

## ***Impact evaluations of STI policies and projects***

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Session 4:

## **STI Policy Monitoring and Evaluation**

**On-line training session on STI policy  
and policy instruments**

**for SDGs for Asia and the Pacific**

November 18-21

UN-IATT Workstream 6 on  
Capacity-Building in STI for SDGs



Evaluations: Rigorously measuring **impacts** and determining the **true cost-effectiveness** of these interventions

**Impact Evaluation** is not Monitoring

**Causality**

? **Why are they necessary?**





- **Resources are public and limited**, their financing must be justified  
**Accountability** of politicians and beneficiaries  
.... And above all, it is **necessary to learn** how to improve the effectiveness of the programs and contribute to socio and economic development.  
**Test** new instruments before scaling them
- **Experimentation** is part of the STI policy toolkit



# Questions that go beyond "what

	Question	Policy implications
<b>First generation</b>	Basic <b>attribution (causality)</b> : Is the policy/program effective in achieving its development outcomes (crowding-in of RD&i)?	Policy Expansion, Cancellation, or Modification
<b>Second generation</b>	1. <b>Heterogeneity</b> : Are the effects different between different categories of beneficiaries?	Targeting of beneficiaries
	2. <b>Dosage</b> (marginal effects): Do the effects depend on the intensity of the treatment? (Magnitude, repetition)	Size of the treatment
	3. <b>Dynamics</b> : How long does it take to observe the effects of the policy? Do these effects vary over time? Sequencing?	Bottlenecks? Cost-Benefit Analysis & Cost Effectiveness Analysis
	4. <b>Multitreatment</b> : Are the effects different if combined with other interventions? What is most effective sequence?	Coordination of public policies
	5. <b>Spillover</b> effects and externalities: any positive (negative) spillover effects?	Definition of profit streams





## STI Policy Evaluations Are DIFFICULT: Few Impact Assessment of STI Policies available

1. **Complex instruments.** They do not consist of a single standardized support or treatment, but rather a menu of interventions. **Indirect, "systemic" approach**, aimed at "facilitating".

**High selection of beneficiaries:** more traditional (and accepted) evaluation techniques are often less applicable. This makes it difficult, for example, to design randomized controlled trials (RCTs).

**Long-term:** Much of the effects of innovation policy manifest themselves over a long period of time. There is a need to extend the time frame for evaluation beyond the mandate of policymakers.

Policies generate **spillovers** and other **externalities**

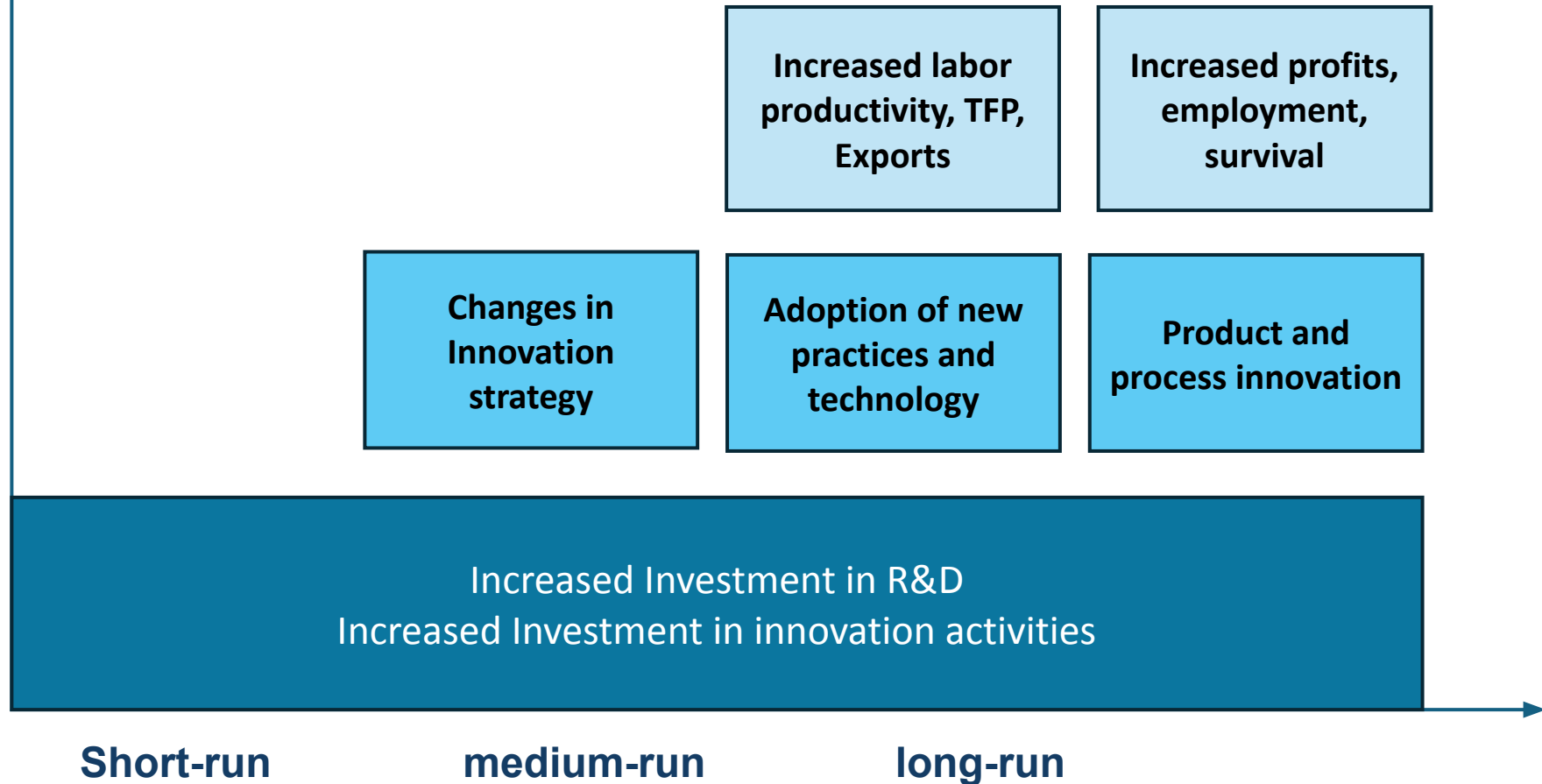


**Effects of an Innovation Policy**

**Enterprise performance**

**Behavior additionality:**  
changes in products/processes

**Input additionality:**  
investments and resources allocation

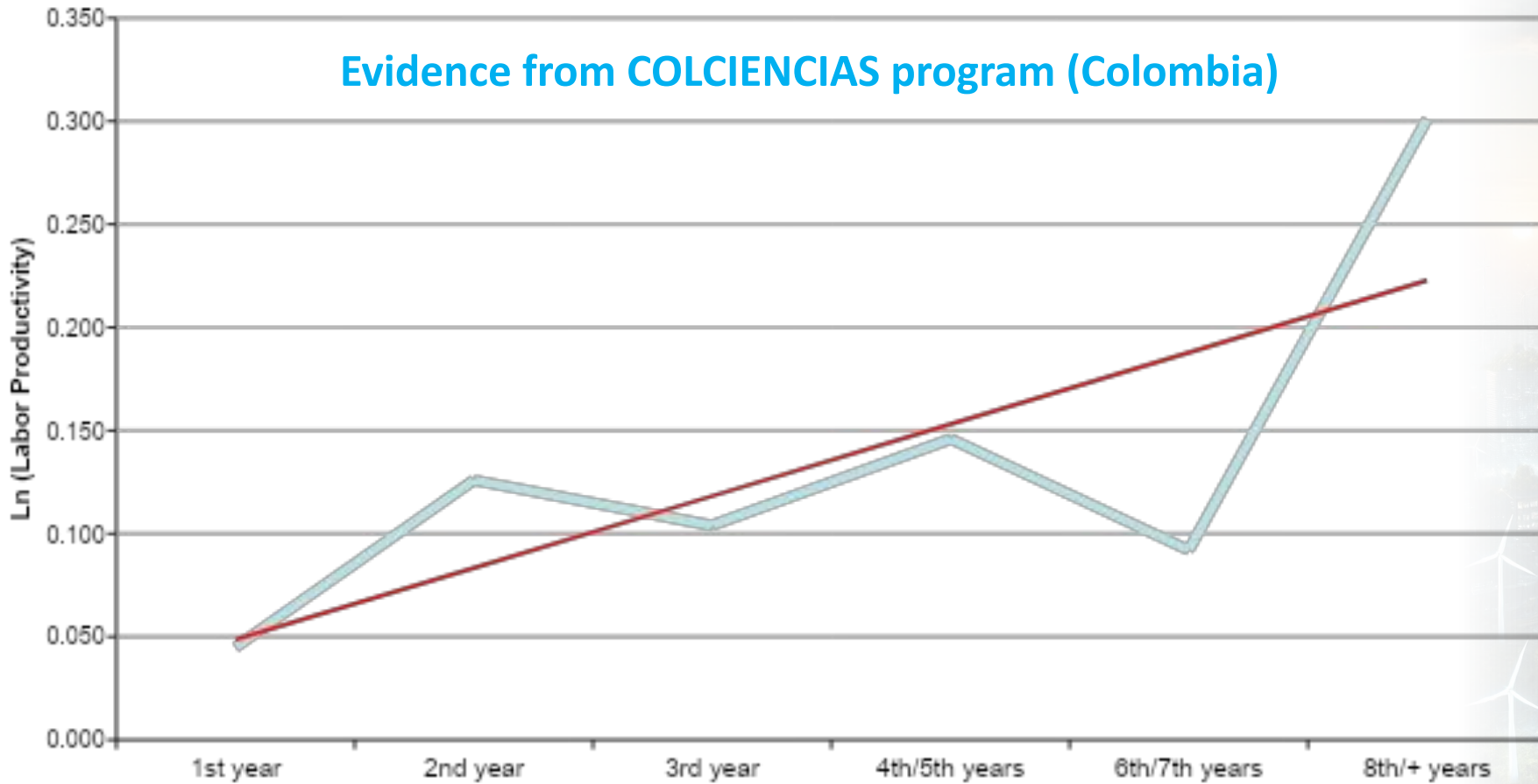


Figal Garone L. y Maffioli A., 2016, "Evaluación de impacto de políticas de innovación en América Latina y el Caribe: hacia una nueva frontera", en Navarro J.C. and Olivari J.(Eds.), *La política de innovación en América Latina y el Caribe: Nuevos Caminos*, Washington D.C.: Inter-American Development Bank





## Durable productivity effects of innovation grants



# One example that makes use of impact evaluations: ***Vietnam STI Policy Effectiveness Review*** by the World Bank

## ***Policy Effectiveness Reviews*** evaluate:

1. **The coherence of the STI policy mix** in addressing the key challenges to foster innovation and the needs of the enterprises.
2. The **quality of the design and implementation** of a sample of programs, in relation to the use of best practices (a **Functional review**)

## **In Vietnam**

- The analysis of the STI policy mix reveals **significant incoherencies** in the choice of policies instruments and in resource allocation, with likely small additionality of STI policies
- **very narrow in the allocation of resources** and highly concentrated in promoting R&D spillovers, which compromises its ability to tackle the wider set of challenges for enhancing innovation found in Vietnam

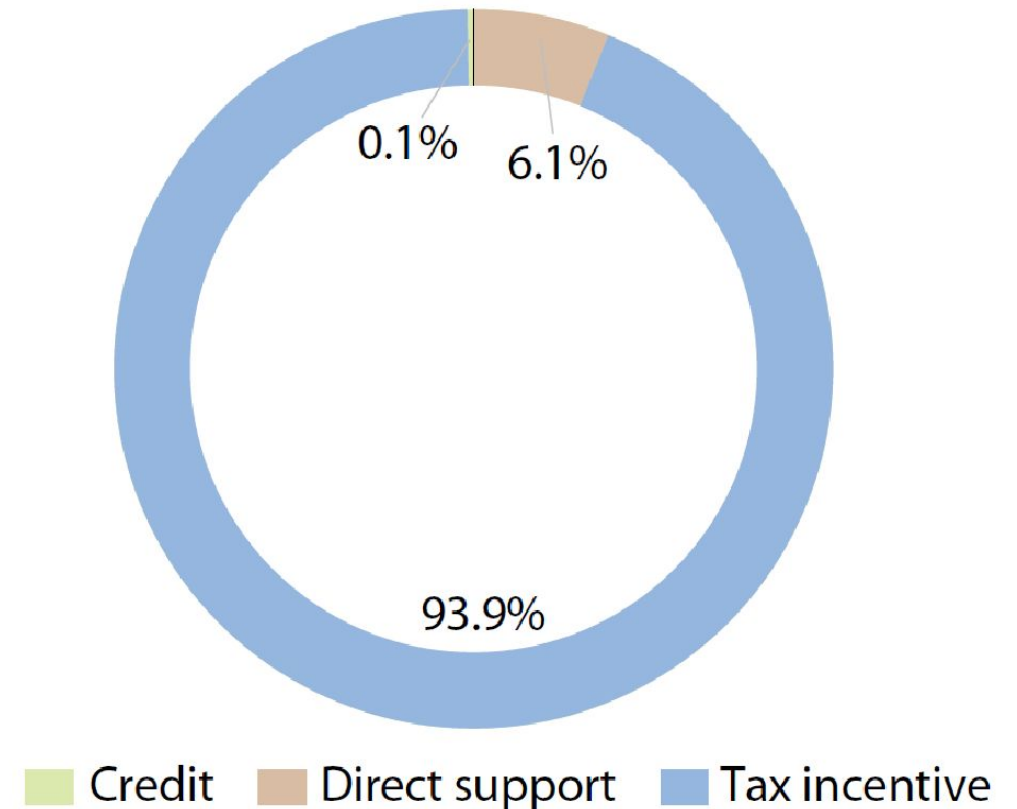


## Tax incentives presented a large share of costs in the STI policy mix in 2017

- High spending in **tax incentives for S&T**: 93.9% of all spending for STI programs, almost equal to tax foregone.
- The foregone tax revenue was associated to a small number of very large **MNEs: benefits remain highly concentrated**.
- **Limited success in developing linkages** with the domestic economy. FDI largely disconnected.
- High **geographical concentration** in Hanoi, and **high spending per project**.
- Necessary to assess if the knowledge spillovers from R&D tax incentives are indeed occurring; and whether they generate additionality.

### Spending distribution of STI programs by type in 2017

VND Million 25,843,328 (Current):  
Number of programs; n: 127



# How to participate in Mentimeter quiz?

## Option 1:

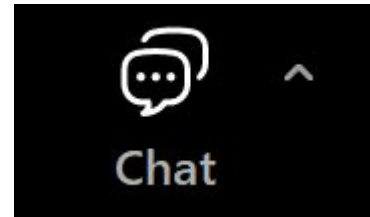
Scan the QR code



QR Code for Session 4

## Option 2:

Go to the chat on Zoom and click on the link provided



Please participate in Mentimeter quiz  
in Session 4 using this link  
[:https://www.menti.com/alye7rb8evsb](https://www.menti.com/alye7rb8evsb)



**Participation is required, participation is anonymous**



**unesco**  
Chair

***Thank you very much !!!!!***

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# Session 4: STI policy Monitoring and Evaluation

## Take Away Points Session 4

1. Current
2. XXX
3. XXX



Session 2:

## **Policy instruments design for STI and the SDGs**

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