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A schematic typology concerning sustainable demographic development

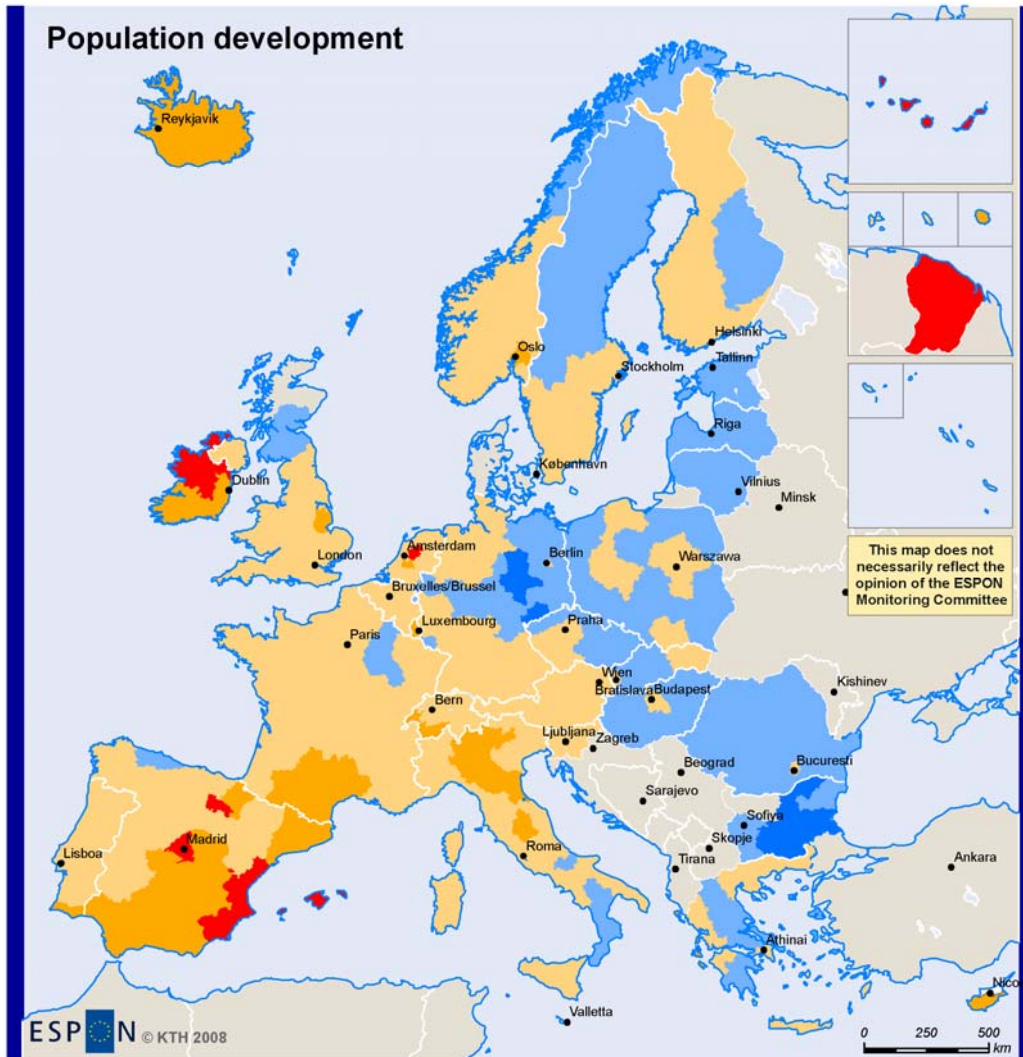
Workshop (08C37)

Networking on European Spatial Planning:

The First Year of the ESPON 2013 Programme

October 8 2008 in Brussels

Work in progress!



Population development 2001-2005 at NUTS2-level

Point of departure:

NUTS2-level – but too aggregated for an in-depth analysis as a consequence of some data problem.

But: A point of departure for further work

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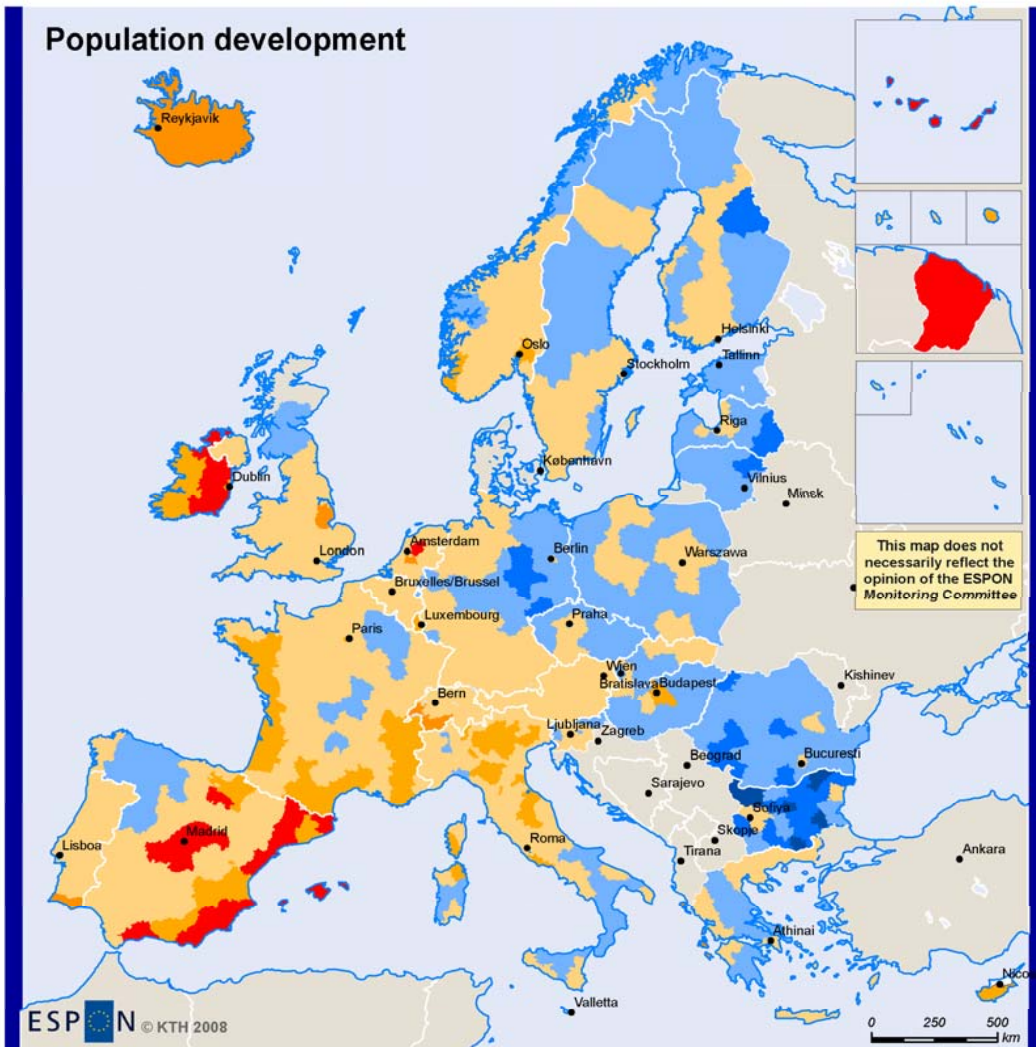
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Regional level: Nuts 2
Source: Estimations based on data from Eurostat

Annual population development 2001-2005

(annual change, exp. base year 2001)

- 2 - 3,5% (Max)
- 1 - 2%
- 0 - 1%
- -1 - 0%
- (Min) -2,1 - -1%
- No data



Population development

2001-2005

NUTS2/3-level

NUTS2:At, Be, Ch, De, NI, Pt, PI & UK

The same pattern as at NUTS2-level but some regions stand out in better as well as worse situations

An effect of the disaggregating and scale problems!

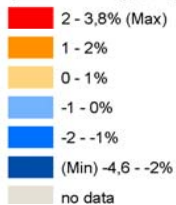
Better from an analytical point of view.

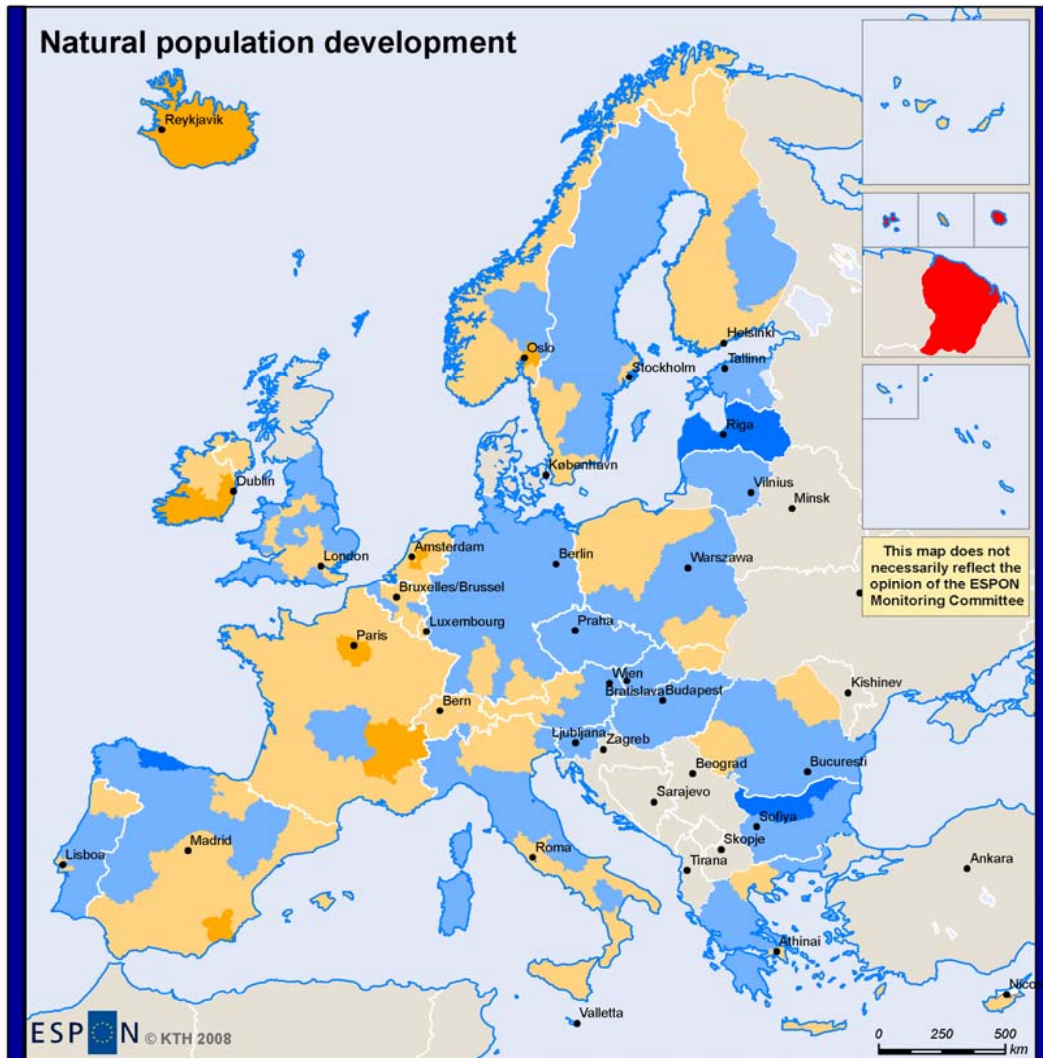
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Annual population development 2001-2005

(annual change, exp, base year 2001)





Natural population development (births-deaths) 2001-2005

NUTS2-level

Natural population change has very small impact on population increase.

Instead – it reinforces the out-migration effects on population development in regions with population decrease.

Exceptions are Northern Italy (negative natural population change), parts of Germany.

Norway and parts of Sweden and Ireland have a positive natural population change.

Even France, Central Europe, Poland and Southern Spain seem to have a more positive natural population change than during the 90s

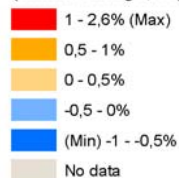
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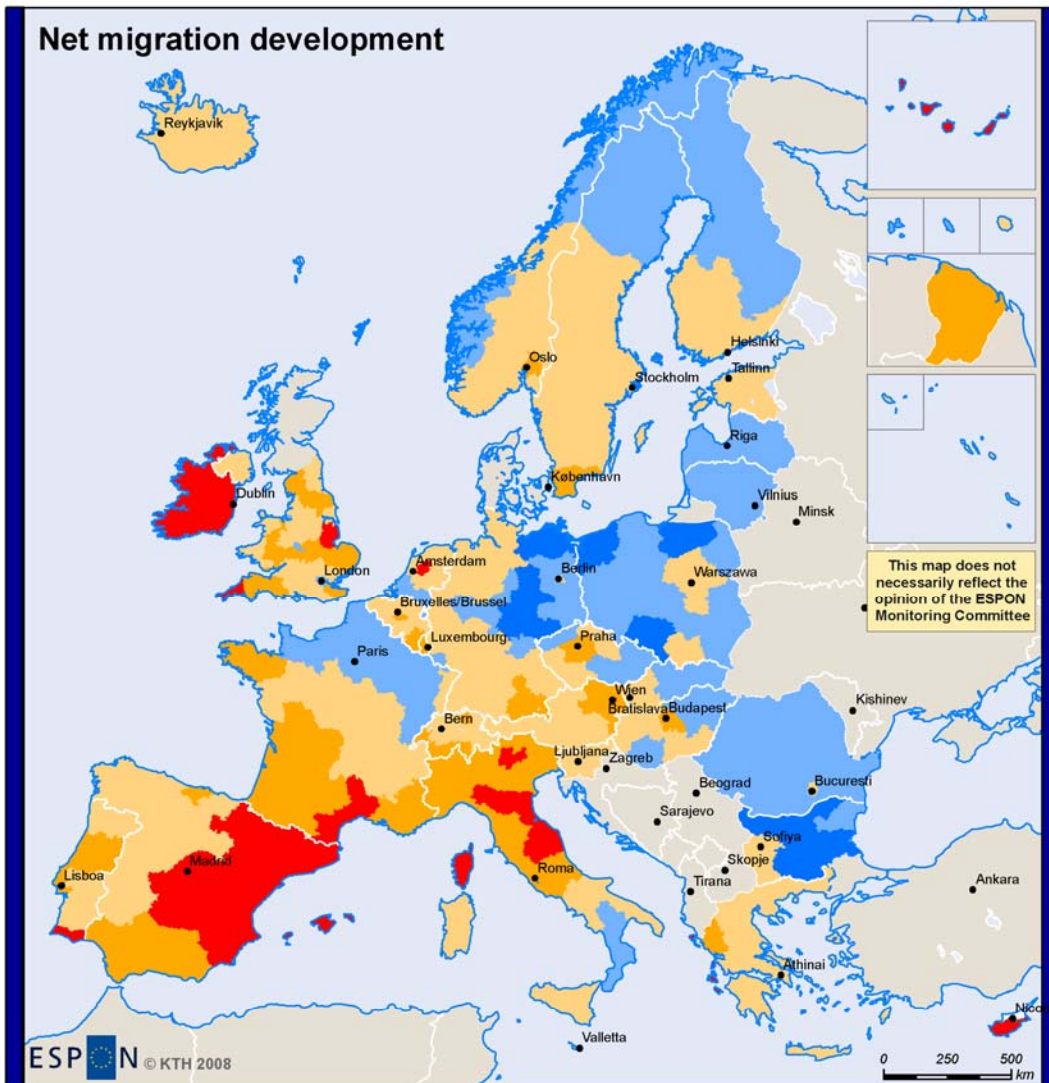
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Annual natural population development 2001-2005

(annual change, exp. base year 2001)






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Annual net migration development 2001-2005
 (annual change, exp, base year 2001)

- 1 - 2,7% (Max)
- 0,5 - 1%
- 0 - 0,5%
- -0,5 - 0%
- (Min) -1,1- -0,5%
- No data

Migratory balances 2001-2005

Net-migration:

Tot pop dev – natural pop dev

NUTS2-level

Migration is the driver behind the population change.

In-migration areas have a relatively good population development and vice versa.

Migration from East to West - Income gaps still of importance

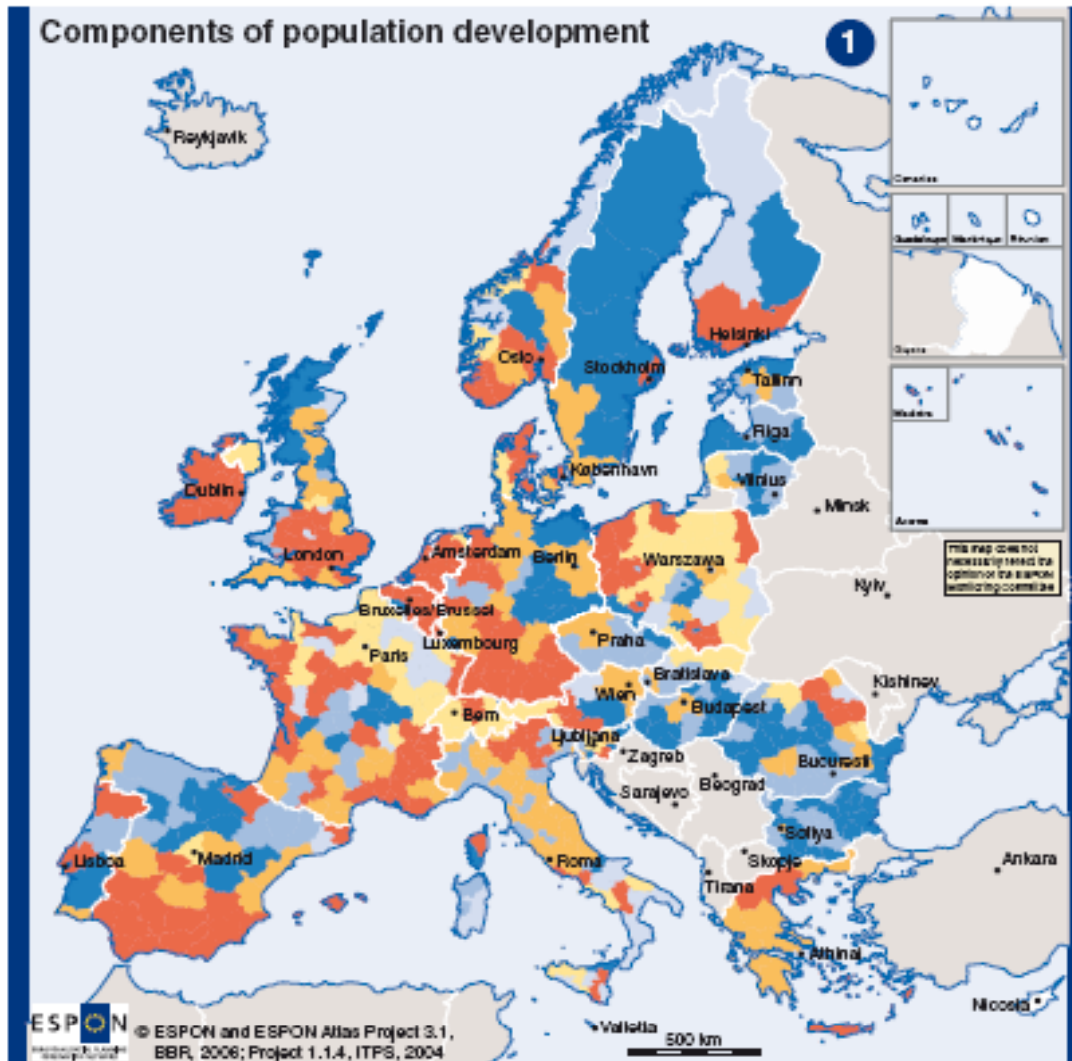
Especially in the new member states in the east and regions in the Northern periphery can out-migration result in depopulation and dying-out regions.

The situation has been accentuated since the second half of the 90s.

But still most important: **Border effects**

**A typology with regard to sustainable demographic development. Six types.
Point of departure: “The demographic equation” $PT=PN+PM$**

1	$PT > 0$	$PM > 0$	$PN > 0$	In-migration and young population/“high” TFR. High sustainability both in short and long term. The most favourable case.
2	$PT > 0$	$PM > 0$	$PN < 0$	In-migration of people with low TFR. Natural population decrease because of lopsided age structure and/or low TFR. Dependent on in-migration. No sustainability in long term – weak reproduction potential.
3	$PT > 0$	$PM < 0$	$PN > 0$	Out-migration and young population/“high” TFR. Short term – sustainability. Long term – eroding sustainability because of lopsided age structure (out-migration).
4	$PT < 0$	$PM < 0$	$PN > 0$	Out-migration but still young population/“high” TFR. Traditionally high fertility regions. Falling TFR -> low sustainability.
5	$PT < 0$	$PM > 0$	$PN < 0$	In-migration and old population/“low” TFR. In-migration of elderly people and/or singles, low reproduction potential. Dependent on in-migration. Low sustainability both in short and long run.
6	$PT < 0$	$PM < 0$	$PN < 0$	Out-migration and old population/“low” TFR, depopulation. No sustainability both in short and long term. The worst case.
PT=Total population development PM=Net migration PN=Natural population development				Based on ESPON 1.1.4 “Demographic trends and migration”



A schematic typology concerning population development based on the demographic equation 1996-1999. NUTS2/3-levels. From ESPON 1.1.4

- Type 1 (best case)
- Pentagon
- Ireland
- Some metropolitan areas
- Southern Spain
- Attractive regions?

- Type 6 (worst case)
- Northern periphery
- The Baltic States
- Scotland
- Eastern Europe
- Unattractive regions?

Population development by components 1996-1999

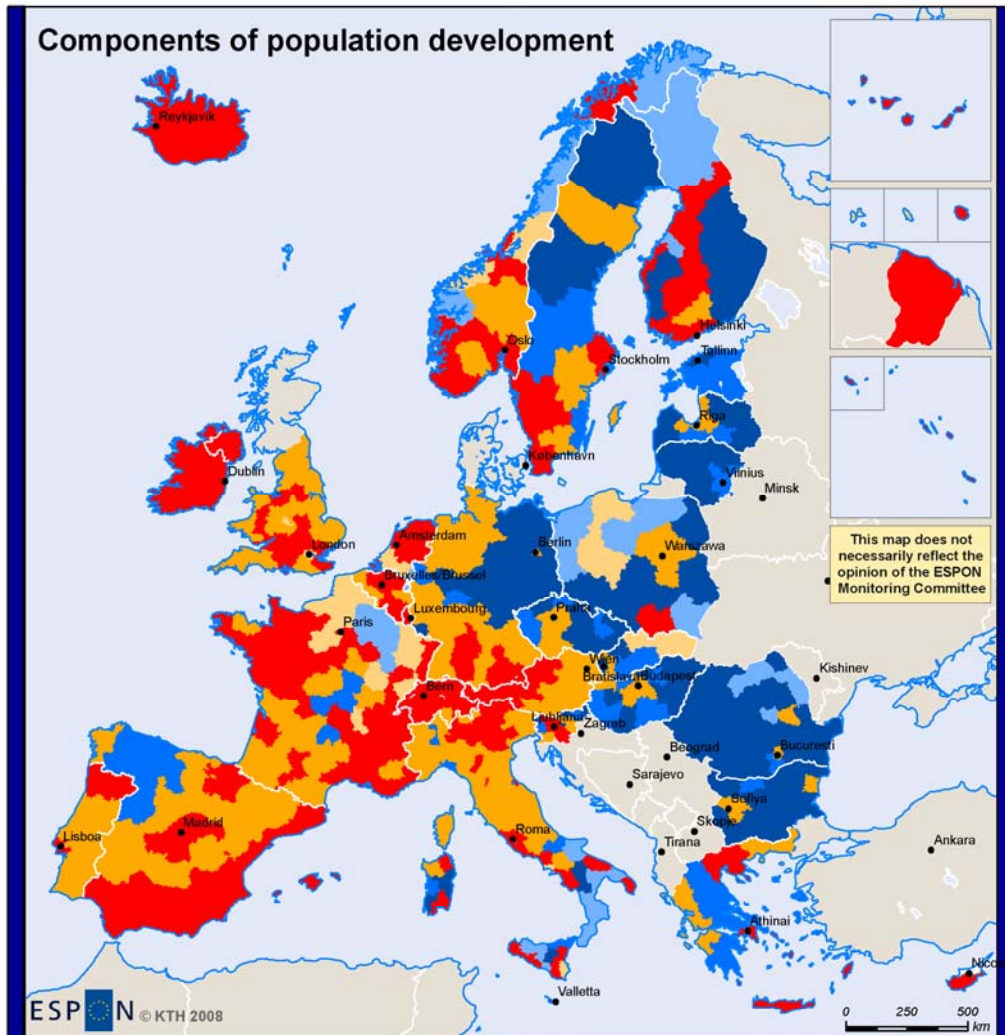
Population increase with

- positive migratory balance and positive natural balance
- positive migratory balance and negative natural balance
- negative migratory balance and positive natural balance

Population decrease with

- negative migratory balance and positive natural balance
- positive migratory balance and negative natural balance
- negative migratory balance and negative natural balance

no data



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Population development by components 2001-2005

Population increase with

- positive migratory balance and positive natural balance
- positive migratory balance and negative natural balance
- negative migratory balance and positive natural balance

Population decrease with

- negative migratory balance and positive natural balance
- positive migratory balance and negative natural balance
- negative migratory balance and positive natural balance
- no data

Note: type 6 – neg nat balance

Components of population development 2001-2005

Nuts2/3-level 2001-2005

The divergent processes are accentuated!

Type 1 (best case)

Still Pentagon and Ireland

Metropolitan areas

Southern Spain, France and Italy – better than in the end of the 90s

Type 6 (worst case)

Northern periphery

The Baltic States – even more problematic

Scotland (?) – no data 2006, but indications

Eastern Europe and Germany – more problematic than during the end of the 90s

A schematic typology with regard to sustainable demographic development based on total population change, net-migration and natural population change. Based on number of regions and size (NUTS2/3). **Period 1996-1999**. Distribution in percent.

				Numbers (NUTS2,3) 1996- 1999	Size (NUTS2,3) 1996- 1999
1	PT>0	PM>0	PN>0	31	34
2	PT>0	PM>0	PN<0	23	18
3	PT>0	PM<0	PN>0	5	10
4	PT<0	PM<0	PN>0	10	16
5	PT<0	PM>0	PN<0	11	8
6	PT<0	PM<0	PN<0	20	13

Source. Estimations based on Eurostat data.

A schematic typology with regard to sustainable demographic development based on total population change, net-migration and natural population change. Based on number of regions and size (NUTS2/3). **Period 2001-2005**. Distribution in percent.

				Numbers (NUTS2) 2001-2005	Size (NUTS2) 2001- 2005
1	PT > 0	FM > 0	PN > 0	38	40
2	PT > 0	FM > 0	PN < 0	29	26
3	PT > 0	FM < 0	PN > 0	7	9
4	PT < 0	FM < 0	PN > 0	4	4
5	PT < 0	FM > 0	PN < 0	7	5
6	PT < 0	FM < 0	PN < 0	16	16

				Numbers (NUTS2,3) 2001-2005	Size (NUTS2,3) 2001-2005
1	PT > 0	PM > 0	PN > 0	31	33
2	PT > 0	PM > 0	PN < 0	29	34
3	PT > 0	PM < 0	PN > 0	4	5
4	PT < 0	PM < 0	PN > 0	6	5
5	PT < 0	PM > 0	PN < 0	8	8
6	PT < 0	PM < 0	PN < 0	21	16

Concluding remarks

Large regions are in more favourable position than small regions

Indications of eroding territorial cohesion?

This is primarily a function of in-migration in all estimations – migratory movements are the prime driver with regard to population change

Natural population change is of small importance except type 1 (positive) and type 6 (negative)

There is a connection between migration and natural population change

Type 1 and 2 are more frequent 2001-2005 compared to 1996-1999 – a sign of better times or increased immigration from abroad?

Still a dividing line between east/north and west/southwest

Thanks for listening