

**Value Chain Knowledge Sharing for Action**  
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# Macro-economic drivers of VC performances and policy implications: how VCA4D assess it?

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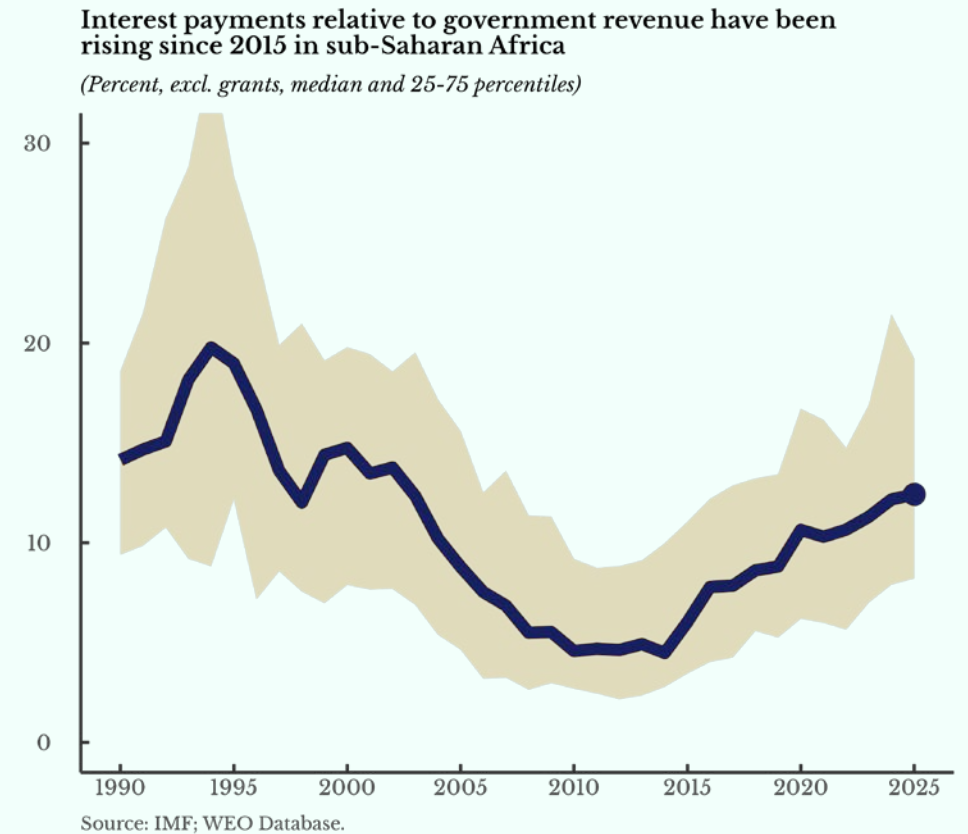


for



# Macro-economic scale still counts

- From the 90's the quest for a neutral macro-economic setting
  - Trade liberalization (WTO)
  - Exchange rate flexibility
  - Reduction of public deficit
- But
  - Financial crisis 2008
  - Covid 2020
  - Increasing fragmentation of global trade...
- Renewed concerns for debt increase and macro-economic adjustments.



# Value chains do not operate in a vacuum

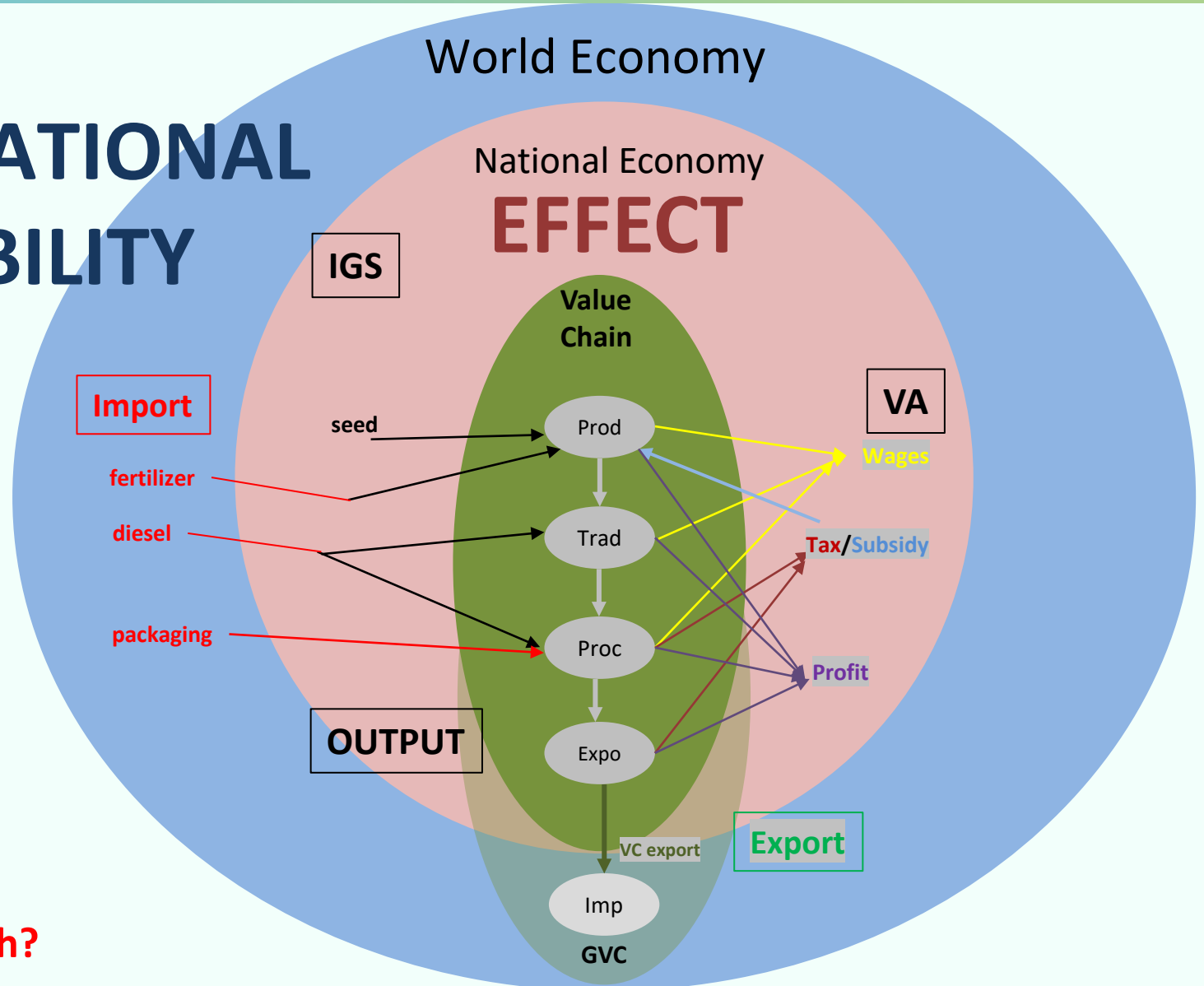
## INTERNATIONAL VIABILITY

$$VA = OUTPUT - IGS$$

$$VA = Wage + Tax-Subsidy + Profit$$

Answering to VCA4D analytical framework question 1:

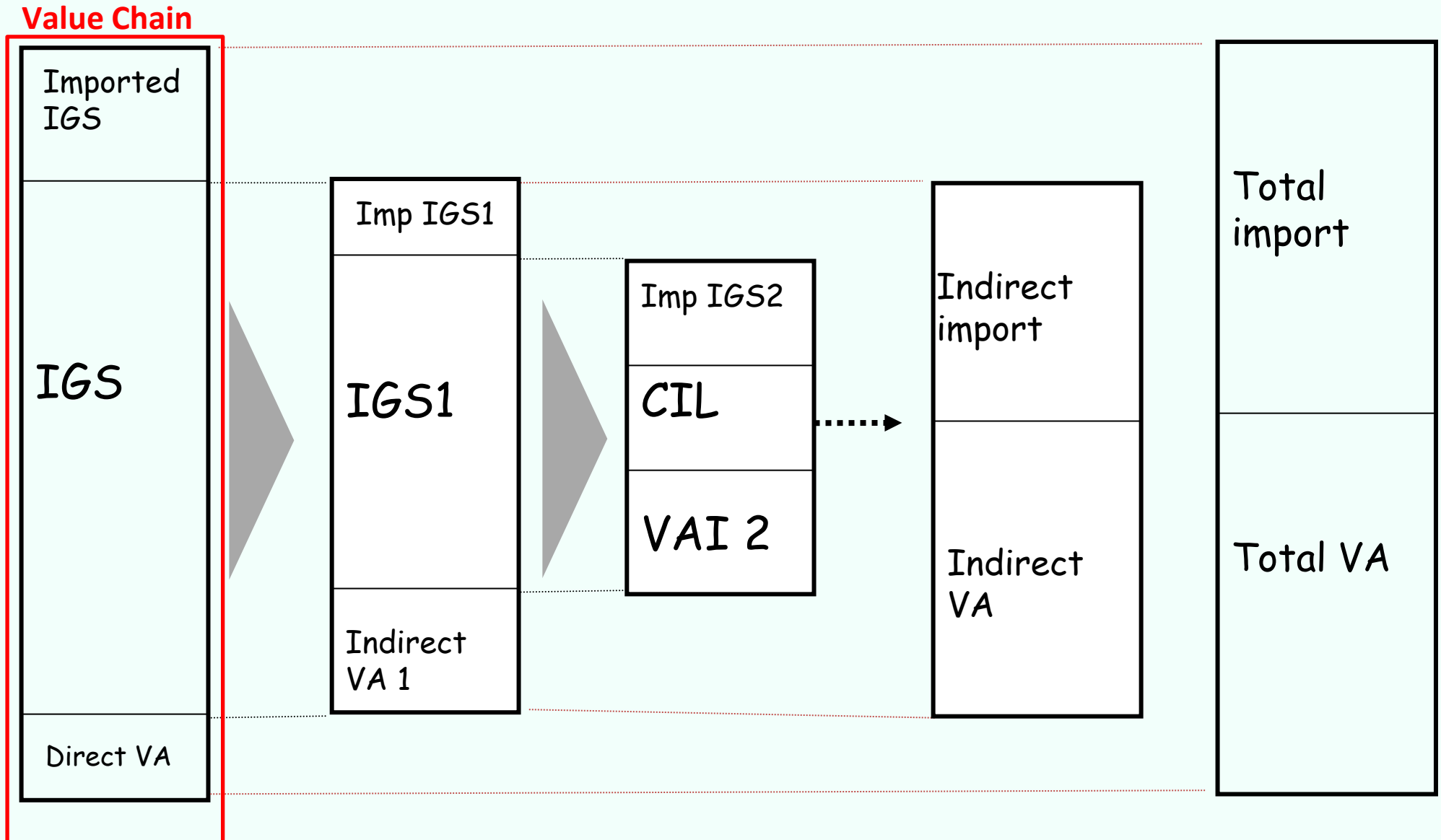
**How the VC contributes to economic growth?**



# Effects method theoretical background

- National Account System
  - Wassily Leontief, 1936, Quantitative Input and Output Relations in the Economic System of the United States
- Project economic evaluation
  - Chervel M; Le Gall M; 1976. Manuel d'évaluation économique des projets : la méthode des effets Ministère de la coopération; Paris
  - Fabre Pierre. 1997. Manuel analyse financière et économique des projets de développement. Bruxelles : Commission européenne, 380 p

# Disaggregating IGS into Imports and VA



# Milk VC effect in Burundi

	Direct Effect	Indirect Effect	Total Effect
Imports	717	9 175	9 892
IGS Non-disaggrated	0	10 600	10 600
Value added			
Wages	13 328	2 019	15 347
Taxes	1 693	0	
Subsidy	3 418	0	
Net tranfer	-1 724	2 877	1 152
Finacial	58	0	58
Rent	261	0	261
Depreciation	24 888	1 296	26 184
Ne Operating Profit	59 614	23 651	83 265
Value added non-disaggregated	0	139	139
Total VA	96 426	29 982	126 408

## Indicators

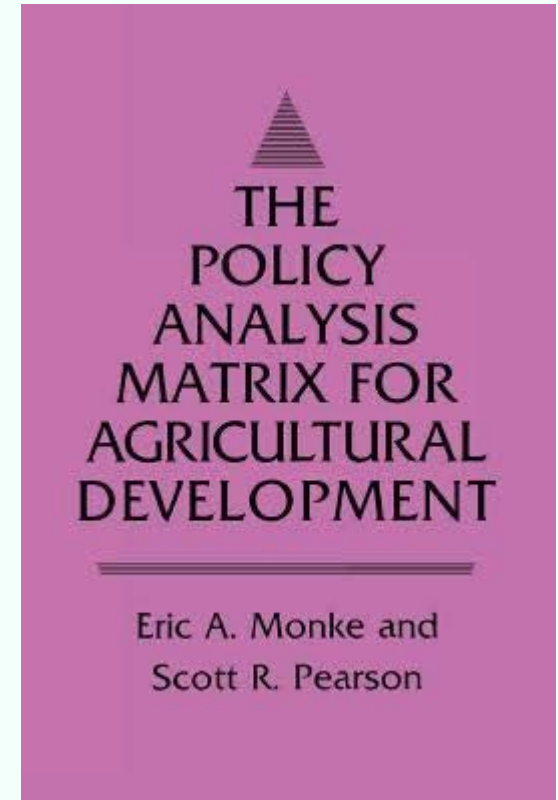
VC Total Value added / GDP	<b>2.00%</b>
CV Primary Production VA/ Agricultural GDP	6.00%
CV Primary Production VA/Livestock GDP	52%
Value chain Trade Balance	-9 892
VC Imports / National Imports	0.50%
VC Trade Balance/National Trade Balance	-0.50%
VC Net Public Transfert/ State Budget	0.07%
VC Total Wages/ National Total Wages	<b>1.00%</b>
CV Net Operating Profit/ National Net Operating Profit	<b>2.00%</b>
Rate of integration	<b>86.10%</b>
Driving effect ratio	<b>0.31</b>

# Arabica and Robusta VCs effect in Tanzania

Indicator	Robusta VC	Arabica VC	National Coffee VC
Total VC Production (MTZS)	585,630	529,997	1,115,627
Total Direct VA (MTZS)	478,897	409,287	888,184
Total Indirect VA (MTZS)	77,948	<b>-52,083</b>	25,865
Total VA (MTZS)	556,000	357,203	913,203
Total VA in percentage of National GDP (%)	0.3%	0.2%	0.50%
Total VA in percentage of Agriculture GDP (%)	5.10%	3.20%	8.30%
Driving Effect Ratio (Indirect VA/Direct VA)	0.16	-0.13	0.04
Rate of Integration (Total VA/VC Production) (%)	<b>95%</b>	67%	<b>81%</b>
Total Taxes (MTZS)	22,939	18,768	41,707
Total Subsidies (MTZS)	73	<b>69,789</b>	69,862
Public Funds Balance (MTZS)	22,866	<b>-51,021</b>	-28,155

# International Viability theoretical background

- Based on neo-classical economic concepts
- Market equal efficiency
- Extensively used during the 80s and 90s
  - E.A. Monke and S.R Pearson, 1989, The Policy Analysis Matrix for Agricultural Developement

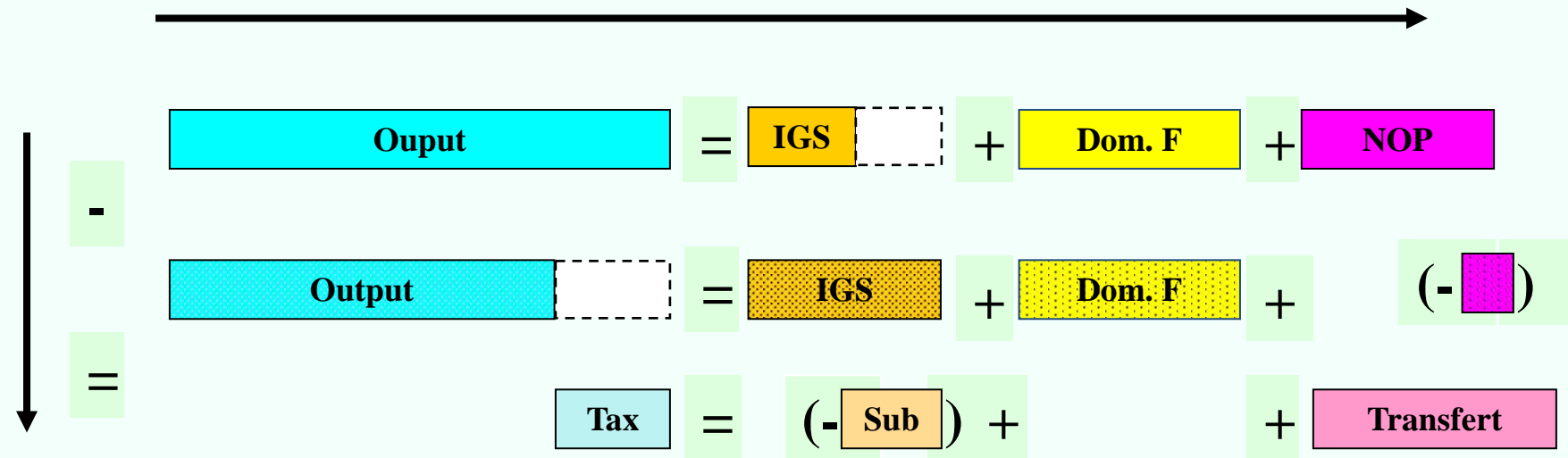


# The Policy Analysis Matrix

Output and cost at market price

Output and cost at parity price

Divergences



# The Policy Analysis Matrix

	Output	IGS	Domes Fac.	Profit
Market Price	A	B	C	D
Parity Price	E	F	G	H
Divergence	I	J	K	L

Nominal Protection Coefficient =  $\frac{A}{E} > 1$

Domestic Resource Cost =  $\frac{G}{E - F} > 1$

# International Viability of VC analysed in VCA4D

## Burundi Milk VC

Indicators	Ratios
Domestic Ressource Cost	0.68
Nominal Protection Coefficient	1.37
Effective Protection Coefficient	1.57
Equivalent Subsidy to producer	36%

## Tanzania Coffee

Indicator	Robusta VC	Arabica VC	National Coffee VC
<b>Profit at market price</b>	438802	368607	807409
<b>Profit at parity price</b>	471261	316522	787783
<b>Divergence</b>	<b>-32458</b>	<b>52086</b>	<b>19626</b>
<b>Nominal Protection Coefficient (NPC)</b>	0.93	1.16	1.02
<b>Domestic Resource Cost Ratio (DRC)</b>	0.04	0.06	0.05

## Concluding remarks

- VC issues focus on governance, innovation and equity but macro-economic drivers should not be ignored.
- Macro-economic setting shape the area of viability for the VC
- Effect and Parity Price methods have limits and advantages.
  - Static analysis - do not model price elasticity and changes in actors behaviour.
  - But allow to build a bridge between VC scale and their macro-environment.
  - No “black box” effect associated with more sophisticated tool and so easier to integrate into the policy dialogue