools into account, as well as international sections, i.e. 0.08% of the total population of Île-de-France. By way of comparison, London offers 16,702 places, that is to say a ratio of 0.20%, and Brussels almost 25,000 places, i.e. 2.08% of the Belgian capital's population. Thus, unlike Brussels, Paris does not appear to offset its inherent linguistic disadvantage in relation to London.[27] Purely international institutions such as the *Lycée international de Saint-Germain-en-Laye* are overloaded. The provision of a greater number of places in these international sections, or even the opening of new international secondary schools, could only promote the reception of high-level foreign executives and therefore the establishment of decision-making centres.

Recommendation 5. The number of international secondary schools and/or places in the international sections available in the Paris region should be significantly increased.

Universities of international standing

Like international secondary schools, universities contribute to a region's attractiveness for foreign executives. They also contribute to a city's influence, and are a factor of attractiveness not only in the field of R&D, but also for decision-making centres more generally (availability of young graduates, possibility of cooperation with academics in the field of law, finance, geopolitics, etc.). Finally, powerful universities give rise to networks of former students (alumni) which promote the region abroad and are more likely to return to Île-de-France for work.

In view of both the positive effects of higher education identified in our regressions and the more general importance of having universities of international standing, in our estimation massive investment in one or two of the Paris region's major university centres would be likely to promote the attraction of new decision-making centres. The "investment programmes for the future" (*Programmes d'investissements d'avenir*) is noteworthy, totalling more than 47 billion euros. However, Paris's universities fell behind in the course of the 1990s and 2000s.[28] The emergence of major mutualised groupings such as the Paris-Saclay University business cluster and PSL Research University represents progress, although efforts still need to be made.

Recommendation 6. Investment should be made in one or two major university centres in Paris in order to make them high-profile institutions of international renown.

Cost of business premises and of skilled labour

Although it is difficult to clarify the impact of real estate costs and skilled labour, since both of these variables are also signs

[25] For details of the 2016 rating, see www.worldairportawards.com/awards/world_airport_rating.html. A rating completed in 2013 by the foreign correspondents of *Le Figaro* newspaper corroborate this conclusion, placing CDG in 9th position internationally, whereas Heathrow appears in 3rd place, see www.air-journal.fr/2013-03-14-les-10-meilleurs-aeroports-du-monde-selon-le-figaro-569255.html. The majority of available ratings do not place Roissy-CDG among the best European airports.

[26] The minimum travel time between Heathrow and London is 20 minutes as compared with 45 for the journey between Roissy and Paris.

[27] Due to the fact that English is in general use in multinational companies.

[28] Cytermann (2010) points out that, with the exception of the *Universités nouvelles*, the universities of Île-de-France were overlooked by the *Universités 2000* programme. The U3M (University of the Third Millennium) programme should enable them to catch up, but this effort will still have to be continued. Cytermann J-R. (2000): "Les universités d'Île-de-France : bilan et perspectives d'évolution", *Les Annales des Mines*, February. Available on www.annales.org/ri/2000/ri03-2000/cytermann43-48.pdf

of attractiveness, it is reasonable to consider that, at a given level of attractiveness, an increase in these two hinders the establishment of new decision-making centres in a given location.

Real Estate

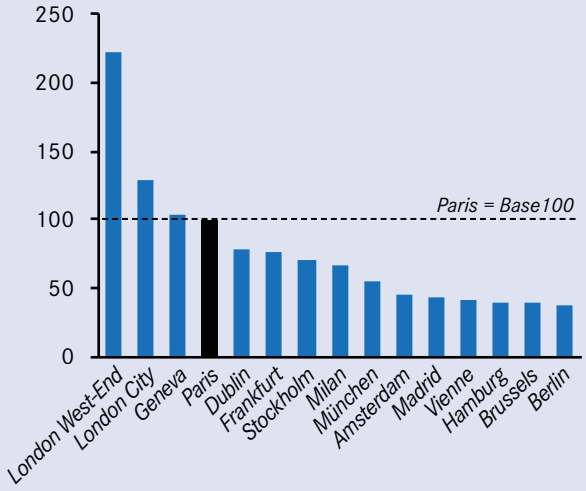
In the absence of entirely reliable data on non-residential property prices (offices in particular), it was not possible to directly test the impact of this variable on attractiveness. However, the small amount of data available shows that Paris is in an intermediate position: less expensive than London and Geneva, but clearly more expensive than the major German cities (Munich, Hamburg, Berlin and even Frankfurt) and almost three times more expensive than Brussels (see graph 4). Thus, changes in office rent prices need to be closely monitored in order to avoid harming the attractiveness of a region, Paris in particular, in which the price of office space per m² has sharply increased since 2009.[29] Levels of empty office space, which are relatively high in La Défense and the "Western Crescent" should also be monitored, with more incentive-based taxation in order to counter the practice of maintaining empty offices. In the first place, we suggest the construction of a public index of business premises prices following the model of the *Notaire-INSEE* index for residential property.

Skilled labour

Academic research shows that wages and property prices tend to reflect concentration of economic activities (see box 2). However, high wages may also prove to be dissuasive above a certain level. The ambiguity of the impact of high wages led us to exclude this variable from the economic estimates.

In France, senior executives on average receive lower gross salaries than those observed in other European countries, and in the Netherlands and Germany in particular. Admittedly, the tax and social contribution rates are much higher in France at these wage levels. However, comparison of labour costs shows that this is not enough to reverse the rankings: the cost

4. Index of the annual occupancy cost of an office per m², at the end of 2015



of senior executives remains lower in France as compared with Germany and is more or less at the same level as in the Netherlands.[30] As far as the organisation of the labour market is concerned, it should be noted that the system for the agreed termination of permanent employment contracts, introduced in 2008, made termination of employment relatively flexible in practice for executive workers.[31] Labour costs and labour market rigidity do not therefore appear to be real negative elements in France regarding the location of decision-making centres.

The recommendations issued in this *Note* are not specific to foreign groups' decision-making centres. They also have positive implications for French groups and more generally for the country's economic activity as a whole.

[29] See Haut Conseil de Stabilité Financière (HCSF) (2016): *Analyse du marché de l'immobilier commercial*. Available on www.economie.gouv.fr/files/files/directions_services/hcsf/HCSF_-_Note_de_synthese_-_Immobilier_commercial_francais.pdf

[30] Keogh A. (2015): "Les salaires des cadres de direction en Europe", *Focus du CAE*, no 9, November.

[31] UNÉDIC (2015): "Qui sont les allocataires indemnisés par l'assurance chômage en 2014", *Éclairages, Études et Analyses*, no 12, June. Signoretto C. (2015): "Quel bilan de l'usage de la rupture conventionnelle depuis sa creation", L*e 4 Pages du CEE (Centre d'études pour l'emploi),* no 121, May.