

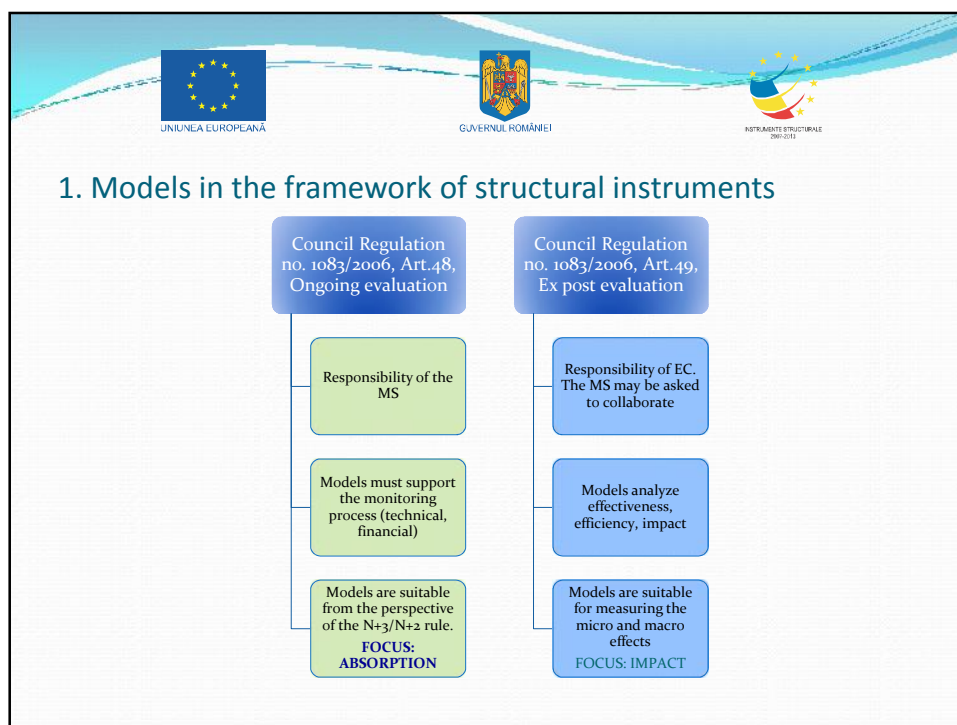


***Applicability of econometric modeling for analyzing structural funds absorption in Romania***

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Proiect co-finanțat din Fondul European de Dezvoltare Regională prin POAT 2007-2013

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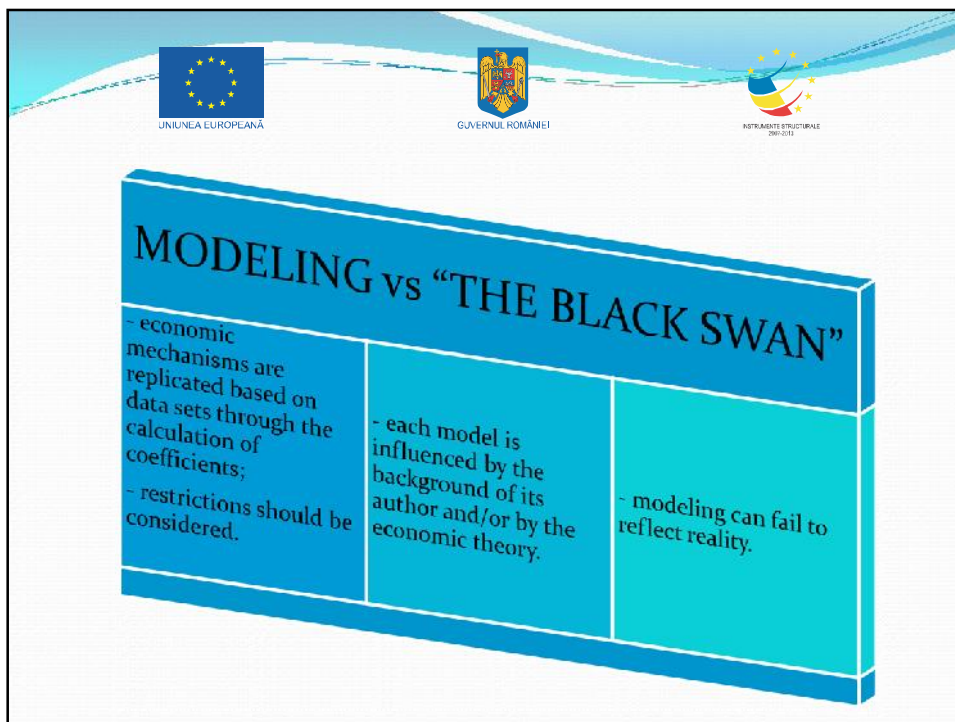
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### ABSORPTION

- actual levels can be calculated at certain moments within the programming period;
- based on historical data, forecasts can show the trend until 2015;
- the strength of the causal relationships between variables can be assessed;
- variables considered are “internal” to the NSRF.

### IMPACT

- difficult to measure;
- impact within the programming period has a low level of significance;
- long term measures are needed;
- models should include a lot of variables which are “external” to the NSRF.



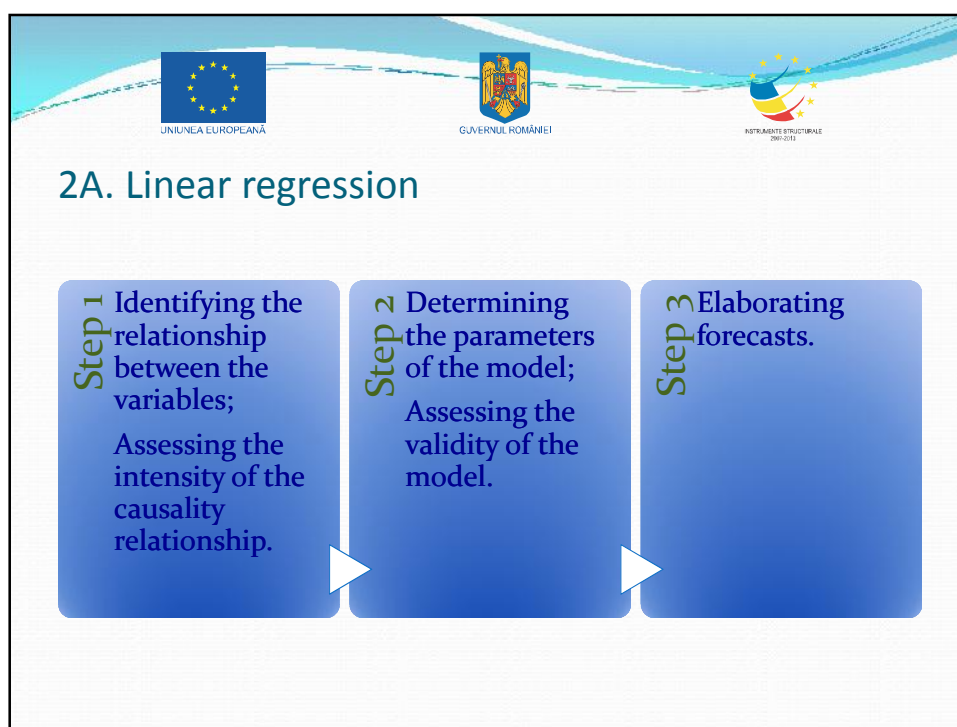
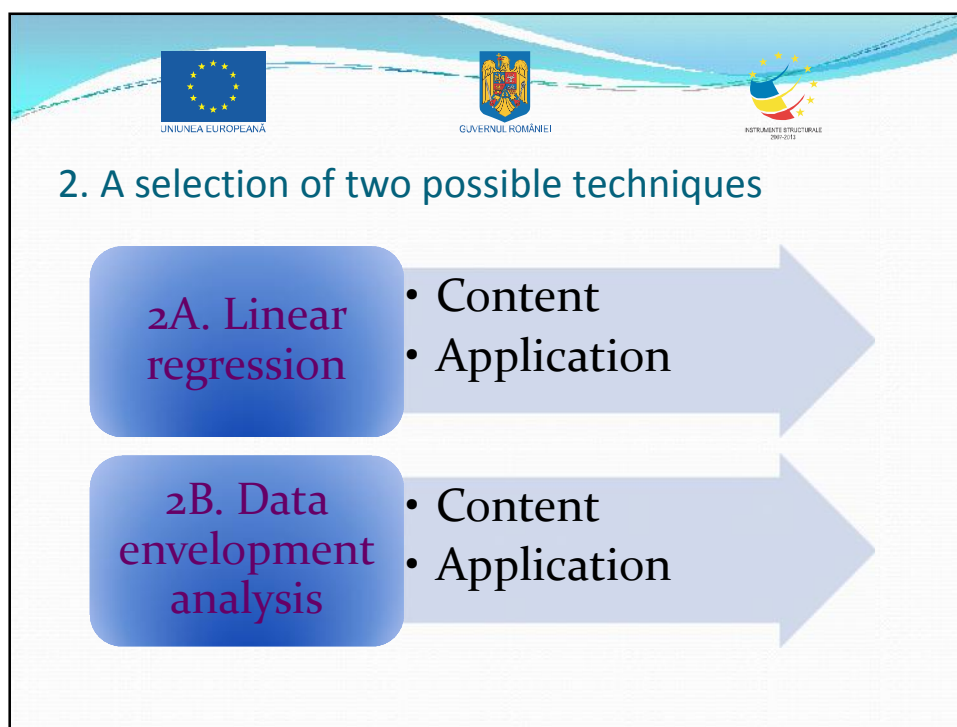
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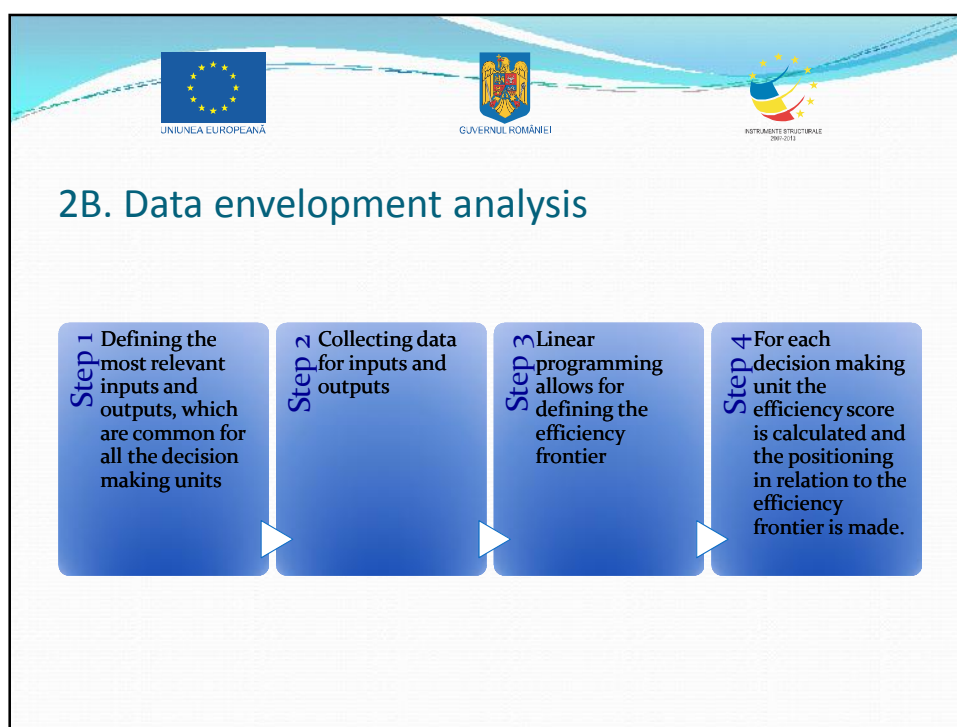
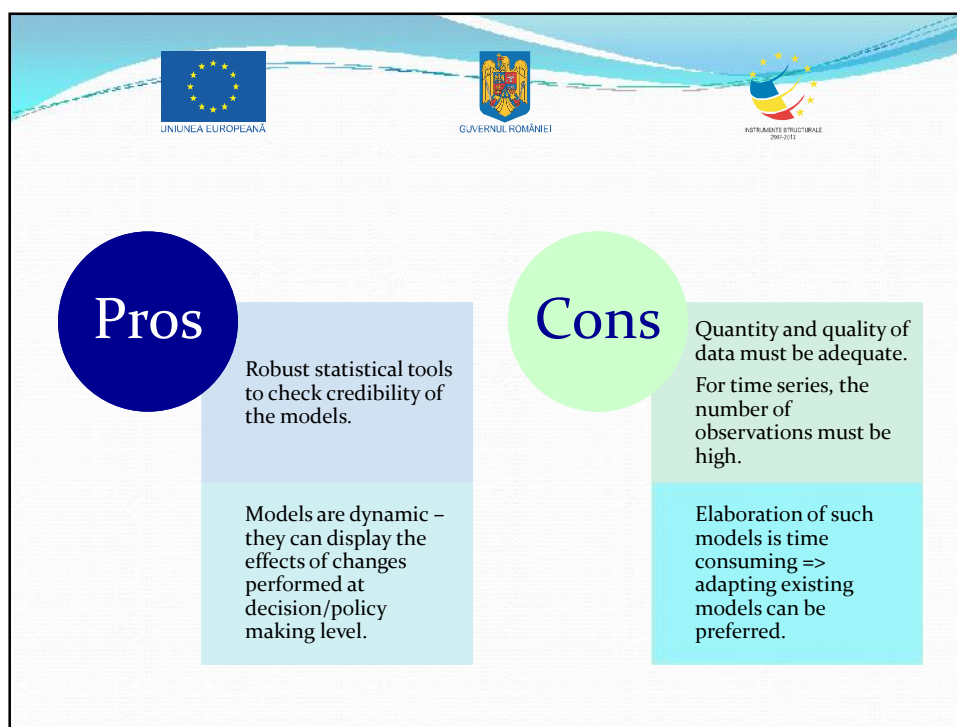
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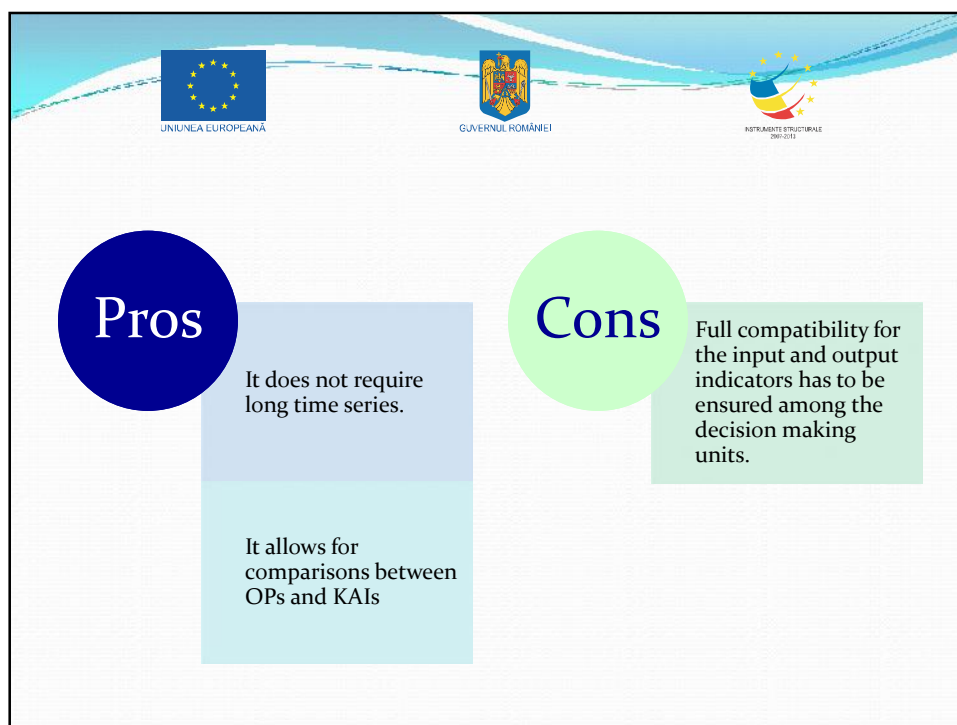
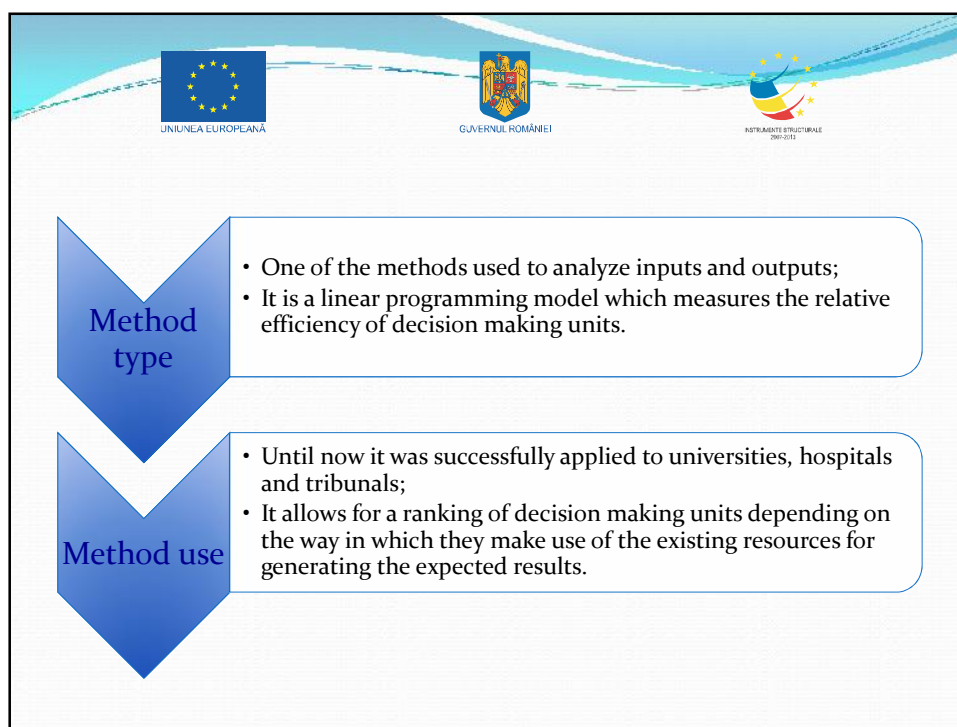
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## MODELING vs “THE BLACK SWAN”

- economic mechanisms are replicated based on data sets through the calculation of coefficients;
- restrictions should be considered.
- each model is influenced by the background of its author and/or by the economic theory.
- modeling can fail to reflect reality.














### 3. Proposal for the structure of a national model to manage absorption considering the N+3/N+2 targets

- For a certain cluster of projects/OP/the NSRF:
  - calculation of the current level of absorption and the current level of achievement for the indicators;
  - identification of causality links for the level of absorption per KAI/OP/types of projects;
  - forecasts on absorption and achieving the indicators (the pathway to targets).

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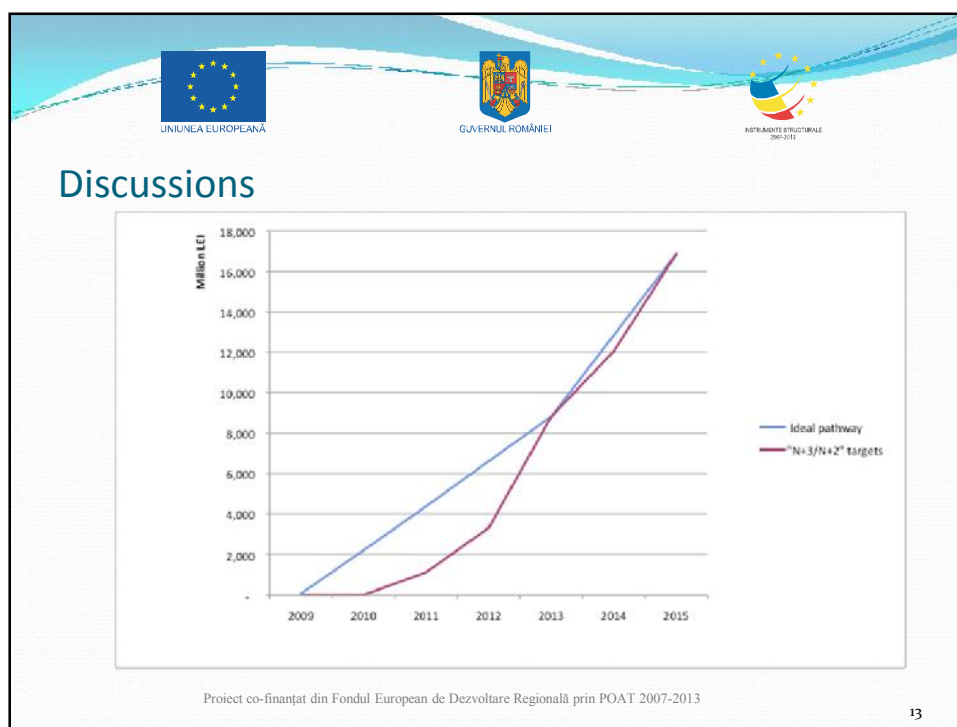
### Hypothetical example

Automatic decommitment and expenditure targets				Pathway to targets	
Year	Budget for the year	Cumulative budget 2007-2013	N+3/N+2 EU Regulatory Targets	Yearly expenditure	Cumulative yearly expenditure
2007	1,033,197,706	1,033,197,706			
2008	1,601,613,462	2,634,811,168			
2009	2,195,619,863	4,830,431,031	0	70,000,000	70,000,000
2010	2,612,077,400	7,442,508,431	0	2,134,000,000	2,204,000,000
2011	2,889,396,532	10,331,904,964	1,117,070,481	2,178,000,000	4,382,000,000
2012	3,233,604,181	13,565,509,144	3,312,690,344	2,230,000,000	6,612,000,000
2013	3,298,276,269	16,863,785,413	8,814,164,277	2,204,000,000	8,816,000,000
2014			12,047,768,457	4,023,000,000	12,839,000,000
2015			16,863,785,413	4,024,785,413	16,863,785,413
Ideal pathway					

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- Absorption level = the “effect” variable;
- Causal variables can be divided as follows:

A. Variables at programme level	A1. Variables resulting from the configuration of the programme	- types of interventions; - types of beneficiaries.
	A2. Variables resulting from the effectiveness in implementing the programme	- time for launching a call; - time for the project evaluation and contracting; - specific elements of the financing contract.
B. Variables at project level	B1. Variables resulting from the type of project	- complexity; - duration; - state aid.
	B2. Variables resulting from the capacity of the beneficiary	- type of beneficiary; - financial capacity; - access to complementary financial resources.

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## Sources of data

A. Variables at programme level	A1. Variables resulting from the configuration of the programme	<ul style="list-style-type: none"> <li>- types of interventions;</li> <li>- types of beneficiaries.</li> </ul>	<ul style="list-style-type: none"> <li>- data from SMIS;</li> <li>- monitoring reports collected by the Authority for the Coordination of Structural Instruments;</li> <li>- data collected directly from the MAs.</li> </ul>
	A2. Variables resulting from the effectiveness in implementing the programme	<ul style="list-style-type: none"> <li>- time for launching a call;</li> <li>- time for the project evaluation and contracting;</li> <li>- specific elements of the financing contract.</li> </ul>	
B. Variables at project level	B1. Variables resulting from the type of project	<ul style="list-style-type: none"> <li>- complexity;</li> <li>- duration;</li> <li>- state aid.</li> </ul>	<ul style="list-style-type: none"> <li>- data from SMIS;</li> <li>- monitoring reports collected by the Authority for the Coordination of Structural Instruments;</li> <li>- surveys among the beneficiaries.</li> </ul>
	B2. Variables resulting from the capacity of the beneficiary	<ul style="list-style-type: none"> <li>- type of beneficiary;</li> <li>- financial capacity;</li> <li>- access to complementary financial resources.</li> </ul>	

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## Methods applicability

A. Variables at programme level	A1. Variables resulting from the configuration of the programme	<ul style="list-style-type: none"> <li>- types of interventions;</li> <li>- types of beneficiaries.</li> </ul>	<p>Regression can show the influence on absorption of:</p> <ul style="list-style-type: none"> <li>- large versus small projects;</li> <li>- private versus public beneficiaries;</li> <li>- regional interventions versus national interventions.</li> </ul>
	A2. Variables resulting from the effectiveness in implementing the programme	<ul style="list-style-type: none"> <li>- time for launching a call;</li> <li>- time for the project evaluation and contracting;</li> <li>- specific elements of the financing contract.</li> </ul>	<p>Regression can show the influence on absorption of waiting periods in the process.</p> <p>However, data envelopment analysis is more relevant in this context to allow for optimizing the activity of the MAs/IBs.</p> <p>Another important factor conditioning absorption is the presence of clear financial monitoring clauses in the financing contracts.</p>
B. Variables at project level	B1. Variables resulting from the type of project	<ul style="list-style-type: none"> <li>- complexity;</li> <li>- duration;</li> <li>- state aid.</li> </ul>	<p>Regression can show the influence on absorption of:</p> <ul style="list-style-type: none"> <li>- narrow focus projects versus broad projects;</li> <li>- public procurements based projects versus the rest;</li> <li>- short versus long contracts;</li> <li>- state aid versus non-state aid projects.</li> </ul>
	B2. Variables resulting from the capacity of the beneficiary	<ul style="list-style-type: none"> <li>- type of beneficiary;</li> <li>- financial capacity;</li> <li>- access to complementary financial resources.</li> </ul>	<p>Regression can show the influence on absorption of:</p> <ul style="list-style-type: none"> <li>- public versus private beneficiaries;</li> <li>- start ups versus experienced companies;</li> <li>- bankable projects versus non-bankable projects.</li> </ul>

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## Modeling scenarios

**A. Forecasts of absorption within the current scenario**

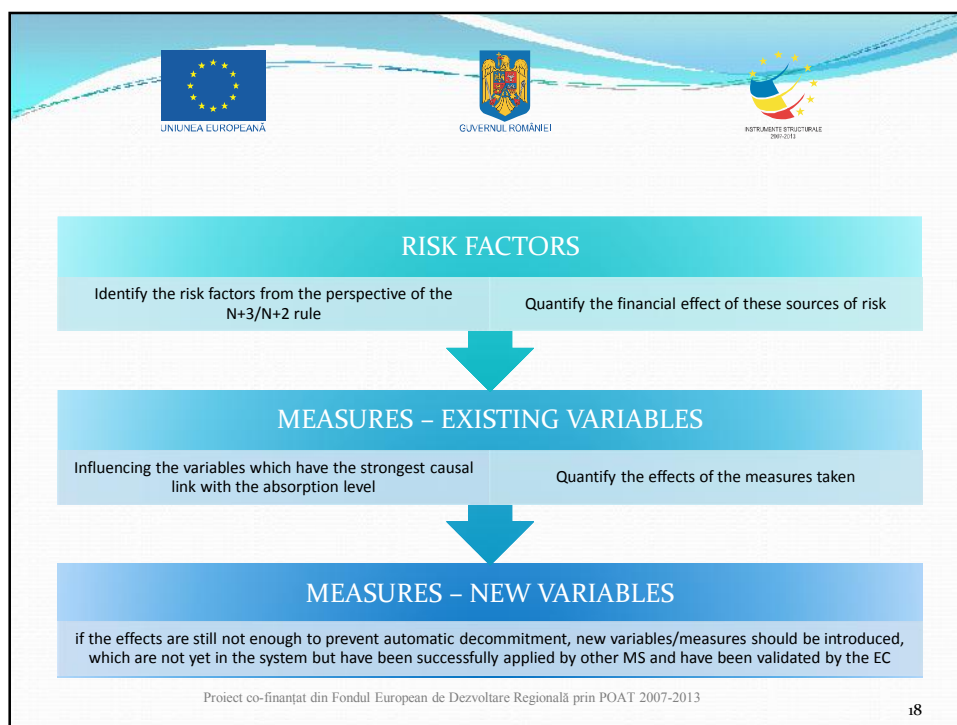
- identification of the independent variables;
- assessment of the intensity of the causal links;
- elaborating forecasts based on the assumption that nothing changes.


**B. Forecasts of absorption within a modified scenario**

- identification of key variables which limit the absorption per types of projects, types of investments, operational programmes;
- changes in the variables and/or inclusion of new variables in the model;
- elaborating forecasts based on the modified scenario and identifying the improvements.

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## 4. Discussions

**(Q1) Why having a mathematical (numerical) approach when it comes to development (qualitative) objectives?**

- the N+3/N+2 rule requires a mathematical approach to the management of operational programmes in addition to the qualitative one focused on the achievement of objectives and indicators;
- the possibility of considering the 2 programming periods (2007-2013 and 2014-2020) as one highlights even more the importance of the monetary assessment/perspective.

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**(Q2) What can regression reveal in addition to the public perception that "authorities are slow"?**

- the slow pace in expenditure and the risk to miss the N+3/N+2 targets can have multiple causes, not only/necessarily the administrative ones related to the MAs/IBs;
- a programme which is built based on very complex, time consuming projects is at risk of missing the N+3/N+2 targets even if managed by the perfect and most effective MA;
- a programme whose interventions are exclusively based on public procurements is affected by delays in expenditure no matter the effectiveness of the MA;
- beneficiaries can be a factor of delay when they are not bound to spend fastly, according to clear provisions in the financing contracts; financial monitoring mechanisms prove to be an important factor for increasing absorption.

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**(Q3) What can the data envelopment analysis reveal?**

- that different MAs and IBs working with similar kinds of resources (human, technical, informational, juridical, financial) and sharing the same restrictions/limitations can deliver different outputs in terms of absorption;
- the efficiency frontier among all these bodies should be analyzed in order to define possible administrative measures.

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**(Q4) What can be done if the variables already existing in the system cannot help the achievement of targets even if they function perfectly?**

- reallocations within the POs;
- reallocations between the POs within the same fund;
- reallocations between funds with a very solid justification;
- thinking “outside the box” – setting up venture capital, revolving funds to increase expenditure;
- mono-characteristic programmes (pure sectoral ones, programmes with a single type of intervention, programmes which only include high value and long duration projects etc.) could be avoided.

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The slide features a decorative header with three logos: the European Union flag (labeled 'UNIUNEA EUROPEANĂ'), the Romanian coat of arms (labeled 'GUVERNUL ROMÂNIEI'), and the Structural Instruments logo (labeled 'INSTRUMENTE STRUCTURALE 2007-2013'). The background of the slide is a light blue grid pattern. The main text is centered and reads 'Thank you for your attention!'. At the bottom left, there is a small text line: 'Proiect co-finanțat din Fondul European de Dezvoltare Regională prin POAT 2007-2013'. At the bottom right, the number '23' is displayed.

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