

# Introduction to agriculture public expenditure analyses

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# Outline

1. **What are Agriculture Public Expenditure (AgPE) Analyses? Why are they necessary? and how are they conducted?**
2. **Framework and approaches to AgPE analyses**
3. **Types of agricultural public expenditure analyses**
  - ▶ Basic Agricultural Public Expenditure Reviews
  - ▶ Specialised country public expenditure analyses
  - ▶ Agricultural Public Expenditure Outcomes Links Analysis

# 1. Why AgPE analyses?

# Our premise...

**Adequate allocation and well-targeted** government expenditure should strengthen the potential of the agriculture sector in the Pacific to contribute to increased growth, reduced poverty/hardship, and shared prosperity across the region

# AgPE Space: Classification Of the Functions Of Government (COFOG) system...

## COFOG Definition

1. Crops
2. Livestock
3. Fisheries
4. Forestry
5. Natural resource management related to agriculture

## ...COFOG Plus

1. Water and sanitation
2. Feeder road
3. Social Infrastructure

# How to prioritize investments? lessons from the Africa AgPE experience

- ▶ Simply increasing resources is not enough
- ▶ Prioritizing and enhancing quality of agricultural investments are vital:
- ▶ Spending must also be efficient, well-targeted and supplemented by investments in non-agricultural sectors
- ▶ Based on empirical analyses in Africa, pro-poor AgPE priority areas include:
  - ▶ **Staples and livestock**: large domestic demand and share of AgGDP
  - ▶ **Irrigation**: During the Green Revolution, Asia irrigated an average of 30-50% of total arable land. Today, Africa irrigates only 3-4%
  - ▶ **Rural Infrastructure** has high poverty reduction effects per unit of investment and links farmers to inputs and markets. Only 34% of rural Africans live within 2 km of an all-season road, compared to 65% in other developing regions
  - ▶ **Agricultural research and development (R&D)**: every 1% increase in yields from agricultural R&D can lift 2 million Africans out of poverty

**What are the priorities for the Pacific countries? Can AgPE analyses help?**

# GDP and AgGDP Growth in Selected Pacific Countries 1990-00 vs 2000-13

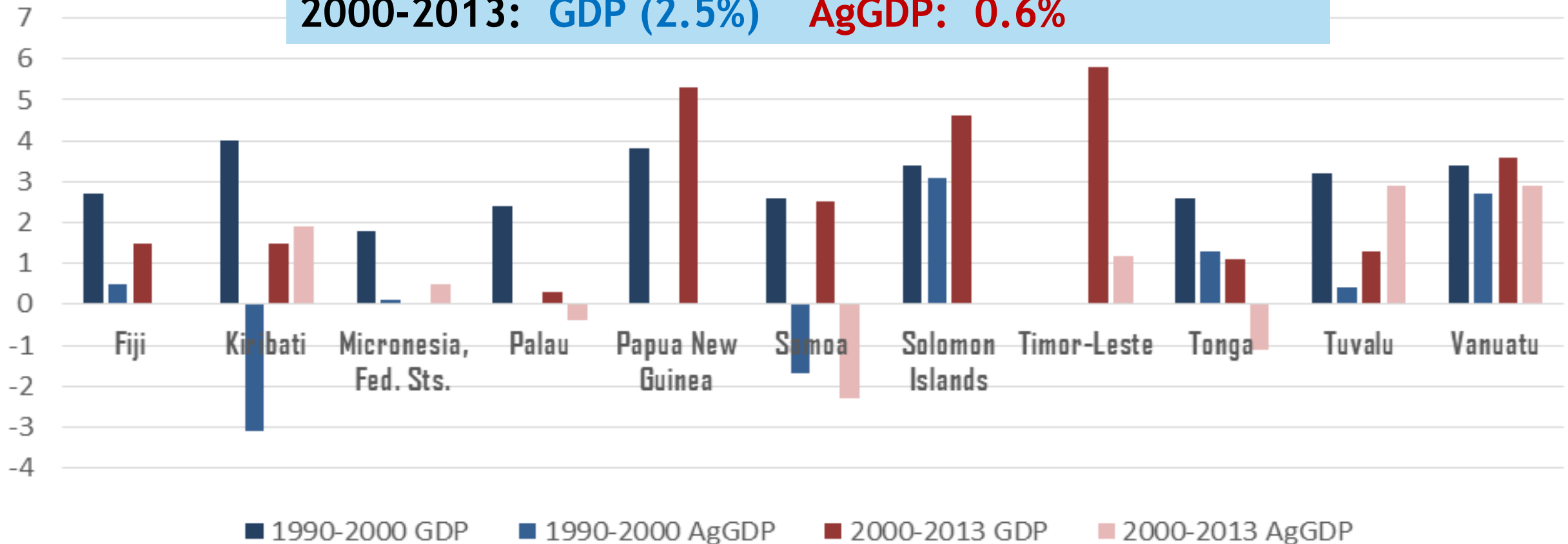
Average annual growth:

1990-2000: GDP (3.0%)

AgGDP: 0.4%

2000-2013: GDP (2.5%)

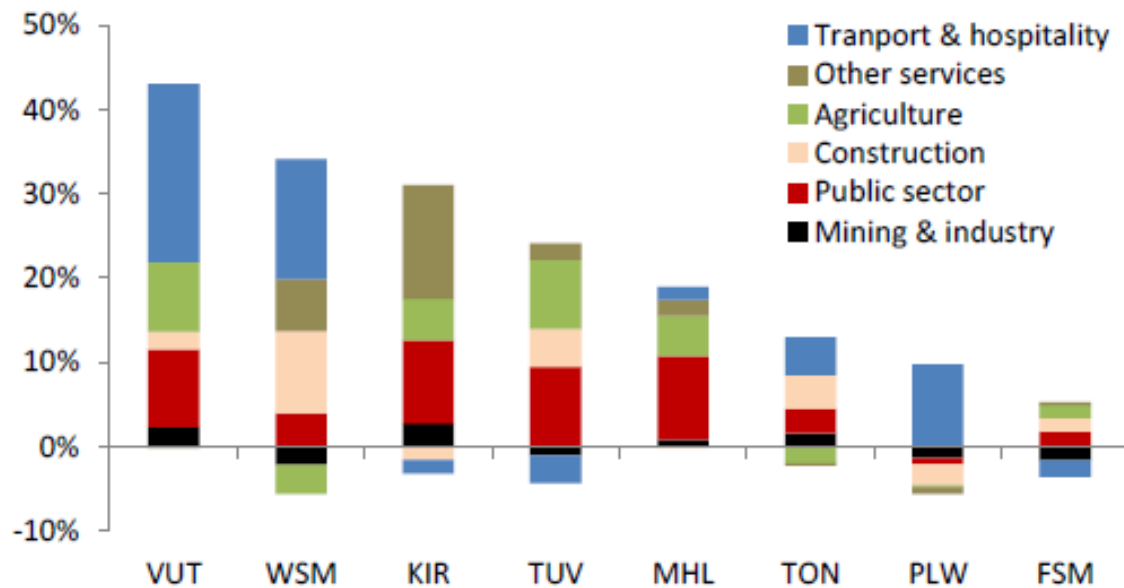
AgGDP: 0.6%



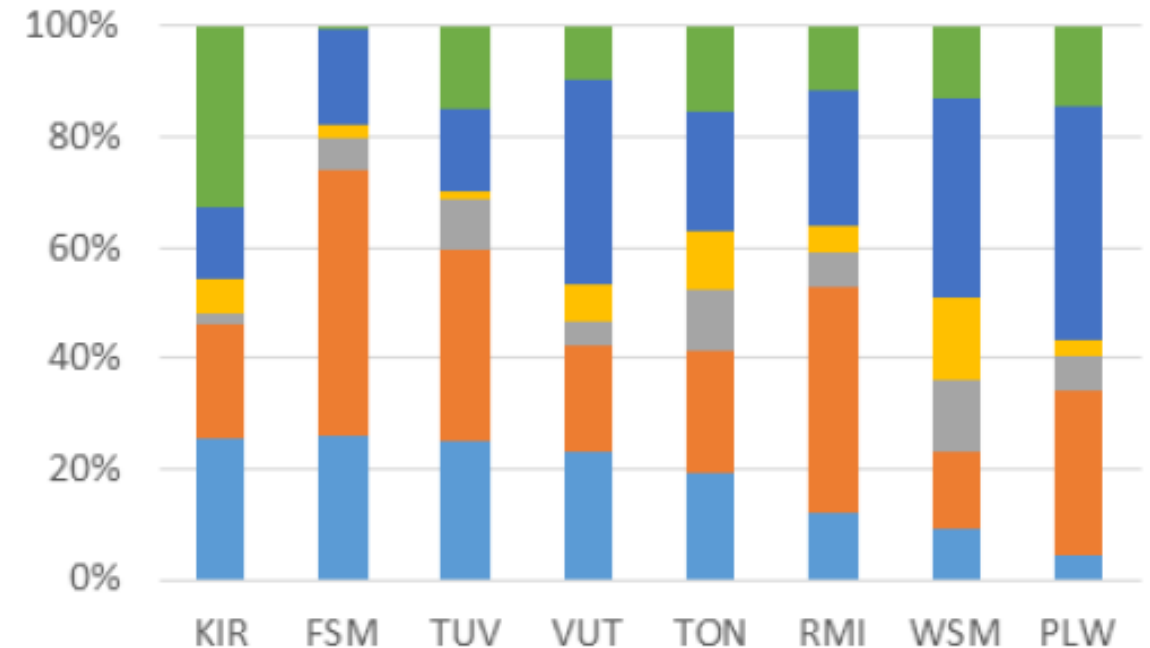
# Sectoral Composition of GDP of Sector Breakdown of Growth in the Smallest PIC

FIGURE 9 SECTOR BREAKDOWN OF ECONOMIC GROWTH

FIGURE 10 SECTORAL COMPOSITION OF GDP



Value added growth in constant local currency prices over 10 years



Sectors as a proportion of Gross Domestic Product, avg. latest 3



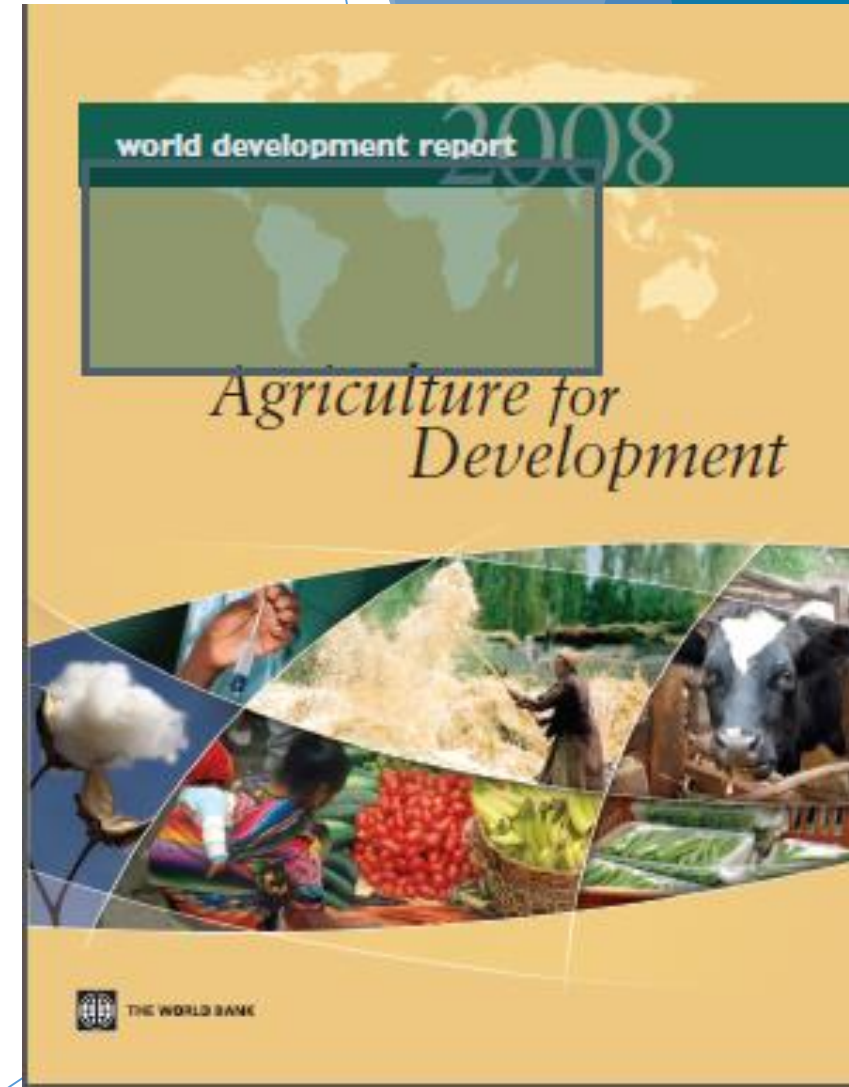
# Heterogeneous agricultural profile across the Pacific... *the WDR 2008 taxonomy*

	Total Population (million)	Rural share of total pop.	Rural pop growth (annual %)	GDP per capita (current US\$)	Agriculture value added (% of GDP)	Real growth, agriculture value added
<i>Period</i>	<i>2013</i>	<i>2013</i>	<i>2013</i>	<i>2013</i>	<i>2009-13</i>	<i>2004-2013</i>
<b><i>Agriculture-based</i></b>						
PNG (2)	7.321	87	2.1	2,088	35.9	3%
Timor-Leste (2)	1.178	69	1.6	1,105	18.6	1%
Solomon Islands (2)	0.561	79	1.5	1,954	38.9	3%
Kiribati (2)	0.102	56	1.3	1,651	25.6	2%
<b><i>Pre-transition</i></b>						
FSM (2)	0.104	78	0.1	3,054	27.2	1%
Vanuatu (2)	0.253	74	1.8	3,277	27.2	3%
Tonga (1)	0.105	76	0.3	4,427	19.0	-1%
Samoa (2)	0.190	81	1.0	4,212	11.9	--2%
<b><i>Urbanizing</i></b>						
Tuvalu (1)	0.010	42	-2.2	3,880	25	3%
Fiji (1)	0.881	47	-0.1	4,375	12	1%
RMI (1)	0.053	28	-0.8	3,627	..	..
<b><i>Developed</i></b>						
Palau (1)	0.021	14	-4.3	11,810	5.2	0%
Pacific island small states	2.3*	63	0.84	3,513	13.7	5%
Small states	29.5	54	0.74	5,881	5.3	6%
Low income	84.9	70	1.57	742	27.0	10%
Middle income	4967.9	50	-0.12	4,817	10.0	12%

Source: 2015 World Development Indicators

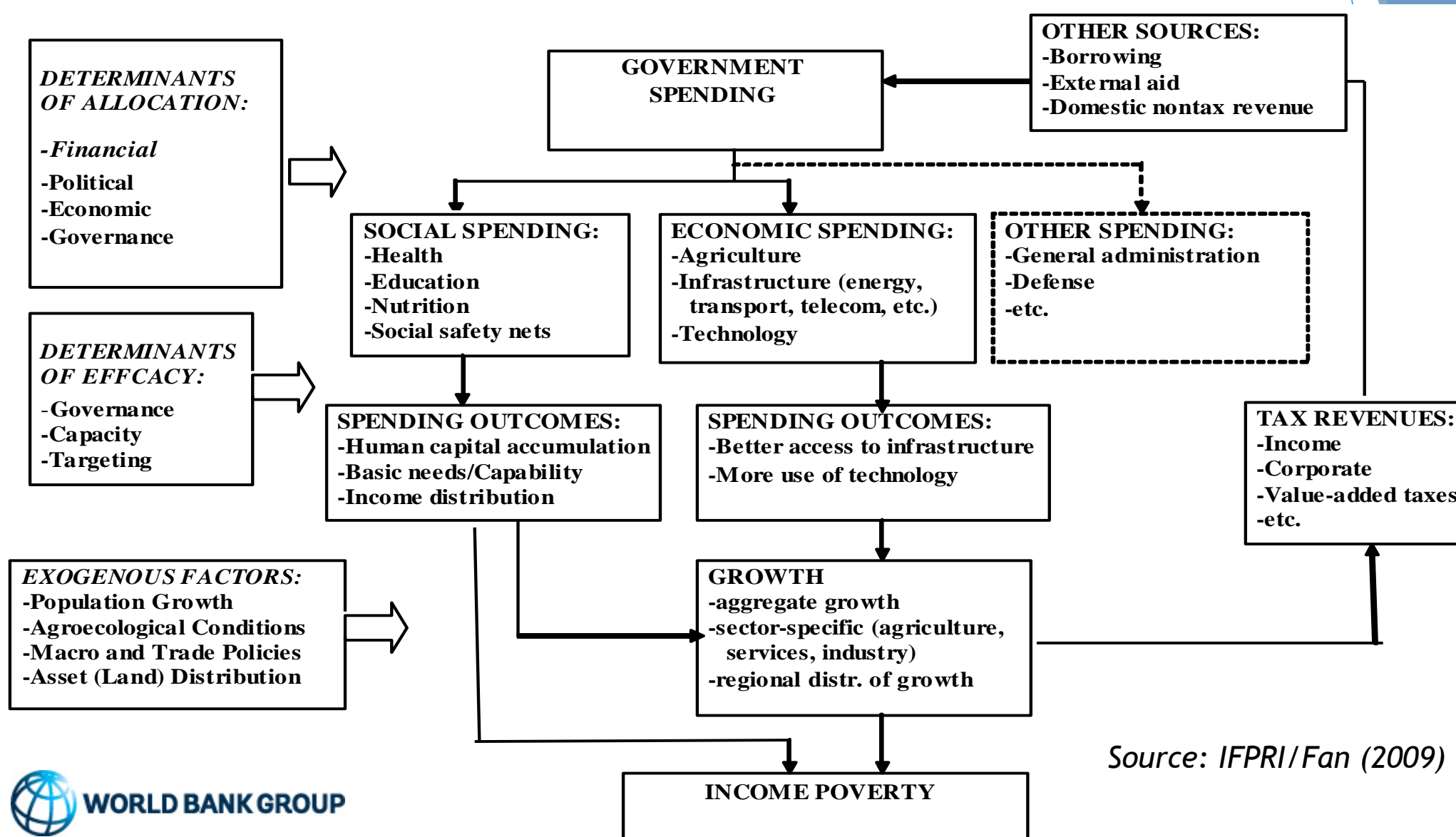
# The importance of agriculture varies across Pacific countries based on WDR 2008...

- ▶ **Agriculture based countries** : Lower per capita GDP, large rural population, relatively large AgGDP share
  - ▶ *PNG, Solomon Islands, Timor Leste, Kiribati*
- ▶ **Pre-transition countries**: Agriculture-based with relatively larger per capita GDP
  - ▶ *FSM, Vanuatu, Samoa, Tonga*
- ▶ **Urbanizing**: Larger p.c. GDP, smaller share of rural pop (less than 50%), relatively small AgGDP share
  - ▶ *Tuvalu, Fiji, Marshall Islands*
- ▶ **Developed**: Lower per capita GDP, large rural population, relatively large AgGDP share
  - ▶ *Palau*



## **2. Framework for AgPE analyses**

# Conceptual Framework: Public Spending and Macro& Sectoral Impact

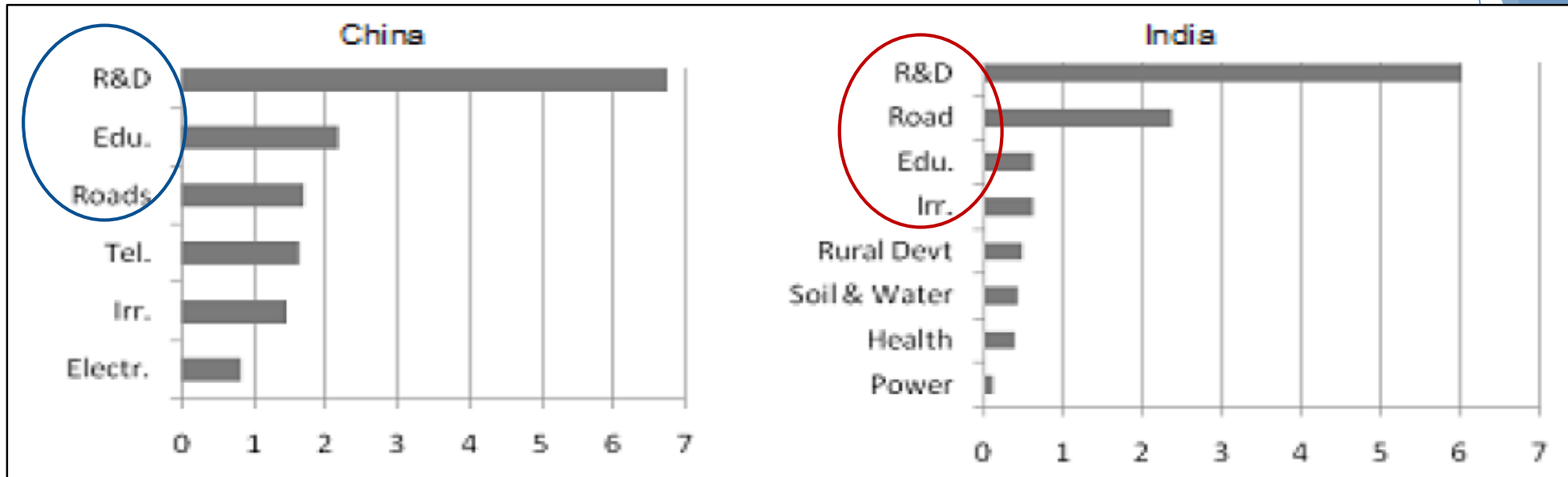


Source: IFPRI/Fan (2009)

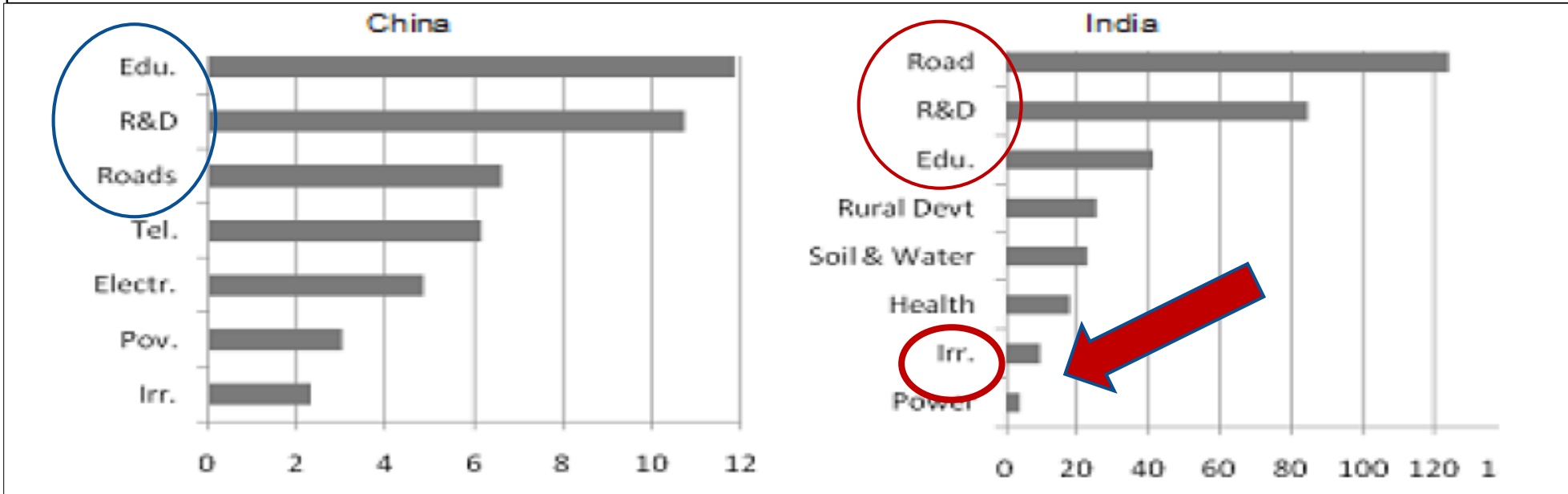
# The two rationales for public investments in/for agriculture

- ▶ **Market failures:** public investments can contribute to increasing the overall efficiency of the economy or the sector by addressing market failures; and
  - ▶ Public versus vs private goods  
(non-rival/rivalrous; non-excludable/excludable)
- ▶ **Poverty/hardship and inequality:** public investments mitigate levels of inequality and poverty that society deems undesirable.
  - ▶ Poverty/hardship-targeting goods and services  
(public/private)

# Policy Goals Matter: Growth vs Poverty in China and India



Impact of public spending on growth



Impact of public spending on poverty

# Targeting: High vs Low Potential Areas?

## Environmental Goods vs Bads?

## Social Goods vs Bads?

- ▶ Outer Island programs: e.g. of **freight subsidies**- cocoa/coffee in PNG; AMA freight subsidies? Tuvalu outer islands food security subsidies via Tuvalu Cooperative Societies?
- ▶ Allocations to reverse **adverse environmental impacts**? Payments for environmental and **ecosystem services**?
- ▶ Allocations to promote **healthier nutritional behaviours**? (e.g. see FAO recent study on this)



# Other considerations: Crowding in or Out?

- ▶ **Crowding in:** public investments can increase the profitability of private investment
  - ▶ Investments in roads → reduction in transportation cost → reduction in the cost of inputs and of marketed outputs → increased profits
  - ▶ Investments in R&D → increase yields and/or product quality → increased profits
- ▶ **Crowding out:** public investments can reduce the profitability of private investment
  - ▶ Public investments → increased public borrowings → increased demand for capital → Increased interest rates → reduced private sector borrowings → less output → less profit
  - ▶ Public investments in public enterprises/state own enterprises → unfair competition b/w public and private sector → reduced private sector activity → less profit

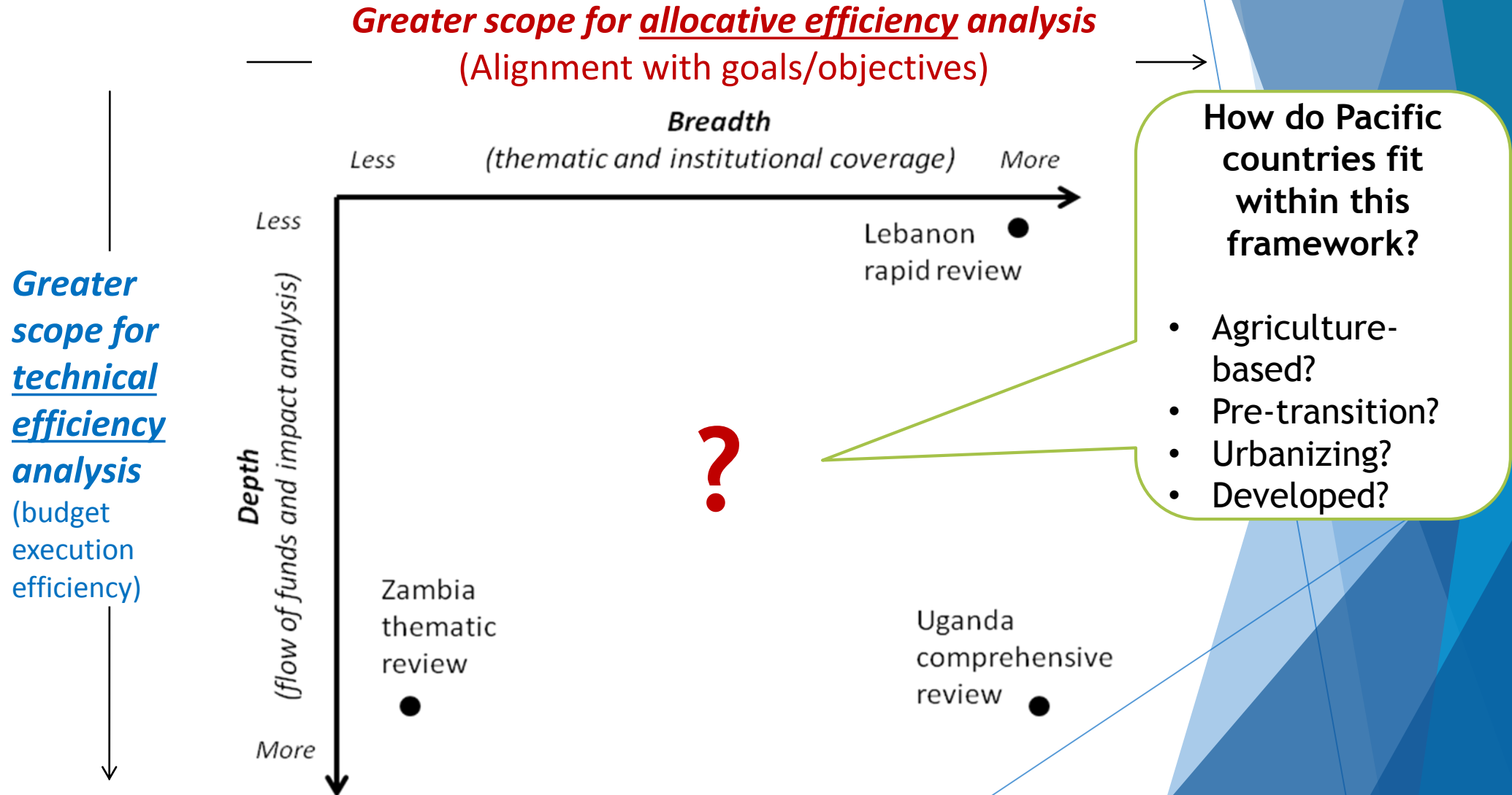


# AgPERs: Types of Indicators

- ▶ **Input indicators**: what is the overall level of effort invested?
  - ❑ Strategy processes, policies, institutions, investments, etc.
- ▶ **Output indicators**: what is the level of provision, coverage, and utilization of goods and services?
  - ❑ Extent of provision of goods and services (e.g. ag services, provision of technologies; access to infrastructure).
- ▶ **Outcome indicators**: what is the effect of outputs on outcomes that contribute toward goals?
  - ❑ Yields, production, wages, prices, trade, etc.
- ▶ **Impact indicators**: what is the ultimate effect on goals?
  - ❑ Growth, income, poverty, food security, hunger, etc.
- ▶ **Conditioning indicators**: how confident are we that any observed changes are due to the intervention(s)?
  - ❑ Total budget resources, climate, natural disasters, wars, etc.

# 3. Types of AgPE analyses

# AgPE Analytical Spectrum



# Types of AgPE Analyses—breadth & depth

- ▶ 3 Types: (and their variants)
  - ▶ **Comprehensive**: extensive breadth and depth; detailed self-standing sector-wide Ag. PER; undertaken periodically (every 4-5 years), with both diagnostic and forward looking strategies; could require 4-10 months
  - ▶ **Rapid**: extensive breadth, but limited depth; quick review to deepen policy dialogue, support annual planning and budgetary process, frame strategic plans, input for multi-sector PER; could take 1-3 months
  - ▶ **Thematic**: limited breadth, but extensive depth; carried out on a specific strategic issue, subsector or program; could require 4 to 12 months
- ▶ Choice of type will depend on need, time-frame and resources available

# Typical Products of AgPE Analyses

- ▶ Basic Agricultural Public Expenditure Reviews:
  - Diagnostic reviews
  
- ▶ Specialized Country Agricultural Public Expenditure Analyses  
(after completing a basic diagnostic AgPE):
  - Expenditure Component Impact Evaluation;
  - Public Expenditure Tracking Surveys (PETS);
  - Medium-Term Expenditure Framework (MTEF) for Ministries of Agriculture.

# Summary

- ▶ AgPE Analyses: One tool among a panoply of analytical tools for agriculture policy, investments and institutional performance; AgPE analyses will complement other equally important sector analyses;
- ▶ AgPE analyses covers understanding of the allocative and technical efficiencies of public investments in agriculture;
- ▶ The extent possible analyses will help link expenditure inputs to a variety of outputs, outcomes and impact
- ▶ The choice of the type of AgPE analysis will depends on the objectives of the analysis, data availability, and timeframe for completing the analysis;

# Key Resources/ References & Acknowledgment

- ❑ [www.worldbank.org/afr/agperprogram](http://www.worldbank.org/afr/agperprogram)
- ❑ [www.worldbank.org/apea](http://www.worldbank.org/apea)
- ❑ [www.fao.org/mafap](http://www.fao.org/mafap)

# Thank you