Perspectives about measuring of development in Romanian agriculture

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What is development?

- Development: The process of **economic and social transformation** that is **based on** complex **cultural and environmental factors** and their interactions.

(http://www.businessdictionary.com/definition/development.html)

Harvey S. Moskowitz and Carl G. Lindbloom in their book “The complete illustrated book of development definitions” (2015), **found about 2,000 distinct definitions about development.**
How we can measure development indicators?

FAO Methodology in *Wye Group Handbook on Rural Household Livelihood and well-being* (2009, pp. 11-12)
Main difficulties in data management

The following main problems are common to many developing countries:

1. limited staff and capacity of the units that are responsible for collection, compilation, analysis and dissemination of agricultural statistics;
2. lack of adequate technical tools, packages and framework to support countries data production efforts;
3. insufficient funding allocated of agricultural statistics from development partners and national budget;
4. lack of institutional coordination which results in the co-existence of not harmonized and integrated data sources;
5. lack of capacity to analyze data in a policy perspective which results in a significant waste of resources as large amounts of raw data are not properly used;
6. difficult access to existing data by users with no metadata and indication of quality.

*Wye Group Handbook on Rural Household Livelihood and well-being* (2009, p. 15)
Lisbon performance and regional economic development

GDP per capita, 2001-2011
in Purchasing Power Standard (PPS)

- 20 Percentage points difference between 2011 and 2001 in relation to the EU27 average in each year
- 10
- 0
- -10
- -20

Composite Lisbon performance

- high above average
- above average
- below average
- clearly below average
- no data

Regional level: NUTS2 (2013)
Source: ESPON Territorial Observation 3, 2010
Origin of data: Eurostat, Eurofound, 2006
European Data
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Observation Network
2014

This map does not necessarily reflect the opinion of the ESPON Monitoring Committee

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Typology of indicators used in agriculture

Multiple typologies:

I. Direct & Indirect measured
II. Simple, aggregate & composite
III. With high, average & low impact
IV. Local, sectorial & trans sectorial impact
1. Measuring the impact of a simple indicator - *Arable Land*

Between 1980 - 2014, in Romania the value of indicator decrease from 42.69% to 38.15% (lost about 4% of surface).

Impact:
- decreasing of agriculture production (%)
- loosing of agriculture potential (%)

![Graph showing arable land percentage from 1980 to 2014 for different countries like Bulgaria, Hungary, Romania, and Poland.](chart.png)
2. Measuring the impact of an aggregate indicator (non dimensional) - **Crop production index**

Romania does not record big differences regarding this index in the last 30 years (99.74 in 1980, versus 102.54 in 2013).

**Impact:**
- decrease cereals productivity (%)
- efficiency of the mechanization of agriculture (% in the last 30 years)
Measuring the impact of an aggregate indicator (dimensional) – Contribution of the agriculture to the GDP

The contribution of the agriculture to the GDP decrease from 23.74% in 1990 to 4.75% in 2015 (about 5 times in only 35 years)!

Impact:
- decreasing of competitiveness (%)
- loosing of agriculture potential (%)
- decreasing of employment in agriculture (%)
Measuring the impact of an composite indicator (dimensional) – Import/export balance for cereals

The exports of cereals increased more than 180 times between 1991 (12.304 thousand USD) and 2016 (2.326.568 thousand USD). The livestock and livestock products increased more 36 times between 1991 (42.242 thousand USD) and 2016 (1.589.947 thousand USD).

Impact:
- increasing the dependence of import( % )
- increasing of revenues( % )
Conclusions

1. The analyzing of a complex sector (as agriculture) involves a set of correlate indicators, not only simple measurements.
2. The measurement of an indicator could be made both directly (analyzing the evolution) but also through the impact generated by the indicator.
3. Romania record a dramatically evolution of some representative indicators in the last 20 years:
   - lost about 4% for the arable land
   - has approximatively the same production index like in the 80th
   - the contribution of the agriculture to the GDP decreased approximatively 5 times in the last 25 years
   - the exports of cereals increased more than 180 times and the imports of livestock and livestock products more than 36 times in the last 25 years.
Thank you!

Questions?