



Jean Monnet Chair

I.2. The design of policy intervention: a framework

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Outline

1. Importance of statistical information
2. Policy definition and evaluation: a statistical theoretical approach
3. Need for a pertinent Statistical Information System
4. Definition and measure of variables and indicators
5. The implementation of a Statistical Information System at a local level: issues and statistical analysis
6. Different methods to get information
7. Need for data of high quality: how to evaluate it

1. Importance of statistical information

- Nobody has ever doubted that **statistical information** and statistical methods are **indispensable for taking rational decisions**
- However, for a long time even **policy makers have rarely and badly used the statistical information available** and, at the same time, producers of official statistics have not always supplied the necessary statistical data
- Now, **governments at different levels** are more and more **interested** in formalizing their **decision processes** and in **evaluating** their programmes, activities and **intervention policies** in economic and social areas
- One important reason for that is the **continuous process** of decisional and institutional **decentralization**, with a **particular attention to territory**

Special emphasis on territorial dimension

- Obviously, this implies **adequate information** and, above all, specific ***statistical information systems and indicator sets*** that official statistics should implement, in the interest not only of **public decision-makers** but also of **citizens**, so that they can exercise a documented **democratic control**
- Special emphasis should be placed on **deepening territorial dimension**, which in many countries is characterized by highly articulated elements and **significant gaps in development**
- Institutional bodies are interested in a **greater and more detailed statistical information** to better investigate the fields they operate in, which is a driving force to strengthening the **vicious circle “new demand–new supply”**

2. Policy definition and evaluation

- In this presentation, it will be illustrated a **statistical theoretical approach** for policy definition and evaluation.
- To give a **reference framework** , I start recalling the **steps** to be implemented to **define, carry out and evaluate intervention policies**;
- The **design of political intervention** is clearly a **strategic field** at least for three reasons



Design of Policy Intervention: a strategic field

➤ SCIENTIFIC SUPPORT FOR DECISIONAL PROCESSES



- Make more adequate choices
- Rationalize interventions, programmes and actions

➤ CONTROL



- On effective implementation of the programmed targets
- On impact of the implemented programs

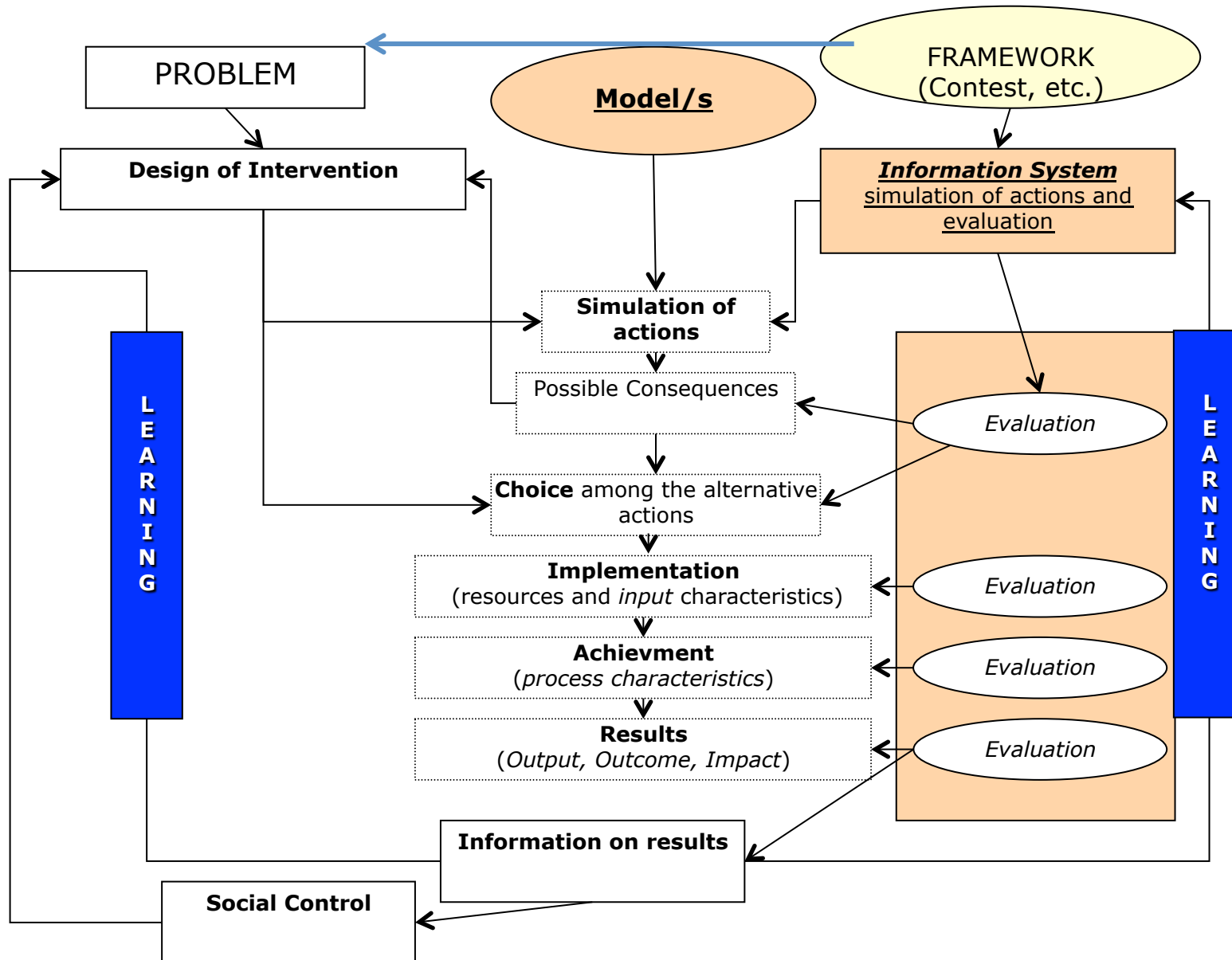
➤ GUARANTEE FUNCTION



- transparency with references to users
- safeguards of society's interests

- ❖ To specify **how policy intervention design and the ensuing impact evaluation should be organized**, we can refer to the **simplified framework** illustrated in the following sketch

SIMPLIFIED FRAMEWORK OF THE DESIGN, THE IMPLEMENTATION AND THE EVALUATION OF AN INTERVENTION POLICY



Framework analysis -1-

- Framework analysis highlights some **important and specific aspects** that must be taken into consideration to organize policy design and evaluation. As a matter of fact, it is necessary:
 - a) To **analyze the context and real situation** (a good knowledge is required of how the phenomenon works and how the involved units behave), and the **problems** that we have to face;
 - b) To **simulate the actions** on which intervention is based with macro or micro **models**, to **evaluate their possible consequences**, and to **choose** among the various **alternative actions**;

Framework analysis -2-

- c) To evaluate **each phase of implementation** of the actions and the obtained results;
- d) To **use results** and evaluation analyses **for learning aims** and, if necessary, to change the plan or to improve the information system already available;
- e) To **disseminate evaluation results** also as a means of **social control** by general public and by interested bodies.

Framework analysis -3-

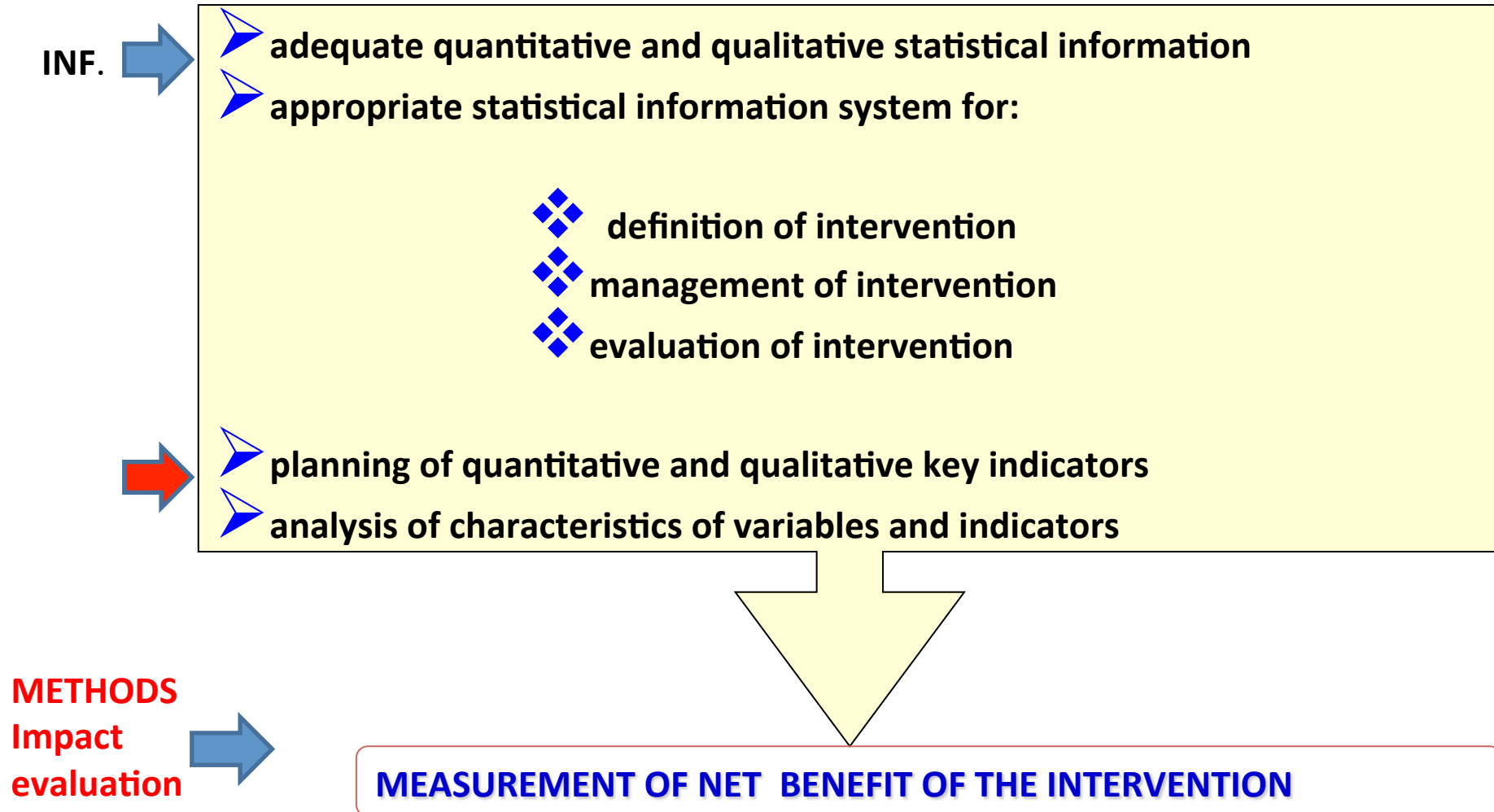
- To develop these statistical designs it is essential to deeply **know the nature and characteristics of the programme**
 - ↓
 - ✓ For example, it is necessary to know which are the elements that influence programme results
- Obviously the **effects** of the programme must be measured using **response variables** strictly connected to the objectives.
 - ✓ The analysis must be done considering the **real operative conditions** and consequently the characteristics of the decisional process (as highlighted in pict. 1).

Framework analysis -4-

- It is therefore **strategic** to define a **reference framework** of the:
 - a) situation in which is **the subject of the study** and/or a **working model**,
 - b) the existing **economical and sociological theories**.
- **If these theories do not exist** or are not convincing, it is necessary to **use empirical evidence**, through a sociological, economic, managerial study of the organizations and the processes involved in the programme (in this case, the importance of the interdisciplinary cooperation is evident).

3. Need for a Statistical Information System

KEY CONDITIONS FOR THE APPLICATION OF THE SCHEME



4. Definition and measure of variables and indicators

- In any case to **plan and evaluate** the policy intervention **in an objective way**, it is necessary :
 - ✓ **first “to measure”**, having decided what to measure
 - ✓ then to have **adequate measures** of the **variables** of interest and plan the opportune **quantitative** and **qualitative indicators**.
- The use of **different indicators** is also an **opportunity to check the quality and consistency of different data** on the same phenomenon as well as data on different phenomena arising from different statistical sources.
 - ✓ In the end, the analysis of data highlights the most important results obtained from different statistical surveys (thus **increasing the value added in the presentation of the results of each single survey**) and provides possible solutions to problems of economic and social policy.



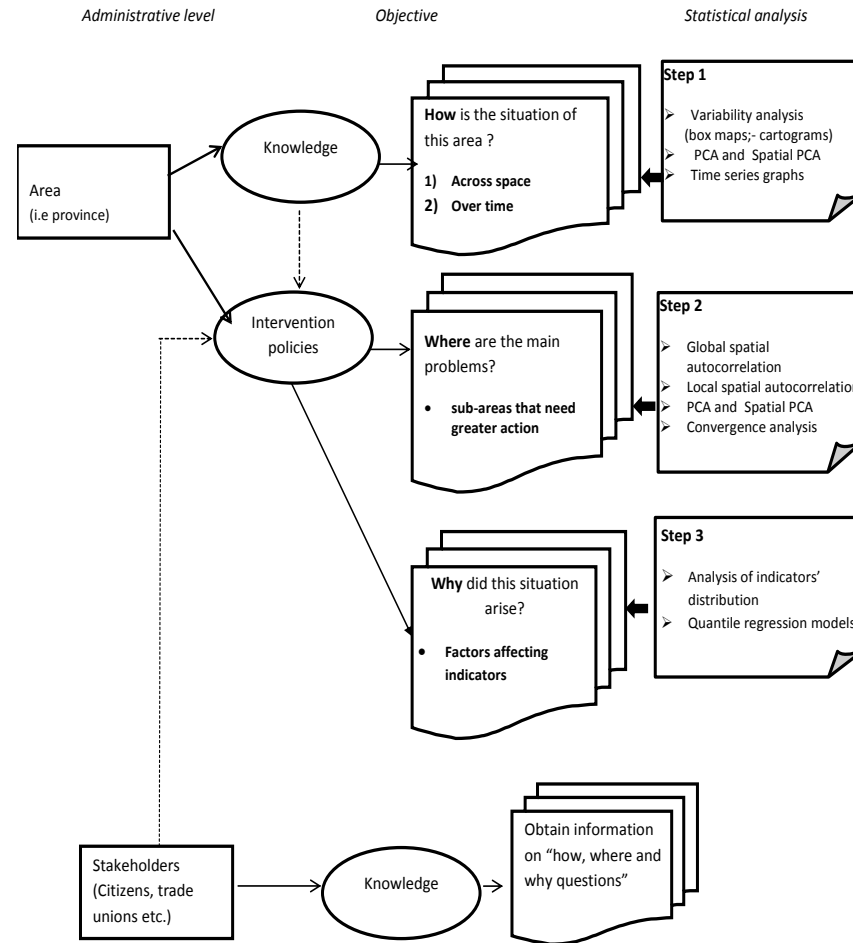
Numbers produced by surveys are transformed into “political relevant information”

5. The implementation of a Statistical Information System at a local level: possible general effects

- ↪ Answer to the **new demand of information** for programming and evaluation of interventions
- ↪ Enhancement of the **existing territorial statistical information**
- ↪ Increase a **permanent settlement of statistical data and indicators** supply on regional and sub-regional basis
- ↪ Use **new methodologies and tools** for producing territorial statistical estimations
- ↪ **Disseminate results** achieved to different users and scientific society as a whole

5.1- Statistical support for the implementation of policy intervention at a local level

Figure 1 The multi-step procedure



Statistical approach for selecting and analyzing Indicators

Statistical analysis **helps** the policy maker to identify issues, using various methods indicated in the sketch to give reply to **various questions**:

How is the **situation** of the area?

Where are the **main problems**?

Why did the situation **arise**?

in order to identify the most important aspects that need to be monitored and considered to design intervention policies

But also to reply to **other questions**:

Is the **situation** of the area **improving or worsening** over time?




Is there a **specific trend** over the last few years?

Do the **sub-areas** have the same characteristics and behaviour?

in order to understand where intervention is primarily required

5.2- Further effects of the implementation of a Statistical Information System at local level

IMPACT OF THE DEMAND FOR TERRITORIAL AND SECTORIAL STATISTICS

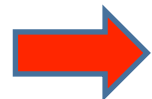
- **A RELATION IMPACT** 
 - ✓ Increasing of **sensitiveness to the topics** of territorial data and indicators
 - ✓ Implementation of exchange of territorial data
- **AN INSTITUTIONAL IMPACT** 
 - ✓ **Involvement of others administrations** to provide and ask for territorial data, and to disseminate the Culture of Measurement and Evaluation
- **AN EXTERNAL IMPACT** 
 - ✓ A direct **reply to an increasing demand of territorial indicators** coming from other actors not directly involved in policy making

❖ **Need to increase investments and financial resources to implement the local information statistical system**

6. Different methods to get information

There are **various methods to collect information** about large population

	Advantages	Disadvantages
➤ Statistical surveys	collection of data in a standardized methods over large number of units	Not ever it is possible to standardized; possible errors
➤ Administrative record systems (Big Data?)	Sometimes offer very good data	Little control over the measurements
➤ Qualitative investigation	Yield deep understanding	Small groups of informants
➤ Observation of behaviors of units (Big Data?)	Information on frequency of events	Are limited to a tiny fraction of behaviors.
➤ Randomized experiments	Answer as stimuli cause behavior	Difficult applicability in real world



NOT THE ONLY WAY, BUT THE MOST IMPORTANT IS STATISTICAL SURVEYS

6. Need for data of high quality: how to evaluate it

- Only when decision makers and citizens **believe the numbers** the **statistical information gain value**
- **Confidence in the quality** of the information is **indispensable** in order to use it without suspect
- ✓ For this reason the international organization (UN and EUROSTAT) state that it is important that the **statistical outputs meet certain quality standards**
relevance, accuracy, timeliness, accessibility , clarity (or interpretability), coherence and comparability

It is therefore **necessary** that the user of data deeply **know the characteristics of data and indicators** and also their **possible errors** and interpretative limitations



Quality of data can be evaluated only from researchers which know

“Methodology of Statistical Survey”

(see Monica Pratesi Lectures)

References

- Biggeri L. (2004), Official Statistics for Decision Making and Evaluation: territorial indicators, in Proceedings of OECD First Forum on: Statistics, Knowledge and Policy: Key indicators to Inform Decision Making, Palermo
- Bedi T., Coudouel A. and Simler K., (2007), More than a Pretty Picture: Using Poverty Maps to Design Better Policies and Interventions, World Bank
- Ray P., Greenhaigh T., Harvey G. and Walshe K., (2005), Realist Review – a new methods of systematic review designed for complex policy interventions, Journal Health Service Reseach Policy, Vol. 10, Suppl- 1 July 2005

To get more information see also the Proceedings of the OECD Forums on Statistics, Knowledge and Policy hold in Istanbul, Turkey, (2007), Busan, Korea (2009), New Delhi, India (2012) and the next Forum that will be held in Mexico from 13 to 15 October 2015.