

Recent trends of population evolution in France: where do the new rural inhabitants find a job?

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1. Demographic surge in rural space thanks to migrations...

Between 1999 and 2006, after four decades of stability or even decrease, population has been rising again in rural space (see definitions in annex 1), and rather sharply. For the first time since a long while, increase of rural population is higher than increase in urban clusters (see graph 1 in annex 3).

Impact on rural density is rather significant, with a +2 variation between 1999 and 2006 (table 1). Nonetheless, as we also see, French population keeps concentrating in urban zones.

Table 1: Density still growing fairly in urban centres

	1990	1999	2006
Urban clusters	791	811	840
Periurban rings	65	71	77
Multipolar municipalities	58	61	66
Predominantly rural space	33	33	35
All metropolitan France	104	108	113

Density of population (inhab./km²)

Source: INSEE, 1990, 1999 and 2006 Censuses

This demographic renewal has been obtained thanks to net migrations (table 2). The contribution of net migrations to the growth rate of population in rural territories is now on level with that in the very dynamic suburban territories. Still, natural increase remains negative, even if it has slightly improved since the last decades.

Table 2: Contribution of net migrations to the growth of population in rural space has almost tripled since 1999

	Average annual growth rate of population 1990-1999 (%)			Average annual growth rate of population 1999-2006 (%)		
	All	Contribution of natural increase (births minus deaths)	Contribution of net migrations (apparent)	All	Contribution of natural increase (births minus deaths)	Contribution of net migrations (apparent)
Urban clusters	0.3	0.5	-0.3	0.5	0.5	0.0
Periurban rings	1.0	0.4	0.6	1.3	0.5	0.8
Multipolar municipalities	0.6	0.2	0.4	1.2	0.3	0.9
Predominantly rural space	0.1	-0.2	0.3	0.7	-0.1	0.8
All metropolitan France	0.4	0.4	0.0	0.7	0.4	0.3

Source: INSEE, 1990, 1999 and 2006 Censuses, Civil status registry

This change in the net rate of migrations stems essentially from internal migratory flows between rural space and the other urban or suburban classes of space. Net internal migrations¹ from urban clusters to rural space has doubled between the 1990s and the beginning of the 21st century (see table 3). Moreover, net internal migrations with periurban rings are now significantly positive: "appeal of rural life" or "return to rural roots" are trends no more confined to cities strictly speaking; they have spread to urban zones in a broader sense.

Table 3: The rate of net internal migrations from urban clusters to rural space has doubled since the 1990s

1990-1999		Net internal migrations rates from				
		Urban clusters	Periurban rings	Multipolar municipalities	Predominantly rural space	All metropolitan France
To	Urban clusters	0	-21	-4	-6	-31
	Periurban rings	83	0	-3	-6	75
	Multipolar municipalities	45	9	0	-4	50
	Predominantly rural space	21	5	1	0	27

Over the five years previous to 2006		Net internal migrations rates from				
		Urban clusters	Periurban rings	Multipolar municipalities	Predominantly rural space	All metropolitan France
To	Urban clusters	0	-29	-6	-13	-48
	Periurban rings	107	0	-6	-18	83
	Multipolar municipalities	73	20	0	-13	80
	Predominantly rural space	44	16	4	0	63

For 10 000 inhabitants, people aged 5 or more years
Source: INSEE, 1999 and 2006 Censuses

2. ...but a relatively moderate development of employment

However, evolution of employment has not turned out so favourably (graph 2). As in the previous decade, rural space is still lagging behind the other classes of space. Rural employment rate has slightly improved between 1990 and 2006, from 55% to 56%, but less than the +4 percentage points registered at national level (from 59% to 63%). There has not been a "migration" of jobs towards rural space comparable to the migration of population.

How can we explain this discrepancy? A rise of population in a territory with no matching rise in employment can only result in the flexion of the activity rates or a development of journeys to work.

The breakdown equations of the evolution rate of active population (see in annex 2) can help to figure the link between population and employment (see table 4). The equations confirm the high contribution of migrations on the evolution of the active population for rural space, along with the rise in the number of journeys to work (reversely, the negative contribution of journeys to work in urban clusters confirms that, as for population, employment keeps concentrating where it is already concentrated). Any specific flexion effect on the activity rates is veiled under an increase general to all categories of space. Contribution of employment is not so low (compared to urban categories of space) as one would have expected.

¹ Information on migrations comes from the answer to the Census question "What was your place of residence five years ago". Many changes of residence may have occurred over a 5 years period for one person. Moreover, the characteristics of a person (in particular: activity or family status) may have changed between the date of the migration and the date of the Census. Consequently, all analysis seeking to link the characteristics of a person and the motive of his/her change of residence is inevitably tainted by uncertainty.

Furthermore, the length of the period is not the same between the last Census (2006) and the previous (1999). People at the 1999 Census were interrogated on their place of residence in 1990. This implies a higher imprecision on migrations from the 1999 Census, and thus not exactly comparable results with the 2006 Census.

Table 4: The strongest contributions to growth of active population in rural space come from migrations, active rates, employment and journeys to work

	Average annual growth rate of active population 1999-2006 (%)	Natural balance contribution (%)	Migratory balance contribution (%)	Active rate effect (%)	Employment contribution (%)	Journeys to work contribution (%)	Unemployment contribution (%)
Urban clusters	0.6	0.3	-0.1	0.4	1.0	-0.4	-0.1
Periurban rings	1.3	0.1	0.7	0.5	0.7	0.7	-0.1
Multipolar municipalities	1.4	0.1	0.7	0.6	0.4	1.0	0.0
Predominantly rural space	0.8	-0.1	0.5	0.5	0.5	0.5	-0.1

Source: INSEE, 1999 and 2006 Censuses, Civil status registry

One question raised by table 4 is the actual relation between migrations and employment on one side and between migrations and journeys to work on another side.

3. Migrations and employment

The link between employment and migrations can be made more obvious if we distinguish long range internal migrations (changes of department or region) from short range internal migrations (changes of municipality inside the same department)². In 2006, long range migrants represented 10% of the entire rural population (persons aged 5 or more) and 43% of the whole internal migrants (this rate is respectively 51% in urban clusters, 34% in periurban rings and multipolar municipalities). Long range migrations combine more frequently a change of dwelling and of job location (or it can also be a change between the place of education and the place of work for people moving after they have completed their education and accessing to their first job). Long range migrants potentially active (aged from 15 to 64) are thus keener than short range to change for a location inside urban clusters, where employment concentrates (graph 3).

The potentially active population represents a rather large share of the whole population of internal migrants, whatever the final place of dwelling, as appeared through the comparison of old-age dependency rates (graph 4). Migrants are relatively younger than "stable" people. For the classes of space with positive migratory balance, it means a positive effect of migrations, not only on the total number of inhabitants but also on the age structure of the population.

Rural space has suffered from the decline of its traditional activities (graph 6.1: -2.7% net job losses between 1999 and 2006). It has benefited from the development of employment in building activities and trade and service, but less than the urban territories. So, it is no wonder that long range internal migrants in rural space –for whom migration implies "economic" as much as residential change– are overrepresented in trade and services (graph 7.1: more than 12.5% difference with the share of these tertiary activities in all population). Rural space is the kind of space where employment structures of long range internal migrants and of the rest of the population are the farthest apart.

Inside tertiary activities, long range rural internal migrants are predominant in general government activities, while underrepresented in trade or education, health and social care services (graph 7.2)³. Rural space and multipolar municipalities share roughly the same profile. In urban clusters and periurban rings, services to businesses take the most of "new" inhabitants from far departments or regions. The prevalence of long range migrants in general government activities is not in proportion to the weight of this sector in the variation of employment from 1999 to 2006 (graph 6.2). On the contrary, education, health and social care services have been the main contributors, whatever the class of space. The public sector seems thus to play a particular role in migratory dynamics. Mobility

² Department, region, municipality: French administrative territorial units. There are 26 regions (including the 4 overseas regions) and 100 departments in France. A department belongs to one and only one region. Each overseas region has only one department. Municipalities are the smallest French administrative subdivisions. Their number is around 36,700 (36,600 for Metropolitan France). This presentation concerns only Metropolitan France.

³ Graphs 7.2 and 7.3 give a good example of the differences according to the range of migrations: employment structures of long range and short range internal migrants are clearly dissimilar.

management in public administrations could explain this particularity⁴, but also the fact that public servant could be less adverse to remoteness from main labour market centres thanks to job security.

4. Migrations and journeys to work

The positive contribution of journeys to work in the breakdown equations of the rural active population corresponds to a decrease for the rural employment stability rate (table 5), i.e. of the share of rural inhabitants employed in rural space⁵. For the most part, this diminishing has fed an expansion of 4 percentage points of the share of rural residents working in urban centres. Stability rate is lower for migrants (with no difference according to the migration range), by 10 percentage points (graph 8). Nonetheless, the migrant stability rate remains relatively high: though weaker than in urban space, the growth of rural employment has offered job opportunities to newcomers, and has not exclusively benefited the "stable" or "old stock" population.

Table 5: Stability rate in rural space has diminished by 5 percentage points between 1999 and 2006

1999		People working in ...				
		Urban clusters	Periurban rings	Multipolar municipalities	Predominantly rural space	All
... and inhabiting in	Urban clusters	93.5%	3.5%	0.9%	2.1%	100.0%
	Periurban rings	55.5%	37.7%	1.8%	5.0%	100.0%
	Multipolar municipalities	43.2%	7.4%	41.0%	8.5%	100.0%
	Predominantly rural space	18.2%	3.2%	1.6%	77.0%	100.0%

2006		People working in ...				
		Urban clusters	Periurban rings	Multipolar municipalities	Predominantly rural space	All
... and inhabiting in	Urban clusters	92.9%	3.8%	1.0%	2.2%	100.0%
	Periurban rings	57.2%	35.4%	1.9%	5.5%	100.0%
	Multipolar municipalities	47.1%	8.5%	35.7%	8.7%	100.0%
	Predominantly rural space	22.2%	4.2%	1.8%	71.8%	100.0%

Source: INSEE, 1999 and 2006 Censuses

Daily flows of workers have increased between kinds of space. As a consequence, travel times between places of work and dwelling have increased (table 6). The raise is higher for rural residents, peculiarly for long range internal migrants and for the longest journeys. Nonetheless, median travel times have remained substantially lower for rural employed persons than for people inhabiting in urban or suburban territories. Thanks to better road or traffic conditions, shorter travel times to work for rural inhabitants coexist with longer travel distances (graph 9); in particular, the share of people travelling 15 kilometres or more is bigger in rural space. The fact that travel times to work are lower in rural space doesn't come from any "selecting bias" effect (travels to work from rural to urban space develop only where accessibility is better) but reflects the weight of intra-space travels; travel time for urban people working in urban space are neatly higher than for urban workers in general (graph 10).

⁴ Two co-dependent factors could be put forward in favour of this explanation. First factor: entry examinations in public administrations are national but jobs offered local, and frequently concentrated in Paris region. Second factor: civil servants tend to move back to their region of origin, as soon as they can take advantage of vacancies, in compliance with mobility rules inside public administration.

⁵ The absolute level of employment stability rate for each kind of space is more or less the direct result of the building rules of the geographic classification by urban area (see annex) and is not meaningful in itself.

Table 6: Travel times to work have the most increased for rural inhabitants⁶

	Mean			Median			3 rd quartile		
	1999	2006	1999-2006 variation	1999	2006	1999-2006 variation	1999	2006	1999-2006 variation
Predominantly urban space									
Long range internal migrants	26	29	3	16	18	2	35	36	1
All	21	22	1	12	14	2	29	30	1
Predominantly rural space									
Long range internal migrants	26	30	4	8	12	4	27	32	5
All	16	18	2	4	7	3	18	22	4
All metropolitan France									
Long range internal migrants	26	29	3	14	17	3	34	36	2
All	20	22	2	11	13	2	27	29	2

Travel time per car in minutes, single journey, peak traffic hours

Source: INSEE, 1999 and 2006 Censuses - INRA UMR1041 CESAER, *Odomatrix* distance database

One could be tempted to infer from this relation between migrations and journeys to work to a close correlation between growth of population in rural space and growth of employment in the surroundings urban areas. Variation of population should be heterogeneous inside rural space, and this heterogeneity should geographically be related to that of the variation of employment in urban areas. It is not exactly true (graph 5). There is indeed a strong heterogeneity, as for urban areas as for rural space. There is also a correlation, but rather weak, even it has tended to increase between the 1999 and 2006 Censuses (correlation coefficient equals 0.23 in 2006 and 0.06 in 1999). Actually, correlation is a little more significant between evolutions of population both in urban areas and rural space (correlation rate equals 0.33 in 2006). The recent rural demographic surge cannot thus be explained solely by the effect of an expanding polarisation of urban areas.

5. Effects of long range migrations on access to labour market – Differentiation according to the position inside the household⁷

When both persons in a couple are working, strategies are set up to mitigate the time costs of journeys to work for one of the persons, in most cases the woman (table 7). It means either that proximity to the woman's job location is favoured when choosing a new residence or reversely that the woman's job seeking perimeter is more constrained than the man's by proximity to home location or a mix of both explanations. The effects of this arbitrage leads to a wider time difference in the case of long range migrants, when in theory both the place of work and of dwelling, for the both people in the couple, could have been at stake. Obviously, these strategies reflect common cultural attitudes towards the sharing of domestic tasks; economic rationalisation can also be at play in giving more value to the time passed by women at home, in relation with women's wages being lower in average than men's.

⁶ The figures given in table 6 or in graph 10 are rather theoretical. The distances –time-distances or kilometre-distances– used for these calculations come from a database measuring average distances between municipalities. This means in particular that for people living and working in the same municipality, the distance is considered equal to 0, which leads obviously to a minimisation of the real travel times or distances. Another factor of minimisation is the fact that all travels by public transportations are excluded. Moreover, for time travels, figures are obtained on the basis of the average speed according to the kind of roads; the congestion problems specific to the Paris region for instance, which represents a big part of the whole journeys to work in urban areas, are thus more or less ignored.

⁷ The position of a person inside the household means here that the person is either the Household Reference Person (HRP) or the HRP's spouse when the HRP has a spouse. It means that we are dealing here with couples (HRP plus HRP's spouse). The household reference person is determined from the family structure of the household and the characteristics of the component persons. In practice, in Census, the HRP is always a man and the spouse a woman.

Table 7: Time costs of travels to work weigh heavier for household reference persons

	Mean			Median			3 rd quartile		
	HRP	Spou -se	Diff.	HRP	Spou -se	Diff.	HRP	Spou -se	Diff.
Predominantly urban space									
Long range internal migrants	35	28	7	24	19	5	43	36	7
All	26	20	7	18	14	4	35	29	6
Predominantly rural space									
Long range internal migrants	34	26	7	16	13	3	37	31	6
All	19	15	4	8	7	1	24	20	4
All metropolitan France									
Long range internal migrants	35	27	7	23	18	5	42	36	6
All	25	19	6	16	12	4	33	27	6

Travel time per car in minutes, single journey, peak traffic hours

HRP: Household Reference Person – Spouse: HRP's spouse

All persons whose household position is either "HRP" or "HRP's spouse" and being employed

Source: INSEE, 2006 Census - INRA UMR1041 CESAER, *Odomatrix* distance database

Access to labour market is also, negatively, affected by migrations. It means either exit strategies from labour market with effect on activity rates, or more limited job opportunities with effect on unemployment rates. Activity rates (respectively unemployment rates) are apparently lower (respectively higher) for long range migrants in rural space than in urban space (table 8), which would tend to confirm a specific handicap due to remoteness from main labour clusters. Concerning differences inside couples, activity rates (respectively unemployment rates) are also always bigger (respectively lower) for men than for women, but the variations seems to be larger for long range migrants than in the whole population. So, long range migrations would lead to an additional handicap for women in couples⁸; it could mean, for instance, that the choice of the new place of residence is made according to what offers the best job opportunities in priority for the man inside the couple.

Table 8: Migrations leads to wider discrepancies on activity and unemployment rates between man and woman in a couple

	Activity rate (%)			Unemployment rate (%)		
	HRP	Spouse	Diff.	HRP	Spouse	Diff.
Predominantly urban space						
Long range internal migrants	91	78	13	9	16	-7
All	86	76	9	6	11	-4
Predominantly rural space						
Long range internal migrants	79	69	10	10	21	-11
All	83	76	7	5	11	-6
All metropolitan France						
Long range internal migrants	89	77	12	9	17	-8
All	85	76	9	6	11	-5

All persons aged 15 to 64 years whose household position is either "HRP" or "HRP's spouse"

Source: INSEE, 2006 Census

Structure effects could be at play in table 8. Logistic regressions have been run in order to neutralise in particular the structure effects due to age and education level.

Two logistic regressions have been run respectively on the probabilities of being active or unemployed, first on all population whatever the position in the household. The sign and value of the coefficient estimates corresponding to the place of residence and the migration confirms the negative impact of long range migrations (table 9 and table 10). But the higher negative impact in the case of migration to rural space is confirmed only for unemployment, not for activity.

Two other regressions have been run introducing this time the position inside the couple (HRP or HRP's spouse). The population is the same as in table 8. In all cases, the chance of being

⁸ It would have been interesting, but outside the range of this study, to check if this handicap exists for migrating women outside couples. In other terms: is this handicap actually specific to women belonging to migrant couples and not general to all migrating women?

unemployed or inactive is lower for the man than for the woman (table 11 and table 12). The difference of probability between spouses is always bigger for long range migrants (except for the probability of being active in rural space). The difference of probability of being unemployed between spouses is the biggest for long range migrants in rural space; for probability of being inactive, the difference is also the biggest for long range migrants but this time in urban space. As for the previous regression, the particular handicap or aggravating factor linked to rural residence is confirmed for unemployment but not for activity.

Table 9: Logistic regression of the probability of being active – Coefficient estimates

Parameter			DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept			1	0.2229	0.00180	15305.14	<.0001
Age	15 to 24		1	0.1043	0.00122	7323.72	<.0001
	25 to 34		1	2.3996	0.00153	2462944.32	<.0001
	35 to 44		1	2.6171	0.00149	3092037.13	<.0001
	45 to 54		1	2.3318	0.00135	3000415.43	<.0001
	55 to 64		0	0			
Education level	01=lowest		1	-2.2625	0.00337	451108.07	<.0001
	02		1	-1.3418	0.00188	511821.78	<.0001
	03		1	-0.8859	0.00233	144072.50	<.0001
	11		1	-1.1175	0.00214	273291.30	<.0001
	12		1	-1.5213	0.00187	659159.03	<.0001
	13		1	-0.4230	0.00185	52524.02	<.0001
	14		1	-0.2164	0.00202	11465.44	<.0001
	15		1	-0.9125	0.00188	236638.53	<.0001
	16		1	0.0109	0.00213	25.98	<.0001
17		1	0.0167	0.00197	72.21	<.0001	
18=highest		0	0				
Gender	Men		1	0.5917	0.00087	464683.89	<.0001
	Women		0	0			
Paris region inhabitant	No		1	-0.2070	0.00113	33754.32	<.0001
	Yes		0	0			
Residence area and migration status	Rural	LRMs	1	-0.2642	0.00289	8340.57	<.0001
	Rural	Others	1	0.0958	0.00125	5873.56	<.0001
	Urban	LRMs	1	-0.2787	0.00139	40067.37	<.0001
	Urban	Others	0	0			

Persons aged 15 to 64 – LRMs: Long range migrants
Source: INSEE, 2006 Census

Table 10: Logistic regression of the probability of being unemployed – Coefficient estimates

Parameter			DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Intercept			1	-2.9395	0.00313	882832.69	<.0001
Age	15 to 24		1	1.1189	0.00265	178503.98	<.0001
	25 to 34		1	0.6376	0.00255	62736.74	<.0001
	35 to 44		1	0.1616	0.00254	4057.95	<.0001
	45 to 54		1	-0.0746	0.00256	848.80	<.0001
	55 to 64		0	0			
Education level	01=lowest		1	1.8253	0.00514	126295.72	<.0001
	02		1	1.4822	0.00260	324640.30	<.0001
	03		1	1.3474	0.00297	205322.93	<.0001
	11		1	1.0101	0.00362	77664.27	<.0001
	12		1	0.8666	0.00303	81870.12	<.0001
	13		1	0.7690	0.00254	91912.14	<.0001
	14		1	0.6273	0.00265	56204.21	<.0001
	15		1	0.5529	0.00285	37658.79	<.0001
	16		1	0.3428	0.00285	14509.01	<.0001
17		1	-0.0190	0.00275	47.73	<.0001	
18=highest		0	0				
Gender	Men		1	-0.3876	0.00124	97747.31	<.0001
	Women		0	0			
Paris region inhabitant	No		1	0.0266	0.00157	285.28	<.0001
	Yes		0	0			
Residence area and migration status	Rural	LRMs	1	0.5003	0.00358	19485.42	<.0001
	Rural	Others	1	-0.2682	0.00191	19658.66	<.0001
	Urban	LRMs	1	0.2764	0.00184	22471.06	<.0001
	Urban	Others	0	0			

Active persons aged 15 to 64 – LRMs: Long range migrants
Source: INSEE, 2006 Census

Table 11: Logistic regression of the probability of being active – Coefficient estimates⁹

Parameter				DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Residence area, migration status and household position	Rural	LRMs	Spouse	1	-1.6420	0.00475	119531.92	<.0001
	Rural	LRMs	HRP	1	-0.7321	0.00565	16778.63	<.0001
	Rural	Others	Spouse	1	-0.9431	0.00234	163040.51	<.0001
	Rural	Others	HRP	1	-0.0213	0.00259	67.27	<.0001
	Urban	LRMs	Spouse	1	-1.7052	0.00274	388106.09	<.0001
	Urban	LRMs	HRP	1	-0.2718	0.00370	5392.78	<.0001
	Urban	Others	Spouse	1	-1.0837	0.00154	497323.40	<.0001
	Urban	Others	HRP	0	0	.	.	.

All persons aged 15 to 64 years whose household position is either "HRP" or "HRP's spouse"

Source: INSEE, 2006 Census

Table 12: Logistic regression of the probability of being unemployed – Coefficient estimates

Parameter				DF	Estimate	Standard Error	Wald Chi-Square	Pr > ChiSq
Residence area, migration status and household position	Rural	LRMs	Spouse	1	1.5428	0.00575	72053.14	<.0001
	Rural	LRMs	HRP	1	0.5429	0.00749	5259.34	<.0001
	Rural	Others	Spouse	1	0.4205	0.00347	14651.10	<.0001
	Rural	Others	HRP	1	-0.4249	0.00444	9149.25	<.0001
	Urban	LRMs	Spouse	1	1.3208	0.00331	159368.45	<.0001
	Urban	LRMs	HRP	1	0.4624	0.00385	14391.81	<.0001
	Urban	Others	Spouse	1	0.5379	0.00218	61095.33	<.0001
	Urban	Others	HRP	0	0	.	.	.

All active persons aged 15 to 64 years whose household position is either "HRP" or "HRP's spouse"

Source: INSEE, 2006 Census

6. Conclusion

In a way, the rise of population in rural space between 1999 and 2006, fed by larger migrations, has contributed to increasing its economic dependency on urban areas and peculiarly on urban clusters, as illustrated by the rise in journeys to work between the two kinds of space. It must not bring us to conclude to a new stage in urban expansion or urban sprawling: first, we are still dealing with territories of low density; second, the growth of population in rural areas is rather loosely connected to that of neighbouring urban zones. The triggers of the new rural expansion must be sought in other directions, where the particular benefits of life in rural areas are at play (including lower land prices).

Migrations have favoured the relative rejuvenation of rural areas, but their impact may not be so positive as far as access to labour market is concerned. The flexion effect of long range migrations on unemployment rates, aggravated for women, should remind us that rurality can mean improved quality of life but can also imply reduced accessibility in general and in particular to labour market.

⁹ Estimates corresponding to age, education and geography variables have been voluntarily removed from tables 11 and 12.

7. Annex 1: Classes of space and of rural space in France

INSEE has two main spatial classifications for studies on occupation of space. One is based on a morphological definition (cities defined by contiguity of housings), the other on a functional definition (two main criteria: concentration of employment and intensity of the link to places where employment is concentrated as measured by journeys to work). The latter is called "geographic classification by urban area" (GCUA). This classification has two versions, established for the first one after the 1990 Census, and for the second one after the 1999 Census, last available Census. All this presentation is based on the 1999 version of the GCUA.

GCUA distinguishes between urban clusters (in French: *pôles urbains*), periurban rings (*couronnes périurbaines*), multipolar municipalities (*communes multipolarisées*), and predominantly rural space (*espace à dominante rurale*). An urban cluster is a city comprising at least 5,000 jobs. The municipalities inside a periurban ring are attracted to one peculiar urban cluster (in terms of journey to work relationship). The combination of an urban cluster and its periurban ring is called an urban area. Multipolar municipalities are municipalities exposed to the simultaneous attraction of several urban clusters. The predominantly rural space (PRS) groups together all the communes or municipalities that do not belong to urban areas and are not multipolar municipalities. The PRS gives us the peculiar definition of rural space used for this presentation. The main characteristics of GCUA are given in the table just below.

Rural space covers 59% of the territory but gathers only 18% of the population

	Number of municipalities		Number of inhabitants (1)		Area (2)		Population density (inhab./km ²)
Urban clusters	3,102	8.5%	36,947.6	60.2%	44.0	8.1%	840
Periurban rings	10,809	29.6%	10,227.5	16.7%	132.0	24.3%	77
Multipolar municipalities	4,123	11.3%	3,161.5	5.1%	47.7	8.8%	66
Predominantly rural space	18,529	50.7%	11,062.9	18.0%	320.1	58.9%	35
All metropolitan France	36,563	100.0%	61,399.5	100.0%	543.9	100.0%	113

Source: INSEE, 2006 Census

(1): Thousands of inhabitants

(2): Thousands of km²

8. Annex 2: The breakdown equations of active population

The variation of active population between two dates 0 and 1 can be expressed in two ways:

1. Either as a decomposition between a natural balance effect, a migratory balance effect and an active rate effect as follows:

$$\begin{aligned}
 AP_1 - AP_0 &= AT_1 \times P_1 - AT_0 \times P_0 \\
 AP_1 - AP_0 &= AT_1 \times P_1 + AT_1 \times P_0 - AT_1 \times P_0 - AT_0 \times P_0 \\
 AP_1 - AP_0 &= AT_1(P_1 - P_0) + P_0 \times (AT_1 - AT_0) \\
 AP_1 - AP_0 &= (AT_1 \times NB) + (AT_1 \times MB) + (P_0 \times (AT_1 - AT_0))
 \end{aligned}$$

AP: active population

AT: activity rate

P: population

NB: variation of population due to births and deaths

MB: variation of population due to net migrations

The calculations are made per detailed ages (for people between 15 and 64); the results are then summed over all ages to produce the general effects.

2. Or as a decomposition between an employment effect, an unemployment effect and a "journeys to work" effect as follows:

$$\begin{aligned}
 AP_1 - AP_0 &= EP_1 + UNEMP_1 - EP_0 - UNEMP_0 \\
 AP_1 - AP_0 &= (EMP_1 - JTW_1) + UNEMP_1 - (EMP_0 - JTW_0) - UNEMP_0 \\
 AP_1 - AP_0 &= (EMP_1 - EMP_0) + (UNEMP_1 - UNEMP_0) - (JTW_1 - JTW_0)
 \end{aligned}$$

EP: employed population of the area

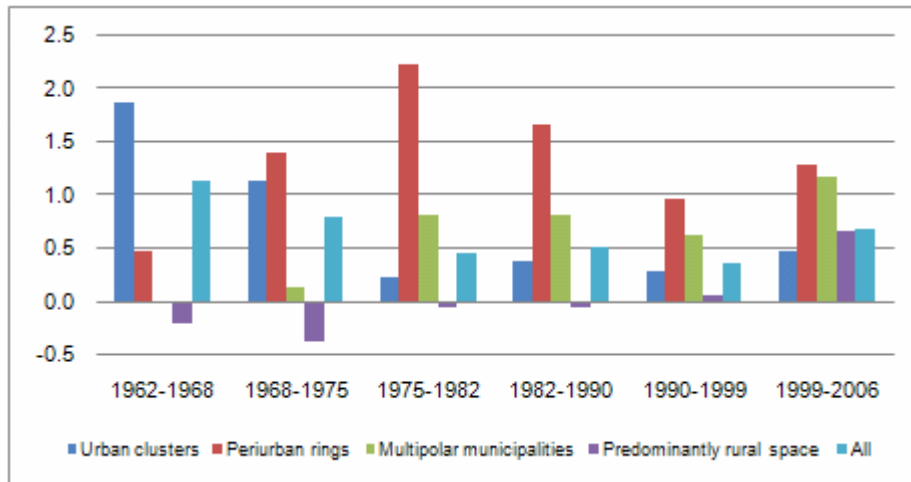
UNEMP: unemployed population

EMP: employment

JTW: population inhabiting outside the area and working inside the area

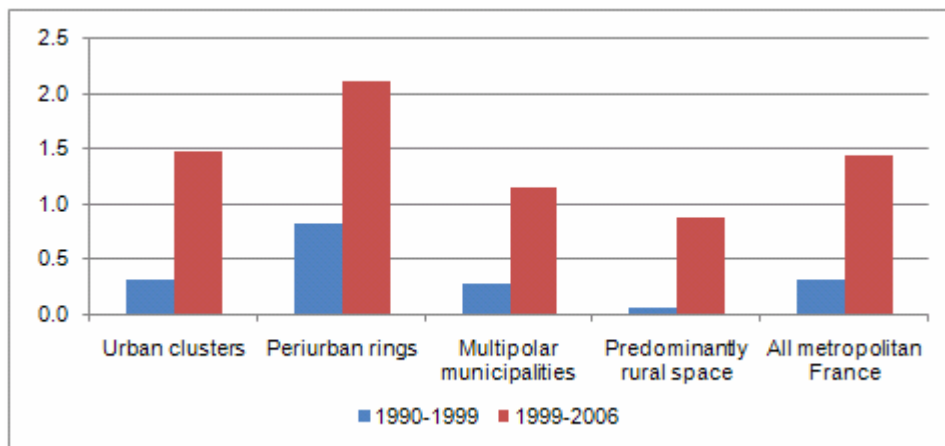
9. Annex 3: Graphs

Graph 1: Average annual growth rate of population by class of space (%)



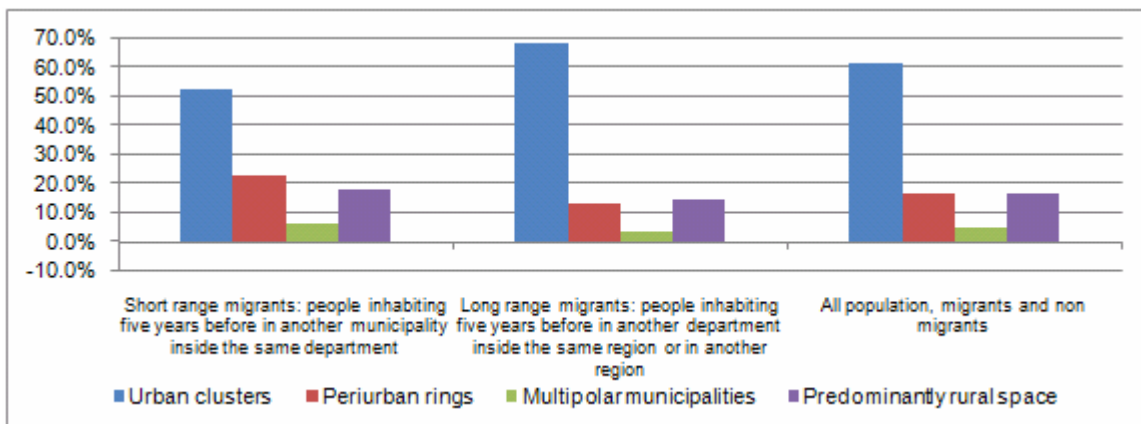
Source: INSEE, Censuses from 1962 to 2006

Graph 2: Average annual growth rate of employment by class of space (%)



Source: INSEE, 1990, 1999 and 2006 Censuses

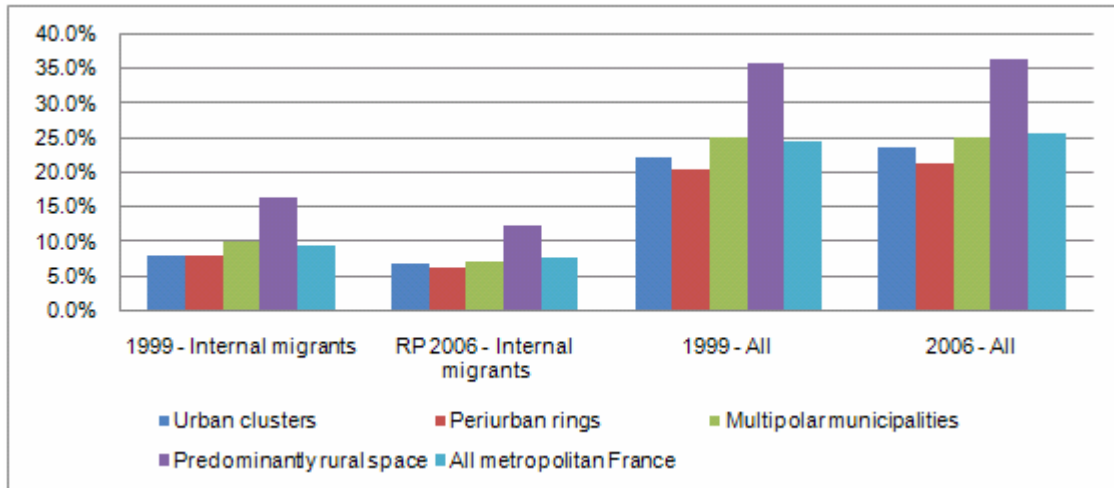
Graph 3: Population by kind of space according to the previous place of dwelling



People aged 15 to 64

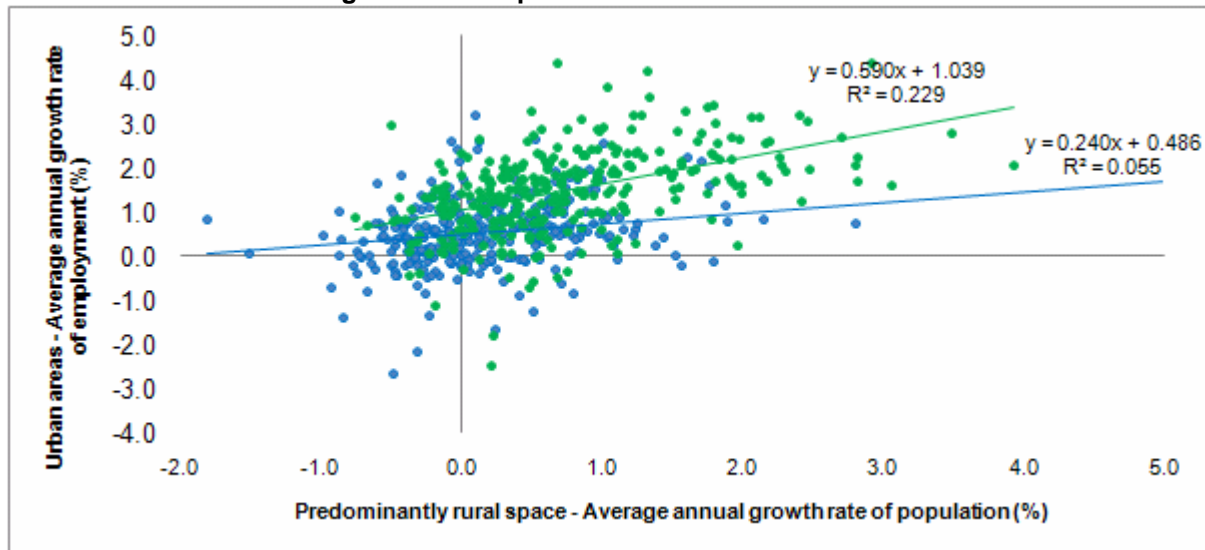
Source: INSEE, 2006 Census

Graph 4: Old-age dependency rate by class of space



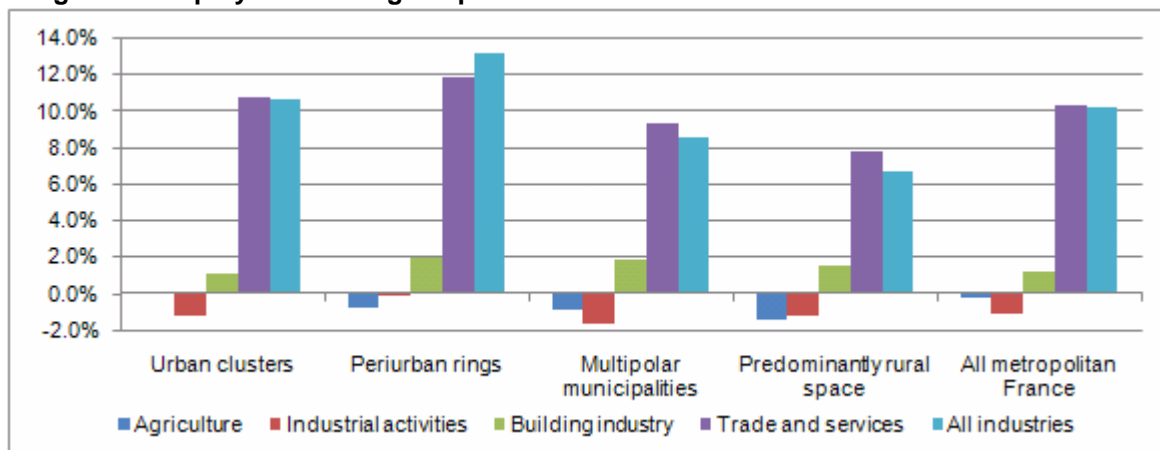
Rate of the number of persons aged 65 or more on the number of persons aged 15 to 64
 Source: INSEE, 1999 and 2006 Censuses

Graph 5: Correlation between the growth rate of employment in urban areas and of population in their closest surrounding rural municipalities



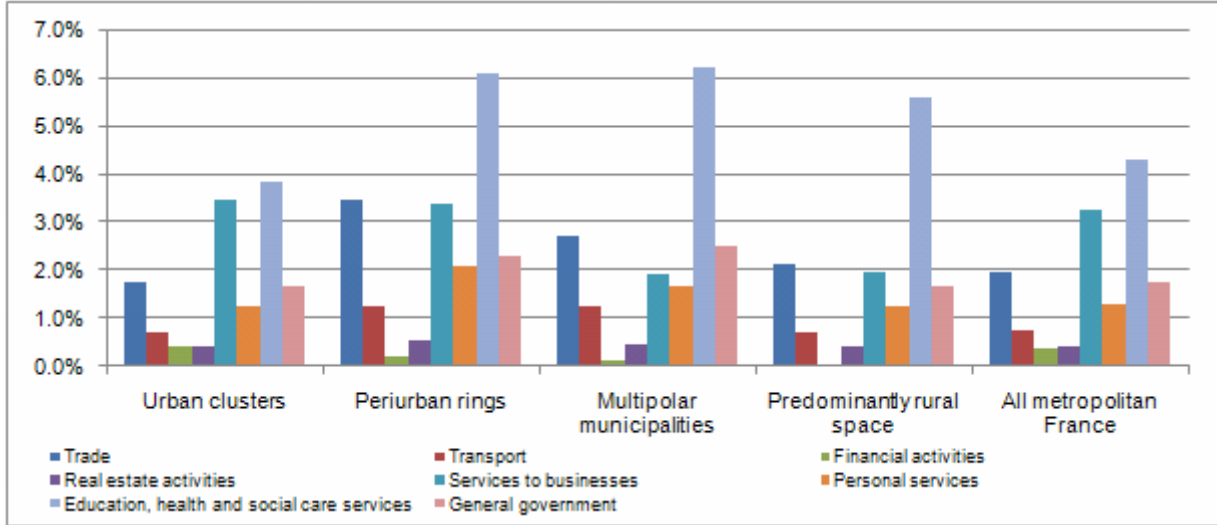
1990-1999 in blue, 1999-2006 in green
 Source: INSEE, 1999 and 2006 Censuses

Graph 6.1: Variations of employment between 1999 and 2006 by activity in proportion of the average total employment during the period



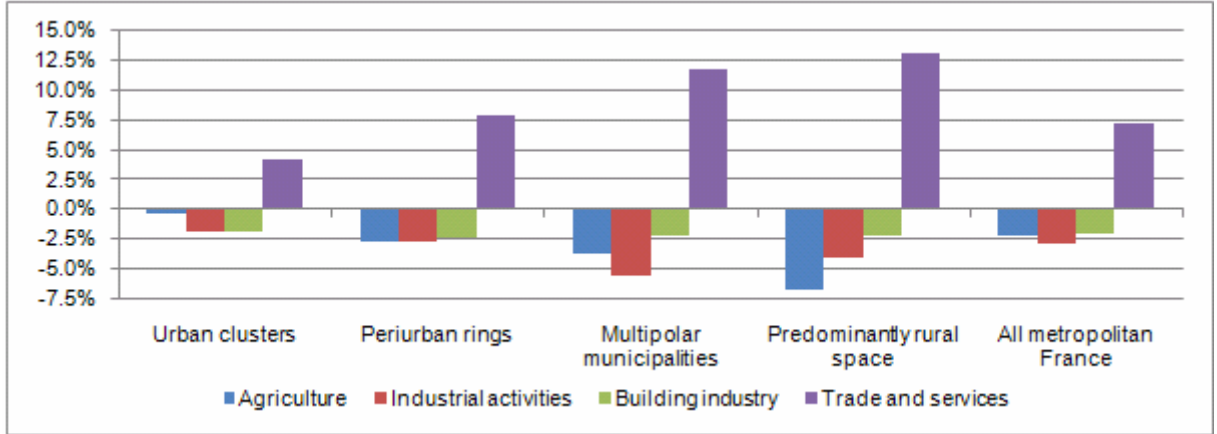
Source: INSEE, 1999 and 2006 Censuses

Graph 6.2: Variations of employment between 1999 and 2006 by activity in proportion of the average employment in tertiary activities during the period



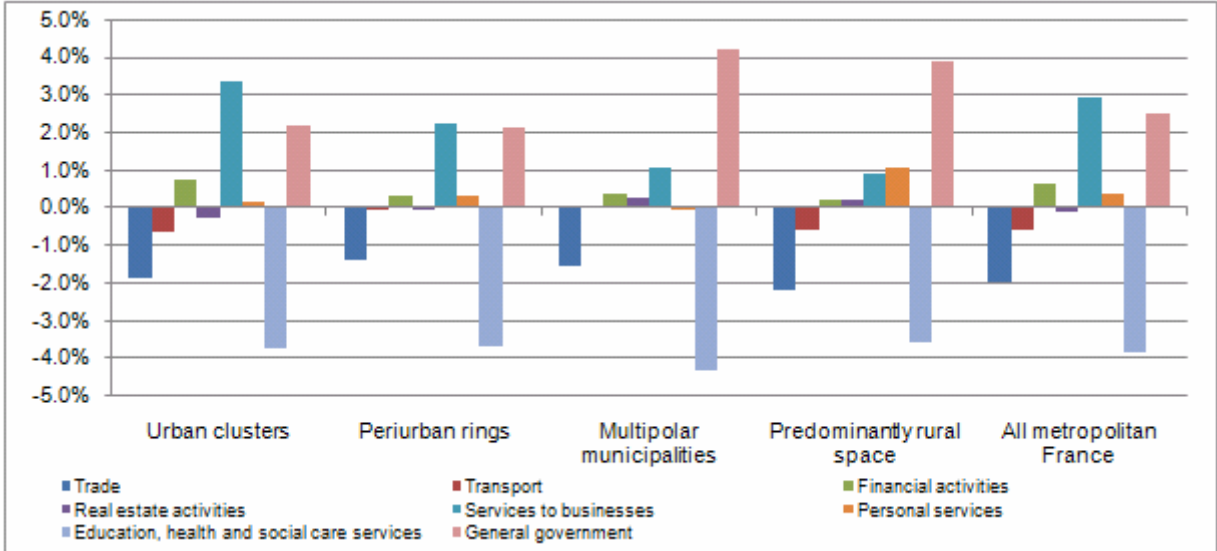
Source: INSEE, 1999 and 2006 Censuses

Graph 7.1: Difference between employment structures of long range internal migrants and of all population



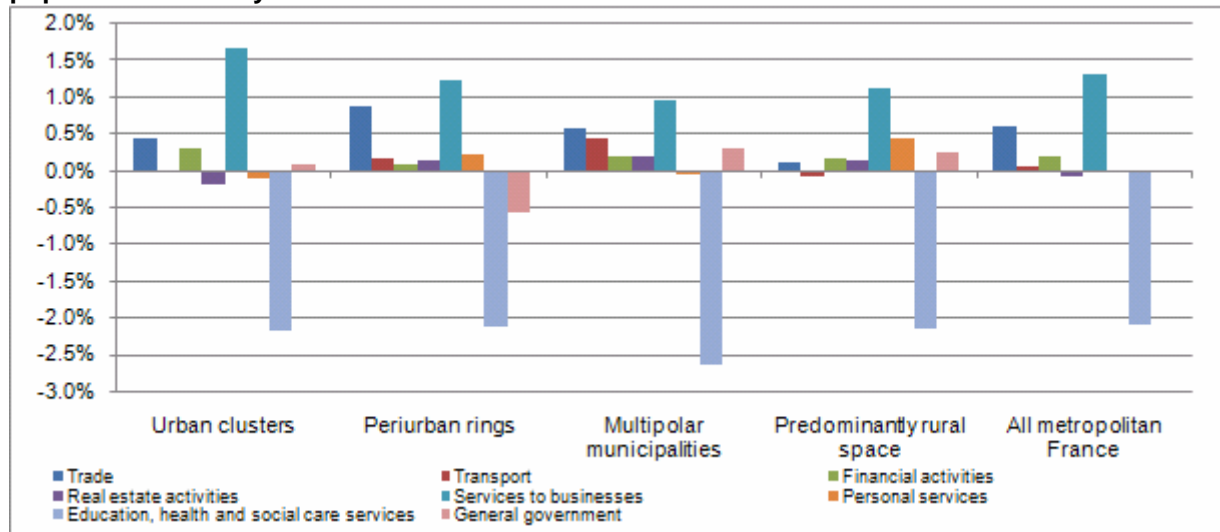
Source: INSEE, 2006 Census

Graph 7.2: Difference between employment structures of long range internal migrants and of all population - Tertiary activities



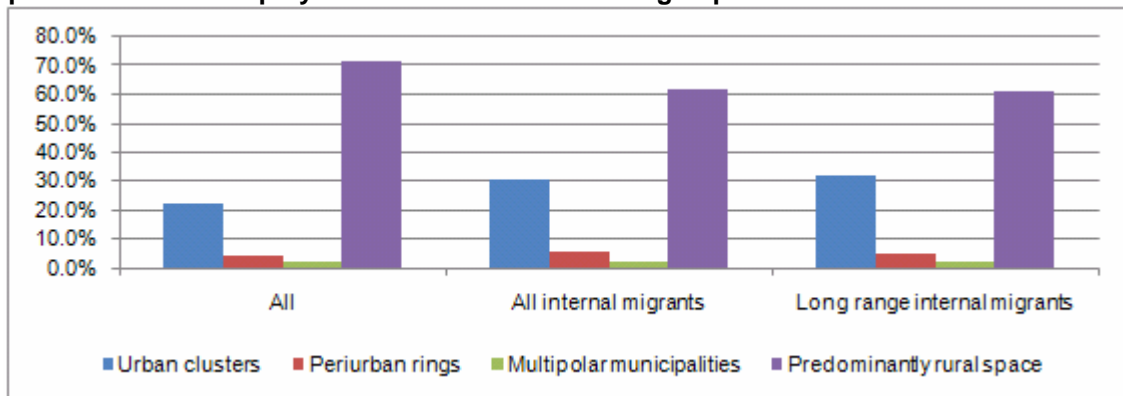
Source: INSEE, 2006 Census

Graph 7.3: Difference between employment structures of all internal migrants and of all population - Tertiary activities



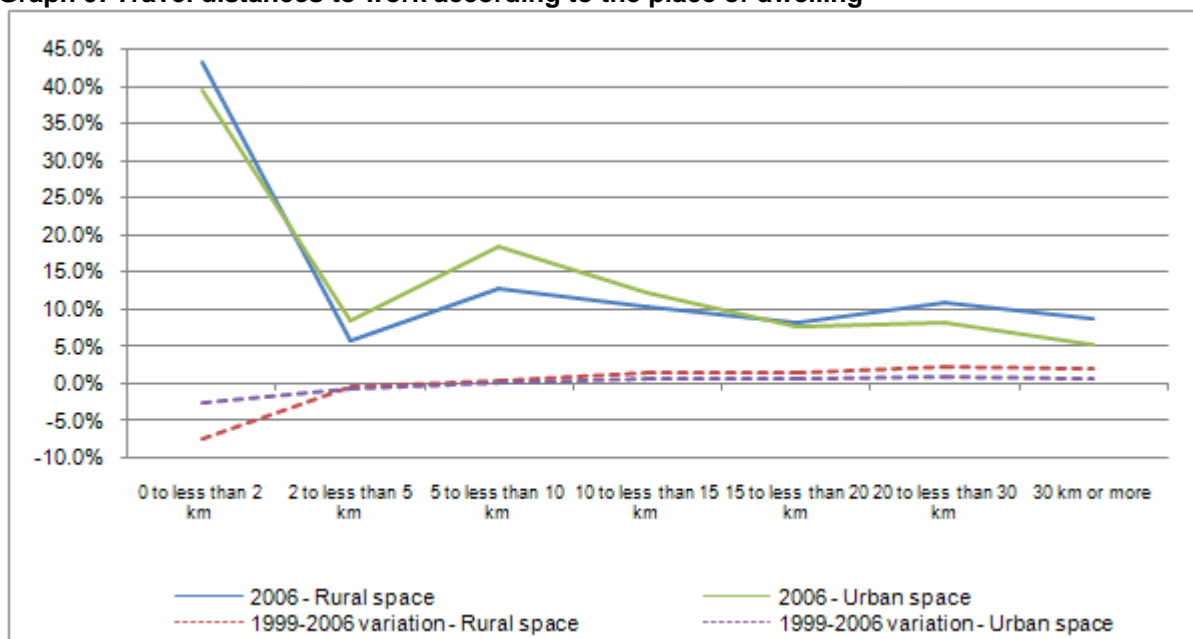
Source: INSEE, 2006 Census

Graph 8: Number of employed rural residents according to place of work



Source: INSEE, 2006 Census

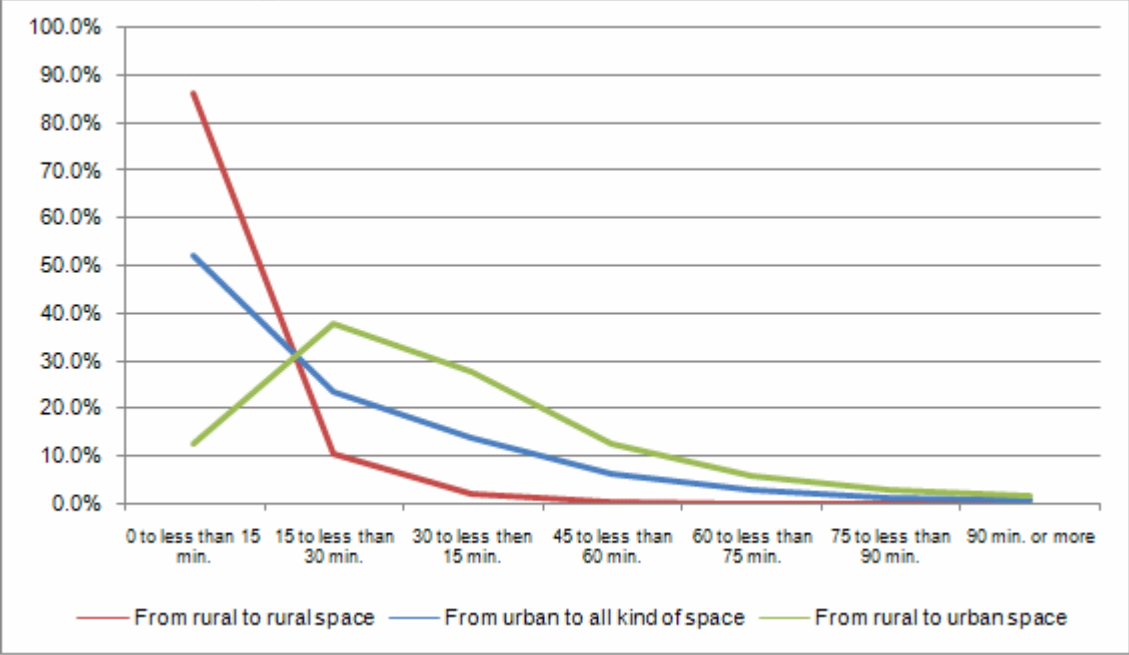
Graph 9: Travel distances to work according to the place of dwelling



Travel per car, single journey, peak traffic hours

Source: INSEE, 1999 and 2006 Censuses - INRA UMR1041 CESAER, *Odomatrix* distance database

Graph 10: Travel times between kinds of space



Travel per car, single journey, peak traffic hours
 Source: INSEE, 2006 Census - INRA UMR1041 CESAER, *Odomatrix* distance database