Globalization and the Urban-Rural Divide in France *

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Abstract

Does globalization exacerbate the economic divide between urban and rural areas? Using establishment-level data for France over the period 1995-2015, we construct the domestic firms' linkage structure across French Employment Zones (EZ). For any EZ pair, we define a linkage as the presence of at least one establishment in both EZs that belong to the same firm or group. We complement this measure of connectedness between EZs with a proxy for domestic trade and a measure of industrial dissimilarity. Along with information about the domestic firms' linkages, we exploit municipality-level information to construct an index of urbanization degree and customs data to define various measures of exposure to globalization. We document that i) over the sample period, employment in large urban areas grows, on average, faster than in rural/medium urban EZs; ii) rural/medium urban areas' employment growth is positively associated with the presence of firms' linkages to large urban areas; eventually, but only preliminary, iii) exposure to globalization reduces the number of firms' linkages between EZs.

Keywords: urban-rural divide, firms' linkages, globalization, local employment growth

JEL Classification: F14, F61, R11

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1 Introduction

In recent years, a narrative has been developing affirming the idea that industrialized countries are experiencing a progressive economic divergence between the fast-growing urban areas and the sluggish rural peripheries. The story goes that the high-skilled urban elite is fully equipped to reap off the benefits of globalization and technological change, while the rural low-skilled counterpart is left witnessing a contraction of jobs and salaries. Those advocating this story have used it to explain several recent phenomena: the 2016 presidential elections in the US, the Brexit referendum in the same year, and the 2017 presidential elections in France, drawing a parallel between the U.S. and EU urbanization experiences.[1] Moretti (2012) provides an in-depth analysis of the economic causes and consequences of what he calls the *great divergence* for the U.S., providing ample evidences about its spatial polarization. Compared to the U.S., the literature on the European urban-rural divide remains scarce[2], with the consequence of making it difficult to compare the urban-rural across the two sides of the Atlantic. By providing new evidences on this matter for France, we aim at addressing this shortcoming.

In this paper, we empirically study the differential urban-rural employment growth patterns for France over the period 1995-2015, and we shed light on the role that globalization plays in shaping the spatial economic ties determining the interdependence between urban and rural areas. We provide evidences for three main stylized facts. First, we show that employment of large urban areas grows, on average, faster than in rural/medium urban location over the period considered. Consistent with this finding, we also document that rural and medium urban areas display greater volatility, with some location performing as good as the large urban ones. Second, we show that rural and medium urban areas' employment growth is positively correlated with the presence of firms' linkages to large urban areas. This results allows to go beyond the simple urban vs rural dichotomy, and highlights how economic ties can be an important mechanism of spatial interdependence and positive spillover propagation. We then move to the causes of firms' linkages creation and destruction. Globalization is frequently ascribed as one of the key drivers to determine spatial economic disparities. We check for this hypothesis, by showing that firms' linkages reduces across areas the more these are exposed to globalization.

[1] In a 2018 article appeared on the online version of the *Financial Times*, Gideon Rachman summarized this view as follows: *The split between a metropolitan elite and a populist hinterland is clear in western politics. [...] So what is it that sets urbanites against the rest? The anti-Trump, anti-Brexit, anti-Erdogan, anti-Orban city dwellers tend to be richer and better educated than their political opponents. By contrast, the rallying cry that unites fans of Mr Trump, Brexit, Mr Erdogan or Mr Orban is some version of a promise to make their countries "great again".* From *Urban-rural splits have become the great global divider*, 30/07/2018.

[2] See Iammarino, Rodriguez-Pose, and Storper (2019) for a recent discussion.

In order to assess urbanization degrees across French locations, we exploit information at the municipality level to construct an employmnet zone index of urbanization. Employment zones are defined by the French administration and are the conceptually similar to the U.S. commuting zones. These are defined as geographic entities in which the large share of its resident people live and commute to work within the boundaries. The urbanization index is constructed as a population-weighted average of all municipalities' urbanization degrees within each employment zone. In our classification, we identify four types of areas: rural, medium urban, large urban, and the region of Paris. To document our stylized facts, we use confidential establishment-level data to construct the domestic network of firms' linkages across employment zones. For any employment zones pair, a linkage is defined as the presence in both areas of at least one establishment belonging to the same firm. We complement this main measure of linkage with other ones. In particular, we jointly use information of domestic input-output tables and local industry composition to map the intensity of the domestic supply chain across employment zones. Moreover, we construct for each employment zones pair an index of industrial dissimilarity. Using French custom data, we identify firm-level import and export activities, however, in order to have spatially disaggregated measures of exposure, we reallocate trade at the establishment level using employment as weight. We complement trade data with firm-level information about ownership, in order to distinguish between national and multi-national firms (MNE).

Our paper relates to two different strands of literature. First, we contribute to the urban and regional economics literature on the spatial spillovers of urban growth. A large body of literature has been developed about the consequences of market potential on the long-run evolution of output and employment spatial distribution. Redding & Sturm (2008) exploit the division of West and East Germany as a natural experiment to highlight the importance of market access on the subsequent evolution of city size distribution in the country. They find that the exogenous placement of the border impacted negatively on the size of cities located near it. Brülhart, Carrère, and Robert-Nicoud (2018) exploit the fall of the Iron Curtain to identify the overall employment and wage effects of an increase in market access for Austria towns. In line with the previous study, they find positive effects across towns near the border, moreover they find wages more responsive and employment less responsive in large cities. To rationalize these facts they develop a spatial equilibrium model featuring city size specific labor elasticities. They find that the welfare gain driven by increase in market access is maximum for mid-size cities. Moving beyond the agglomeration literature, recent studies suggest that heterogeneous firms sort endogenously in space to take advantage of productivity gains driven by density (see Baldwin & Okubo,

2006; Forslid & Okubo, 2014). Combes et al. (2012) find selection effects in larger French cities to be negligible. A different conclusion is reached by Gaubert (2018), who develops a model of endogenous city size distribution to disentangle the role of agglomeration economies from firm sorting. She finds the sorting mechanism to account for half of the total productivity level across cities. Compared to these works, we are interested in the interdependence between urban and rural areas and we test how the former can be an economic driver for the latter. Our paper is also related to Cuberes, Desmet and Rappaport (2021), in which they explicitly take into account the role of proximity of large urban areas to their hinterland for the latter economic growth. They study U.S. counties and metro areas over a long period of time, between 1840 and 2017, and find that positive urban spillovers have been weakening over the last decades. They develop a two-city model of commuting and trade where the main drivers capturing the rise and fall of spatial urban spillovers are dictated by the relative importance of commuting and shipping costs. Compared to their paper, we delve into the spillover mechanisms, highlighting how firm's linkages play a pivotal role in fostering rural areas growth, moreover, by considering French local labor markets as the unit of analysis, we control for variations in commuting costs and focus on the role of globalization.

Second, we contribute to a growing trade, urban, and macro literature studying the propagation of shocks within and between countries. Following the pioneer work on trade and output correlation by Frankel & Rose (1998), Di Giovanni & Levchenko (2010) extend the analysis at the sector level, in particular they show that vertical production linkages account up to a 30% of such comovements.[3] Di Giovanni, Levchenko, and Mejean (2018) exploit French firm-level data to quantify the role of direct multinational linkages in explaining output comovements between France and foreign countries, finding that the formers account for one third of the correlation. Cravino & Levchenko (2017) shows that bilateral multinational linkages alone cannot explain the large outcome fluctuations observed and propose a theoretical model to quantify the aggregate impact of multinational firms. They find that at the world level such firms account for 10% of productivity shocks for an average country and by eliminating barriers to multinational production would decrease cross-country standard deviation in output growth by 30%. Kleinert, Martin and Toubal (2015) look at output comovements at a more disaggregated level. They exploit variation in multinational affiliates presence across French regions and find positive output correlation between the latter and the countries of origins of the affiliates. These findings have important implications for different policy aspects: from a macroeconomics perspec-

[3]See also: Clark & Van Wincoop, 2001; Baxter & Kouparitsas, 2005; Ng, 2010

tive, they clarify the role that international trade and global value chains can have in explaining a country aggregate output volatility. Previous works have also focused on the role of input-output networks (Acemoglu et al., 2012; Caliendo et al., 2018), the role of financial linkages and social networks. In particular, our work relates to those of Giroud and Mueller (2019), who document the role that firms' internal network play in propagating shocks across US regions. They use U.S. Census Bureau data that allows to identify the firms' affiliations of all establishments located in the U.S. territory. Compared to their work, we go beyond the study of the non-tradable sector and we keep into account the role of international linkages, moreover we focus on the spatial pattern of urban versus peripheral employment zones' economic outcome.

The rest of the paper is organized as follows. Section 2 presents the data used in the analysis. Section 3 presents the empirical methodology and findings on the role of French large urban areas as source of employment growth for rural and medium urban ones, moreover it discusses the mechanisms at the core of this results, namely the role played by the firms's network of spatial linkages. Section 4 presents the empirical methodology and findings on the role of globalization in shaping the spatial distribution of firms' linkages. Section 5 concludes.

2 Data

For the empirical analysis, we combine five datasets provided by different French administrations. For the construction of the domestic firms' network we use information reported in the Social Security database, the *Déclaration Annuelle des Données Sociales* (DADS), produced by the National Institute of Statistics and Economic Studies (INSEE). The dataset contains establishment-level information on employment, wage bills, and the location zip code, and industry of activity for extraction, manufacturing and services, over the period 1995-2015. We restrict the sample to private employment due to changes in the reporting methodology of public employment in 2009, we keep only non-occasional reported jobs, excluding the occasional ones that are very short lived[4]. Each establishment is associated to the firm of belonging, this allows the identification of the branches of all multi-establishment firms in the sample, hence the construction of the firm's network. In addition, DADS reports information about employment and wage bill levels by class of occupation, we therefore exploit the share of managerial employees and the total wage bill expenditure of each establishment to

[4]The same worker could be reported for different occasional jobs in one year, hence by excluding it we ensure to not double count the number of jobs across establishments. Double counting is particularly problematic in our context, since it might artificially increase employment growth correlations across locations.

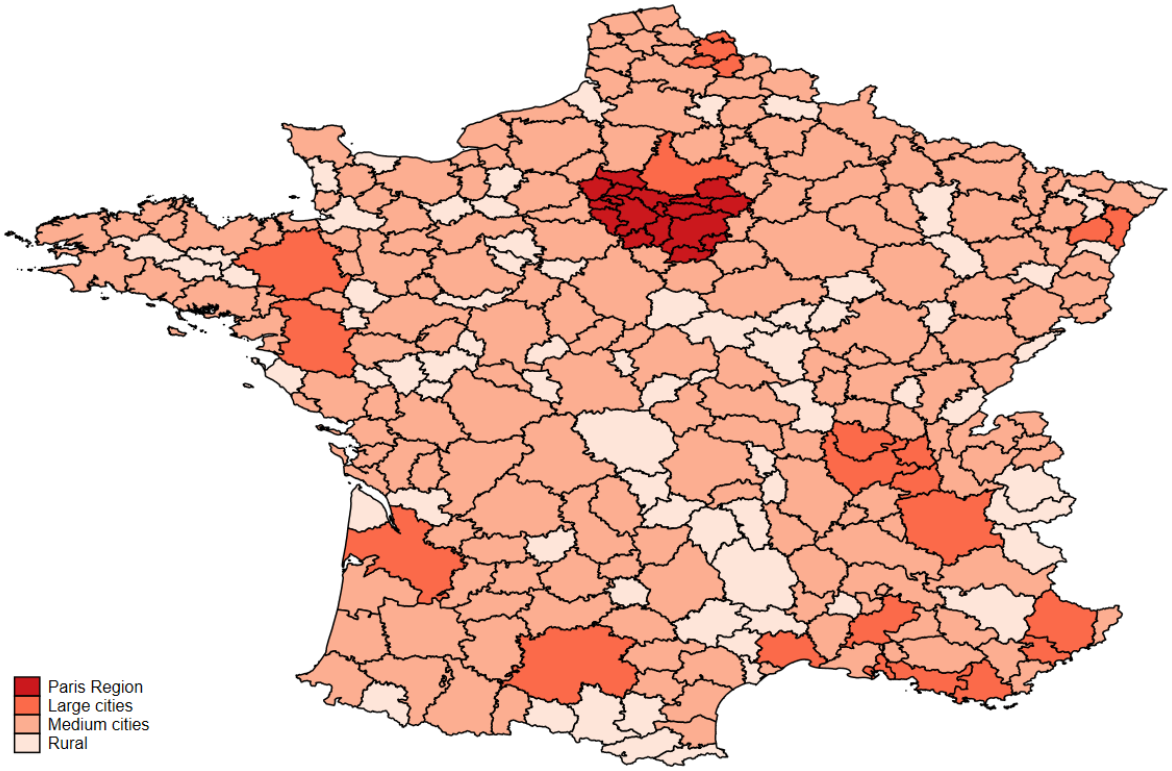
predict the location of firms' headquarters[5]. We complement these information with firm-level balance sheet data collected by the fiscal authority, the *Fichier de Comptabilité Unifié dans SUSE* (FICUS) and the *Fichier Approché des Résultats d'Esane* (FARE), with FARE replacing FICUS from 2008 onwards. The two datasets contain information on domestic and export revenues, value added, total production, employment in full-time equivalent (FTE), capital, and intermediate inputs. Overall, the full merged dataset covers the period 1995-2015, with a yearly average of 1.4 million plants, 1.1 million firms, and 16 million workers, across 220 different sectors classified at the 3-digit 2003 NAF (*Nomenclature d'Activités Française*) level. To construct the different measures of exposure to globalization we merge information on firm-level bilateral exports and imports, provided by French Customs, and information on multinational ownership of firms located in the French territory, collected in the *Liaison Financière* (LIFI) database. To allocate trade data, we apportion a firm import and export volumes to its respective establishments using the employment share of the latter. In addition, we construct different measures of within-France linkages based on the structure of the input-output tables provided by INSEE for the year 1995. Eventually, we choose employment zones (EZ), or *Zones d'Emploi*, as the unit of analysis. These are geographical areas characterized by a large fractions of population living and working within it and only a tiny fraction commuting outside for working reasons. INSEE provides a territorial division of Metropolitan France in employment zones since 1990, however boundaries are not subject to significant changes over time, hence for simplicity we use the 2010 version of the tables. EZs are much smaller than French regions and identify 297 different areas comprising many different towns and cities. **Table A.1** in Appendix A reports summary statistics.

Urbanization Index

Each of the 297 employment zone defines a geographical area encompassing a multitude of cities and towns characterized by different numbers of inhabitants, population densities, and boundaries structures. In order to assign an urbanization index to each EZ, we rely on the 2010 administrative geographic repartition of France in Urban Areas (UA), or *Aires Urbaines*, developed by INSEE, which assigns each municipality to an urban agglomerate following similar principles to those used for defining local labor markets. INSEE classifies urban units using different levels of employment threshold, in particular 10, 5, and 1.5 thousands workers, to distinguish between large cities and medium urban centers. These urban units need to be autonomous entities,

[5]We cross validate the predicted HQ location using the one reported in the FICUS-FARE database. Our strategy allows to match more than 80% of reported HQ location.

Figure 1: French Employment Zones' Urbanization Degree



Note: The figure reports the partitioning of France in 297 employment zones, as defined by INSEE in 2010, along with their degree of urbanization.

hence detached from larger urban agglomerates. All towns and rural areas in the outskirts of the urban unit are then incorporated to the latter as long as they employ at least 40% of their workforce in the urban unit. These municipalities can also be connected to multiple large urban units. All together the urban unit and, potentially, its economic zones of influence constitute an UA. This classification procedure leaves some remote, low populated towns and villages excluded, hence these are considered utterly rural. With all cities, towns, and villages assigned to an UA, INSEE provides an index, from zero to ten, defining the UA population size to which any municipality belongs.

The advantage of using the geographic definition of an UA is to allow perfect matching to its relative employment zone boundaries. EZ are larger than urban areas and each contains many of the latter, with a wide range of urbanization degrees. For our purpose, we compute a weighted average of all UA urbanization indexes at the EZ level, using population as weights, and we define four different urbanization index bins in order to define the EZ-level degree of urbanization. **Figure 1** shows the subdivision of France in the 297 EZ previously discussed and their respective urbanization

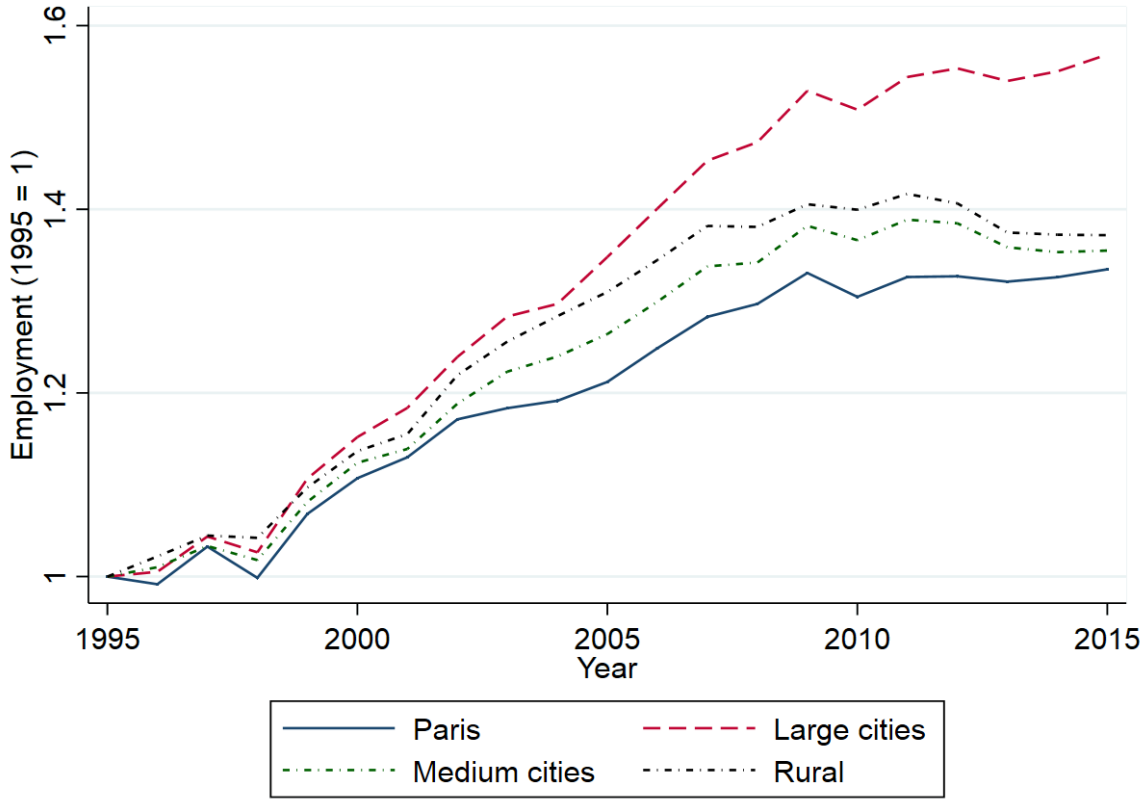
Table 1: Employment Zones (EZ) Summary Statistics by Urbanization Degree

	Rural	**Medium Urban**	**Large Urban**	**Paris**
Panel A: Levels in 1995				
Private Employment	8.750	32.305	134.100	173.748
Wage Bill (million EUR)	158	621	2.803	4.631
Average Wage	17.788	18.803	20.471	22.678
Exports per Employee	10.132	11.815	20.471	22.678
Share Exporters	0.09	0.10	0.13	0.14
Share Exporters, Manuf.	0.24	0.24	0.26	0.29
Share Manuf. Employment	0.38	0.33	0.27	0.27
Panel B: Changes 1995-2015				
Private Employment (%)	41	39	55	27
Wage Bill (million EUR) (%)	115	109	134	86
Average Wage (%)	53	50	51	56
Exports per Employee	6.162	5.152	6.417	5.956
Share Exporters	0	0	-0.02	-0.02
Share Exporters, Manuf.	0.01	-0.02	-0.02	-0.02
Share Manuf. Employment	-0.12	-0.12	-0.11	-0.13

Note: Panel A provides summary statistics at the EZ level in 1995. *Share Exporters* defines the average number of establishments involved in exporting activity over all establishment at the EZ level. *Share Exporters, Manuf.* defines the average number of manufacturing establishments involved in exporting activity over all manufacturing establishment at the EZ level. *Share Manuf. Employment* defines the average share of manufacturing employment over the total private employment at the EZ level. Panel B shows variations over the whole sample (1995-2015) at the EZ level. Variables reported in absolute values in Panel A, but expressed in percentage changes are marked with %.

classification in four levels: rural areas, medium urban centers, large urban centers, and the region of Paris. Our methodology is able to capture the high urbanization degree of all the largest cities in France (in dark orange). Excluding the region of Paris (in red), on the North-East it is possible to distinguish Lille and Strasbourg; on the South-East corner, in the inner side we have Lyon and Grenoble while on the coast we have Nice, Cannes, Toulon, Marseille, Avignon, and Montpellier; on the South-West corner we identify Toulouse and Bordeaux; finally, on the North-West corner we have Nantes and Rennes.

Figure 2: Evolution of Private Employment by Urbanization Degree



Note: The figure reports the evolution of French private employment over the period 1995-2015 for the four urban area categories. for each of the latter categories, private employment is normalized to one in 1995.

Table 1 reports the summary statistics by urbanization category. The evolution of private employment, in Panel B, is suggestive of diverging trends between the large urban areas and the rest of the country. Paris is characterized by a different dynamic, despite sharing most of its features with the other large urban agglomerates, it ranks last in terms of average employment growth. This differential evolution has been

accruing over the period studied, as depicted in **Figure 2**. This pattern represents our first stylized fact and it will guide the subsequent empirical analysis.

It must be noted that the evolution of these average growth rates hide much of heterogeneity. When looking at the EZ level, rural and medium urban areas can be found both at the top and the bottom of the distribution. As an example, over the period 1995-2015, the best performing EZ in terms of employment growth is Clermont-l'Hérault, a predominantly rural area located in the southern part of France and neighbouring with Montpellier. The latter EZ sharing the same fate of Clermont-l'Hérault, being the fastest employment growing EZ among the large urban areas. This geographical pattern is not exceptional[6], in the next section we will develop a methodology allowing to systematically capturing this regularity.

3 Urban Growth Spillovers

This section documents the second stylized fact, namely the role of large urban areas as a pull factor for local employment growth of rural and medium urban EZs. We presents the baseline empirical specifications and discuss in detail its main variables and controls, we further document some geographical patterns of interest for the understanding of the urban-rural divide.

Empirical Specification

In our baseline specification, we look at the cross-section of employment growth between 1995 and 2015 across the 257 employment zones classified as rural or medium urban. We aim to capture the role of large urban areas as economic engines for the rest of the country, in particular, we test whether being connected to a large EZ has a positive impact on employment growth over time. We estimate the following OLS specification:

$$\Delta \log(L_{i,t}) = \alpha + \beta_1 DIST^{LEZ}_{i,95} + \beta_2 LINKS^{LEZ}_{i,95} + \beta_3 IOD^{LEZ}_{i,95} + \mathbf{X}'_{i,95}\gamma + \delta_z + \varepsilon_i, \qquad (1)$$

where $\Delta \log(L_{i,t})$ defines employment growth for rural and medium urban EZ i over the sample period 1995-2015, $DIST^{LEZ}_{i,95}$ defines the distance (km) between EZ i and the closest large urban EZ, $LINKS^{LEZ}_{i,95}$ defines the share of establishments in EZ i that belong to the same firm/group with establishments located in large urban EZs,

[6] **Figure B.1** in Appendix **B** presents evidences of such heterogeneity for all the 297 EZs. **Figure A.3** and **Figure A.4** in Appendix **A** show summary statistics for the top and bottom five employment zones respectively for rural/medium urban areas and large urban areas.

$IO^{LEZ}_{i,95}$ defines a measure of exposure of EZ i to large urban EZs through input-output linkages, $\mathbf{X}_{i,95}$ is a set of EZ-specific controls, eventually δ_z is a fixed effect capturing the belonging of EZs to a macro region[7] and ε_i the error term. Our specification blends together insights from the trade and macro literature about the propagation of shocks[8] with the urban economics literature about the interaction of urban systems[9]. In particular, we apply the tools of the first to shed light on the research question of the latter, namely the mechanisms determining large cities spillover effects.

Measures of Linkages

The main hypothesis we want to test is whether the domestic firms' network is a key driver in explaining spatial spillovers from the fast-growing, large urban EZ towards rural and medium urban ones. To accomplish this, we construct different *direct* and *indirect* measures of linkages between EZs. A first source of direct linkage concerns the role played by domestic firm-to-firm trade. Recent works have highlighted this to be a crucial mechanism behind the propagation of shocks in the domestic economy[10], however firm-to-firm trade data are yet to be widely available and the French administration has no access to such kind of data. This calls for a second-best strategy, hence we construct a spatial proxy of domestic firm-to-firm trade by merging together information about establishments location, the industry in which they are active, and the domestic input-output table. Let's define the input-output "distance" between EZ i and EZ j over all industries k as follows:

$$\text{IOD}_{ij,t} = \sum_{k} \left[s_{ik,t} - \sum_{k'} \frac{\alpha_{k',95}\, \omega_{kk',95}}{\sum_m \alpha_{m,95}\, \omega_{mk',95}}\, s_{mk',t} \right]^2,$$

where $s_{ik,t}$ is the share of employment in EZ i and industry k at time t, $\alpha_{m,95}$ is the production labor intensity of intermediate m in 1995, and $\omega_{km,95}$ is the expenditure share of sector k for intermediate m, such that $\sum_m \omega_{km,95} = 1$. The idea behind $\text{IOD}_{ij,t}$ is to measure how close two EZs are in the vertical production chain by comparing their local employment composition, knowing that specialization in certain industries will make these areas more dependent from those in which their intermediate inputs are produced. In this respect, $s_{ik,t}$ is a proxy for the local supply capability of EZ

[7] See **Figure B.2** in Appendix **B**

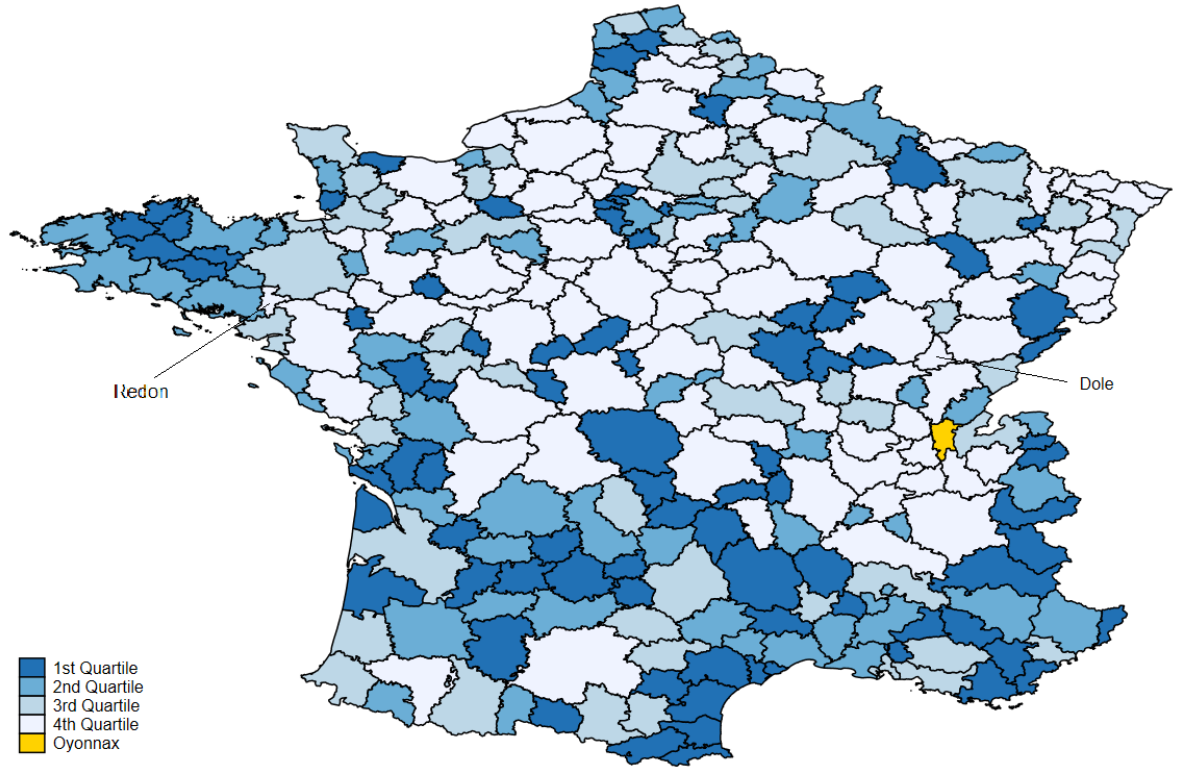
[8] See among others: Acemoglu, Akcigit, and Kerr (2016), Di Giovanni, Levchenko, and Mejean (2018), Kleinert, Martin and Toubal (2015), and Giroud and Mueller (2019).

[9] The literature provides a heterogeneous collection of theoretical and empirical results. Some examples are: Krugman (1993) and Cuberes, Desmet and Rappaport (2021)

[10] Direct tests using domestic firm-to-firm trade data include Magerman et al. (2016) and Tintelnot et al. (2018)

i in the production of inputs k, while the second term proxies for the demand for inputs k of EZ j by weighting its expected expenditure across industries given the local employment and industrial compositions. Such input-specific supply-demand "distance" is then squared and summed across all industries. As any measure of distance, the closer EZ i will be in terms od supplying capacity to EZ j, the tighter their interdependence, and the smaller will be the value associated with their linkage.

Figure 3: Input-Output Distance (IOD) between Oyonnax, Redon, and Dole



Note: The figure reports the cross-section distribution of the input-output distance measure between Oyonnax and all the other EZs in 1995. The IOD measure has values ranging between 0 and 1, with the $1st$ quartile featuring the highest values. To interpret the IOD measure, as any distance measure, low values need to be associated to small distances in terms of vertical production structures, hence tighter linkages between the EZs considered.

For clarification purposes, consider the following example. According to the 1995 French input-output tables, 30% of chemical industry expenditure goes in the purchase of manufactured plastic, hence the chemical industry is intensive in such input. *A priori* we should expect an EZ specialized in manufacturing plastics to be largely involved in domestic trade with another EZ specialized manufacturing chemical products. Our measure aims at capturing such relationship. For France, Oyonnax employs 30% of the workforce in the plastic industry, while Redon and

Dole employs 15% in the chemical one. **Figure 3** presents the IOD coefficients for Oyonnax *vis-à-vis* all the other EZs. As expected, the two coefficients associated to Redon and Dole are very small, falling in the bottom quartile, hence confirming that these location are potentially very much dependent from each other.

A second source of both direct and indirect linkages concerns the role of firms' network. For each EZ pair, we construct two different measures of firms' linkages. We consider an establishment p in EZ i to be *directly* linked to EZ j if the latter is hosting p's headquarters (HQ). We take the ratio of all HQ linkages with EZ j over the set of establishments in EZ i, P_i, to define the HQ share exposure of EZ i:

$$\text{HQ}_{i \leftarrow j,t} = \frac{\sum_{p \in P_i} \mathbb{1}_{i,t}[HQ(p) \in j]}{N_{P_i}},$$

where the function $HQ(p)$ defines the location of establishment p's HQ. Such definition implies for the measure to be directional, indeed the correspondent exposure of establishments in EZ j to their HQs in EZ i need not to be the same. One way to overcome directionality is to use some sort of aggregate function summarizing the information of the variables. We chose to take the average between the two:

$$\text{HQ}_{ij,t} = \frac{\text{HQ}_{i \leftarrow j,t} + \text{HQ}_{j \leftarrow i,t}}{2}.$$

These measures can be thought of as the within-country versions of the multinational ownership linkage proposed by international trade literature [11], which account for the fact that affiliates' economic outcomes are tightly connected to their respective parents company, thus acting as a crucial channel of shocks propagation in the economy. The mechanisms at the core of such comovements can be of various nature. On the one hand, HQs and their establishments tend to face common demand and supply shocks, on the other, they tend to be involved in large volumes of intra-firm trade. Our measure is able to pick up correlation in economic outcomes due to this type of relationships. Another aspect pertaining the nature of firms' network is the role of within-firm resource allocation, highlighted in Giroud and Mueller (2019), according to which financially constrained firms tend to spread across establishments the losses of one of them, in an attempt to curb local negative shocks. This implies that all the establishments of a same firm or group are *indirectly* linked together. To capture this channel, we define at the EZ pair ij the share of establishments belonging to the same

[11] See among others: Kleinert, Martin and Toubal (2015) and Di Giovanni, Levchenko, and Mejean (2018)

HQ over the total number of establishments in the two EZs:

$$\text{LINKS}_{ij,t} = \frac{\sum_{p \in P_i} \sum_{p' \in P_j} \mathbb{1}_{ij,t}[HQ(p) = HQ(p')]}{N_{P_i} N_{P_j}}.$$

Some evidences also point to the fact Another source affecting employment growth comovement across EZs relates to plants common ownership. Plants belonging to the same firm or economic group that are located across different EZs are expected to be subjected to the same shock affecting the firm. We define the pairwise plant-level linkages, $LINK_{ijt}$, as the number of plants pairs located respectively in EZ i and EZ j that belong to the same firm[12] at time t.

Set of Controls

Among the set of EZ-specific controls, we take into account geographical aspects, the incidence of international trade, and the industrial composition. The urban economics literature highlights the importance of amenities in the location choice of individuals. Part of the amenities story relates to climate and environmental conditions, that might incentivize domestic migration towards specific French regions like the southern costs. To control for these, we include geographic dummy variables defining French macro regions.[13] International trade can also dampen local employment growth (*e.g.* Autor, Dorn, and Hanson, 2013), therefore we control for the EZ growth of trade exposure per worker over the period 1995-2015. Defining by p an establishment belonging to the set of all establishment in the EZ i, P_i, we define the trade exposure per worker in EZ i at time t as:

$$\text{TEW}_{i,t} = \frac{\sum_{p \in P_i} [X_{i,t}(p) + M_{i,t}(p)]}{L_{i,t}},$$

where $X_{i,t}(p)$ and $M_{i,t}(p)$ define respectively export and import values of establishment p in EZ i at time t. In the baseline specification we will control for the growth rate of $TEW_{i,t}$ over the period 1995-2015. Eventually, we want to control for the industrial composition of the EZ and we will include two of such measures. The first one is a shift-share picking up the predicted industry-level growth over the sample period, where the share component is constructed using the beginning-of-the-period

[12] DADS provide a 14-digit code, SIREN, identifying each plant in the sample. The code SIREN is in turn composed by a 9-digit code, SIRET, identifying the firm/group and a 5-digit code, NIC, identifying the plant belonging to any SIRET, allows a consistent track over time

[13] Macro-region dummies delimit Metropolitan France in five areas: North-East, South-East, North-West, South-West, and the Paris Region.

industry-level employment composition, and the shift component using the aggregate industry-level employment growth rate between 1995 and 2015. Defining by k an industry present in EZ i, K_i, we construct the following industrial shift-share measure:

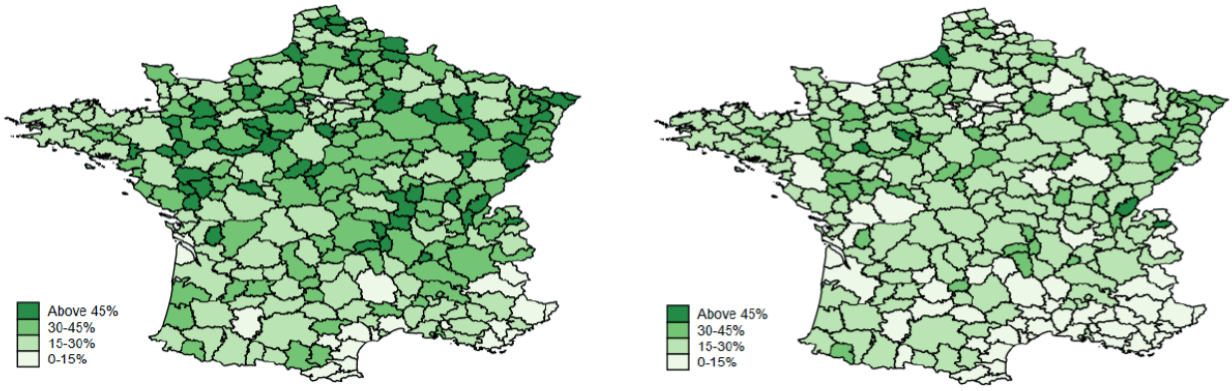
$$\text{SSI}_{i,t} = \sum_{k \in K_i} \Delta \log(L_{k,t}) \frac{L_{ik,95}}{L_{i,95}}.$$

The second measure is constructed at the EZ pair and takes into account the fact that similar production structures are subjected to similar demand and supply shocks. Consider oil price shocks, for example, oil-intensive industries would be all affected by an increase of the price of oil, in turn this might affect local employment of those areas specialized in such sectors. Imbs (2004) pointed out such criticality in the study of international business cycle comovements. In order to account for this potential omitted variable problem, we construct a measure of production structure dissimilarity between any pair of EZs. The industry dissimilarity index given by:

$$\text{DIS}_{ij,t} = \frac{1}{2} \sum_{k} \left(\frac{L_{ik}}{L_i} - \frac{L_{jk}}{L_j} \right)^2,$$

where L_{ik}/L_k represents the share of industry k employment in EZ i. The index takes value between 0 and 1, with 0 being the case of symmetry in industry specialization for the EZ pair ij.

Figure 4: Manufacturing Share Evolution Across EZs between 1995 and 2015



(a) 1995 (b) 2015

Note: The figure reports the distribution of manufacturing shares across French EZs for 1995 and 2015.

Finally, we control for the share of manufacturing at the EZ level. Industrial trends

across western economies have been characterized by a steady decline of employment in the manufacturing sector.[14] France is no different in this respect, Malgouyres (2017) shows how the rise of Chinese import competition, following its accession to the WTO, had a negative impact on manufacturing employment growth at the EZ level. Similar results are found by Acemoglu, Lelarge, and Restrepo (2020) when looking at the effect of robot adoption on overall French manufacturing employment growth. In order to account for these long-run trends, we control for the beginning-of-the-period share of manufacturing at the EZ level. **Figure 4** presents two snapshots of the manufacturing shares across EZs at the beginning and at the end of the sample period.

Results

Table 2 presents the empirical estimates of equation (1). The sample contains only small and medium urban EZs' employment growth. We test whether employment growth in these areas is correlated to the presence of direct and indirect linkages with large urban areas. Column (1) reports estimated coefficients for the set of controls only. On top of the previously mention controls, we include the EZ employment level at the beginning of the period to test for the presence of convergence patterns of the least populous areas. Indeed, the negative coefficient associated to the employment level in 1995 is suggestive of conditional convergence and it is stable across specifications. Concerning the controls of the industrial composition, manufacturing share is not significant, this should however being not surprising due to the presence of the industrial shift share that captures, among other factors, the long-lasting decline of manufacturing at the aggregate level. Worker-level trade exposure growth is substantially not significant, a part for few specification. It is worth noting that in this case, by using the aggregate level of trade, the variation stemming from the differential effect of export and import for employment growth is hid. Columns (2) to (5) show one by one the coefficients of our main variables of interest, column (6) shows our preferred specification with all variables together. Proximity has a positive effect for spillovers to propagate, this is in line with previous results Our measure of firms' network linkage is positive and weakly statistically significant when distance is not taken into account. Industrial dissimilarity is significant and enters with negative sign, meaning that the more similar the industrial structures of the two EZ are, the larger the realized spillover effects. Finally, our measure of input-output linkages is not significant. Appendix **C** presents additional results taking into account the

[14] Among others: globalization as in Autor, Dorn, and Hanson (2013) and robotization as in Acemoglu and Restrepo, 2019)

Table 2: Employment Growth Determinants over the Period 1995-2015

	Dep. var.: Private Empl. Growth 1995-2015 (%)					
	(1)	(2)	(3)	(4)	(5)	(6)
Empl. in 1995 (Log)	-0.04***	-0.05***	-0.10***	-0.06***	-0.05***	-0.10***
	(0.01)	(0.01)	(0.04)	(0.02)	(0.01)	(0.03)
Share Manuf. Empl.	-0.08	-0.08	-0.05	-0.07	-0.07	-0.03
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Shift Share Industry	0.80***	0.79***	0.76***	0.75***	0.80***	0.72***
	(0.18)	(0.17)	(0.17)	(0.17)	(0.15)	(0.16)
Trade. per Empl. Growth	0.01	0.02*	0.01**	0.01	0.02***	0.02**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)
Distance (Large Urban ZE)		-0.12***				-0.12***
		(0.02)				(0.02)
Links (Large Urban ZE)			1.87*			1.35
			(0.98)			(0.98)
Dissimilar (Large Urban ZE)				-0.05***		-0.08*
				(0.03)		(0.05)
IO Links (Large Urban ZE)					-0.13	0.84
					(0.68)	(0.97)
Obs.	256	256	256	256	256	256
R^2	0.54	0.55	0.55	0.54	0.61	0.61

Note: The table reports the estimated coefficients for equation (1). The dependent variable is defined as the private employment growth of rural and medium urban EZs over the whole period (1995-2015). All the independent variable refers to the year 1995, with the exception of *Shift Share Industry* and *Trade. per Empl. Growth* that are defined over the period 1995-2015. Standard errors are cluster at the ZE level. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

polarizing effects[15] that proximity and economic connections with the Region of Paris have on long-run employment growth. These results go in the direction of the baseline ones, with firms' linkages to Paris playing an important role in influencing other EZs' growth patterns.

In the next session, we discuss the role that globalization has in hindering local growth of rural and medium urban areas by disrupting their firms' connections to large urban areas.

[15] Following the nomenclature provided by Hirschman (1958): the *trickle-down effect* refers to positive economic spillovers from urban to rural areas, while the *polarization effect* the negative ones.

4 The Role of Globalization

Having assessed the importance of firms' linkages as a channel of employment growth spillover, we are interesting in evaluating the impact of globalization in shaping the evolution of such linkages. In this section, we document how EZs that are more exposed to globalization forces tend to be less connected. The impact is heterogeneous across degrees of urbanization, with the high-globalized large urban EZs disconnecting relatively more with the rest of the country. We then inquire what kind of globalization aspect determines the observed patterns.

Empirical Specification

In the same spirit of equation (1), we test the long-run determinants of firms' linkages for each EZ pair. With $u \in U = \{S, L\}$, we define the EZ's urbanization degree, such that S defines the rural and medium urban EZs, and L defines the large urban EZs and those belonging to the Region of Paris. Moreover, with $g \in G = \{L, H\}$, we define the EZ's globalization degree, such that L defines low exposure and H high exposure to globalization. We estimate the following specification:

$$\Delta \log(\widehat{LINKS}_{ij,t}) = \alpha + \sum_{u \in U} \sum_{u' \in U} uu' + \sum_{g \in G} \sum_{g' \in G} gg' + \sum_{u \in U} \sum_{u' \in U} \sum_{g \in G} \sum_{g' \in G} (uu' \times gg') + \mathbf{X}'_{ij,95}\gamma + \varepsilon_{ij}, \quad (2)$$

where $\Delta \log(\widehat{LINKS}_{ij,t})$ defines the growth rate of the share of firms' linkages between EZ i and EZ j over the sample period 1995-2015, uu' and gg' define respectively a set of EZ pair urbanization and globalization indexes, eventually $\mathbf{X}_{ij,95}$ is a set of EZ pair-specific controls for the beginning of the period, and ε_{ij} the error term.

Among the set of covariates in 1995, we control for the beginning-of-the-period share of firms' linkages, the distance (km), and the level of industrial dissimilarity between each EZ pair.

We also aim at understanding what features of globalization are relevant in explain the observed long-run patterns of firms' linkages formation and disruption. We separately estimate the following two-way fixed effect specification, for the three main urbanization group pairs (*i.e.* Small-Small, Small-Large, and Large-Large) and for all of them together:

$$\log(\widehat{LINKS}_{ij,t}) = \alpha + \beta_1 EXT_{ij,t} + \beta_2 INT_{ij,t} + \beta_3 TRAD_{ij,t} + \delta_{ij} + \varepsilon_{ij,t}, \quad (3)$$

where $EXT_{ij,t}$ and $INT_{ij,t}$ respectively define measures of the EZ-pair extensive and intensive margin of trade, $TRAD_{ij,t}$ define a measure of local specialization in the tradable industries.

Globalization Measures

We here describe in detail the three globalization measures used for the estimation of equation (3). We define the intensive margin of trade for the EZ pair ij at time t as:

$$\text{EXT}_{ij,t} = \frac{\sum_{p \in P_i} \mathbb{1}_{i,t}[X(p) + M(p) > 0] + \sum_{p' \in P_j} \mathbb{1}_{j,t}[X(p') + M(p') > 0]}{N_{P_i} N_{P_j}},$$

where p and p' respectively represent plants located in EZ i and in EZ j, $\mathbb{1}_{i,t}[X(p) + M(p) > 0]$ is an indicator function taking value one when the sum of export and import of establishment p located in EZ j at time t is greater than zero, and N_{P_i} represents the sum of all establishments located in i. In other words, $\text{EXT}_{ij,t}$ capture the share of trading establishments in the EZ pair ij over the total number located in i and j. We further control for the intensive margin of trade, that we define as:

$$\text{INT}_{ij,t} = \frac{\sum_{p \in P_i}[X_{i,t}(p) + M_{i,t}(p)] + \sum_{p' \in P_j}[X_{j,t}(p') + M_{j,t}(p')]}{L_{i,t} + L_{j,t}}.$$

Our definition of intensive margins is simply the sum of the trade exposure per worker in EZ i and EZ j. Finally, test the importance of the size of the local tradable sector. Defining with $T \in K$ the subset of tradable industries[16], we define the share of tradable industries in EZ-pair ij as follows:

$$\text{TRAD}_{ij,t} = \sum_{k \in T} \frac{L_{ik,t} + L_{jk,t}}{L_{i,t} + L_{j,t}}.$$

Results

Table 3 presents the empirical estimates of equation (2). The sample contains all EZ pairs. We evaluate the differential role of urbanization and globalization on the evolution of the spatial firms' network over time. Columns (1) to (3) reports estimated coefficients for the set of controls only. Standard gravity determinants do not play any role on the evolution of linkages, moreover the coefficient associated to the beginning-of-the-period level of linkages is negative and significant, suggesting that

[16] We exploit the definition of tradable industries as proposed in Mian and Sufi (2014)

firms' location decision do alter the spatial structure of the established network in a way that does not reinforce the main nodes. Column (4) assesses the differential impact across urbanization groups. Coefficients are negative and significantly estimated, with large urban EZ pairs characterized by the largest values. This result suggests that rural and medium urban places have actually experienced a strong convergence in terms of spatial connectedness with the rest of the country. However, since these places actually benefit the most in terms of employment growth from connection to the large urban areas, we can see how such an opportunity has been seized over time. Column (5) introduces controls for the level of globalization across EZ pairs. Results mirror those for the urbanization degree, with the high globalized areas disconnecting relatively more than the low globalized ones over time. This result holds even after controlling for the interaction terms in column (6).

Table 4 presents the empirical estimates of equation (3). By controlling for EZ pairs fixed effects, we evaluate the role of different globalization determinants on the evolution of the spatial firms' network over time. We do this for all EZ pairs in column (4) and also by dividing for pairs of specific degrees of urbanization in column (1)-(3). Across all specifications, it is apparent that the extensive margin of trade, namely the share of exporters, does not play a significant role. The intensive margin, namely the value of trade per employ, and the share of employment in the tradable sector are, instead, precisely estimated. Globalization at the intensive margin seems to generate more links over time, however such effect is counteracted by the negative effect of employment in tradables. Interestingly, each of these effects plays a similar role, in terms of magnitude, across EZ pairs when controlling for the urbanization level.

5 Conclusion

In this paper, we have analyzed whether rural areas benefit from being economically connected to fast-growing large urban areas. To assess this, we have focused on French employment zones over the time period 1995-2015. We find evidence of large urban areas to grow, on average, at a faster pace, and we document that rural and medium urban areas connected to them through the domestic French firms' network to outperform their non-connected peers.

Among the drivers in severing the economic linkages between employment zones, globalization is key. Highly exposed areas are characterized by low levels of firms' linkages growth and this capture much of the variation of firms' linkages evolution for pairs of large urban areas and partly for large-to-medium urban ones. We acknowledge that evidences are still preliminary and need to be further investigated.

Table 3: Establishment Linkages Growth Determinants over the Period 1995-2015

	Dep. var.: Normalized Est. Link.s Growth 1995-2015 (%)					
	(1)	(2)	(3)	(4)	(5)	(6)
Norm. E. Link.s in 1995 (Log)	-0.29***	-0.30***	-0.29***	-0.32***	-0.32***	-0.31***
	(0.06)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Distance in km (Log)		-0.01	-0.01	-0.02	-0.03	-0.03
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Dissimilarity			0.48	0.28	0.69	0.69
			(0.64)	(0.64)	(0.67)	(0.67)
Small-Large Urban				-0.15***	-0.13**	-0.27***
				(0.06)	(0.05)	(0.02)
Large-Large Urban				-0.23***	-0.19**	-0.39***
				(0.08)	(0.08)	(0.04)
Low-High Glob.					-0.07**	0.21**
					(0.03)	(0.10)
High-High Glob.					-0.16***	0.26
					(0.16)	(0.17)
SL Urban × LH Glob.						-0.16**
						(0.07)
LL Urban × LH Glob.						-0.14**
						(0.06)
SL Urban × HH Glob.						-0.18**
						(0.09)
LL Urban × HH Glob.						-0.27**
						(0.11)
Obs.	43,955	43,955	43,955	43,955	43,955	43,955
R^2	0.11	0.11	0.11	0.12	0.13	0.13

Note: The dependent variable is the growth rate of the establishment linkages total between any EZ pair over the sum of employment of the respective ZE pair. Standard errors are clustered at the EZ-pair level. All dependent variables are computed in 1995.

Table 4: Establishment Linkages Determinants over the Period 1995-2015

	Dep. var.: Normalized Esta. Link.s (Log)			
	Small-Small	*Small-Large*	*Large-Large*	*Total*
	(1)	(2)	(3)	(4)
Share Traders	0.02	-0.76	-0.32	0.03
	(0.69)	(0.58)	(0.65)	(0.16)
Trade per Empl. (Log)	0.20***	0.18***	0.09***	0.05***
	(0.02)	(0.02)	(0.03)	(0.01)
Share Empl. in Tradable	-1.56***	-1.85***	-1.06***	-0.35***
	(0.51)	(0.35)	(0.20)	(0.07)
Pair FE	YES	YES	YES	YES
Obs.	65,236	20,992	1,640	87,864
Adjusted R^2	0.90	0.95	0.96	0.93

Note: The dependent variable is the total of establishment linkages between any EZ pair over the sum of employment of the respective ZE pair. All dependent variables are computed in 1995.

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A Tables

Table A.1: Employment Zones (EZ) Summary Statistics

	Mean	Min	p25	Median	p75	Max
Panel A: Levels in 1995						
Private Employment	42.971	2.587	9.803	16.848	42.339	2.151.762
Wage Bill (million EUR)	919	41	175	319	794	59.767
Average Wage	18.918	15.116	17.717	18.678	19.785	27.776
Exports per Employee	11.821	229	5.344	9.746	14.612	87.498
Share Exporters	0.10	0.03	0.08	0.10	0.12	0.31
Share Exporters, Manuf.	0.25	0.04	0.19	0.24	0.29	0.61
Share Manuf. Employment	0.33	0.05	0.24	0.32	0.45	0.71
Panel B: Changes 1995-2015						
Private Employment (%)	40	-23	21	38	56	113
Wage Bill (million EUR) (%)	111	19	79	106	137	228
Average Wage (%)	50	21	47	51	54	71
Exports per Employee	5.547	-18.710	238	3.226	8.459	75.471
Share Exporters	0	-0.11	-0.02	0	0.01	0.04
Share Exporters, Manuf.	-0.02	-0.21	-0.04	-0.01	0.01	0.16
Share Manuf. Employment	-0.12	-0.29	-0.16	-0.12	-0.08	0.03

Note: Panel A provides summary statistics at the EZ level in 1995. *Share Exporters* defines the average number of establishments involved in exporting activity over all establishment at the EZ level. *Share Exporters, Manuf.* defines the average number of manufacturing establishments involved in exporting activity over all manufacturing establishment at the EZ level. *Share Manuf. Employment* defines the average share of manufacturing employment over the total private employment at the EZ level. Panel B shows variations over the whole sample (1995-2015) at the EZ level. Variables reported in absolute values in Panel A, but expressed in percentage changes are marked with %.

Table A.2: Urban Area (UA) Population Size Index Provided by INSEE

Population Threshold	**UA Index**
Rural Area	00
Urban Area (< 15.000 inhabitants)	01
Urban Area (15.000-19.999 inhabitants)	02
Urban Area (20.000-24.999 inhabitants)	03
Urban Area (25.000-34.999 inhabitants)	04
Urban Area (35.000-49.999 inhabitants)	05
Urban Area (50.000-99.999 inhabitants)	06
Urban Area (100.000-199.999 inhabitants)	07
Urban Area (200.000-499.999 inhabitants)	08
Urban Area (500.000-9.999.999 inhabitants)	09
Urban Area of Paris	10

Table A.3: Top and Bottom 5 Employment Zones (EZ) Summary Statistics, Large Urban Only

	Empl. Growth	**Urban.**	**Sh. Manuf.**	**Sh. Exp.s**	**Exp./Empl. Growth**	**Imp./Empl. Growth**
Panel A: Top 5						
Montpellier	1.00	Large	0.10	0.10	-0.30	0.83
Toulouse	0.96	Large	0.23	0.13	1.52	3.22
Rennes	.86	Large	0.27	0.11	-0.31	0.56
Cannes-Antibes	0.81	Large	0.18	0.12	0.46	0.38
Nantes	0.79	Large	0.08	0.24	1.02	0.85
Panel B: Bottom 5						
Douai	0.36	Large	0.39	0.10	0.25	0.79
Istres-Martigues	0.43	Large	0.11	1.11	4.55	5.26
Strasbourg	0.30	Large	0.21	0.15	0.57	0.79
Molsheim-Obernai	0.28	Large	0.53	0.16	-0.03	-0.16
Roubaix-Tourcoing	0.10	Large	0.33	0.17	-0.30	0.01

Note: The table reports the ranking of the top and bottom 5 EZs by employment growth over the period 1995-2015. Only large urban areas are considered. *textbf*Sh. Manuf. refers to the share of employment working in the manufacturing sector in 1995, *Sh. Exp.s* to the share of establishments reporting positive trade values in 1995, *Exp./Empl. Growth* and *Imp./Empl. Growth* respectively to the export and import exposure per worker growth over the period.

Table A.4: Top and Bottom 5 Employment Zones (EZ) Summary Statistics, Rural and Medium Urban Only

	Empl. Growth	Urban.	Sh. Manuf.	Sh. Exp.s	Exp./Empl. Growth	Imp./Empl. Growth
Panel A: Top 5						
Clermont-l'Hérault	1.13	Rural	0.25	0.06	1.51	1.94
Aix-en-Provence	1.13	Medium	0.17	0.11	-0.19	0.50
Salon-de-Provence	1.06	Medium	0.15	0.09	0.87	-0.36
La Tarentaise	1.02	Rural	0.22	0.05	-0.05	0.75
Pauillac	1.00	Rural	0.08	0.08	-.035	-0.75
Panel B: Bottom 5						
Chatillon	-0.07	Rural	0.37	0.12	0.41	2.20
Neufchâteau	-0.10	Rural	0.11	0.06	4.55	3.89
Longwy	-0.11	Medium	0.40	0.11	-0.51	-0.31
Thiers	-0.12	Rural	0.70	0.20	1.22	3.09
Sante Claude	-0.23	Rural	0.22	0.06	0.78	2.52

Note: The table reports the ranking of the top and bottom 5 EZs by employment growth over the period 1995-2015. Only rural and medium urban areas are considered. *textbf*Sh. Manuf. refers to the share of employment working in the manufacturing sector in 1995, *Sh. Exp.s* to the share of establishments reporting positive trade values in 1995, *Exp./Empl. Growth* and *Imp./Empl. Growth* respectively to the export and import exposure per worker growth over the period.

B Figures

Figure B.1: EZs' Employment Growth over the Period 1995-2015 Conditional on the Initial Employment Level

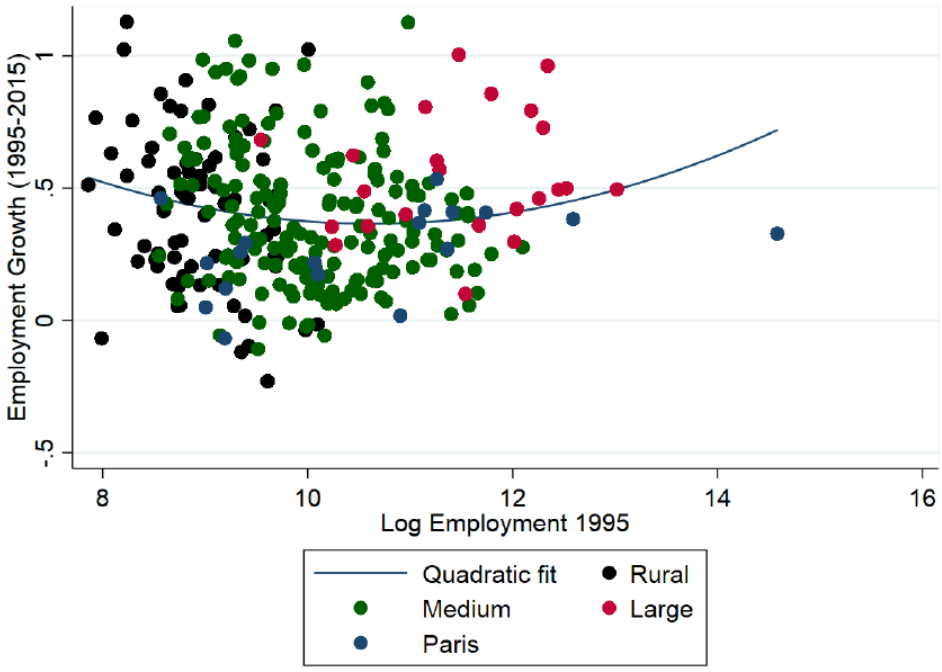
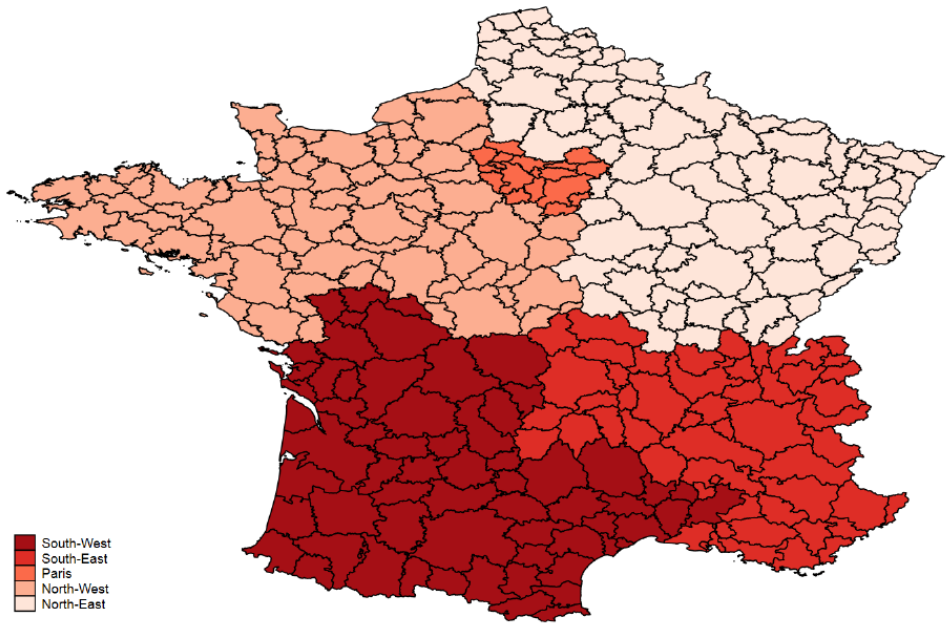


Figure B.2: French Macro Regions



Note: The figure shows the five macro regions into which we split Metropolitan France.

C Robustness Checks

Table C.1: Employment Growth Determinants over the Period 1995-2015, Robustness for Paris Region

	Dep. variable: Private Empl. Growth 1995-2015 (%)					
	(1)	(2)	(3)	(4)	(5)	(6)
Empl. in 1995 (Log)	-0.04***	-0.04***	-0.09***	-0.06***	-0.05***	-0.10***
	(0.01)	(0.01)	(0.04)	(0.02)	(0.01)	(0.03)
Share Manuf. Empl. in 1995	-0.05	-0.06	-0.03	-0.03	-0.07	-0.01
	(0.05)	(0.05)	(0.05)	(0.04)	(0.05)	(0.05)
Shift Share Industry	0.78***	0.78***	0.75***	0.71***	0.80***	0.69***
	(0.17)	(0.17)	(0.17)	(0.16)	(0.15)	(0.15)
Trade. per Empl. Growth	0.01	0.01	0.01**	0.01	0.01	0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Distance from Paris	0.14***	0.10***	0.13***	0.15***	0.15***	0.12***
	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
Distance (Large Urban ZE)		-0.10***				-0.12***
		(0.02)				(0.02)
Links (Large Urban ZE)			1.56*			1.17
			(0.93)			(0.86)
Dissimilar (Large Urban ZE)				-0.08**		-0.10*
				(0.03)		(0.05)
IO Links (Large Urban ZE)					-0.57	0.70
					(0.65)	(0.94)
Large Region FE	✓	✓	✓	✓	✓	✓
Obs.	256	256	256	256	256	256
R^2	0.58	0.62	0.59	0.60	0.59	0.61

Note: The dependent variable is the growth rate of the establishment linkages total between any EZ pair over the sum of employment of the respective ZE pair. Standard errors are clustered at the EZ-pair level. All dependent variables are computed in 1995.

Table C.2: Employment Growth Determinants over the Period 1995-2015, Robustness for Paris Region

	Dep. variable: Private Empl. Growth 1995-2015 (%)					
	(1)	(2)	(3)	(4)	(5)	(6)
Empl. in 1995 (Log)	-0.01	-0.01	-0.09***	-0.01	-0.00	-0.10***
	(0.01)	(0.01)	(0.04)	(0.02)	(0.01)	(0.03)
Share Manuf. Empl. in 1995	-0.08*	-0.08*	-0.03	-0.07	-0.08*	-0.01
	(0.04)	(0.04)	(0.05)	(0.04)	(0.05)	(0.05)
Shift Share Industry	0.86***	0.84***	0.75***	0.79***	0.84***	0.74***
	(0.18)	(0.17)	(0.17)	(0.17)	(0.18)	(0.16)
Trade. per Empl. Growth	0.01	0.01	0.01**	0.01	0.01	0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Links (Paris Region)	-7.03***	-5.67***	-8.95***	-7.48***	-7.11***	-7.84***
	(1.61)	(1.50)	(1.81)	(1.54)	(1.60)	(1.58)
Distance (Large Urban ZE)		-0.11***				-0.10***
		(0.02)				(0.02)
Links (Large Urban ZE)			3.38***			2.74***
			(0.95)			(0.88)
Dissimilar (Large Urban ZE)				-0.07**		-0.10**
				(0.03)		(0.04)
IO Links (Large Urban ZE)					-0.33	0.85
					(0.65)	(0.91)
Large Region FE	✓	✓	✓	✓	✓	✓
Obs.	256	256	256	256	256	256
R^2	0.58	0.62	0.60	0.58	0.58	0.64

Note: The dependent variable is the growth rate of the establishment linkages total between any EZ pair over the sum of employment of the respective ZE pair. Standard errors are clustered at the EZ-pair level. All dependent variables are computed in 1995.