

# STATEC

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**Statistical resources for economic  
evaluation**

**PIBien-être: The report**

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June 11th 2018

**„Where are we? What do we have achieved compared to the past and to others? What are the perspectives?“**

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# The team

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## STATEC Research

- <http://www.statistiques.public.lu/en/actors/statec/organisation/red/index.html>
- About 10 economists with different background (economic growth, happiness studies, finance,...) and from different countries (Italy, France, USA, Slovenia,...)

-> Diversity of views and approaches!

# The topics

STATEC Research



# What are the challenges for people?

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- For experts: Combination of expert analytic skills and well developed communication skills...which is a rare combination of skills!
  - For the policy makers: The question has to be understandable! And realistic!
- 1) “To achieve a comprehensive assessment of living condition in Luxembourg”  
**INCLUSIVE GROWTH**
  - 2) “To organise in a wide dashboard of indicators information” 63 indicators – 11 pillars.

Domain	Indicator	Change	Tier	Indicator	Change	Tier
<b>I. Income and Wealth</b>	1. Gross National Income per capita	↗	●	7. Inter-quintile and inter-decile ratio	↔	●
	2. Total household wealth	↗	●	8. Men-women wage gap	↘	●
	3. Net adjusted available household income	↘	●	9. Risk of poverty after social transfers	↗	●
	4. Real yearly growth rate of various measures of household income	↗	●	10. People in situation of severe material deprivation	↗	●
	5. Household total consumption (marketed goods and services)	↘	NA	11. People unable to make ends meet	↗	●
	6. Gini index	↔	●			
<b>II. Occupation</b>	12. Employment rate	↔	●	16. People living in households with a very weak work intensity	↔	●
	13. Unemployment rate and long-term unemployment rate	↗	●	17. Accidents at work	↗	●
	14. Wage earners with temporary contracts	↗	●	18. Feelings of job insecurity	↔	●
	15. Frequency of forced part-time work	↗	●			
<b>III. Housing</b>	19. Number of rooms per person	↔	●	22. Number of new dwellings per year	↘	NA
	20. People living in overcrowded dwelling	↔	●	23. Dwellings in "Wohnvorranggemeinden"	↘	NA
	21. Relative part of dwelling costs	↔	●			
<b>IV. Health</b>	24. Life expectation at various ages and in good health	↘	●	28. Drug consumption	↔	NA
	25. Prevalence of mental problems	↗	●	29. Share of adults declaring to be in good or very good health	↘	●
	26. Suicide rate	↘	●	30. Share of adults declaring to have chronic disease	↗	●
	27. Death by cause	↘	●	31. Share of adults declaring to be limited in their everyday activity because of health reasons	↗	●
<b>V. Work-life balance</b>	32. Share of employees working very long hours	↗	●	35. Time spent commuting	NA	NA
	33. Leisure and occupation time	NA	NA	36. Share of parental living (woman/man)	↗	NA
	34. Employment rate of women with children in mandatory schooling age	↗	●	37. Satisfaction with work-life balance	NA	●

<b>VI. Education and skills</b>	38. Educational attainment	↗	●	40. Reading skills at 15	↗	●
	39. Young people having left education and training early	↗	●	41. Civic skills of students	NA	●
<b>VII. Social relationships</b>	42. Social network support	NA	●	44. Time spent volunteering	NA	NA
	43. Membership in social, cultural and sport associations	NA	●	45. Frequency of social contacts	↗	●
<b>VIII. Governance and civic engagement</b>	46. Voter turnout	↔	NA	49. Knowledge and use of Luxembourgian, French, German, and/or English	NA	NA
	47. Consultation on rule making	↔	●	50. Confidence in institutions	↘	●
	48. Membership in political and civic associations	NA	●	51. Feeling of discrimination	↔	NA
	52. Air quality	↗	●	56. Share of renewable energies on the final consumption of energy	↗	●
<b>IX. Environment</b>	53. Water quality	↘	NA	57. Car use	↔	●
	54. Noise	↔	●	58. Land use	↔	NA
	55. Recycling rate	↗	●	59. Organic farming	↔	●
	60. Environmental disease burden	NA	●			
<b>X. Personal security</b>	61. Offence rate	↗	NA	62. Feeling of safety (walking alone at night)	NA	●
<b>XI. Subjective well-being</b>	63. Life satisfaction	↘	●			

# Some of the key characteristics of meaningful statistics (1)

- Understandability :
  - Avoiding economic/statistical jargon  
(closing the output gap, dual multipliers, ...)
    - > indicators are clearly defined (meaning)
  - Making minimal assumptions about statistical knowledge of the audience  
(mixed data frequency approach, kernel density estimates,...)
    - > Hiding technical work e.g. weighting schemes of survey data

BUT understandability does not stand for over-simplification!

- Interpretability:
  - Choosing indicators that are easily interpretable with a clear unit of measure (% of the total population, on a scale from 1 to 10, in EUR ...)



# Example of non-interpretability

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- Smoot (From Wikipedia, the free encyclopedia)
- The smoot /'smu:t/ is a nonstandard, humorous unit of length created as part of an MIT fraternity prank. It is named after Oliver R. Smoot, a fraternity pledge to Lambda Chi Alpha, who in October 1958 lay down repeatedly on the Harvard Bridge (between Boston and Cambridge, Massachusetts) so that his fraternity brothers could use his height to measure the length of the bridge. One smoot is equal to Oliver Smoot's height at the time of the prank, 5 feet 7 inches (1.70 m).

# Some of the key characteristics of meaningful statistics (2)

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- Comparability:
  - One indicator in 2017 should have the same interpretation in 2018
  - One indicator for Luxembourg should have the same interpretation for France
    - Needs of reliable datasources – regularly updated – with a clear definition of concepts
    - Limit the use of specific data collection e.g. national had hoc surveys if international comparisons are needed
- Exhaustivity:
  - One or more indicators to cover all aspect of a phenomenon
  - Summary indicators

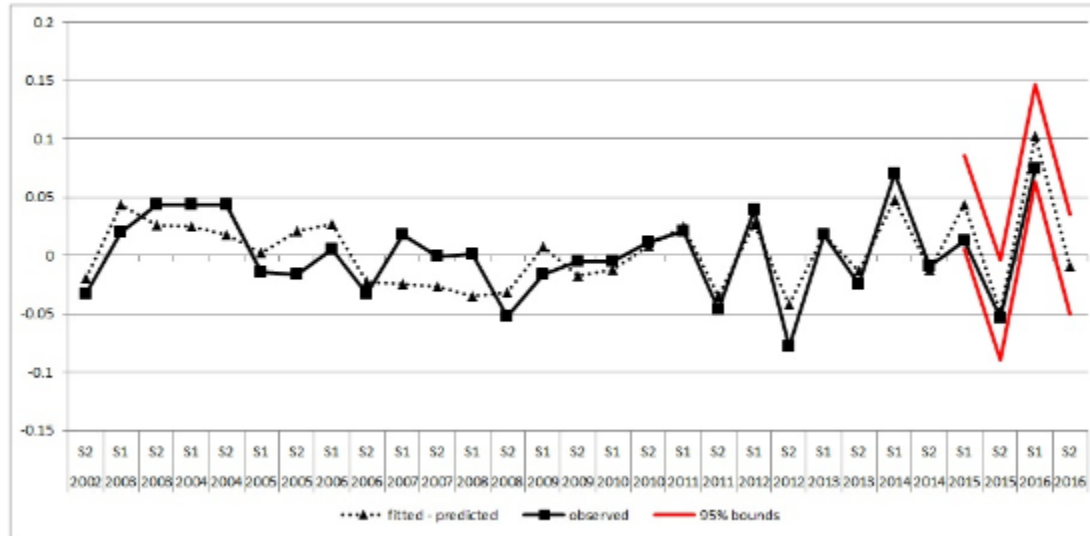
# Some of the key characteristics of meaningful statistics (3)

- Replicability:
  - Give the possibility to re-do the analysis in the future – in other countries...
  - A matter of trust in particular avoid the use of confidential sources
  - Quote your datasources
- Timeliness:
  - Information should reflect the recent past as much as possible the present and if possible the near future.

“Our main results: We were expressing well-being in the past!” but “About today?”

# Timeliness – Now-casting

Figure 6.2: Share of people very satisfied with their life: observed and fitted time series.



# What we have done

- We have opinion surveys conducted every month and we believe that the perception of people about their current and future situation in terms of income, employment, savings,... should explain the evolution of their perceived well-being

- Bad communication...

$$\Delta Y_T = \alpha_0 + \alpha_1 \Delta Y_{T-1} + \sum_{j=0}^5 \beta_j X_{t-j,T} + \sum_{j=6}^{11} \gamma_j X_{t-j,T-1} + \varepsilon_t$$

$$\Delta Y_t = \alpha + \sum_{i=1}^p \alpha_i L^i \Delta Y_t + \gamma \sum_{k=1}^m \Phi(k; \Theta) L^k X_t + \varepsilon_t$$

$$\Phi(j; p) = p_1 + p_2 \cdot \cos(p_3 + j)^{-1} \cdot \sin(p_4 + j)^{-1}$$




# New data – new technologies...




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- Beside “standard” economic/social data a lot subjective information exist and might enrich the analysis
  - Facebook, comments on web sites e.g. Wort, Lessentiel, ...
  - New tools are available to retrieve information web scrapping and data/text mining

# Croissance tonique, index prévu pour le 3e trimestre

**LUXEMBOURG** – Le Statec a revu à la hausse ses prévisions de croissance pour les années 2018 et 2019, présentées mardi. L'index reste attendu au troisième trimestre 2018.

   **Indexation pour les bas revenus seulement** le 05.06.2018 17:37 [▲ dénoncer ce commentaire](#)  
L'indexation ne fait que renforcer l'inflation et diminuer la productivité de Luxembourg....même si à court terme, je l'apprécie. Je conserverais l'indexation que pour les bas revenus.

   **Fred doudou** le 05.06.2018 20:13 [▲ dénoncer ce commentaire](#)  
Ben non c'est pour tous ou personne, aucune raison d'artificiellement faire diminuer des différences de salaires largement justifiés par la différence de valeur ajoutée. Déjà que d'un index de 200€ brut je ne reçois que 99€ alors qu'un junior reçoit 35€ nets d'un index de 60... donc les « hauts » salaires perdent déjà du pouvoir d'achat par rapport aux plus bas.

   **Martine Schuetz** le 06.06.2018 07:44 [▲ dénoncer ce commentaire](#)  
On devrait réserver l'indexation aux nationaux et en exclure les frontaliers.

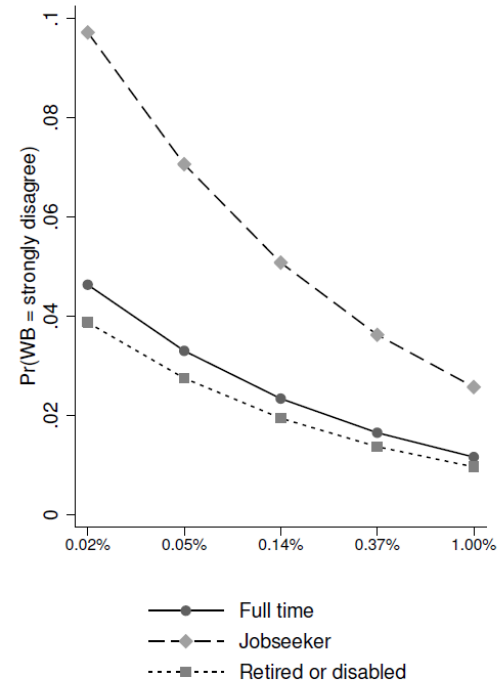
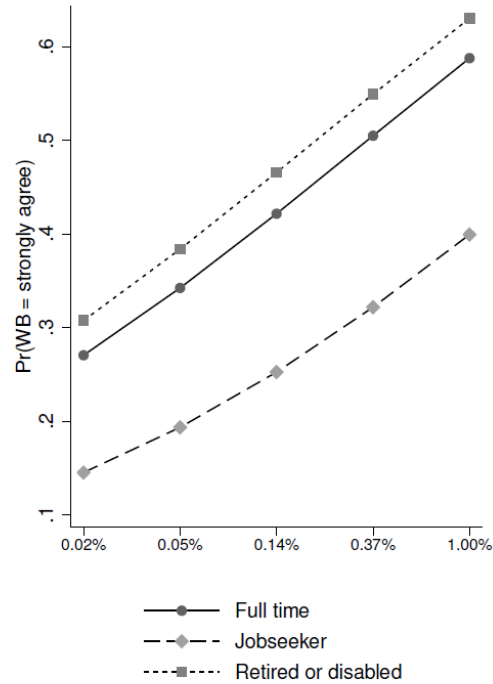
# Our work is not only data collection but is also analysis

- Social enterprises and well being -

- “We check whether social enterprises meet their objectives by looking at Subjective well-being as a measure of the common good produced by social enterprises.”
- These are for benefit enterprises:
  - eliminating unemployment, homelessness;
  - fighting poverty and exclusion;
  - promoting integration of disadvantaged people;
  - producing renewable energies and sustainable goods;
- Data mainly the nation Global Entrepreneurship Monitor
- Econometric technics



# One result among many



## A final quote...

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- Economic historians have a difficult job: they search for a black cat in dark room. Economists' job is even more challenging: they search for the same black cat in the same dark room, but the cat is not there. Econometricians find their job more rewarding: they search for the same black cat in the same dark room, the cat is not there but they shout "I got it" all the time. Economists advising governments are bolder: they get paid to train the imaginary black cat to capture mice, and they blame unexpected external shocks for the lack of mice (Folk Wisdom).

In "When You Are Missing a Paragraph A crowdsourced paper in honor of Charles Wyplosz"

# STATEC

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# Merci pour votre attention!

## Des questions?

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[statec.lu](http://statec.lu)

## Interesting reading

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- Making Statistics More Meaningful for Policy Research and Program Evaluation – H. May – American Journal of Evaluation vol.25 N°4 – 2004 – pp.525-540