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Social and Material Deprivation in French and Italian Macro Regions: A Proposal of New Indicators from Eu-Silc Data

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Abstract

Eurostat databases (EU-SILC survey) provide forty indicators relevant for material and social deprivation and indirectly affecting standard of living and life expectancy. Our paper uses this set of comparable data to highlight the difference between Italy, France and their macro-regions. The two countries are comparable, according to their social, institutional and economic structure, as several authors maintain and the Governor of the Bank of Italy remarked in May 2011. The research has been carried out following the factorial analysis methodology. We have chosen the variables to create two indexes referring to material and social deprivation, respectively. They are positively correlated with life expectancy (the material index correlates more highly), and their sum gives the social and material condition index. The index derives from just six data, which have been selected through the cited methodology; they find their theoretical basis on the concepts of capabilities, empowerment and entitlement proposed by Sen (Sen 1987). The two indicators of social and material deprivation show that the distinction between "social" and "material" can be tested and holds well. Social and material deprivation is considered separately, to grasp the territorial specificity of the standard of living, and then they are put together, to come to a synthesis and a comparison between different French and Italian macro-regions. In the conclusions, some hints about policies to implement are provided.

Key Words: *Material Deprivation, Social Deprivation Composite Index, Factorial Analysis, European Union.*

Introduction

In France and Italy population, Gross Domestic Product (GDP) per capita in Purchasing Power Parity (PPS) and rate of growth are very similar in the last decade. Moreover they have the same model of capitalism, namely coordinated market economy (Soskice 1999). The sustainability of the welfare state is a major challenge in France and Italy (and even Germany) (Esping – Andersen 1990, Smith 2004). In 2007 life expectancy and rate of mortality were almost the same in France (77 and 84 years for men and women and 9 ‰) and Italy (78 and 84; 10 ‰) (*Tableaux* ..., 2011). Finally, in May 2011 the Governor of the Bank of

Italy, comparing productivity, foreign direct investment, industrial structure, growth of GDP, wages and consumption and other indicators in both countries, remarked their similarity (*Considerazioni* ..., 2011).

Therefore the comparison based upon the respective importance of material and social elements of deprivation in France and Italy may be interesting. The difference between "material" and "social" is nuanced: we assume that income and employment concern "material", whereas age, family structure and opportunity of communication concern rather "social" conditions. Indeed, according to Townsend (1987), the material form of deprivation "entails the lack of goods, services, resources, amenities and physical environment which are customary, or at least widely approved in the society under consideration", while its social form "is non-participation in the roles, relationships, customs, functions, rights and responsibilities implied by a member of a society and its sub-groups". Material deprivation is likely to be a major cause of social deprivation (although the latter can be rooted also in other grounds, e. g. racial discrimination), as Sen shows by his concept of "empowerment": the possession of commodities is valuable only to the extent that it enables people to do or be a range of things (Sen 1987).

The availability of Eurostat data - EU-SILC (European Union Statistics on Income and Living Conditions) survey data, which collect timely and comparable cross-sectional and longitudinal multidimensional micro-data on income, poverty, social exclusion and living conditions- at Nomenclature of Territorial Units for Statistics (NUTS) level enable us to adopt macro-regions as geographical scale (NUTS1), to single out better the (dis)similarities between the countries. Indeed regional disparities in Europe are persistent, and the enhancement of education, infrastructures and communication is needed in order to reduce them (Heidenreich 2003). However, the regional scale of analysis of deprivation has remained quite neglected in Europe (remarkable exceptions: Callens and Croux 2009; Reinstadler and Ray 2009), whilst most of studies focus on urban or national dimension, so that some scholars complain about "disciplinary impasse" (Labao et al. 2008).

Literature Review

We considered appropriate to construct an index based on currently available data, which do not require *ad hoc* surveys, with the double result of avoiding the creation of additional costs and of being allowed to update indexes in a simple and continuous manner, basing decisions on objective and transparent data coming directly from certified sources (Jarman 1983; Gordon and Pantazis 1997). A classification nomenclature of territorial units for statistics has been used. NUTS is the acronym (from the French nomenclature des Unités territoriales statistiques), created in 1988 by Eurostat taking as a benchmark the size of the resident population in each local administrative area, going from a minimum of three million inhabitants to a maximum of seven million inhabitants (Eurostat 2003). The NUTS 1 level used is one which includes the geographical areas shown in Table 1a and b.

Table 1a. NUTS 1 Classification (France)

Île-de-France	Île-de-France
Parisian basin	Champagne-Ardenne, Picardie, Haute-Normandie, Centre, Basse-Normandie, Bourgogne
Nord-Pas-de-Calais	Nord-Pas-de-Calais
East	Lorraine, Alsace, Franche-Comté
West	Pays de la Loire, Brittany, Poitou-Charentes
South West	Aquitaine, Midi-Pyrénées, Limousin
Centre East	Rhône-Alpes, Auvergne
Mediterranean	Languedoc-Roussillon, Provence-Alpes-Côte d'Azur, Corse
Overseas departments	Guadeloupe, Martinique, French Guiana, Réunion
	not included in the analysis

The analysis of literature offers several solutions to deduce in advance what should be the most appropriate variables to be included within an index, even if the choice is influenced by both the availability of data and the purpose of the indicator (Jarman 1983; Carstairs, Morris 1991; Cadum et al. 1999; Valerio, Vitullo 2000; Grasso 2002; Noble et al. 2003; Testi et al. 2005; Brenna 2007; Guio 2009; Whelan et al. 2010; Ivaldi, Testi 2011; Testi, Ivaldi 2011).

Table 1b. NUTS 1 Classification (Italy)

North West	Valle d'Aosta, Liguria, Lombardia, Piemonte
North East	Emilia-Romagna, Friuli-Venezia Giulia, Trentino-Alto Adige/Südtirol, Veneto
Centre	Lazio, Marche, Toscana, Umbria
South	Abruzzo, Puglia, Basilicata, Calabria, Campania, Molise
Islands	Sardegna, Sicilia

Defining the material and social deprivation indexes as a proxy for the socio-economic conditions of a Nuts 1 area requires the choice of variables to utilise, and secondly how to deal with them on a statistical basis (Ivaldi, Testi 2010). The literature suggests that forty indicators have a significant influence on life expectancy, so we have selected six potential indicators on the basis of their significant correlation (Pearson Correlation Coefficient) to life expectancy. An exploratory factor analysis was carried out in order to provide insight into the underlying data structure (Dillon, Goldstein 1984; Hogan, Tchernis 2004).

Analysis

Factor analysis model offering a theoretical relationship linking the observation and the latent dimension. In this paper this technique is preferred to other methods that provide aggregations of variables such as principal component analysis, or other latent variable models such as MIMIC (multiple indicators and multiple causes) models or SEM (structural equation models) (Krishnakumar, 2008).

Factorial analysis aims to summarising information contained in a matrix of correlation or variance/covariance, and tries to statistically identify their latent and not directly observable dimensions (Stevens 1986). If two variables are highly correlated to the same factor, a significant proportion of the correlation between the two variables is explained by the fact that they have common factors (Dillon, Goldstein 1984). Therefore, by providing a principle of identification of these common factors, the factor analysis sets out a description in a simple form of the complex web of interpolations existing within a set of associated variables (Johnson, Wichen 2002). It represents the set of the identified variables in terms of a lower number of underlying variables, so simplifying complex data. Factorial analysis conveys information in the variance/co-variance matrix, trying to identify the latent dimensions of the phenomenon (Dillon and Goldstein 1984, Stevens 1986). It explains the maximum possible variance of the variables included in the original information matrix. Thus we obtain a set of new variables through a linear transformation of the original ones, thereby reducing the number of variables needed to describe the phenomenon.

Since the variables can be saturated by differing factors in almost the same way, the problem of the rotation of factors rises. The rotation brings about the reduction of the weight of the factors that were comparatively "lighter" in the first step of the analysis, along with the increase of the weight of the factors that were comparatively "heavier" (note that here the absolute value is concerned) (Abdi 2003, Krzanowski and Marriott 1995). Indeed, in a non-rotation solution any variable is explained by two or more common factors, whereas in a rotation solution any variable is explained by a single common factor (Johnson and Wichern 2002). With reference to this case study, subsequent tests, using differing algorithms for extraction and rotation, have shown the real stability of the factors extracted (Kaiser 1958).

We have applied the rotation Quartimax with Kaiser normalisation, a form of *orthogonal rotation* used to transform vectors associated with factor analysis to *simple structure*. **(**Jackson, 2005.) This rotation maximizes the variance of the saturation per line (Carroll 1953), in order to concentrate as much variance as possible for each variable on a single factor. The Quartimax reduces the presence of the variables among the factors, obtaining the minimum number of factors, where the single variable has significant weights (Neuhaus, Wrigley 1954 In Kaiser normalization the loadings of each variable are divided by the square root of their communalities to ensure that each variable has equal influence on the rotation process (their communalities are normalized to all equal one for the duration of the rotation (Dien et. al., 2005)

We have found two subsets of variables, each of them reflecting a latent data dimension, which validates our expectations in that the two kinds of variables, direct and indirect, should be kept separate. The factorial analysis reveals that our six variables are distributed on two latent dimension able to explain the variance at about 65% of the total variability of the model, therefore can be considered sufficiently significant (Stevens 1986);

The second step is to detect the best way of aggregating together the partial indicators to describe socio-economic conditions in each area with a single figure and to allow comparing them. Therefore two indexes were made, the *Material Condition Index (MCI)* and the *Social Condition Index (SCI).* In both cases, to solve the problem of aggregation, the commonly adopted *z-score* technique was used. (Jarman 1983, Carstairs 2000). This procedure was suggested by the differences found out in the scales of the variables. Standardisation allows one to obtain the same weight for items with longer and shorter scales in the overall score. Finally we have summarized the two indexes found in an overall index, the *Social and Material Condition Index (SMCI)* .

The additive index is rather simple, consisting in summing the partial indicators. The only difficulty is that the partial indicators are usually quantified in different units of measure. This therefore requires standardizing them before summing up, to avoid that some of them have more importance compared to the others (Jarman 1983; Jarman 1984; Townsend 1987; Townsend et al. 1988; Carstairs, Morris 1991; Forrest, Gordon 1993; Bartley, Blane 1994, DETR 2000, Testi, Ivaldi 2009, Ivaldi, Testi 2010).

Differences in variables scales suggest the use of standardisation,because if this were not done items with longer scales would then have more weight than those with shorter scales in the overall score (Bartley and Blane, 1994) . Due to the non-normality of the original distributions the use of a transformation capable of achieving an approximate normal distribution for each variable is required. The Box Cox method (Box, Cox 1964)was used to find an appropriate transformation. This method relies on a family of power transformations given by

$$x(\lambda) = \frac{(x^{\lambda} - 1)}{\lambda} \qquad \lambda \neq 0$$

$$x(\lambda) = \ln(x) \qquad \lambda = 0$$

and it plans, in order to select the value of the parameter λ , to use that value which, given an observations vector $\mathrm{x} = x_1, x_2, \ldots, x_n$, maximizes the logarithm of the likelihood function

$$f(x, \lambda) = -\frac{n}{2}\ln(\sigma^2_{X(\lambda)}) + (\lambda - 1)\sum_{i=1}^{n}\ln(x_i) .$$

The variables have been standardized through the Box Cox method, to transform the original non-normal distribution into an approximate, normal distribution for each variable (Bland, Altman 1996). After this transformation, z-scores were calculated for each observation, obtained by subtracting the means of the distribution from the observed, transformed value and dividing the result by the standard deviation of the distribution (Osborne 2002). Therefore, both indexes result from the sum of three z-scores.

Lastly, the index distributions were obtained, where values may be either negative or positive, going from the most deprived areas (larger negative values) to the most affluent ones (larger positive values). Two indexes were therefore constructed, MCI (Material Country Index) and SCI (Social Country Index). The first one includes: Gross domestic product (GDP) at current market prices, Employment by sex and age from 25 to 64 years, Income of households; the second one includes: Not single-parent households, People aged 25-64 with higher secondary education attainment, (%), Households with access to the Internet at home.

Finally, after being sure that the partial indicators had been correctly aggregated, the most important thing is to also be sure that the proposed indexes are good predictors of health status. An appropriate synthetic measure of health is, life expectancy at birth (see for example Auger et al. 2010, Guio 2009), that is the expected (in the statistical sense) number of years remaining to live. Also Hicks and Streeten (Hicks and Streeten 1979, pag. 578) maintain that life expectancy at birth can be "the appropriate index of health".

The final step is grouping the values of *SMCI* (Social Material Country Index) index into categories to identify groups of areas with similar socio-economic conditions. We have selected the areas following the parameters of the distribution (means and variance), in order to retain the discriminatory features of the distribution (Carstairs, Morris, 1991; Carstairs 2000).

We have based our analysis on a set of variables in line with most of literature. Also Serge Paugam, member of the *Observatoire Sociologique du Changement*, founded his analysis of the "spiral of precariousness" on indicators such as job, family structure, poverty, social relations. Indeed Paugam's "precariousness" is synonymous of our material and social "deprivation": as poverty, as social deprivation are likely to trigger a vicious circle leading to "social disqualification", that is unemployment, dependency, lack of self-esteem (Paugam 1995).

More recently in France public authorities (the *Haut commissaire aux solidarités actives contrela pauvreté*), unsatisfied of the monetary definition of poverty are setting up complementary indicators of poverty, which consider education, health, home, employment and so on (Lambert 2008a). Even Michel Foucault, whose methodological approach was utterly different from ours, in a lecture in 1970 held in Tokyo put forward three forms of exclusion, or "existential marginality", concerning the poor: job, family and language (cited in Gueslin 2006), that roughly correspond to our data on employment, one parent families, and education and Internet access.

Generally speaking, our groups of variables describe the individual and social condition of people. GDP and employment are standard macroeconomic indicators of the level of economic activity and the effectiveness of the system in creating jobs; the income of households has the prominent role regarding the material deprivation. On the other hand, single-parent households indicate a situation that is relevant to quantify social deprivation, and they are much more at risk of unemployment, as shown by long-period data - In the period 1975-2002 the percentage of one parent families without a job had soared from 9.6 to 25.8% (*La France* ... 2006) and they are classified as a deprived social group (Gueslin 2004). - ; education and access to the Internet allow better participation in social life.

According to some authors, since "social exclusion" concerns life expectancy, social links, education, job, family, and so on, "exclusion" and "poverty" must be distinguished: the poor can be not excluded and, on the other hand, excluded people not always are poor (CESIS, 1997; IDS 1997; Iorio 2001; Freguja, Pannuzi 2007) - . In France people aged 25-64 who accomplished the 2° cycle are 70.4%; in Italy 54.3% (UE 27 72%). Only Spain, Portugal and Malta have a level of education lower than Italy (Tableaux ..., 2011). This is a significant difference that can not be easily represented by our analysis, but that must be kept in mind when interpreting it.

We have not examined data relating to the housing property, since the very higher amount of public housing in France would take away the sense of such a comparison. In France in 2008 only 57.9% of households owned their home; 6.6 m. households paid rent on the free market; 5.1 m. lived in public housing. In the same year, households paying rent on the free market whose cost of housing (net of any sort of public aid) is 40% or more of disposable income, are only 10% of total households in France (that is the lowest percentage in EU 27) and 27.4% in Italy (EU 27: 25.6%) (*Tableaux* ... 2011). This wide gap suggests that the structure of housing is different in Italy and France. Gender, immigration and ethnic differences have been excluded as well: data are not available or gives rise to distortion, since, for example, the female life expectancy is always longer. However the distinction between material and social deprivation, and their respective weight in the macro-regions, are depicted; this is quite a satisfying result, taking into account that the world of French poverty is made up of heterogeneous groups difficult to aggregate on the social and cultural level (Gueslin 2004, Paugam 1995); also Italian evidence, as it appears from a few inquiries in the Nineties, has shown an important territorial dimension and the progressive multidimensional pathway towards marginality and exclusion, confirmed by our study (Mingione 1997; Iorio 2001).

In the material index, the labour market trends play a key role. Here the emerging difference deserves some further reflection: it is due to structural elements and to the reactions to the current crisis as well (see Cochard and Heyer 2010). In 2009 in France the rate of activity (70.7%) and employment (64.2%) were significantly higher than in Italy (62.4% and 57.5% respectively), and have recently risen; the difference in the rate of female employment is remarkable: 60.1% compared with 46.4%. However the upturn of the active population and the crisis have increased the rate of unemployment, which is 9.1% (in Italy 6.9%), with a significant share of long term unemployment (*Tableaux* ..., 2011). In France the drop in GDP and employment, caused by the crisis, has been lower than in Italy, but at the same time the rate of unemployment is higher, so mirroring the different structure of the labour market, namely the lower rate of participation in Italy.

All this, together with the economic policies to cope with the crisis, also influences poverty. Allègre and Cochard forecast a rise of 1.4% in the rate of poverty between unemployed and a slight drop in it (- 0.2%) between labourers in the period 2007 – 2011, the final effect being a small rise (0.4%) - Under the hypothesis of constant social and fiscal policies, they reckon 42 more poor out of 100 more unemployed, the total being 297,000 new poor from 2007 to 2011. The line of poverty is defined as less than 60% of the median GDP per head. See also Lambert 2008a, where the relationship between relative poverty and inequality is briefly discussed from the point of view of their measurement. - (Allègre, Cochard 2010). However, in France political action is more effective than in Italy: the rate of poverty in France is 25% before and 13% after social transfers; in Italy the data are 24% and 20% respectively. Poverty affects the two countries almost in the same measure, but the French social net expenditure (about 30% of GDP in 2006) is more efficacious in reducing it. The effectiveness of France is near that of Northern countries, whereas Italy belongs to the less effective Mediterranean group (Italy, Spain, Greece). In Europe, French are the most frightened by poverty: 86% of them think that everybody might fall below the poverty line and lose his home. This can be explained by the multidimensional character of poverty, difficult to grasp by statistics (Lambert 2008b). In 2009 the disposable income of households rose (+1.0%), even though the income deriving from activities and wealth decreased; this may be explained by the drop in taxation (-4.4% on income and wealth taxes) and the rise in public aid. Total wages decreased, due to the fall in employment and in unitary wages as well and social aid, which soared (+4.7%) between 2008 and 2009, is now 27.8% of primary household incomes. Nevertheless, the rate of poverty after social transfers is 13.3% (in Italy the same indicator is higher: 18.7%). Since the beginning of the crisis, the upturn of the subsidies to the unemployed (+10.8%) and the extension of the public aid (+22.7%) has coped with the deterioration of the labour market and the risk of poverty. In 2009 the global social aid *Prestations de protection sociale* was 36.7% of the gross disposable income of households (34.7% in 2000; 32.8% in 1990) (*Tableaux* ..., 2011).

On these basis six variables from Eurostat have been chosen among about forty of those affecting socio-economic conditions (Table 2).

Exploratory factorial analysis on the selected variables has been carried out to detect if we can individuate two subsets of variables, each one reflecting a latent data dimension. The variables are distributed on two principal components. Note that the relevant feature is the distance from each axes which corresponds to the relative proximity to the first and the second factor; that is the factorial score relative to each variable (Figure 1, Table 3). Figure 1 and Table 3 point out how social and material variables are significantly loaded on the first and on the second factor respectively, thus empirically validating the conceptual distinction.

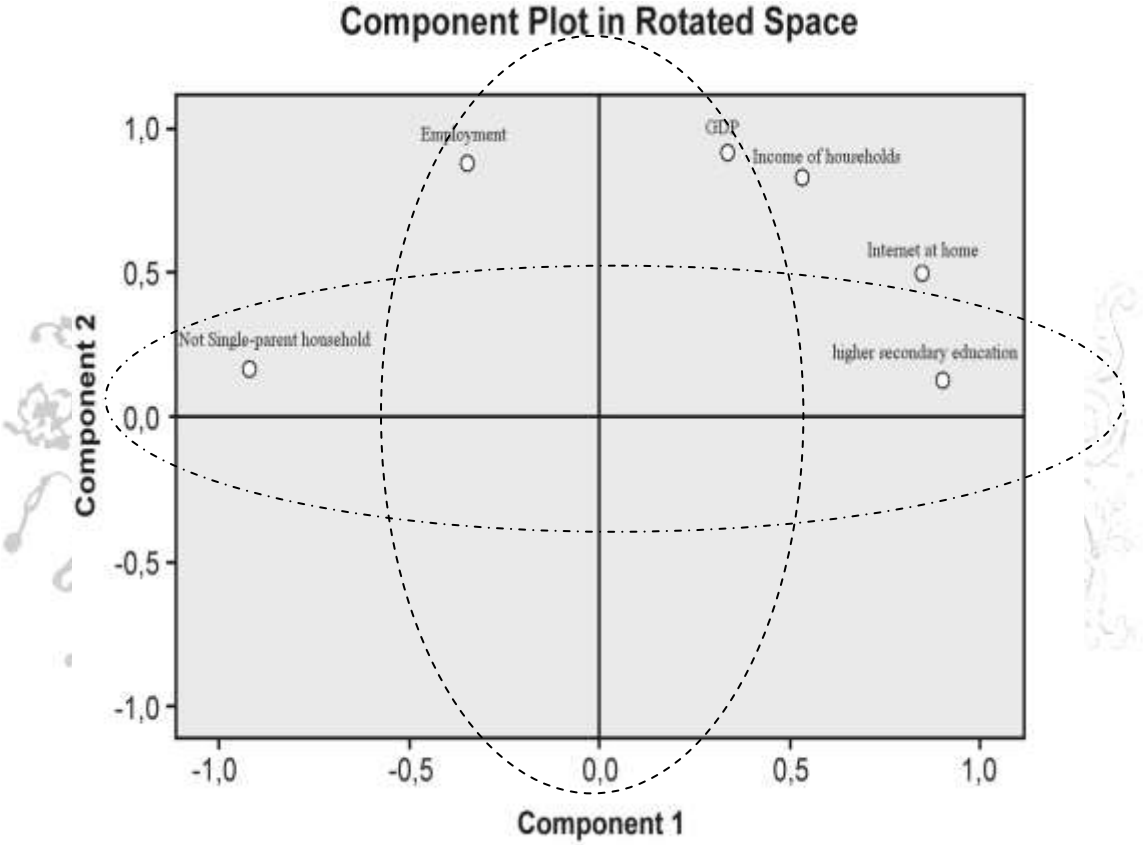

Figure 1. Factorial Analysis Plot.

Table 2. Variables description

Variable
Gross domestic product (GDP) at current market prices
Employment by sex and age from 25 to 64 years
Income of households
Not Single-parent household
Persons aged 25-64 with higher secondary education attainment
Households with access to the Internet at home

Table 3. Factorial Analysis: Rotated Component Matrix

	Component	
	1	2
Not Single-parent household	-0,919	0,168
Persons aged 25-64 with higher secondary education attainment (%)	0,895	0,140
Households with access to the Internet at home	0,845	0,504
Gross domestic product (GDP) at current market prices (Purchasing Power Standard per inhabitant)	0,333	0,916
Employment by sex and age from 25 to 64 years	-0,350	0,887
Income of households. Balance of primary income, net (uses)	0,531	0,833

Extraction Method: Principal Component Analysis.
Rotation Method: Quartimax with Kaiser Normalization.
a Rotation converged in 3 iterations.

Table 4. Social, Material and Social-Material Conditions Indexes

GEO/TIME	SCI	MCI	SMCI
Île-de-France (F)	1,9	5,9	7,8
North West (I)	-0,1	3,9	3,8
North East (I)	0,6	2,4	3,1
Centre (I)	0,7	1,5	2,2
Centre East (F)	1,1	0,0	1,1
West (F)	1,0	-0,7	0,3
Parisian basin (F)	0,2	0,0	0,1
South West (F)	0,7	-0,9	-0,2
East (F)	0,6	-1,4	-0,8
Mediterranean (F)	-0,7	-1,0	-1,7
Nord - Pas-de-Calais (F)	-0,8	-2,7	-3,5
South (I)	-2,3	-2,7	-5,0
Islands (I)	-2,9	-4,2	-7,1

With the selected variables, three indexes have been calculated: *SCI*, *MCI* and *SMCI*. SCI is the sum of the z-scores referred to in the variables disposed on the first factor: Not Single-parent household, Persons aged 25-64 with higher secondary education attainment, (%), Households with access to the Internet at home; MCI is the sum of the z-scores referred to in the variables disposed on the second factor: Gross domestic product (GDP) at current market prices, Employment by sex and age from 25 to 64 years, Income of households (Table 3). The SMCI index is the sum of the two indexes.

Finally, to assess which index is able to better take into account health inequalities as measured by Life Expectancy, the parametric correlation (Pearson) was tested (Table 5). MCI is the most correlated with life expectancy, but we have to take into account also the social aspects that affect life expectancy, although to a lesser extent.

Table 5. Values of Pearson's coefficient

Indexes	Life Expectancy
SCI	0,398
MCI	0,605
SMCI	0,579

The final step is grouping the values of indexes into categories to identify the areas (classes) with similar socio-economic conditions. The distribution of the index has been divided into four classes: class 1 identifies the countries with the best socio-economic conditions, while class 4 contains, on the contrary, countries characterized by the lowest index value (Table 6a-c). In order to identify homogeneous areas the values of 0 and ±1/2□ have been used as a cut off. The patterns appear quite different, suggesting a theoretical distinction between material and social deprivation.

Table 6a. Classes homogeneous with respect to the SCI index

Class	Country
1	Île-de-France (F)
2	North East (I), Centre (I), Centre East (F), West (F), Parisian basin (F), South West (F), East (F),
3	North West (I) Mediterranean (F), Nord-Pas-de-Calais (F)
4	South (I), Islands (I)

Table 6b. Classes homogeneous with respect to the MCI index

Class	Country
1	Île-de-France (F), North West (I)
2	North East (I), Centre (I), Centre East (F), Parisian basin (F)
3	West (F), South West (F) Mediterranean (F), East (F), South (I), Nord-Pas-de-Calais (F)
4	Islands (I)

Table 6c. Classes homogeneous with respect to the SMCI index

Class	Country
1	Île-de-France (F), North West (I)
2	North East (I), Centre (I), Centre East (F), West (F), Parisian basin (F)
3	South West (F), East (F), Mediterranean (F), Nord-Pas-de-Calais (F)
4	South (I), Islands (I)

We have selected the areas following the parameters of the distribution (means and variance), in order to retain its discriminatory features (Carstairs, Morris 1991; Carstairs 2000).

Figure 2a. Maps of social deprivation.

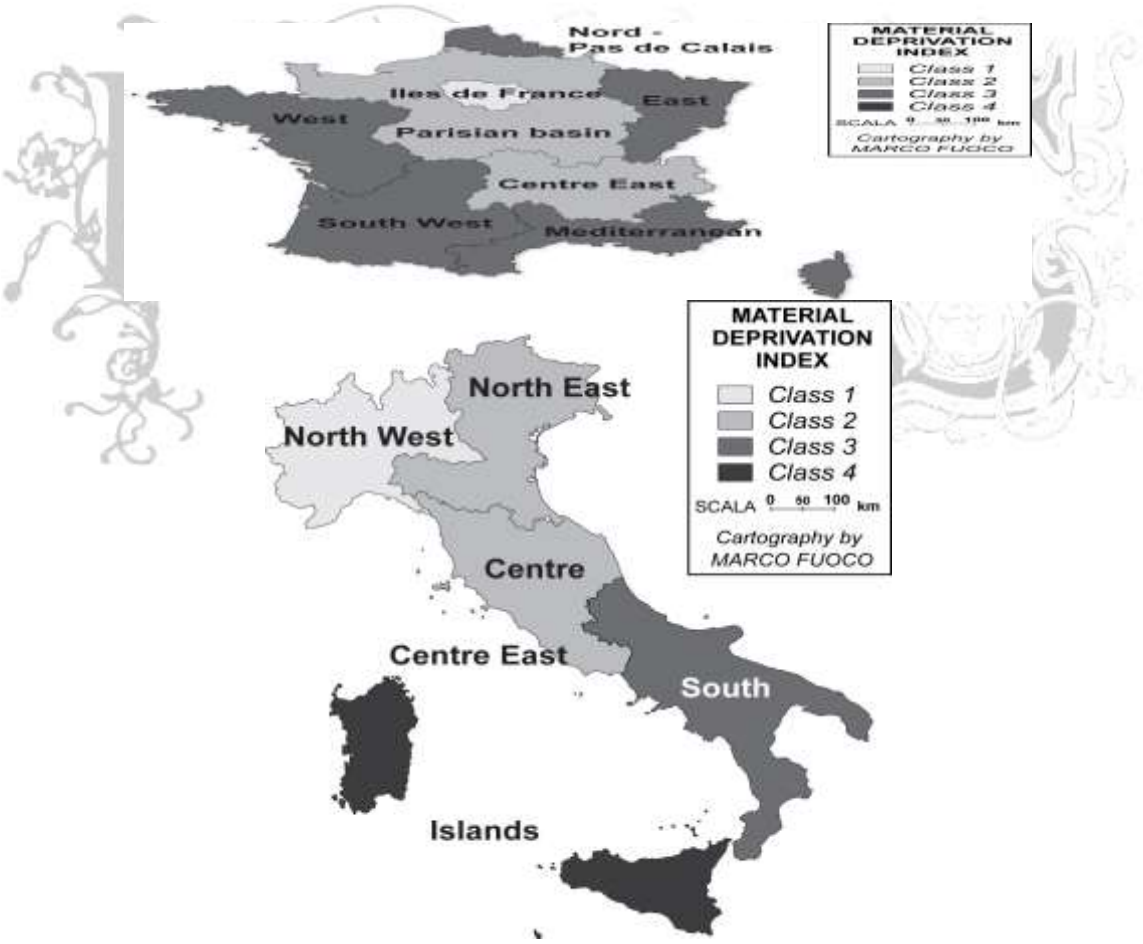

Figure 2b. Maps of material deprivation.

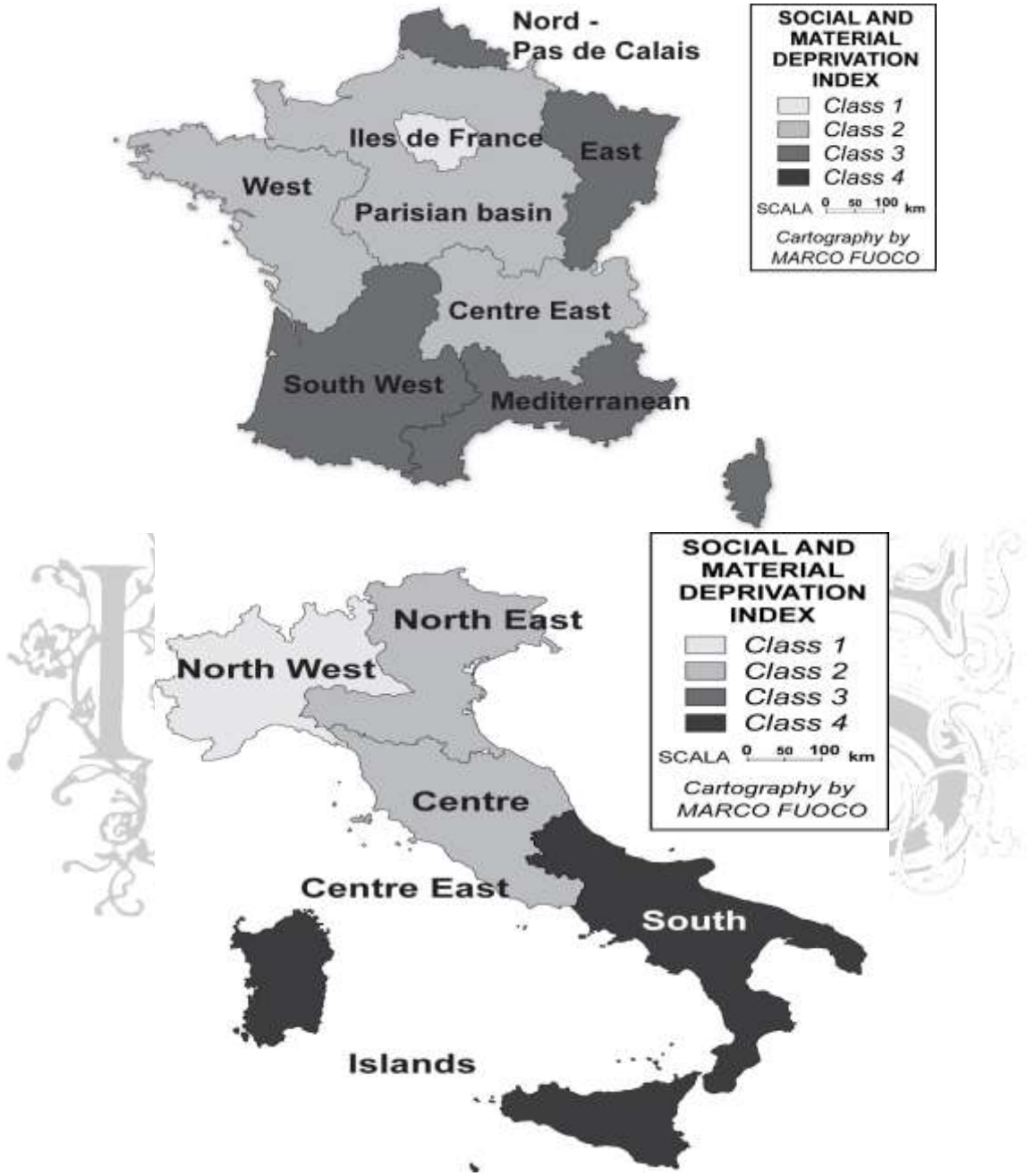

Figure 2c. Maps of social and material deprivation.

Discussion

The analysis of the ranks of the two additional components in the indicator (SCI and MCI) reveals the peculiarities of the different regions. First of all we can observe that no substantial differences between SCI and MCI exist in these areas: Île-de-France (F), North East (I), Parisian basin (F), Centre (I), Centre East (F), Mediterranean (F), Nord-Pas-de-Calais (F) and Islands (I).

Secondly, West (F), South West (F) and East (F) have a better SCI rank compared to MCI, due to above average education, whereas employment is lower than average. North West is the only Italian region that shows a marked difference between the two components of the SMCI index, being 2nd place in the MCI, and only 5th place in the SCI. The position between MCI and SCI is very badly balanced. This is due to the fact that the variables that make up MCI are all above average - especially employment - whilst two SCI variables are below average and the third is on average with the other geographical areas.

From the results obtained through the SMCI indicator it can be noted that there are differences in the distribution of the index in the two countries: in particular, from Figure 2c we see that in France deprivation increases moving away from the capital, according to a concentric structure, while in Italy deprivation increases with the passage from North to South (Benassi, Colombini 2007). The French spatial pattern of affluence/deprivation is concentric and centred on Ile-de-France while the Italian one is linear to North to South of the peninsula. Indeed a few French researches have shown that the various forms of territorial development influence standard of living and poverty differently. In some French areas the economic activity is exposed to international competition; elsewhere pensions and public wages, or tourism, are the main source of income. The more dynamic regions are less affected by poverty (adjustment costs of crises are likely to be borne by the upper and middle classes), but there it remains constant, whilst in the areas where the income derives from public expenditure the initially high rate of poverty decreases. The evolution of the human geography of poverty, from retirees to workers, is mirrored well in its spatial dimension, since the urban character of poverty has grown in last years, especially in Nord-Pas-de-Calais (Davezies 2004; Noyé 2008).

We also note (Table 4) that the value of the Île-de-France is much higher than other geographical areas concerned, thus giving evidence to a situation of well-being and classifying the area at the first place for both the SCI and MCI, even though other studies demonstrate that inequality is marked in that region and France has no NUTS1 areas in the last class (Noyé 2008). Finally the Italian situation presents higher variability, as shown by the lack of areas in Class 3 in SMCI. Through a set of easy-to-find data, and on the theoretical basis of the concepts of capabilities, empowerment, entitlement proposed by Sen (Sen 1987), we have put forward the index SMCI. Our approach singles out that the core point of deprivation is what people can or can not afford; poverty is important, but it is only one component of deprivation, since social exclusion is multidimensional and its quantitative evidence is difficult to find (Iorio 2001).

The distinction between "social" and "material" can be tested and holds well. General demand-sided macroeconomic policies financed by progressive taxation can improve material conditions. On the other side, social deprivation must be faced by fine-tuned public policies (e. g.: education and access to the web) aiming at the equality of capabilities and/or "endowments" (*dotations*: see Bourguignon 2008), or by specific welfare programmes. The structural spatial features emerged must be taken into account together with the metropolitan polarizing effects. Such effects contribute to the overall good score of some regions, but must be governed, to avoid the imbalances that depolarisation may engender. Such distinction, quite common in economic policy, is confirmed by our analysis.

First we have considered social and material deprivation separately, to grasp the territorial specificity of the standard of living; then we have put them together, to compare the different macro-regions. Our benchmark has been life expectancy, insofar as it is a "neutral" and appropriate measure of health. As expected, the material index is correlated. Since also social aspects express significantly high correlation, although in less proportion, our empirical analysis suggests that income and "capabilities" are significantly linked (see on this point Bourguignon 2008). This is a consequence of our social complexity and stratification, heavily influenced by transnational flows of people, commodities and information. One can hardly maintain that, e.g., the connection to the Internet has a direct influence on life expectancy, but the groups marked by social deprivation (which difficult communication is an element of) have a worse quality of living and their shorter life expectancy witnesses it.

Conclusion

From the geographical distribution of deprivation, a couple of hints emerge: first, inequality in Italy is stronger even on territorial basis, with the wide gap of Southern Italy and the Islands; secondly, the case of the Île-de-France, where the geographical polarization is to be considered as the aftermath of the role of Paris. Our results can be compared with some regional demographic trends, showing interesting analogies. In France the higher demographic rise takes place in the Southern and Western regions, where also the balance of immigration is positive (inflow higher than outflow); on the contrary, it is negative for the North and the North-East. The Île-de-France has net outflow of population, but its dwellers are particularly young (*Tableaux ...*, 2011): presumably Paris attracts the young, while old Parisiens prefer to move towards smaller towns or to the countryside. In Italy, where the natural demographic trend is negative, the small rise in the population (about 0.5%), due to immigration, is higher in the North and also the Centre, thanks to the attractiveness of Rome.

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