INSTITUT WALLON
DE L'ÉVALUATION,
DE LA PROSPECTIVE
ET DE LA STATISTIQUE

Indicators complementary to GDP:

Social situation index (SSI) for Wallonia *
1st exercise, April 2014

In November 2012, the Walloon Government decided to ask the IWEPS (Walloon Institute for Statistics, Evaluation and Foresight) to develop and calculate consolidated indicators complementary to GDP. The priority indicators defined by the Walloon Government include the development of a social situation index (SSI).

In this document, we present a definition of the multidimensional concept of social situation, the main stages of development of the index, as well as the results of the first calculation exercise over a period of 11 years, from 2002 to 2012.

1. Definition and structure of the Walloon social situation index

1.1. Definition

The social situation index aims to take account of the many issues of social progress and their evolutions over time.

Following the example of the American indexes (Miringoff & Miringoff, 1995, 1996, 1999) and French indexes (Boutaud, 2007, 2009; Jany-Catrice & Zotti, 2011) of social health, from which it takes its inspiration, the Walloon social situation index aims to provide a statistical overview of the social situation in Wallonia. It is based on dimensions that are generally recognised as being constituent of the living conditions and quality of life of a population. The annual evolution of the index provides a signal that can attract the attention of the general public and users, while evolutions in its components enable those elements that explain the general trend to be identified.

1.2. Dimensions and structure of the Walloon SSI

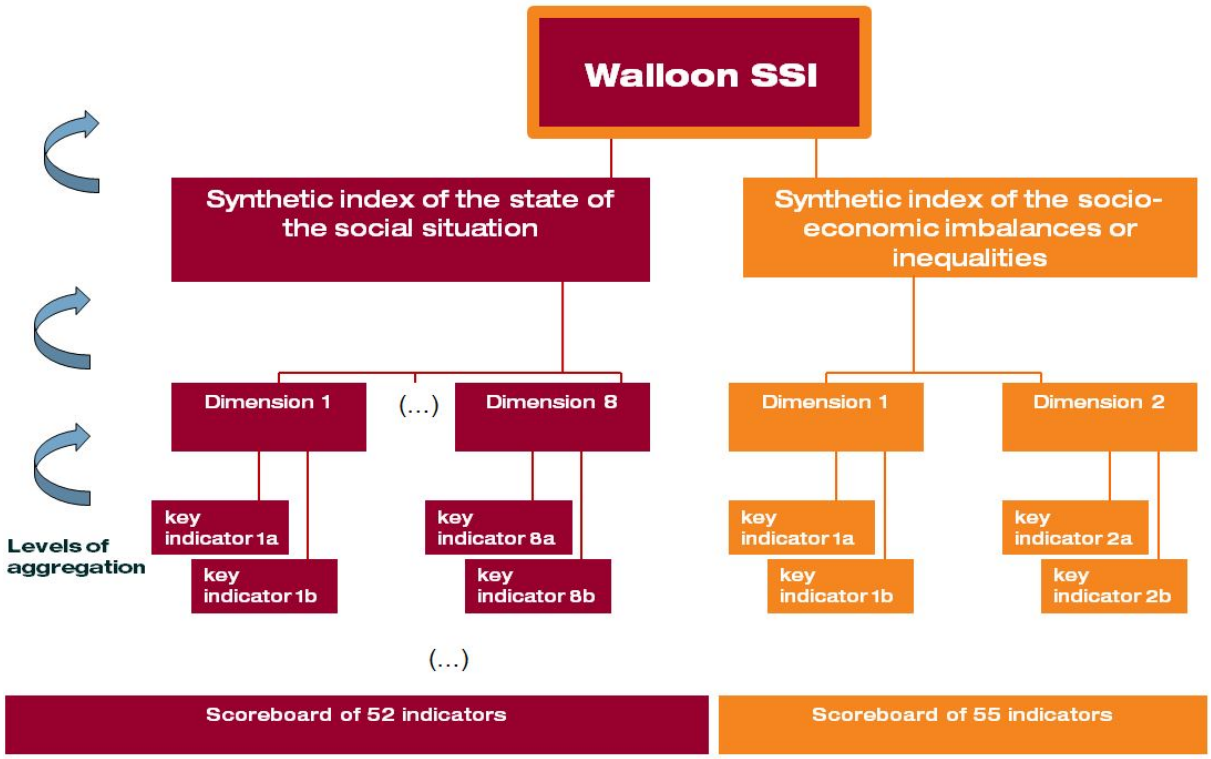
The dimensions and components proposed for the construction of the Walloon SSI are based on analysis of experiences proven worldwide[1].

The Walloon social situation index is a consolidated index based on key indicators grouped into different dimensions representing the state of the social situation and socio-economic imbalances or inequalities (figure 1). It is developed on three levels of aggregation. Based on scoreboards, certain indicators are identified as key indicators and selected. The first level of aggregation corresponds to the aggregation of these indicators by dimension. The second level of aggregation corresponds to the aggregation of these dimensions into two different groups that form two indexes: the consolidated index of the state of the social situation and the consolidated index of socio-economic imbalances. The third and final level corresponds to the aggregation of these two indexes to form the Walloon SSI.

* Translated from original French version by DATA-TRANSLATIONS

[1] All these experiences, on which our selection of dimensions is based, are described and analysed in three Working Papers of the IWEPS, nos. 4-7 and 10 (http://www.iweps.be/indicateurs-complementaires-au-pib).

Figure 1: Structure of the Walloon social situation index



This choice of distinguishing between measurements of states and imbalances is based on the recommendations of the Stiglitz-Sen-Fitoussi Report - themselves constructed from a large volume of pre-existing work - and on the scoreboard developed in the Netherlands, the *Monitor Duurzaam Nederland*.

In the Walloon SSI, the "state of society" part touches on measurements of resources, stocks or capital, and highlights more specifically what can be passed on to future generations. The "socio-economic imbalances and inequalities" part touches on measurements of tensions, balances/imbalances, fragility.

The resource indicators cover ten dimensions; the indicators of imbalances eight (figure 2). In this first exercise, however, we present only statistical information on eight dimensions in the state indicators and on two dimensions in the indicators of socio-economic imbalances, due to a lack of reliable statistics for the indicators within other dimensions (see section 2 of this document). Dimensions for which no key indicator was found or used in this first exercise are indicated in parentheses in figure 2.

Figure 2: The dimensions of the social situation included in the scoreboards on which the construction of the Walloon SSI is based

STATE of SOCIETY	DEMOGRAPHY	√
	HEALTH	√
	(HOUSING and LIVING ENVIRONMENT)	X
	TRAINING and KNOWLEDGE	√
	(SOCIAL RELATIONS and PARTICIPATION)	X
	CULTURE	√
	SAFETY	√
	VALUES	√
	INCOME	√
	EMPLOYMENT	√

SOCIO-ECONOMIC IMBALANCES	INCOME INEQUALITY	√
	LABOUR MARKET	√
	(DECENT HOUSING)	X
	(HEALTH CARE)	X
	(KNOWLEDGE and in TRAINING)	X
	(SOCIAL GROWTH)	X
	(CULTURAL GROWTH)	X
	(GROWTH OF CITIZENS)	X

2. Method

2.1. Constitution of scoreboards

The choice of indicators used in the scoreboard is based on the work of social indicator experts as well as on the many statistical productions published at European, federal and regional level by statistical institutes, research centres, administrations and other bodies that generate statistical data.

At the same time, a broad review of the various sources of data available at regional level was carried out. The numerous administrative and technical sources (see box below) are particularly precious, since they allow to extract information covering more or less fully the populations concerned by the indicators. Survey sources were also sought out, but are only taken into account when the Walloon sample was sufficient to ensure adequate representativeness of the population studied. The restriction in the use of survey data was mainly encountered while collecting information on small aggregates, especially when dealing with imbalances. The fluctuation of the results over time, within the confidence interval, does not in fact allow them to be used.

Box on the sources of data for the scoreboard and key indicators of the Walloon SSI:

The administrative sources: the National Register, the bulletins of registrations of births and deaths with registry offices, the data gathered by the Common Sickness Funds Agency (Agence Intermutualiste) on health, the “steering” files of the AGERS (General Administration of Educational and Scientific Research) - Ministry of the Wallonia-Brussels Federation, the police crime statistics, the databases of the National Social Security Office, the statistics of the National Accounts Institute, the statistics of the National Bank of Belgium on the social audits of companies, of the Central Office for Credits to Private Individuals, the statistics of the Accidents at Work Fund.

The surveys: annual labour force (FTE) surveys, surveys on income and living conditions (EU SILC), annual surveys of salary structures (DGSIE), annual surveys of the Walloon Telecommunications Agency, the Social Barometer of Wallonia survey (IWEPS) and the National Health Survey (Scientific Institute of Public Health).

2.2. Selection of key indicators that make up the SSI

Choosing the key indicators that illustrate each of the facets of social situation constitutes the first stage in the construction of the consolidated index. The selection was made from among the indicators of the scoreboards according to six acceptability criteria listed below. These six criteria were identified from among the twelve criteria described in the technical construction document for the Canadian Index of Wellbeing (CIW) (Michalos et al., 2011, p. 9). These six criteria were identified as particularly relevant for the Walloon SSI, according to the latter's objectives, especially because of the objective of comparability over time, the availability of the indicators over time and the statistical quality required.

Figure 3: The six acceptability criteria of the key indicators for the Walloon SSI

1. Relevant to the levers for action (or concerns) for Walloon users;
2. Easy to understand;
3. Reliable, valid;
4. Sensitive to changes;
5. Timely, easy to obtain and periodically updated;
6. A constituent and/or determinant of social situation; indicator contributing to a coherent and global vision of the social situation in Wallonia.

According to these criteria, 18 key indicators (table 1) were selected within the scoreboard comprising 56 indicators of the state of society, and 6 key indicators (table 2) were selected within the scoreboards comprising 50 indicators of socio-economic imbalances.

For this first exercise, we were unable to obtain a key indicator for two dimensions of the state of society: *housing* and *social relations*. None of the indicators listed in the scoreboard could be included according to our 6 acceptability criteria, in particular for lack of reliability. Unfortunately, therefore, these two dimensions are not covered by this first SSI exercise.

For one dimension, *"training and knowledge"*, we were only able to select indicators covered by a single sub-dimension of the former. To demonstrate this reduction, in the following table (table 1) and in the rest of the exercise, this dimension was renamed *"training"*.

For imbalances, we used 6 key indicators covered by two imbalance dimensions: imbalances and inequalities of income and imbalances on the labour market. The other imbalances identified in the first phase of the work could not be qualified, as they involved comparisons over time of sub-groups of the surveyed populations that were too small.

Table 1: List of the 18 key indicators of the state of the social situation

Dimensions	Indicators	Units	Sources	Calculations	Available period
DEMOGRAPHY	life expectancy at birth men & women	years	DGSIE, National Register	DEMO-UCL, IWEPS cytise	1997-2011
DEMOGRAPHY	dependency rate (-20 and 65 and above /20-64)		DGSIE, National Register	IWEPS	2001-2013
HEALTH	percentage of people declared chronically sick	%	Common Sickness Funds Agency (Agence Intermutualiste, AIM)	AIM	2006-2012
HEALTH	suicide rate	number per 100,000	DGSIE, Bulletins of registrations of deaths with registry office	IWEPS	2003-2010
HEALTH	number of years of life lost men & women	years	DGSIE, Bulletins of registrations of deaths with registry office	IWEPS	2003-2010
TRAINING	percentage of adults aged 25 to 64 with no qualifications or primary education only	%	FTE labour force surveys	Steunpunt WSE	2001-2012

TRAINING	percentage of adults aged 25 to 64 with a higher education	%	FTE labour force surveys	Steunpunt WSE	2001-2012
TRAINING	percentage of people aged 18 to 24 who do not have a higher secondary education and who are no longer engaged in any form of education or training	%	FTE labour force surveys	Steunpunt WSE	2001-2012
TRAINING	percentage of pupils “on time” in secondary education	%	Ministry of WBF-AGERS “steering” files	AGERS	2004-2012
TRAINING	percentage of formal training hours in companies according to the social audit in relation to the total hours worked	%	BNB Publication - Social audit	BNB	2000-2011
SAFETY	number of people killed in road traffic accidents (in 30 days)	number	FPS Economy, DGSIE / Infography: IBSR		2001-2012
SAFETY	number of RTA victims involving at least one driver under the influence of alcohol	number	FPS Economy, DGSIE / Infography: IBSR		2001-2012
SAFETY	number of offences: offences against physical integrity	number	CGOP/B- police crime statistics, management data		2000-2012
CULTURE	percentage of people who claim to engage regularly in information-gathering activities (mean of 4 indicators: read the daily press, read a magazine, listen to the radio, watch the news on television)	%	Wallonia Telecommunications Agency Walloon surveys	AWT and IWEPS	2004-2012
VALUES	satisfaction with life		Social barometer for Wallonia (BSW) and European Value Survey (EVS)	IWEPS	BSW: 2003, 2007, 2012 and EVS 2002-2012
INCOME	adjusted disposable income	at 2011 prices euros per inhabitant	ICN National Accounts Institute	IWEPS	1995-2011
EMPLOYMENT	employment rate for those aged 20-64	%	FTE labour force surveys	Steunpunt WSE	2001-2012
EMPLOYMENT	average salary: ordinary remuneration	thousands of euros /FTE (full-time equivalent)	National Social Security Office NSSO	IWEPS	2000-2012

Table 2: List of the 6 key indicators of socio-economic imbalances

Dimensions	Indicators	Units	Sources	Calculations	Available period
INCOME IMBALANCES	interdecile ratio (p90p10ratio) on income		Income and living conditions surveys EU-SILC	IWEPS	2004-2011
INCOME IMBALANCES	risk of poverty rate		Income and living conditions surveys EU-SILC	IWEPS	2004-2011
IMBALANCES on the LABOUR MARKET	unemployment rate for those aged 15 to 64	%	FTE labour force surveys	Steunpunt WSE	2001-2012
IMBALANCES on the LABOUR MARKET	unemployment rate for young people (15-24)	%	FTE labour force surveys	Steunpunt WSE	2001-2012
IMBALANCES on the LABOUR MARKET	percentage of long-term unemployed (more than 1 year) in the total unemployed population (15+)	%	FTE labour force surveys	Steunpunt WSE	2001-2012
IMBALANCES on the LABOUR MARKET	pay gap between men and women calculated on the average annual salaries of Walloon employees liable for social security		National Social Security Office NSSO	IWEPS	2000-2012

2.3. Allocation of missing values

For the key indicators, one or two missing observations had to be estimated before aggregating into a consolidated index. There were few interpolations, retropolations or extrapolations, as the existence of a chronological series was part of the selection criteria for the key indicators. These three procedures were carried out by performing a simple regression, if the trend was stable, or by comparison with the developments of a nearby population (Wallonia-Brussels Federation or all of Belgium), if these were available.

2.4 Normalisation and aggregation

When constructing a consolidated index based on indicators with different units of measurement, it is necessary to transform the values of the indicators by normalisation before they are aggregated.

Several normalisation methods are available, and were tested for this first exercise so as to analyse the various impacts, pros and cons of each one: Min-Max normalisation (as in the American and French SSI), standardisation (z-score), and indexing in relation to a reference year.

Indexing in relation to a reference year is particularly appropriate or “natural” in the case of an analysis over time as it is one of the objectives of the SSI. It is a method that avoids transformations based on the structure of values of the constituent indicators (min, max, mean or standard deviation), the main drawback of these methods being that whenever the indicator is updated, the values that depend on the structure vary and lead to changes in all the values of the time series.

It is therefore this method that was chosen. This choice was based on the various tests carried out, on the recommendations of the technical construction documents of composite indicators (Nardo et al., 2008;

Maggino and Zumbo, 2011) and on the results of other known or proven work or experiences involving « beyond GDP » indicators: the ICME (Michalos et al., 2011). It is also a commonly used transformation in economics (growth, consumer price, etc.).

In concrete terms, the values for the 18+6 selected indicators were transformed by taking their ratio with the reference year 2007. This transformation is a way of measuring distance from the year 2007. 2007 was chosen for various reasons:

- 2007 is a year for which all the indicator values were available (without interpolation, retropolation or extrapolation),
- 2007 is one of the central years in the time scope of this first exercise (2002-2012),
- 2007 is the last year before the 2008 crisis.

The final technical stage in the construction of the consolidated index is to aggregate the various key indicators.

Some indicators help improve the social situation (training indicators, for example), while others tend to worsen it (road traffic accidents, for example). To aggregate these two categories of indicator, they must be given the same orientation. To achieve this, the degradation factors are “reversed”. Technically, as these are time indexes, they simply have to be replaced by their inverse (1/x).

Aggregation is performed by averaging all the indicators in each dimension, followed by a new aggregation of those averages, firstly for the part on the state of society, secondly for the part on socio-economic imbalances. Various robustness tests were applied (aggregation of all indicators without involving dimensions, variations in the weights of dimensions (around 0 and 1)); these different tests revealed the stability of the results obtained and the relative insensitivity of the composite indexes to the implicit weightings resulting from the number of indicators involved in the various aggregation phases.

Finally, one last aggregation was performed for the development of the SSI integrating the two parts. To take account of the wider coverage of dimensions on state and the smaller coverage of imbalances for this first exercise, the last level of aggregation takes into account the number of dimensions for each part.

3. Results and analyses

3.1 Results and analyses for the SSI in Wallonia

Figure 4 illustrates the development from 2002 to 2012 of the social situation in Wallonia, synthesised by the SSI, with the reference year 2007. The development of GDP per capita calculated on the same basis was added to the graph.

Figure 4: Development of the SSI of Wallonia from 2002 to 2012 and comparison with GDP per capita (index 100 in 2007), 1st exercise

Sources: RN, IMA, DGSIE, EFT - Steunpunt WSE, Ministry of WBF - AGERS, FPS Economy-IBSR Infography, CGOP/B, AWT, BSW, EVS, ICN, NSSO, EU-SILC, BNB

Calculations: IWEPS

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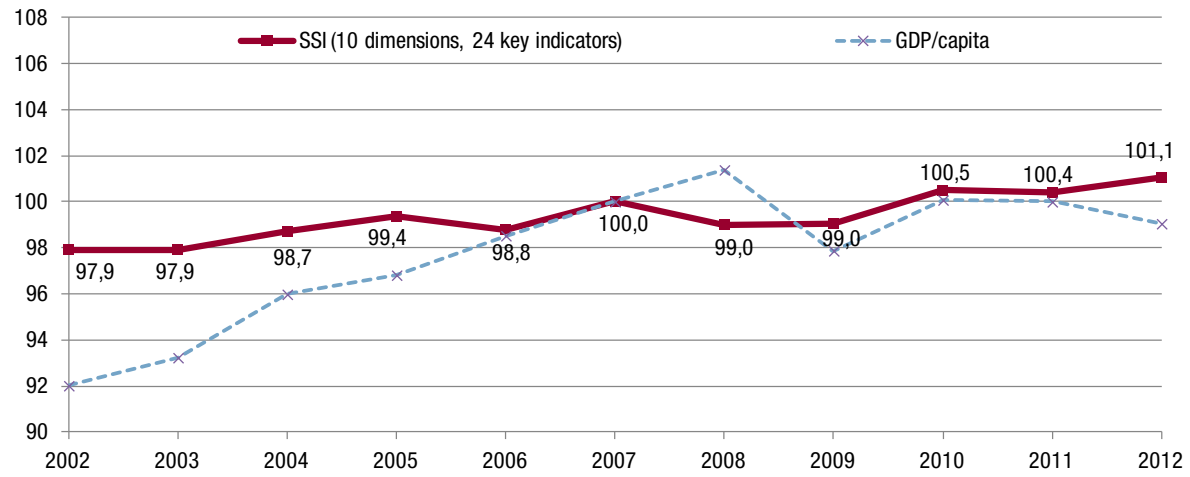

Figure 4 shows that from 2002 to 2005, the social situation index enjoys a slightly positive progression, with values going from 97.9 (in 2002) to 99.4 (in 2005). In 2006, the SSI falls, then rises again in 2007. After 2007, the crisis of 2008 is characterised by a 1 point drop in the index compared with the index value for 2007. This is the sharpest fall in the period. In 2010 the SSI recovers, passing the 2007 level before stabilising.

Comparison with the transition curve of GDP/inhabitant reveals three different “periods”:

(1) the first corresponds to the years 2002 to 2005, when the SSI increases but less rapidly the the GDP per capita;

(2) the second period, from 2006 to 2010, is “under pressure” in terms of the evolution of the two indexes, SSI reacting quicker than GDPper capita to the 2008 crisis: this is a period of uncertainty;

(3) the third (short) period is characterised by a stabilisation of the SSI from 2010 to 2011 and a relative stabilisation of GDP per capita as well. Subsequent exercises will confirm (or not) the continuation of the slight positive progression of the SSI from 2011 to 2012.

At the request of the Walloon Government, this SSI is an aggregation of two parts, firstly a consolidated index of state and secondly a consolidated index of imbalances. We believe it is very important to analyse the evolutions of these two indexes separately.

3.2 Results and analyses for the index of the state of the social situation in Wallonia

Figure 5: Evolution of the index of the state of the social situation of Wallonia from 2002 to 2012 by part (index 100 in 2007), 1st exercise

Sources: RN-UCL, IMA, DGSIE, EFT - Steunpunt WSE, Ministry FWB - AGERS, FPS Economy-IBSR Infography, CGOP/B, AWT, BSW, EVS, ICN, NSSO, EU-SILC, BNB

Calculations: IWEPS

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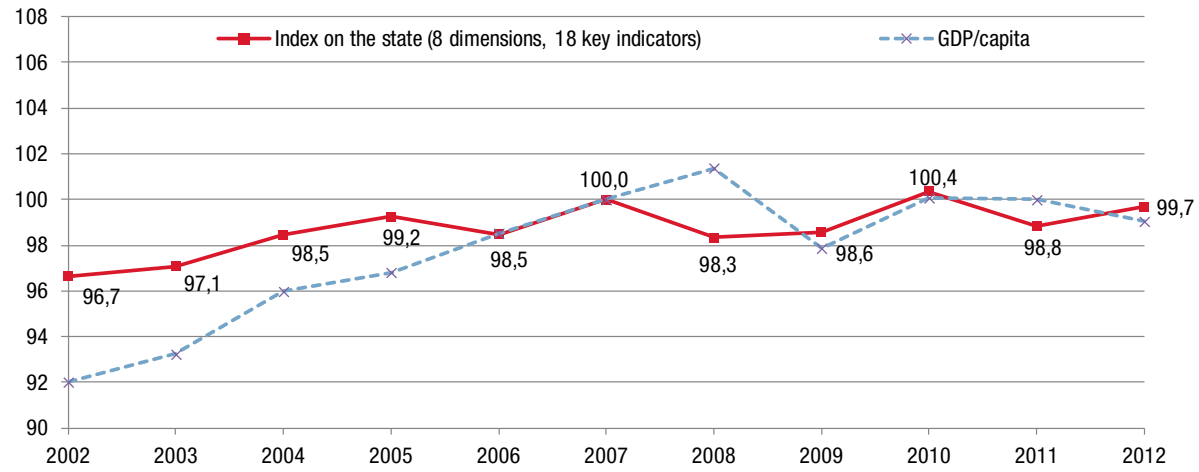


Figure 5 shows the development of the index of the state of the social situation in three periods as well. The sharpest fall in the index occurs in 2008, the year of the economic crisis, the state index only reaches a lower level in 2006. Following a period of uncertainty and fluctuations from 2006 to 2010, the curve moves forward with several “adjustments” from 2010 to 2012.

Analyses of the development of the indexes per dimension (figures 6a, 6b) enable the evolution over time of this consolidated index to be qualified. The indexes per dimension of state are presented in two graphs to make the curves easier to read.

Figure 6 a: Evolution of four dimensions of the state of the social situation of Wallonia from 2002 to 2012 (2007 index = 100), 1st exercise

Sources: RN-UCL, IMA, DGSIE, EFT - Steunpunt WSE, Ministry of WBF - AGERS,BNB, FPS Economy-IBSR Infography, CGOP/B

Calculations: IWEPS

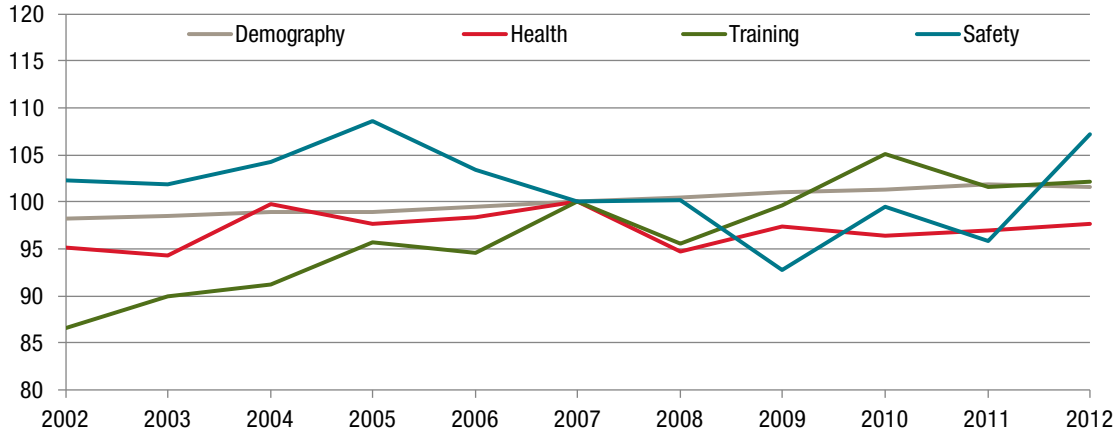
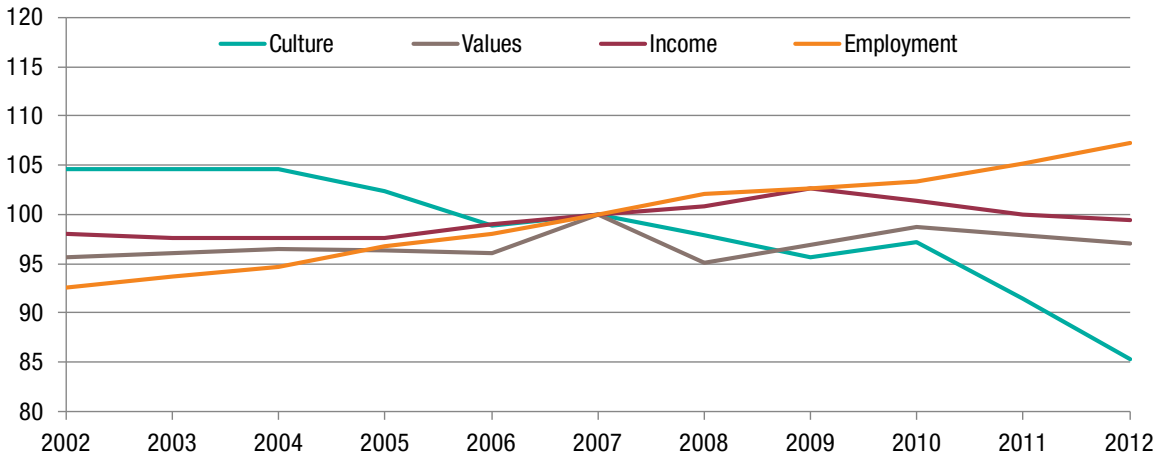


Figure 6 b: Evolution of four dimensions of the state of the social situation of Wallonia from 2002 to 2012 (2007 index = 100), 1st exercise

Sources: AWT, BSW, EVS, ICN, EFT, NSSO Calculations: IWEPS



It is important to note the wide variety of evolutions over time per dimension. Since 2002, some dimensions have increased almost constantly: *demography* and *employment*. The evolution over time of the *health* dimension is fairly stable. The *income* dimension presents an upward evolution over time until 2009, then downward in recent years. The *values* dimension, with its "satisfaction with life" indicator, presents an evolution curve over time close to the consolidated index of the state of the social situation.

The lowest value of the period for the consolidated index on the state of the social situation in 2008 is explained by curves that fall in 2008 for the dimensions *health*, *training* and *values*. The decline in 2011 is explained by the curves for the dimensions *training*, *safety*, *culture* and *values*. It is important to note that the evolution of the SSI is relative and is explained by the "compensation" effects of the different component dimensions. This is the consequence of constructing a consolidated indicator.

To qualify the results further, table 3 presents the results of the trends for certain key indicators since 2007.

Table 3: Trend in the development of key indicators of the state of the social situation since 2007

Since 2007	
Negative trend in terms of social performance	Positive trend in terms of social performance
• percentage of pupils "on time" • percentage of people declared chronically sick • percentage of people who claim to engage regularly in information-gathering activities (written press, radio, news on television)	• life expectancy at birth • number of years of life lost • percentage of adults aged 25 to 64 with no qualifications or primary education only • number of people killed in road traffic accidents (in 30 days) • average salary: ordinary remuneration

The other indicators have fluctuated since 2007 and cannot therefore be unequivocally classed according to these two columns.

Each of these dimensions deserves numerous analyses showing the results of their component key indicators, but also of the elements of the scoreboard. We plan to detail these various elements in subsequent publications.

3.3 Results and analyses for the index of socio-economic imbalances in Wallonia

Analysis of the index of imbalances provides another perspective for the interpretation of the consolidated SSI. as the imbalances index has to be ultimately aggregated with the social situation index, it has been necessary to invert it (see section on normalisation and aggregation) to garantee that variations in the same directions will have similar interpretations (a reduction of imbalances improves the social situation).

Figure 7: Evolution of the index of socio-economic imbalances of Wallonia from 2002 to 2012 (index 100 in 2007), 1st exercise

Sources: EFT - Steunpunt, WSE NSSO, EU-SILC Calculations: IWEPS

Key: as this index is inverted, an increase in the index corresponds to a reduction in the imbalances observed

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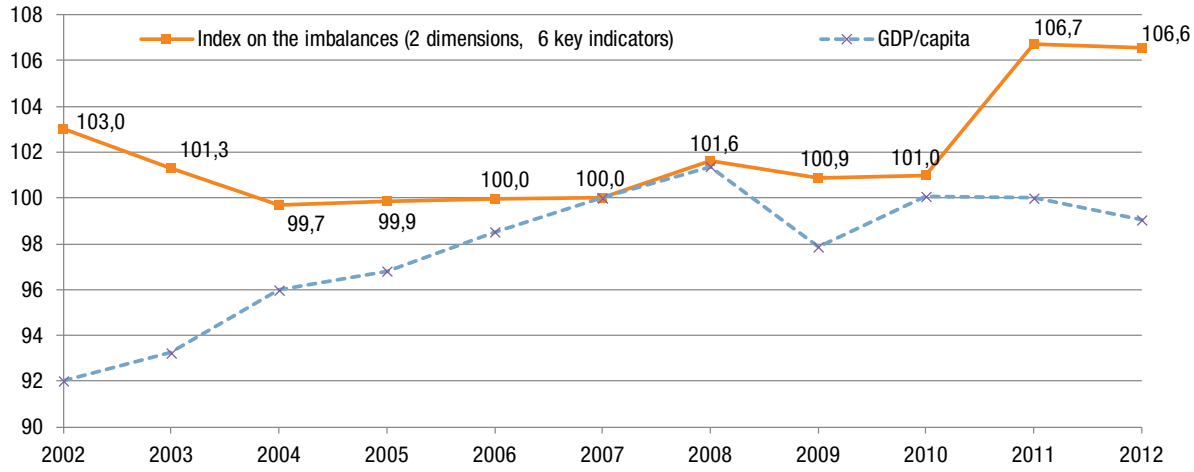


The evolution over time of the index on imbalances presents an evolution in four periods.

In the first period, from 2002 to 2004, the index of imbalances falls, which is explained by a reduction in the imbalances curve on the labour market (figure 8) and may be interpreted by an increase in unemployment rates.

The second period, from 2004 to 2007, is a period of stability for the index of imbalances. However, figure 7 clearly shows that this stability is explained by identical differences between the two imbalance curves, but during this same period there is a decline in social performances on income imbalances (and therefore an increase in these imbalances) and an increase in social performances on labour market imbalances (and therefore a reduction in these imbalances).

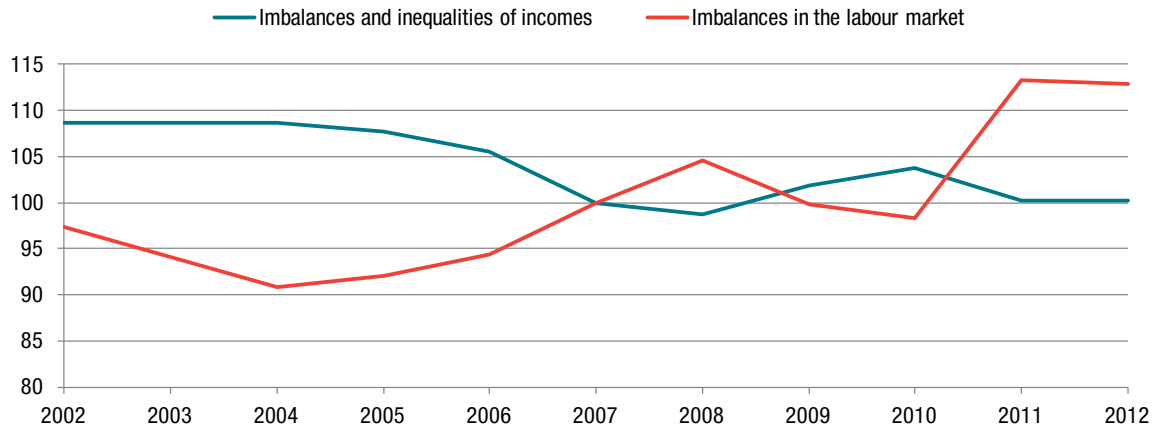
During the third period, from 2008 to 2010, the imbalances index increases in 2008 then falls slightly. On this curve, the 2008 crisis is therefore expressed in 2009 by a slight fall.

The fourth period, from 2010 to 2012, is characterised by a sharp rise in this index of imbalances, which corresponds to a sharp rise in the index of performances on labour market imbalances (figure 8) and can be interpreted by a drop in unemployment rates (for the total population and young people).

Figure 8: Evolution of the two dimensions of imbalances in the social situation of Wallonia from 2002 to 2012 (2007 index = 100), 1st exercise

Sources: EU-SILC, BNB, EFT-Steunpunt WSE, NSSO Calculations: IWEPS

Key: as this index is inverted, an increase in the index corresponds to a reduction in the imbalances observed



These two curves illustrating imbalances present highly contrasting evolutions. The mean index calculated from these evens out very different evolutions.

Again, each of these dimensions deserves in depth analyses of their constitutive time series and also of the other indicators of the scoreboards.

4. Lessons learned from the exercise

The construction of a new indicator is a challenge on several levels. Based on the experiences of constructing SSIs in the USA and France, but also on other experiences of « beyond GDP » indicators, a consolidated index was developed according to a simple methodology ; it comprises 18 + 6 key indicators. This construction is a double challenge: to evaluate the performance in the social situation of Wallonia and to compare it over time, from 2002 to 2012.

From the point of view of the method and the data sources, at the end of this first exercise, three initial “lessons to be learned” are expressed below:

(1) The index constructed is a consolidated index, easy to communicate but difficult to interpret.. It is very important to remember that this single figure must be explained and qualified by the trends of each of its constituent indicators.

(2) The construction methodology is based on the most justified choices possible. Several analyses of sensitivity to selections of key indicators and to techniques of normalisation and aggregation were performed for this first exercise. These sensitivity analyses proved reassuring. However, each of these stages still requires research, and additional work will be needed to consolidate our results in the next stages of our project.

(3) The index is constructed on the basis of key indicators, themselves calculated following extractions from several data sources identified as being as reliable as possible. However, for certain dimensions or sub-dimensions, this work allowed limits or gaps to be identified in terms of statistical data collections, in particular on the subject of housing, social relations and on a large number of socio-economic imbalances. We will aim to fill in these gaps in our subsequent work and with our partners. This first SSI is incomplete, but we could not introduce unconsolidated key indicators in this first version, at the risk of introducing noise in the consolidated index. This first Walloon SSI therefore does not provide a complete statistical panorama of the social situation in Wallonia. However, it is, today, the result of a rich mobilisation of sources and reliable indicators on this subject, in a comparison over a time period of 11 years.

From the point of view of the results, at the end of this first exercise, there are several lessons to be learned and areas for improvement:

(1) the evolution of the Walloon SSI shows quite clearly three periods that can be summarised as follows: from 2002 to 2005, a period of slow positive development, from 2005 to 2010, a period of uncertainty with annual fluctuations, just like the GDPper capita, but with temporal differences compared with this, and, from 2010 to 2012, a period of quasi-stabilisation of the SSI.

(2) analysis of the consolidated index must be qualified by the values and the evolution over time of its constituent key indicators, which display several fluctuations or different evolutionary trends. In particular, a carefull analysis of the two curves on both the state of and imbalances in the social situation is necessary before trying to interpret the evolution of the consolidated curve.

(3) here, the measurement of the social situation is given by a synthetic index ; this kind of indicator has well-known limitations. Among others, it does not refer to an underlying directly measurable reality and is based on a certain number of conventions. Its interpretation is therefore delicate. The main merit of this type of indicator is to offer decision-makers and users a consolidated view of a complex, multidimensional situation.

5. Prospects for development

The exercise is incomplete. It should be improved and if necessary amended, and we will subject it to debate. Other exercises will follow, and will benefit from improvements, validations and, we hope, from being appropriated by users.

References

Boutaud A., 2007, "Les indices synthétiques du PNUD et l'ISS en région Ile de France", IAURIF and Regional Council for the Ile de France, under the direction of Annie Mendez and Iuli Nascimento. Report 101 p.

Boutaud A. (2009). "Un indice de situation sociale régional (ISSR) pour la région Ile-de-France", IAU Ile-de-France and MIPES - Regional Council for Ile-de-France, 61 p.

Centraal Bureau voor de Statistiek (CBS) (2011). Monitor Duurzaam Nederland 2011, 285p.

Jany-Catrice (F.) and Zotti (R.) (2009), "La santé sociale des territoires. Un indicateur de santé sociale pour les régions françaises", in Futuribles, no. 350, March, pp. 65-87.

Maggino F., & Zumbo B.D. (2012). "Measuring the quality of life and the construction of social indicators." In K.C. Land, A.C. Michalos, & M.J. Sirgy (Eds.), *Handbook of social indicators and quality-of-life research.* New York*:* Springer.

Michalos A.C., Smale B., Labonté R., Muhajarine N., Scott K., Moore K., Swystun L., Holden B., Bernardin H., Dunning B., Graham P., Guhn M., Gadermann A.M., Zumbo B.D., Morgan A., Brooker A.-S., & Hyman I. (2011). *"The Canadian Index of Wellbeing."* Technical Report 1.0. Waterloo, ON: Canadian Index of Wellbeing and University of Waterloo.

Miringoff M., Miringoff M-L. (1995). "America's social health: the Nation's need to know", Challenge, Fall 1995, pp. 19-24

Miringoff M., Miringoff M-L, Opdycke S. (1996). "The Growing Gap between Standard Economic Indicators and the Nation's Social Health", Challenge, July-August.

Miringoff M., Miringoff M-L. (1999). "The social health of the nation. How America is really doing", Oxford University Press, New-York, 245p.

Nardo M., Saisana M., Saltelli A., Tarantola S., Hoffmann A., Giovannini E. (2008). "Handbook on constructing composite indicators: Methodology and user guide." *OECD* in cooperation with the *Joint Research Centre (JRC) of the European Commission,* 158 p.

Stiglitz, J., Sen A., Fitoussi J.-P. (2009). *"Report of the Commission on the Measurement of Economic Performance and Social Progress"*, 14 September 2009.

Stiglitz, J., Sen, A. and Fitoussi, J.-P. (2009a), *"Richesse des nations et bien-être des individus"*, Paris, Odile Jacobs.

Stiglitz, J., Sen, A. and Fitoussi, J.-P. (2009b), *"Vers de nouveaux systèmes de mesure"*, Paris, Odile Jacobs.

Authors, citation and thanks

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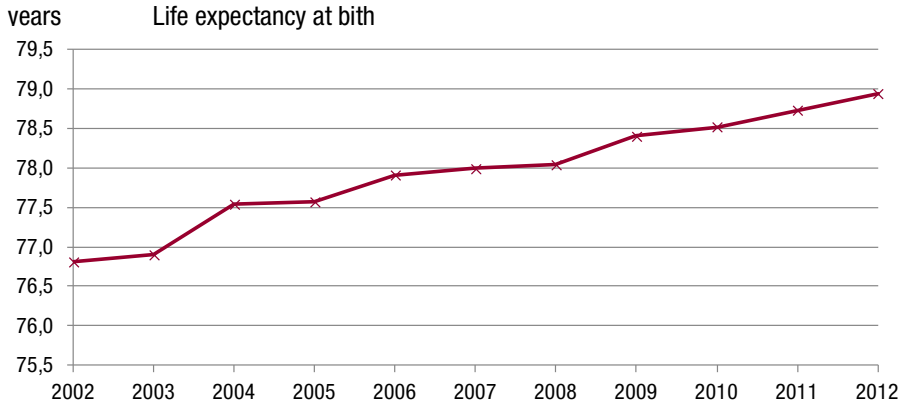
Annex: Developments from 2002 to 2012 in the 24 key indicators of the SSI of Wallonia

[Please read commas in numbers as dots]

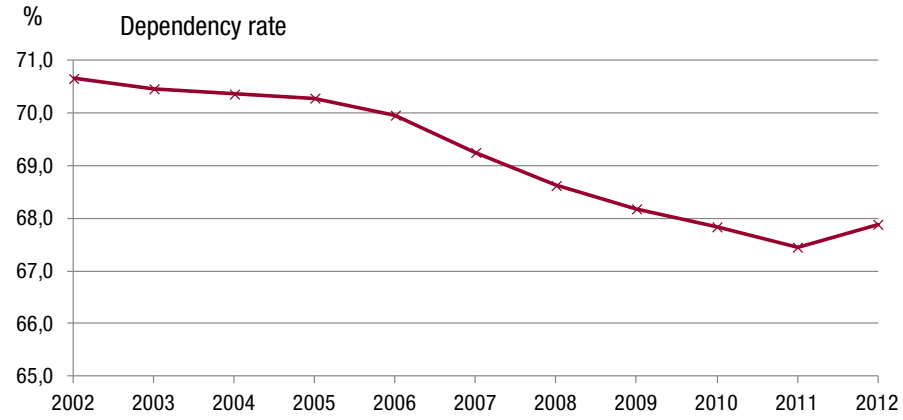
Life expectancy at birth (men and women)

Source: DGSIE, National Register Calculations: DEMO-UCL, IWEPS cytise



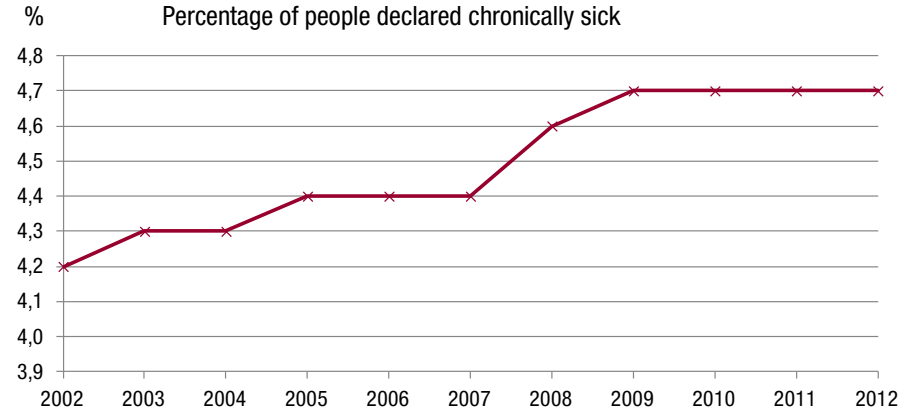
Dependency rate ((% below age of 20) + (% aged 65 and above) / % aged 20-64)

Source: DGSIE, National Register Calculations: IWEPS



Percentage of people declared chronically sick

Source: Common Sickness Funds Agency

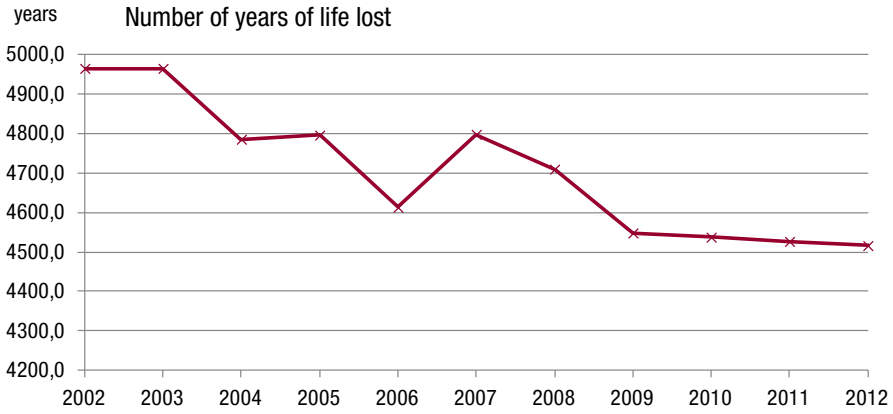


Suicide rate

Source: DGSIE, Bulletins of registrations of deaths with registry offices Calculations: IWEPS

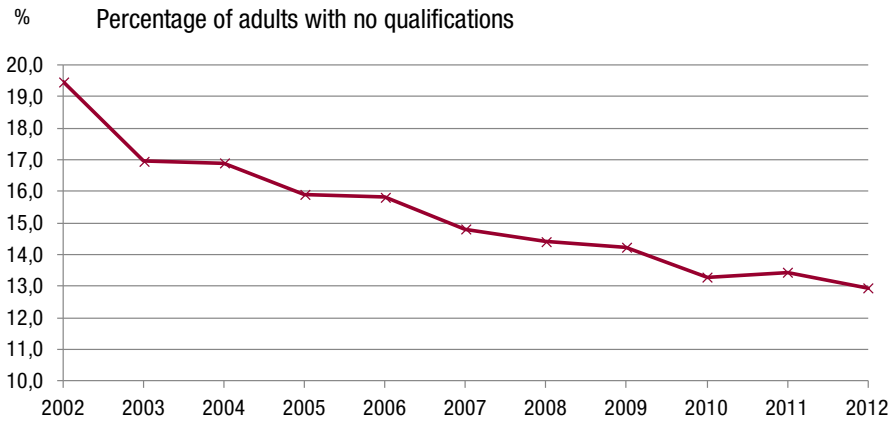
Number of years of life lost (men and women) up to the age of 70

Source: DGSIE, Bulletins of registrations of deaths with registry offices Calculations: IWEPS



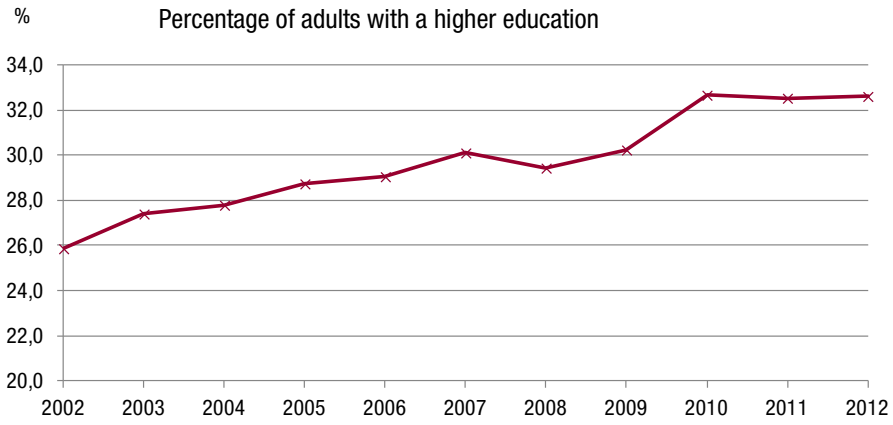
Percentage of adults aged 25 to 64 with no qualifications or primary education only

Source: FTE labour force survey Calculations: Steunpunt WSE



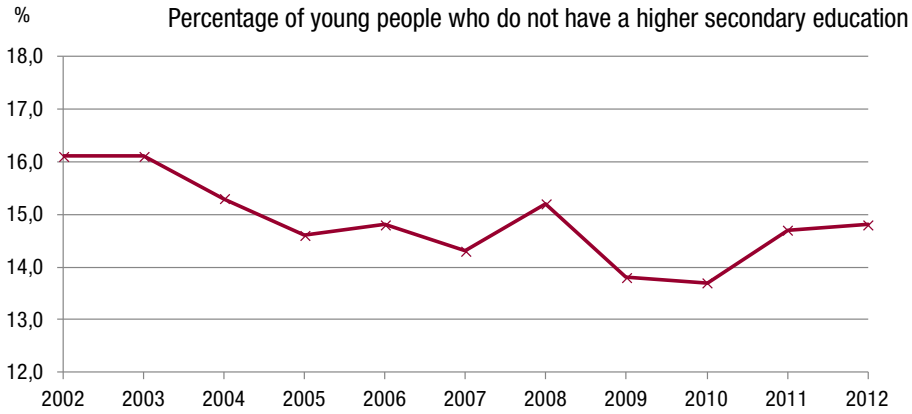
Percentage of adults aged 25 to 64 with a higher education

Source: FTE labour force survey Calculations: Steunpunt WSE



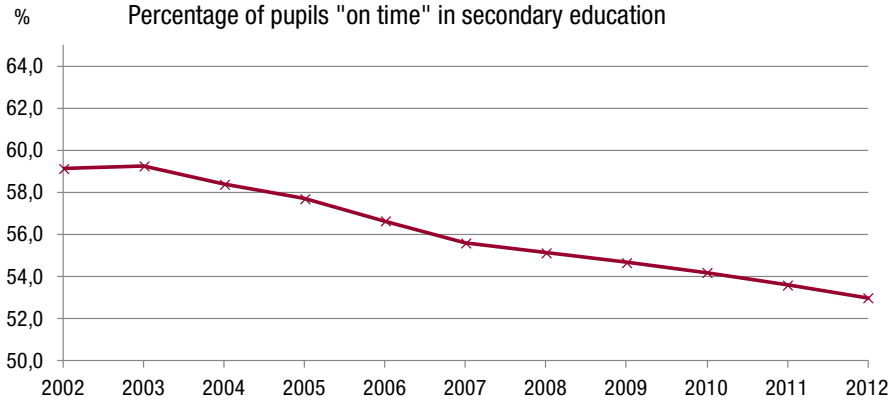
Percentage of young people aged 18 to 24 who do not have a higher secondary education and who are no longer receiving any form of education or training (during the four week reference period)

Source: FTE labour force survey Calculations: Steunpunt WSE



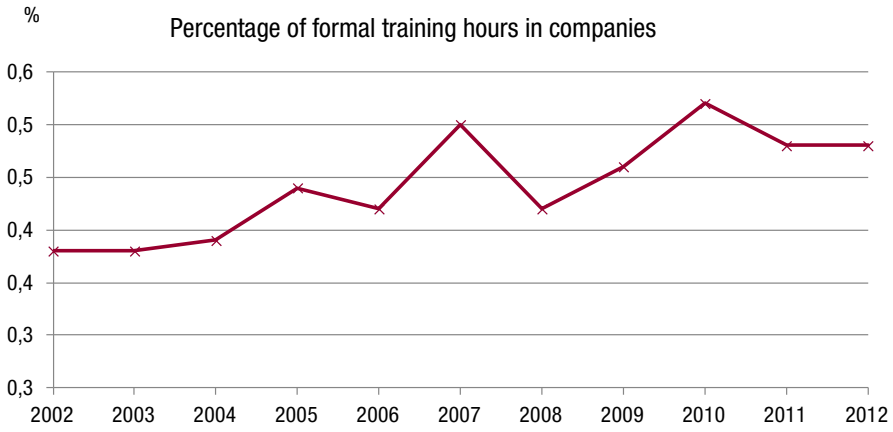
Percentage of pupils “on time” in secondary education

Source: MFWB Calculations: AGERS MFWB



Percentage of formal training hours in companies in relation to the total hours worked

Source: BNB Social audit calculations: BNB

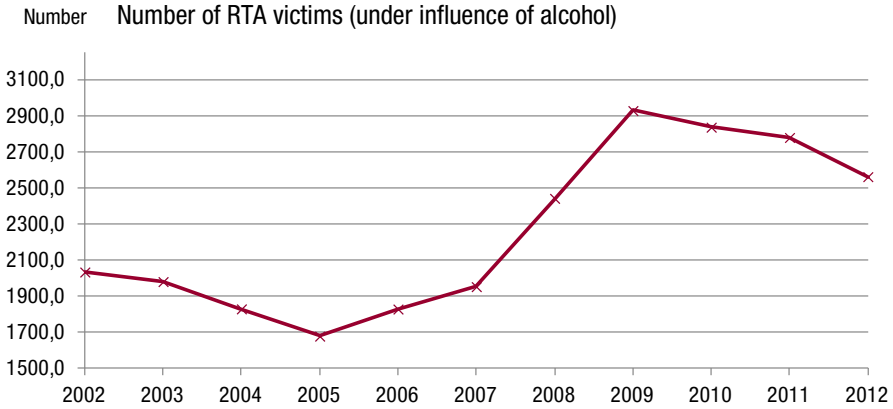


Number of people killed in road traffic accidents (in 30 days)

Sources: FPS Economy DGSIE, IBSR Infography

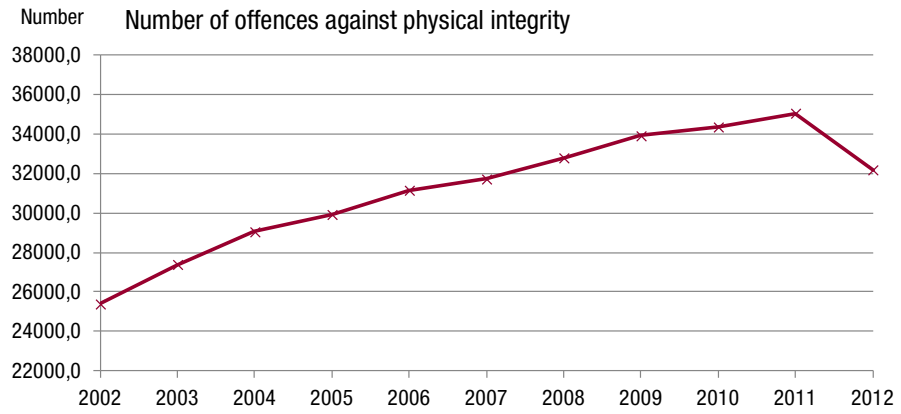
Number of RTA victims involving at least one driver under the influence of alcohol

Sources: FPS Economy DGSIE, IBSR Infography



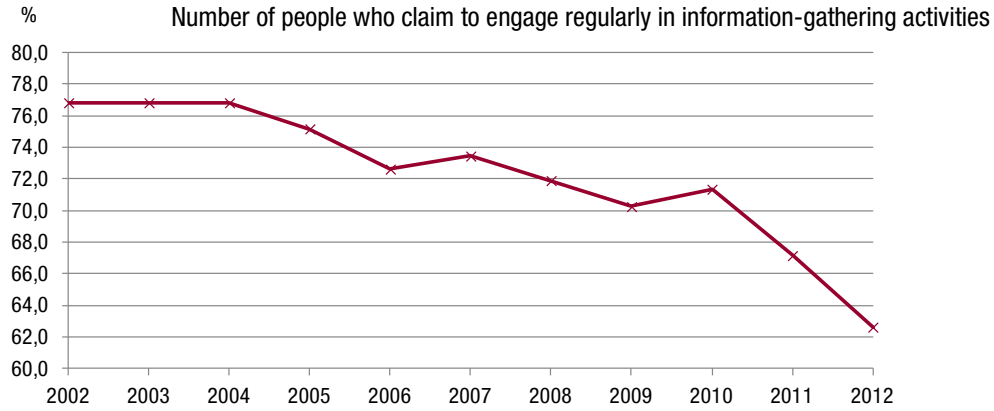
Number of offences against physical integrity

Source: CGOP/B- police crime statistics -management data



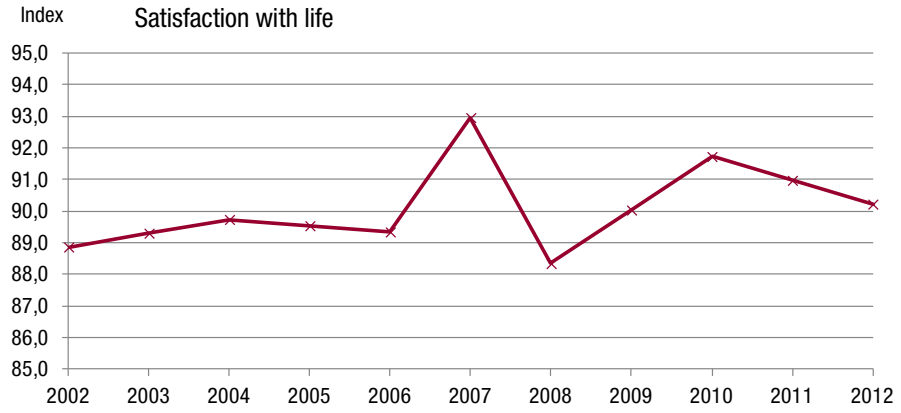
Number of people who claim to engage regularly in information-gathering activities

Source: AWT



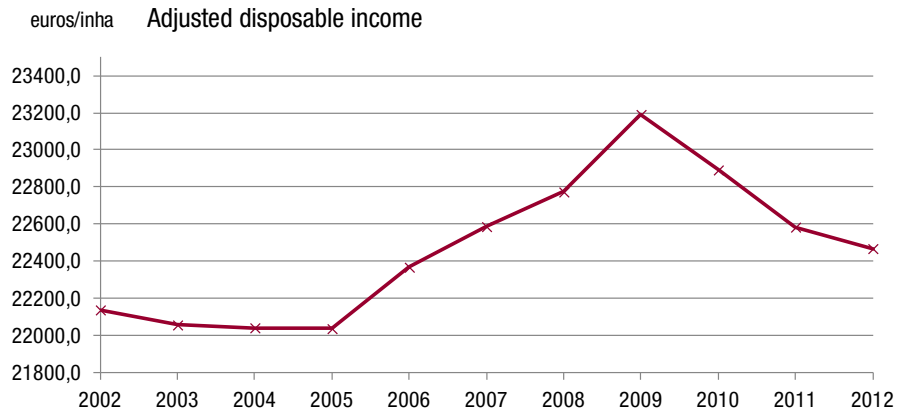
Satisfaction with life

Sources: BSW and EVS IWEPS calculations



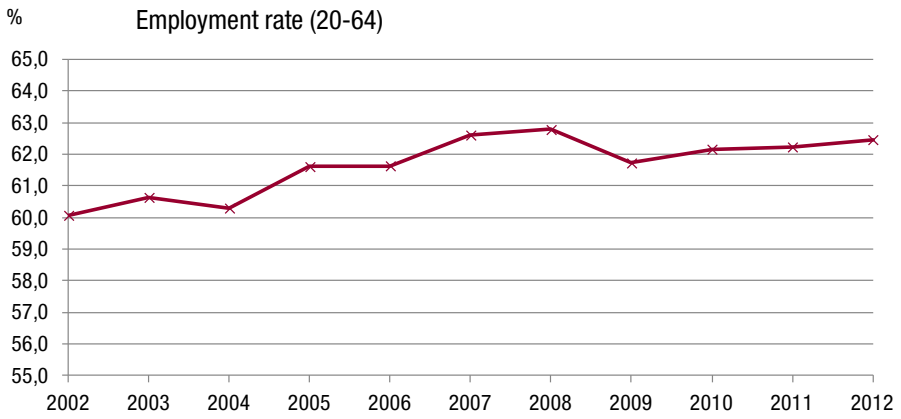
Adjusted disposable income (at 2011 price)

Source: ICN IWEPS calculations



Employment rate for those aged 20-64

Source: FTE labour force survey Calculations: Steunpunt WSE

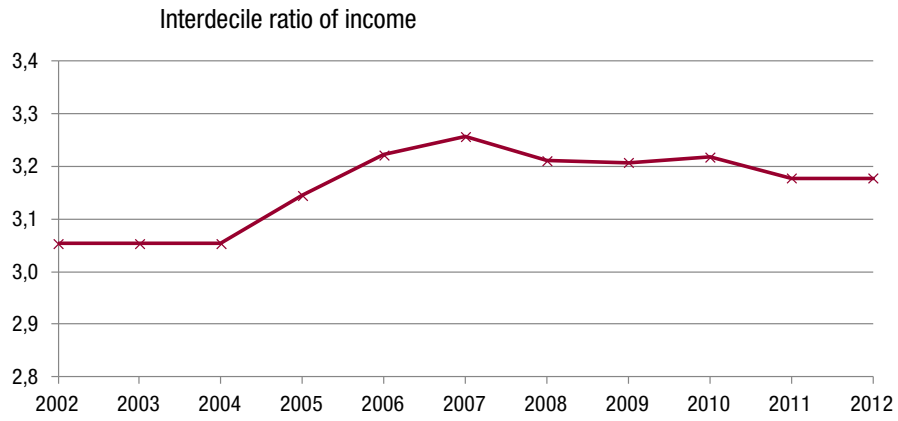


Average salary (ordinary remuneration) per full-time equivalent

Source: NSSO

Interdecile ratio of income (ratio between the 9th decile and the 1st decile (D9/D1))

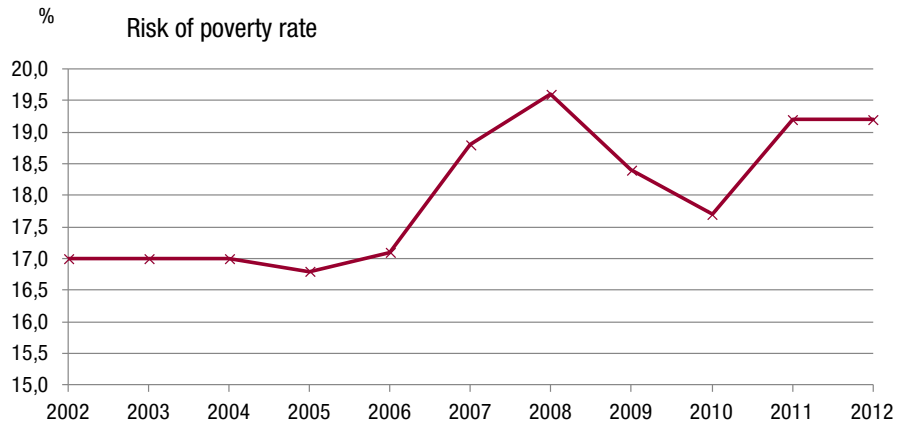
Source: EU-SILC Calculations: IWEPS



Risk of poverty rate (as % of the population)

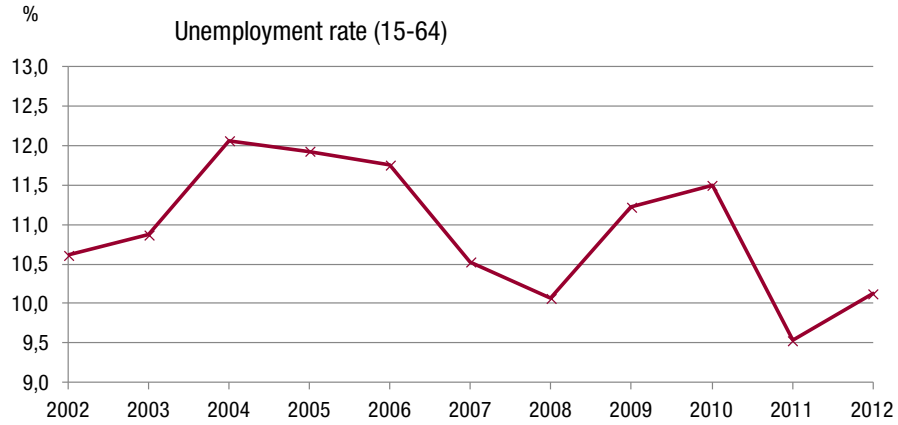
percentage of the population whose equivalent household disposable income is below the poverty threshold set at 60% of the mean equivalent disposable income after social transfers

Source: EU-SILC Calculations: IWEPS



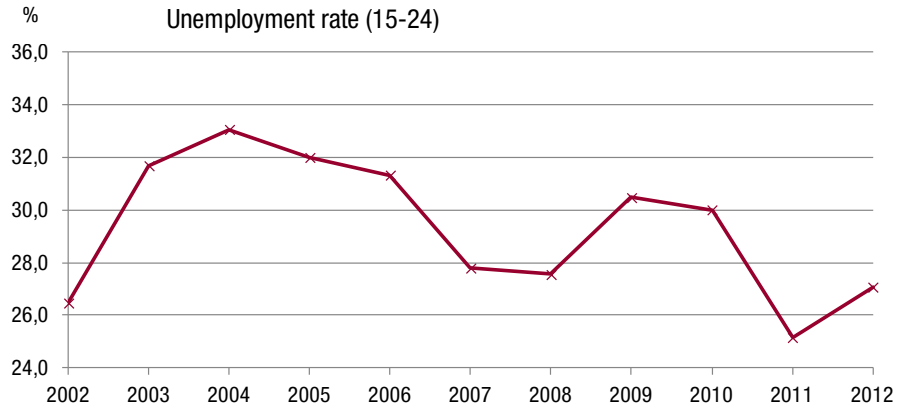
Unemployment rate for those aged 15 to 64

Source: FTE labour force survey Calculations: Steunpunt WSE



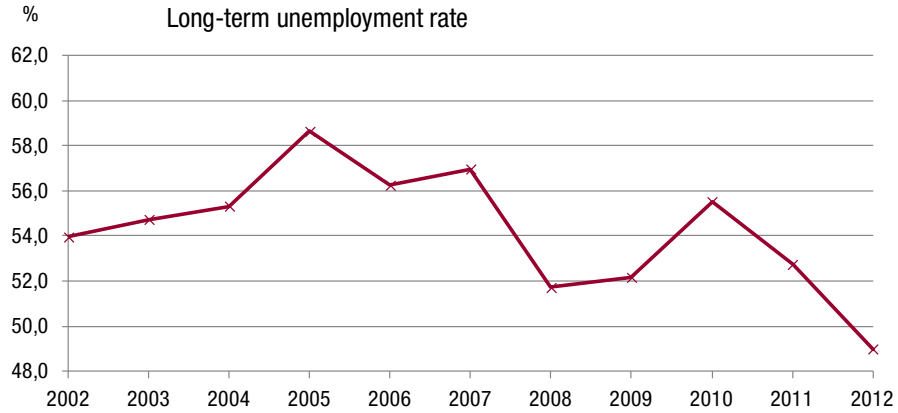
Unemployment rate for those aged 15 to 24

Source: FTE labour force survey Calculations: Steunpunt WSE



Long-term unemployment rate (more than 1 year) in the unemployed population

Source: FTE labour force survey Calculations: Steunpunt WSE



Pay gap between men and women (annual average salaries)

Source: NSSO Calculations: IWEPS