

# **Econ Diversification and Macro Policies: Re-Examining the Missing Link in Africa's Industrialization Strategies**

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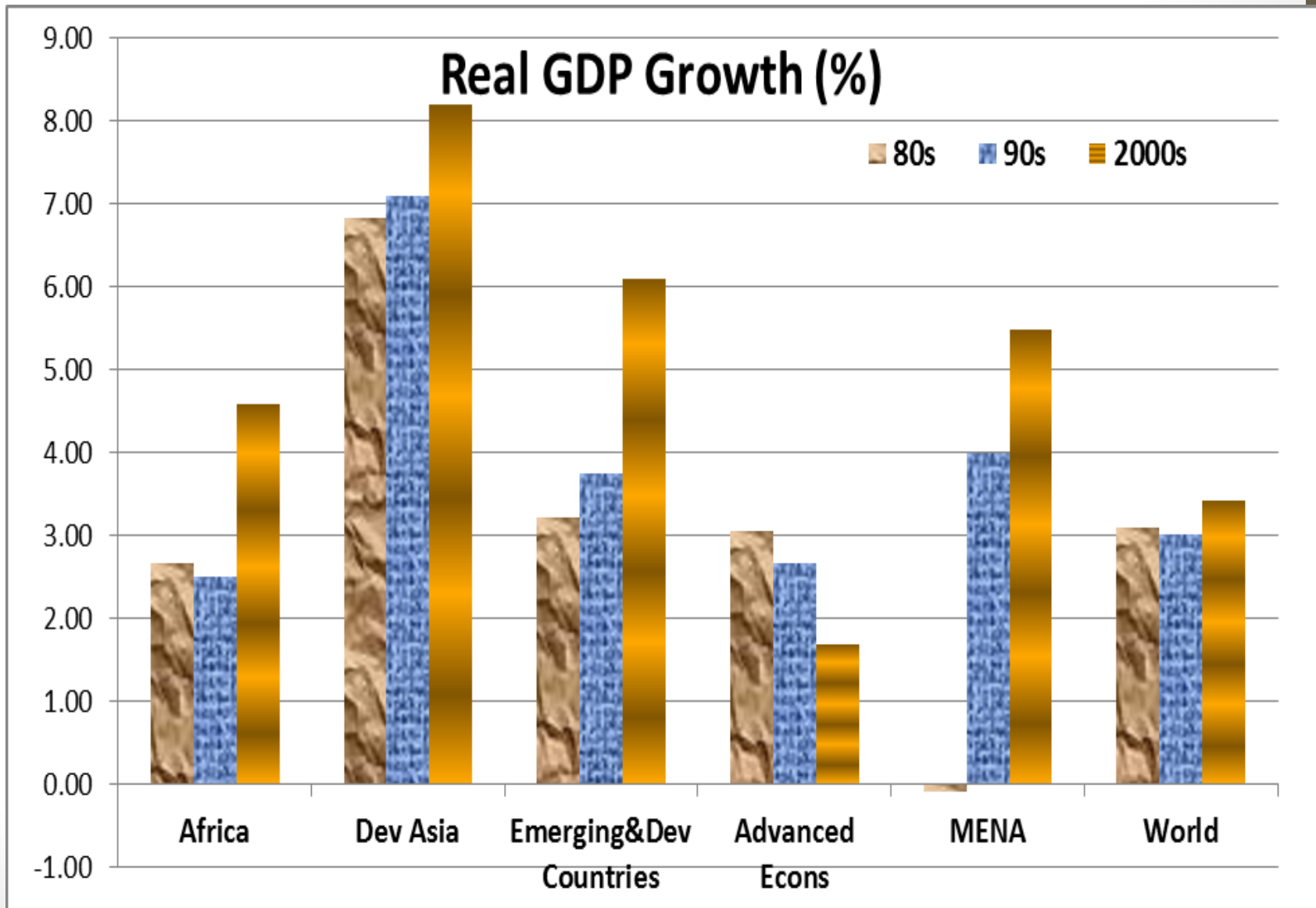
# Motivation

- Assumption of Policies – stabilize external balance, then remove govt distortions to “get the prices right” and reallocate factors towards high productivity industries
- But many countries have enjoyed unprecedented improvements in external balances alongside continued decrease in industrial production
  - And this is not minor
- Diversification can enhance stability; but improved macroeconomic stability in Africa has come with the opposite of diversified structure
- Is it possible that macro policies have further roles to play in supporting diversification?
- Are reforms in Africa insufficient in spinning off needed diversification? Or should macro policies remain neutral and leave the job of diversification to structural reforms?
- Are macro stability tools incapable of dealing with concentration of production or have they been merely poorly structured?
- Are there other responsible factors; are they too deep for superficial macro policies? In what sense and for what reasons?

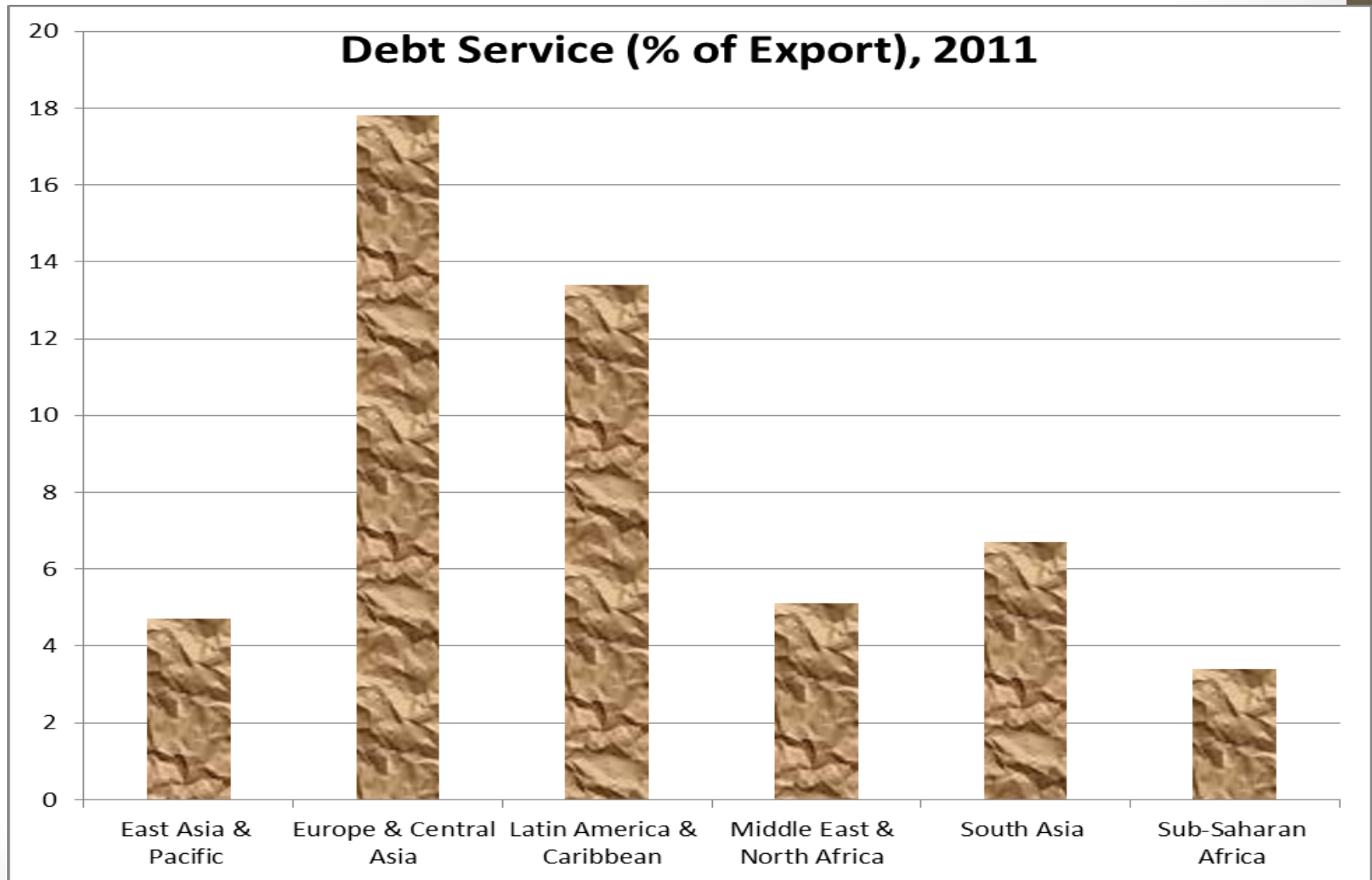
# Motivation Cont'd

1. Evidence of concurrence of improved macro balances & deteriorating diversification
2. Estimates from panel dataset of 21 countries on impact of selected macro instruments
3. Country case studies indicating policy accentuation – not amelioration – of non-diversification
4. Theoretical insights from structuralism, post-structuralism and Nurksism
  1. Macroeconomic policies do have a role in diversification
  2. But this is through impact on relative prices
  3. 'Getting prices right' is necessary, but not sufficient
5. Our model for thinking about macro policies in an encompassing way
  - **Working hypothesis**
    - Macro policies can be neutral to diversification, with little or no role beyond stabilization
    - Channel from stabilization to diversification is neither direct nor assured
    - This porous r/ship accounts for Africa's lackluster performance despite extended reforms
    - Both diversification and increased industrialization are possible for African countries

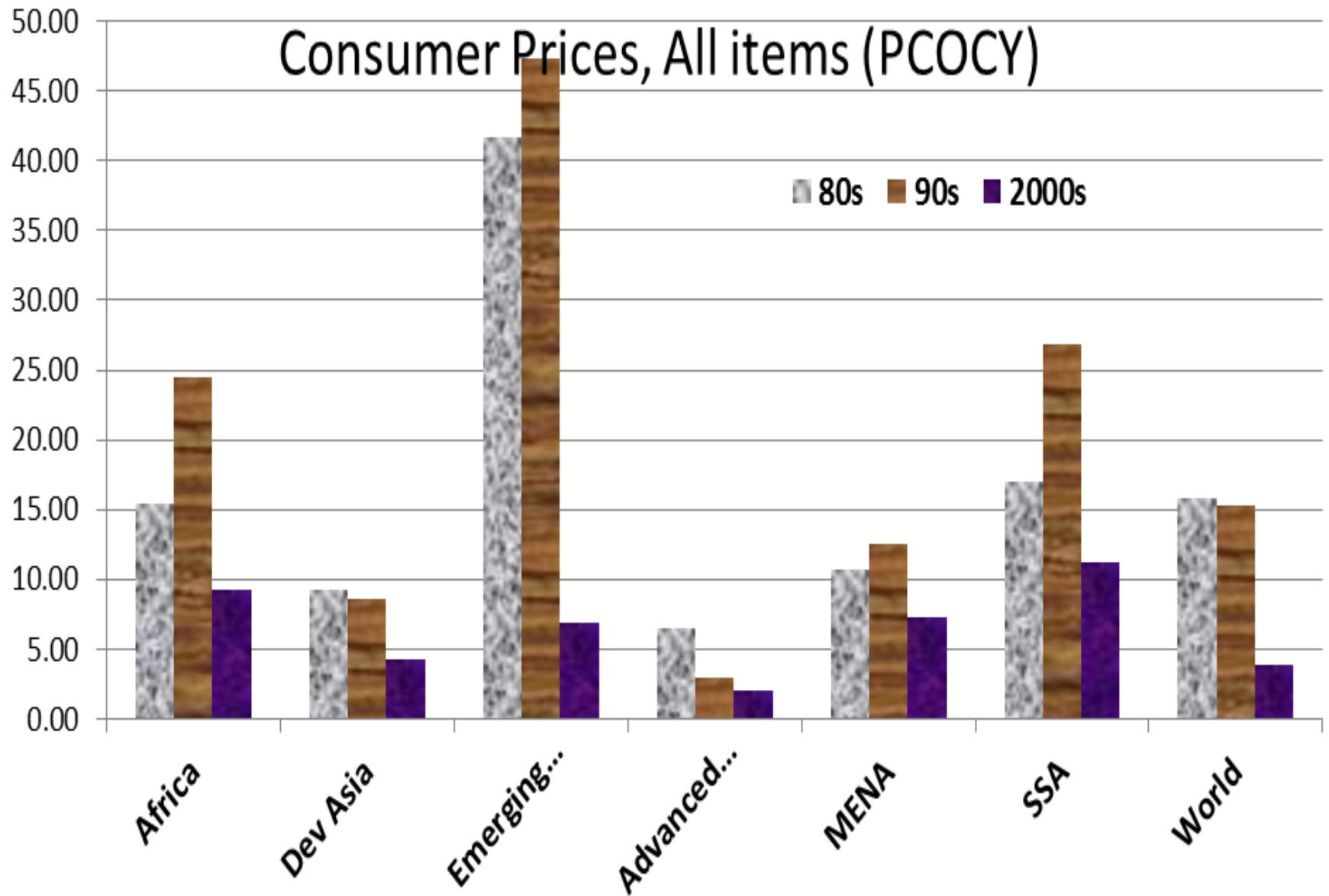
# Africa's Stability – GDP Growth



# Africa's Stability - Debt Service to Export

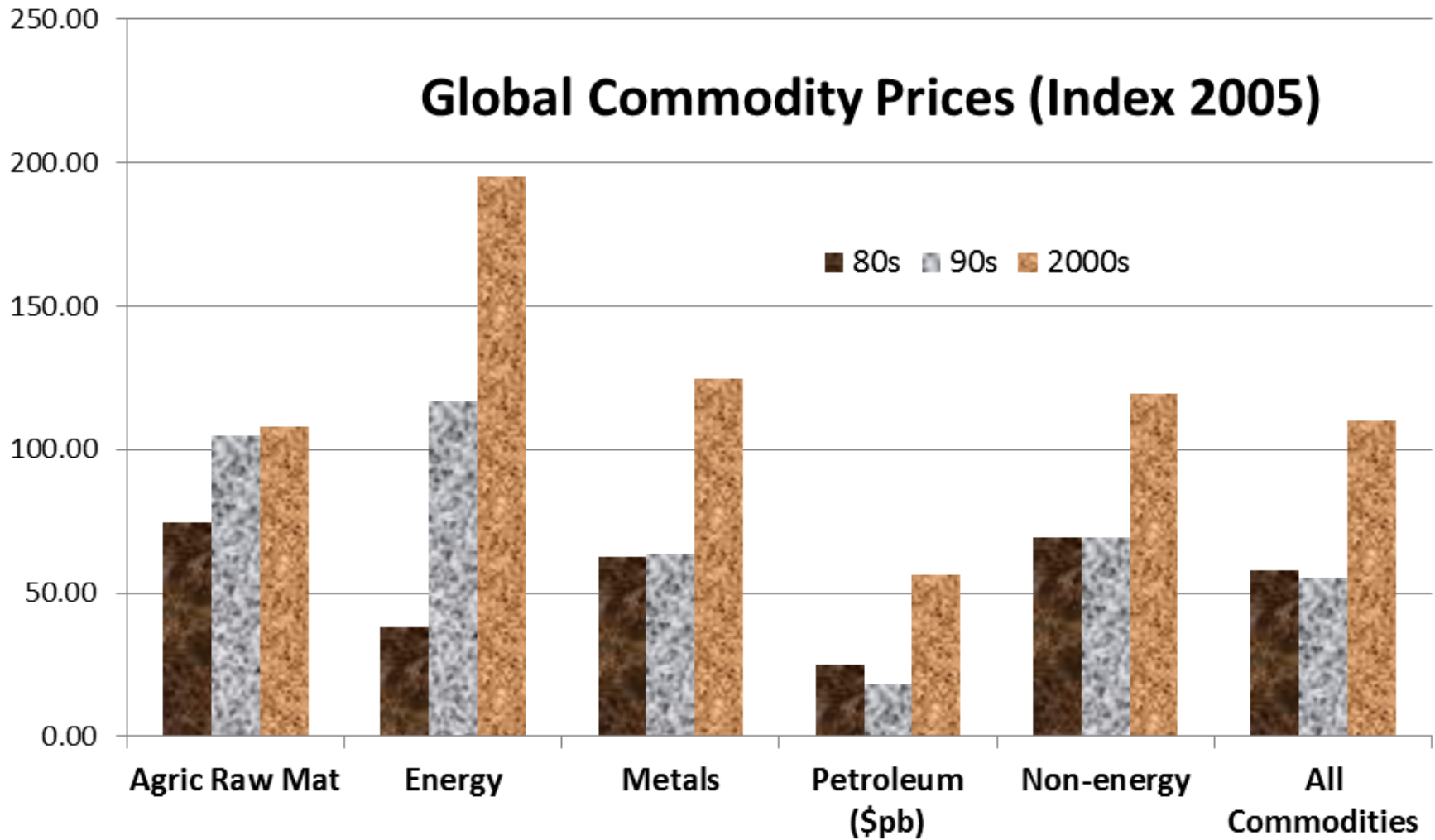


# Consumer Prices, All items (PCOCY)

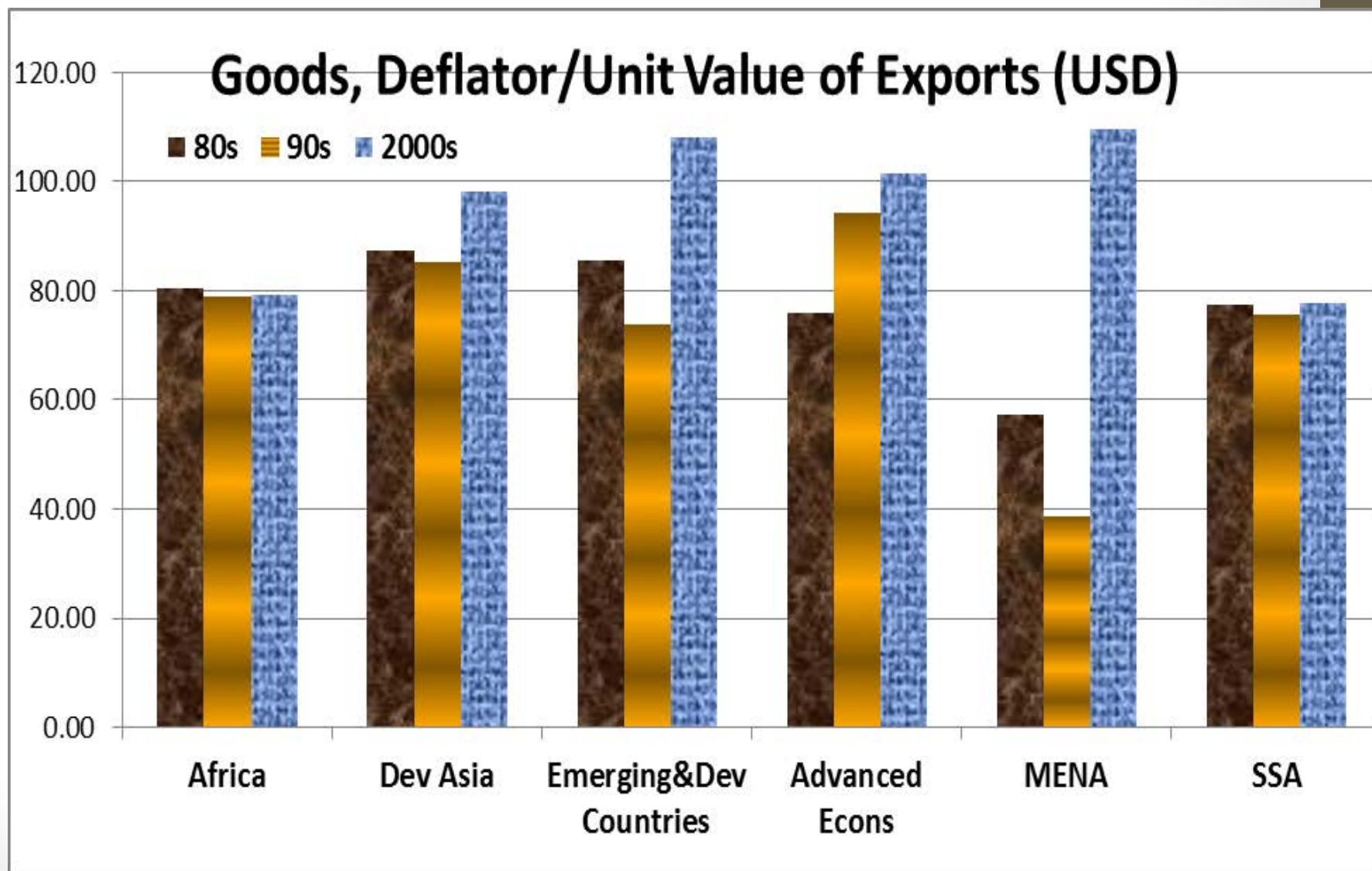


# ...And Benefitted from High Commodity Prices

## Global Commodity Prices (Index 2005)



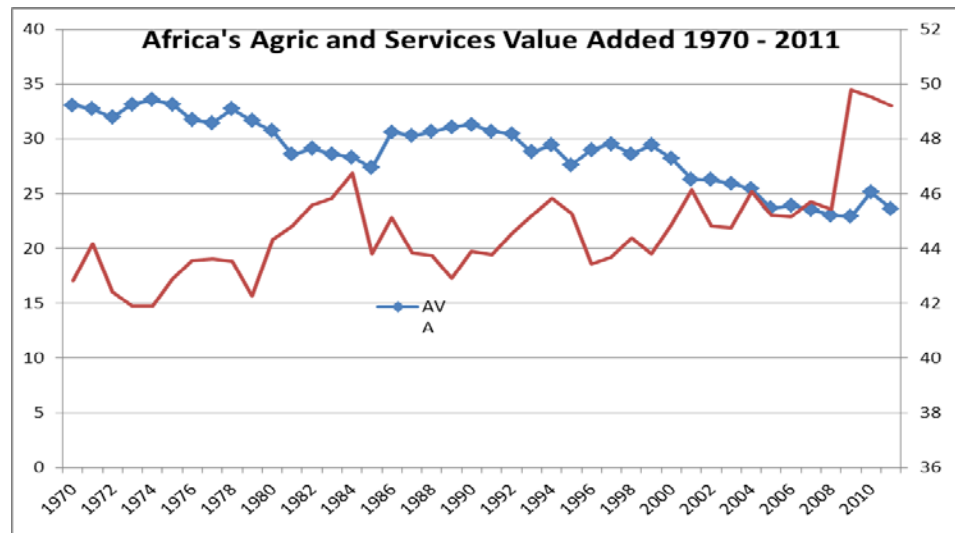
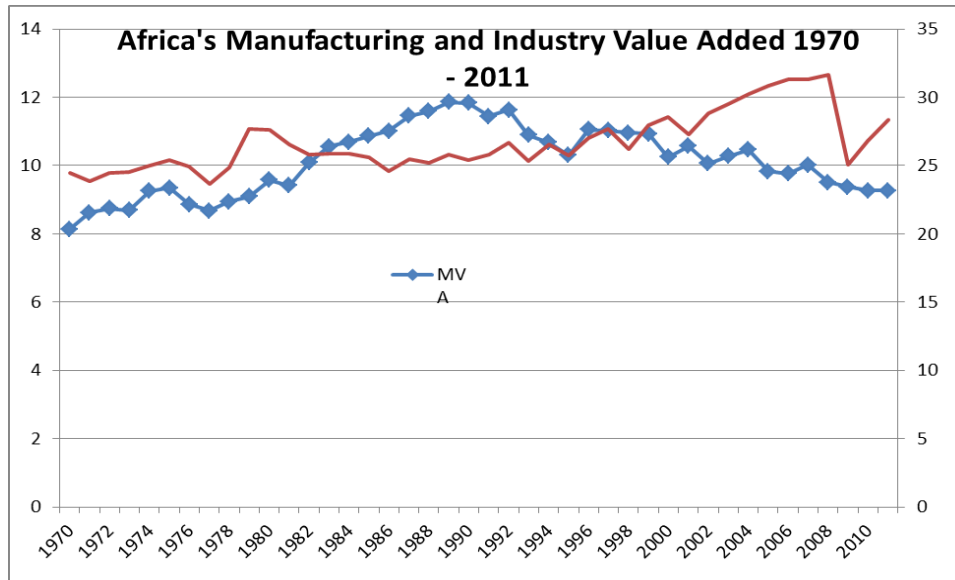
# But Concentration Remains High too





# On the New Growth

- Divergence btw industry and man accounts for simultaneous existence of large commodity booms and sterling domestic growth on the one hand and stagnant export unit value index and dom non-diversification
- Sustained investment in natural resource extraction without translating any of the proceeds to higher value products in other sectors
- 3 factors – Dutch disease; weak inter-industry and sectoral spillovers and ‘toxic political economy effects’
- Many started industrialization with ISI to escape these; with ISI declared null and void, there has been no replacement.
- But also agric has continued to deteriorate with high employment (over 50%)
- Losses in agric value added translated to gains in services; nearly 50 percent in 2011
- Decreasing agric should look commendable, raising optimism about Africa’s future away from agric
- But the structure of the replacement ‘services’ and linkages formed with industry are questionable
  - 1<sup>st</sup> bc of quality of products offered; not superior to agric products (and mainly non-tradable)
  - 2<sup>nd</sup> bc of set of new economic interest groups and players created by such products, their interaction with the growing extractive industry and the implications of such relationships for reforms



# Drivers of Growth 1

Variable	Agric GDP	Manufacturing GDP	Service GDP	Industry GDP	Manufacturing Export	Total Export
Interest Payment		-.0138223 (-0.26)	.9360636 (3.20)		-2.615223 (-3.34)	
Broad money	-.0201698 (-1.52)	-.0259312 (-4.37)	-.0022263 (-0.05)	.043914 (2.29)	-.1577729 (-1.19)	.1146573 (3.69)
Inflation	.0077231 (0.74)	.002991 (0.65)	.0243026 (0.77)	-.0348316 (-2.61)	.0548374 (0.63)	-.0836935 (-3.62)
Int rate spread	-.0454874 (-0.73)	.1252161 (4.82)	.7315502 (5.09)	-.0316375 (-8.60)	-1.564113 (-3.75)	-.1111459 (-0.79)
Domestic Credit (% of GNI)	-.0300865 (-1.91)	-.0025062 (-0.35)	.0893647 (2.52)	-.0635985 (-3.04)	.0222079 (0.22)	.0478298 (-1.32)
REER	.0166076 (2.28)	-.0065106 (-3.67)	.071114 (4.40)	-.0546692 (-6.50)	-.3231214 (-5.92)	-.0537617 (-2.29)
Constant term	10.02012 (5.94)	4.993012 (7.23)	23.65503 (6.45)	38.56148 (14.18)	94.98071 (6.58)	20.0199 (4.40)
R <sup>2</sup>				0.5965	0.6241	

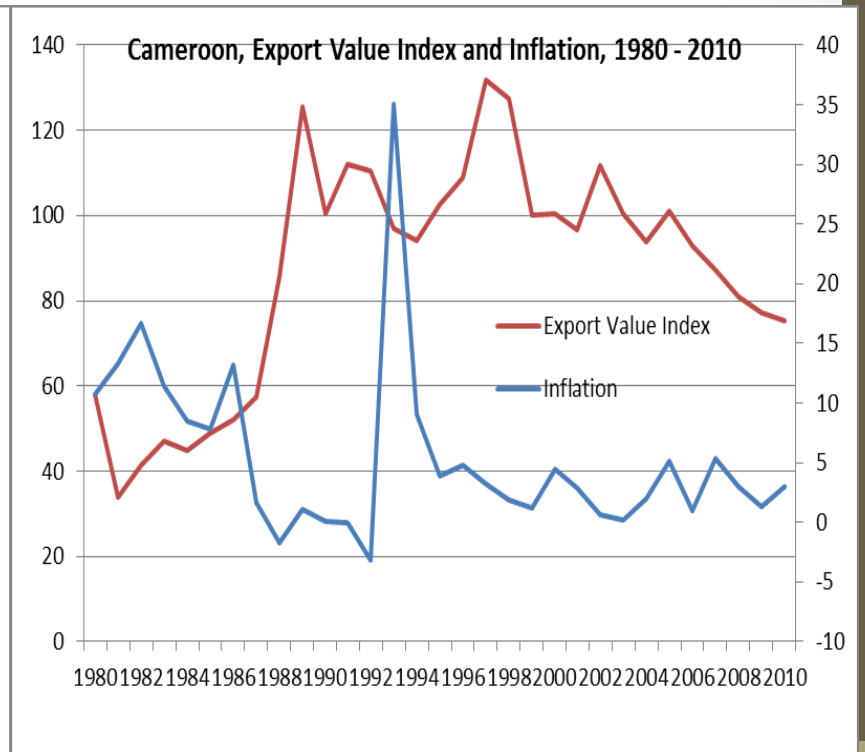
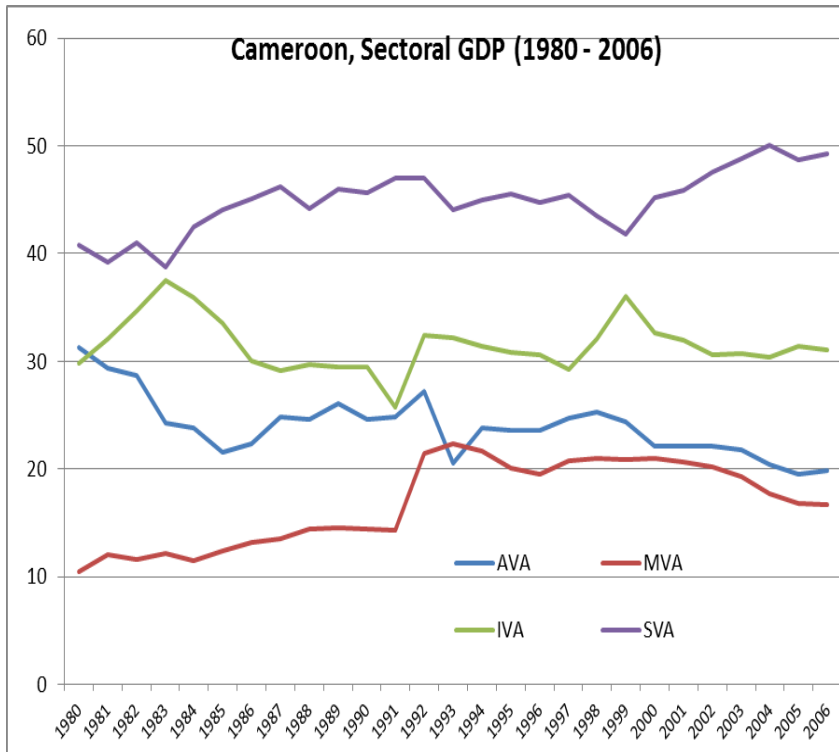
# Drivers of Growth II

Variable	Agric	Manufacturing	Services	Industry	Man Export
Remittances	1.374823 (4.02)	.6046 (2.78)			
Domestic credit to the private sector	.0032686 (0.26)	-.0119 (-1.24)	.0323703 (0.74)	-.1699619 (-2.69)	-.3089975 (-4.52)
Electric power	.0284849 (0.78)	.02519 (1.00)	.5309822 (2.52)	.3895784 (2.58)	-.2726494 (-2.19)
Gross domestic savings	.0011395 (1.35)	.00066 (1.93)	.0054118 (1.95)	.0011991 (0.84)	.0182405 (14.66)
Real Effective Exchange rate	.0049208 (0.76)	.0168 (2.60)	.0954611 (2.37)	.0188725 (0.71)	-.0166549 (-0.50)
Age dependency ratio	.0947842 (2.26)	-.0231 (-0.79)	-.0390878 (-0.23)		
Import value index		-.0021 (-0.74)	-.0391068 (-2.42)	.043582 (2.80)	-.0213891 (-1.62)
Tax revenue (%of GNP)	-.0050275 (-0.34)	-.0365 (-2.87)	-.1678738 (-2.41)	.0101981 (0.10)	-.0936147 (-1.10)
Export volume index	-.0191112 (-2.47)	.0136 (1.91)	.0396879 (1.12)	-.2347363 (-5.88)	.0857793 (2.29)
Debt svcs		.0866 (3.79)			
Constant term	.2738402 (0.06)	-1.921 (-0.63)	30.2154 (2.07)	55.63128 (12.46)	10.67109 (2.00)

# Cameroon

- One of the most concentrated in Africa
- Relatively high debt overhang – PRSPs
- Continues to adopt ‘reforms’, is continually praised for sound monetary and financial indicators
- Major challenge is structural
- *“Electricity remains expensive in Cameroon and is always in short supply...”*
- Result – continued, if not increased, reliance on agric and natural resources – so growth is driven by weak domestic dd

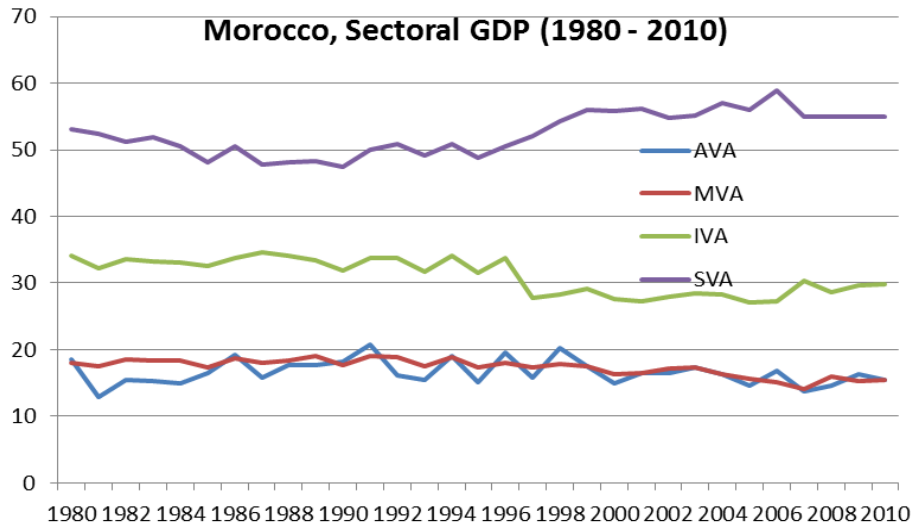
# Cameroon



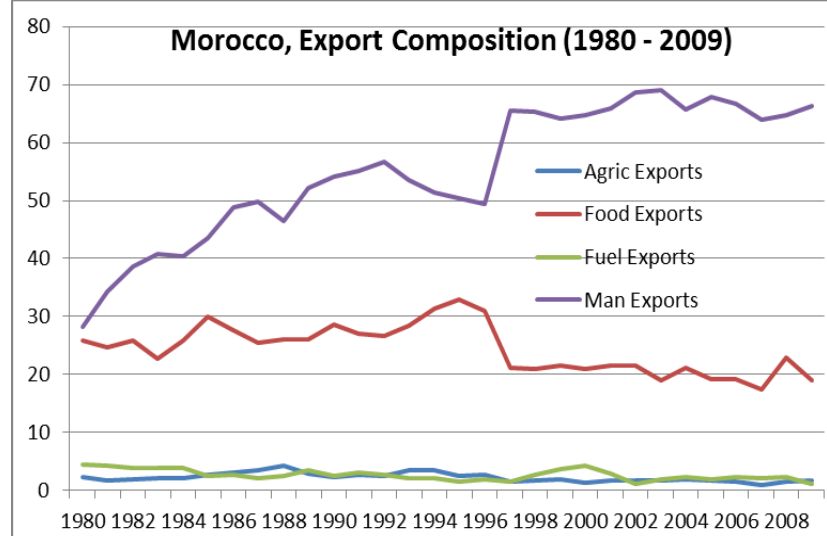
# Morocco

- MVA, 15% - fluctuated and shrank over last 3 decades
- Much unchanged – weak growth
- Overarching macroeconomic objective is fiscal and monetary consolidation
  - And gradual diversification (??) of the productive base.
  - Attention continues to be on size of deficit, inflation and money supply
  - Inflation btw 0.9 and 1% since 2009
- Domestic economy driven by services
- Though 15 percent MVA, manufacturing is 70% of exports
- Seen a rise in export value index since 1992
- So not having fuel is not enough if policies are not directed
- Significant dip in export value since 2007 – fragility and non-diversification of trading partners

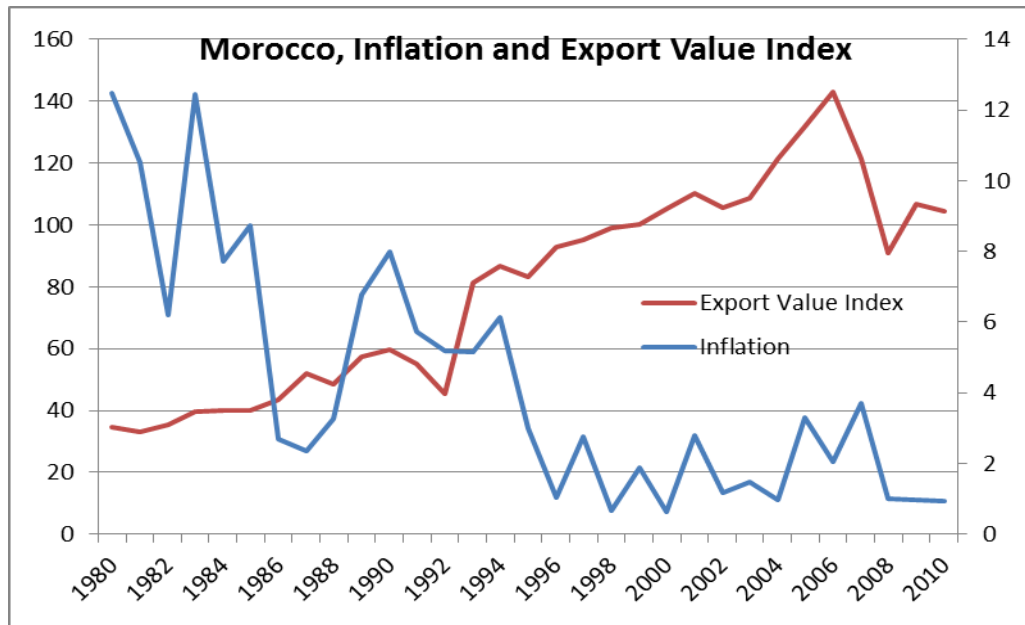
### Morocco, Sectoral GDP (1980 - 2010)



### Morocco, Export Composition (1980 - 2009)



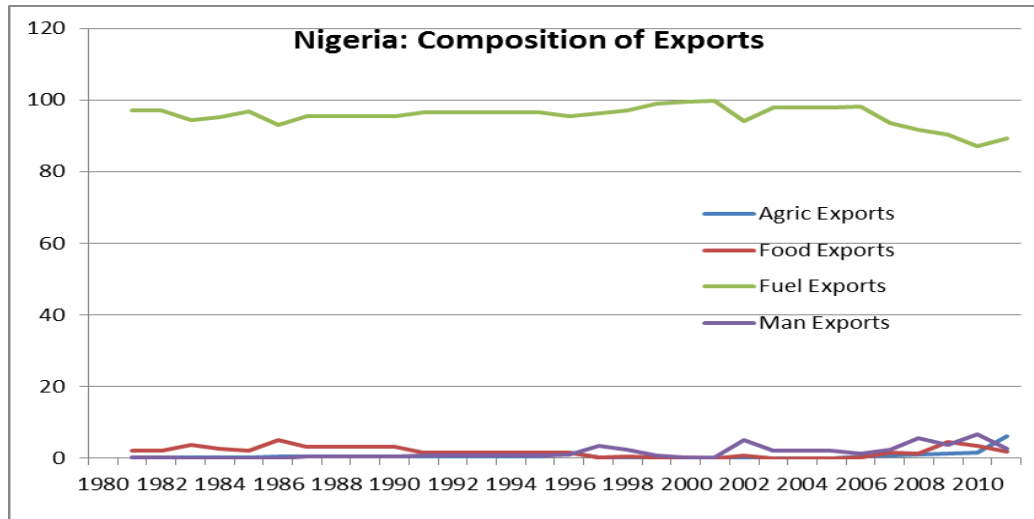
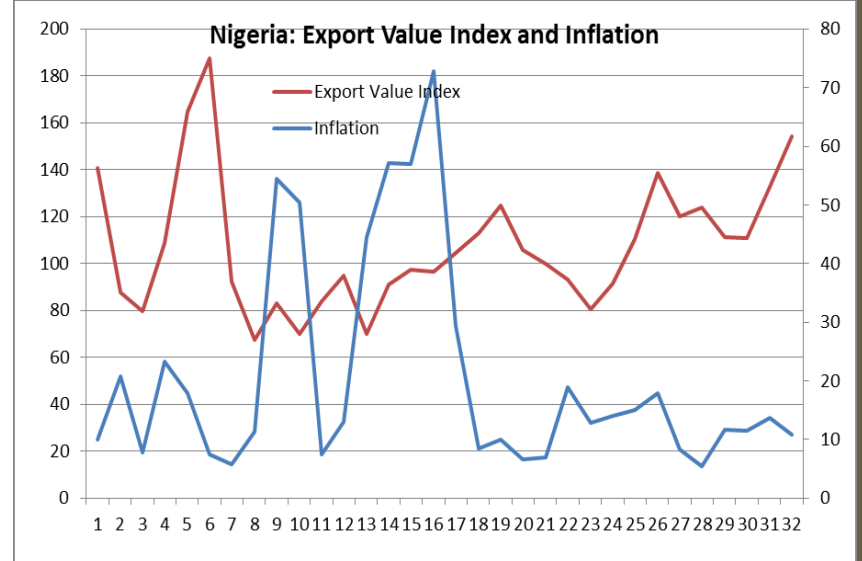
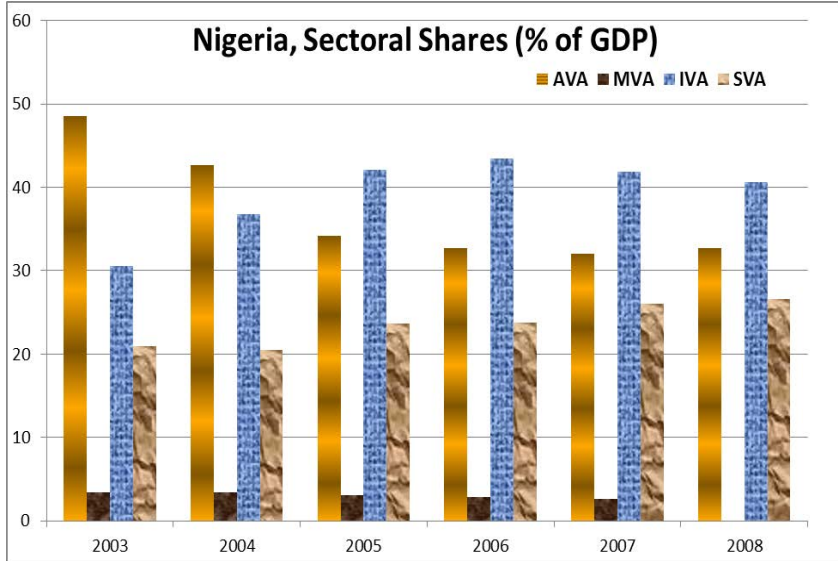
### Morocco, Inflation and Export Value Index





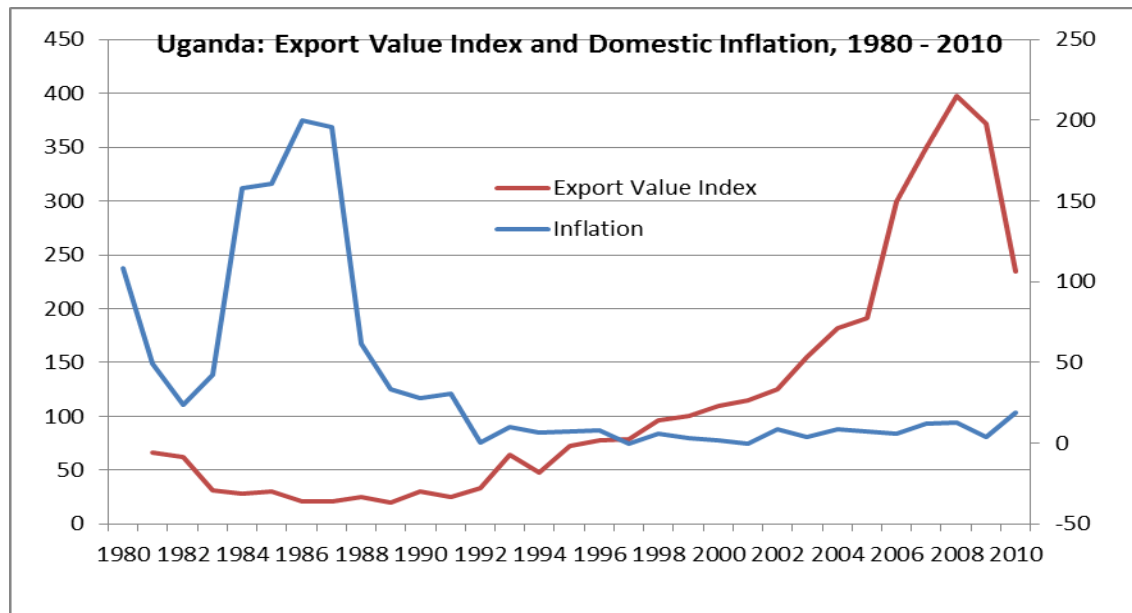
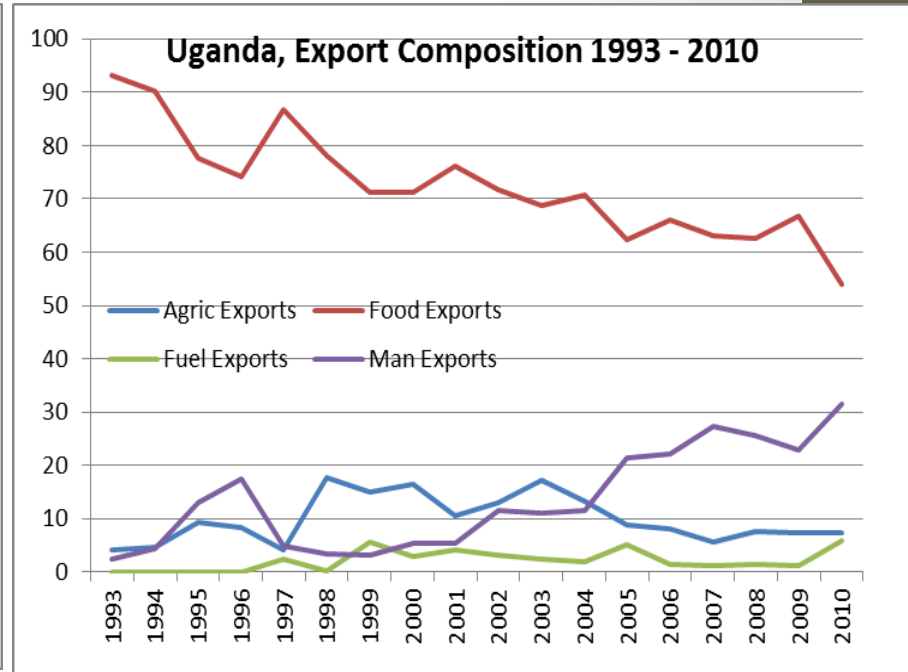
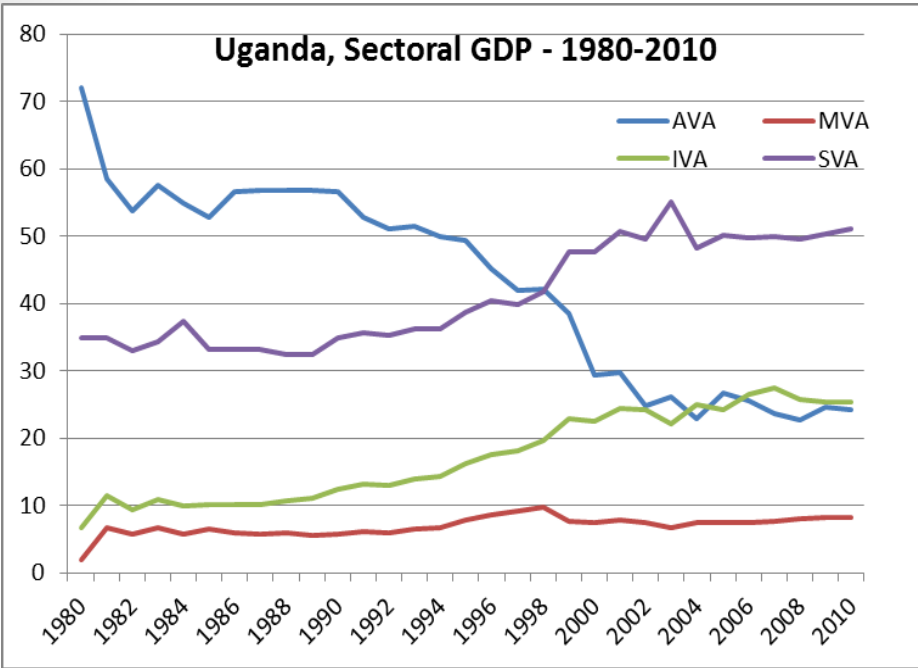
# Nigeria

- Probably the most concentrated in Africa
- Services also been rising; agric been going down
- Yet Nigeria has continued to reform
  - But mostly tinkering fiscal and monetary policies – because of fiscal dominance
- Meant little attention to fundamental constraints facing production and exports
- Oil price volatility regularly translates to domestic macro volatility thru govt revenue and expenditure
- Disrupting service delivery and creating uncertainty that inhibits non-oil economic activities



# Uganda

- Regularly held up as a good example of successful macro stabilizer that has managed to also improve its domestic production and exports structures.
- Govt strictly adhered to various prescriptions for liberalization, privatization and implementation of stringent fiscal and monetary policies; paying attention to price stability, external openness and low deficits, etc
- Also keeps an open capital account, a flexible exrate and embarked on extensive deregulation and privatization
- Experienced significant changes – Agric fell from 70% in 1980 to about 25% in 2010; services moved from 35% to 51% and industry gone from 5% in 1980 to nearly 27%; manufacturing also risen from 2% to 9%
- *Appreication of need for more activist role of govt, but only as facilitator – increased attention to support infrastructure for the private sector*
- Share of exports from manufacturing has risen from about 2% to nearly 30% since 1993.
  - So export value has risen, though concentration led to high impact of the 2008 crisis
  - But infrastructure constraints continue to keep growth below potential
  - Low capital and weak productive capacities mean high labour unemployment
- Recently found oil which may complicate the equation
- Need to use the resources to fast-track infrastructure devt
- There are possibilities of stability at a low equilibrium – maturing before growing fully
- Esp if policy emphasis does not shift a little



# Implications for Africa

- We think Nurkse's messages are very central to understanding and improving Africa
- Literature admits diversification matters – for macro stability – esp for dualistic economies – with high profits in high productivity sectors repatriated or wasted through irrelevant imports
- Generates high productivity enclaves disconnected from the rest of the economy and causes volatility, translating TOT volatility to domestic macro volatility;
- Also generates higher growth and reduced volatility of output, consumption and investment and increases resilience. But these are one direction of the cause
- But does macroeconomic stability support greater diversification?
- Since macroeconomic stability can be achieved in a number of ways, are there ways that are more conducive to diversification than others?

# Implications for Africa Cont'd

- Comparative advantage – is good but cannot sustain growth if external demand conditions do not induce it; separate the act from the trade patterns that induce it
- Investment, attracted by demand prospects, is the engine of such comparative advantage
- So favourable TOT does not automatically take care of development financing – indeed, is not guaranteed to contribute to K formation, unless deliberately channeled to saving
- Instead as export revenue increases, MS will increase consumption (including for imports); limits savings and worsens external balance
- Role of public finances: propensity to save is crucial determinant of growth but does not maximize itself automatically – so taxation becomes critical by assuring that a higher proportion of the extra resources is withheld from consumption and directed into investment
- Basic question of devt policy is about whether available investment funds should be used to promote increases in output that are specialized along int'l comparative advantage or diversified along national income-elasticities of demand so as to provide markets for each other locally. The first could lead to immiserizing growth if external demand conditions are unfavorable or TOT worsens. This is not to advocate pulling resources out of the traditional export activities; just about use of new and additional resources

# Implications for Africa Cont'd

- Balanced growth – it is the small buying power of people that generates a vicious circle of low investment, low income – balanced growth is the primary means to enlarge the market size – industries would provide market for each other.
- In dealing with sources of finance for required capital, Nurske believes that in poor countries with large populations, surplus labor means same output could be gotten with a smaller labour force, without necessarily a change in methods of production. So disguised unemployment, which implies that occupations are relatively unproductive while others are relatively productive; so utilize potential to transfer labor from the former to the latter thereby increasing total output.

# How Macro Policies can be relevant to diversification

- Exrate – depreciated exrate boosts tradables; but such tradables suffer from institutional and market failures that keep countries poor. So sustained RER depreciations increase relative profitability of investing in tradables, and relieve the economic cost of these distortions.
- RER depreciation also stimulates growth thru increases in aggregate savings and technological change – and both rely on impact on increased production of tradables (via learning by doing, climbing the tech ladder and having spillovers)
- Reverse of the above is the widely acknowledged Dutch Disease syndrome. Stabilization that includes overvalued exchange rate is not useful then



# Implications for Africa Cont'd

- The Role of fiscal policy – undervalued exchange rate is only part of the story since it supports all tradables; actually may preserve imbalance in favour of natural resources and widen the gulf between the more profitable (tradable) and less profitable (non-tradable) sectors.
- Impact of commodity boom depends on extent of altering incentives for further investment of either the same products that they already produce or other higher value additions
- It is expected demand and profitability, not a static “comparative advantage,” that determines investment
- So trying to diversify the economy in the face of strong demand for commodities is unlikely to succeed without some way to improve the relative profitability of the sectors that are targeted for upgrading
- 2<sup>nd</sup> – Increased revenue can translate to consumption and not investment – best way to sterilize inflows is through “forced saving” of taxation and the channeling into public investment; otherwise recommending state action to correct low propensity to save i.e. using fiscal policy to complement an exchange rate regime (what Corden, 2004 termed “functional finance”)
- 3<sup>rd</sup> is the link btw utilization of labor and emergence of non-traditional industries – mobilization of unutilized labor capacity (is quite expansionary)

# A Proposed Model

- Beginning with the Keynesian output identity,  $Y - (C + I + G) = X - M$ , we expand the external sector
- $Y - (C + I + G) = [\alpha E_n P_n(\pi_n, T_n) + (1 - \alpha) E_I P_I(\pi_I, T_I)] - M$
- $E_n$  is Exports of resources and  $E_I$  is exports of industrialized goods;  $P$  is their respective profitability,  $\alpha$  denotes their respective weights, in the export basket,  $\pi$  is relative prices (and therefore profitability) and  $T$  is taxes.
- The function  $\pi, T$  is positively sloped for  $\pi$  (raising investment and exports) and negative for  $T$  (reducing investment and exports)
- So taxation matters
- But increases in taxation will have to reflect on the left hand side of the equation, increasing either  $I$  or  $G$ ; if not, or there'll be unintended reduction in net exports.
- This emphasis on industrialization will yield the 'balanced growth' discussed by Nurske as it generates domestic market demand and is labour intensive and so should complement export sector
- Unemployment impacts of an undervalued RER can also be traced to increased intensity of labor in manufacturing goods sector
  - Coming via adoption of more labor-intensive techniques or reallocation of labor and investments toward labor-intensive tradables
  - And can only happen if the tradables sector getting boost is manufacturing
- Also greater portion of the generated revenue will accrue to wages, which generates additional demand for non-tradables, and makes new industries viable and invite new investment in them
  - This effect is not produced just with any export-related income, but only to the extent that such export-related income accrues to wages (purchasing power) and increases in the size of the market

# A Proposed Model Cont'd

- Mobilization of “disguised savings” is fulfilled if labor in lower productivity activities moves to higher productivity ones – does not matter if the higher productivity activities are for export or for the domestic market
- So endgame of boosting an export sector is not ‘the endgame – endgame is the creation of inducements to invest in domestic industries.
- But there could be limits of capacity to boost new domestic industries in the face of an existing export sector, bc of relatively limited dd & bc prices in non-tradable sector are set in undervalued domestic currency? Well, not in the short to medium term
  - By definition, assumption of investment flowing into domestic industries at a level to make them thrive would be accompanied by proportionally greater increases in investment in the export sectors
  - This would maintain imbalance
  - So should not be enough to stop non-tradable sector diversification given increase in demand and investment
  - But also to the extent that building a set of domestic industries that would develop as demand makes them more viable, this is not a problem

# A Proposed Model Cont'd

- What may be problematic (for the model) is if the export sector is left untouched. But this we do not envisage but should grow alongside
- Again, fiscal policy comes in to bridge the productivity gap, but primarily as investment in “public overhead”
- If however greater proportion of the new income goes to wages & to non-tradables, capacity to increase production is not there, or lags, inflation or imports dependence will ensue, respectively eroding undervaluation of the RER or driving external imbalance
- seems the only way out is discreet use of taxation & expenditure policy on both export revenues and wages
- May sound draconian on already low wages, but the alternatives are to either let lower labor-intensity sectors dominate or allow increased income to drive up prices
- Govt spending of revenue on infrastructure will drive down costs and prices thus serving as palliative on the wage reduction

**Thank You for  
Listening**