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RE-IGNITING AFRICA INDUSTRIALIZATION: THE ROLE OF INNOVATION

KEYNOTE SPEECH

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INTRODUCTION

WE WILL CONSIDER...

- Why the renewed debate on Industrialization?
- What underlines the poor industrialization record of African countries?
- Does an abundance of natural resources pre-determine a negative development outcome?
  → or the reliance on wasting asset that generates strong exclusive effect on Technological Learning and Innovation?
- How countries have in the past used natural resources as a basis to build strong economies
- Next steps for Africa

INDUSTRIAL POLICY

THE COMEBACK OF THE DEBATE ON INDUSTRIAL POLICY

1. The COVID-19 pandemic showed countries with weak manufacturing capacity to be extremely vulnerable to not just economic shocks but real health and food security risks.

2. The lessons of the last 50 years of Africa post-independence saw countries with poorly diversified technological production bases and export baskets have increased volatility and swings in fundamental economic variables. → This is especially true for resource-dependent countries that are the most impacted by external shocks and such as the recent nexus of pandemic and the resulting global financial crisis.

3. Despite implementing trade liberalization measures over the past decade, African countries did not realize the promised growth and development dividend. These countries remain at the bottom rung of the poverty ladder. In large part, the fundamental reason hacks back to their inability to push their Industrial Agenda and failed economic diversification.

4. The African Development Bank prioritizes industrialization as one of its pillars: Industrialize Africa.

5. African countries have fallen far behind their Asian comparators that continue to implement industrialization plans.

GROWTH TRAJECTORIES

GROWTH TRAJECTORIES OF COUNTRIES

The early 20th century was very challenging for the Asian continent; extreme poverty was rife as countries struggled through wars: Vietnam, Korea, and Japan. These countries have completely transformed their economies.

In **1950**, the avg. Asian had almost half as much income as the African. **By 2016** the Asian was **twice as rich.**

KOREA'S ECONOMIC BREAKTHROUGH

In early years, the Republic of Korea was dependent on donor support for food and consumption goods, raw materials & military assistance. From a per capita income less than Ghana's, its phenomenal growth had it join the exclusive club of the world's most affluent industrial economies, the OECD in 1996.

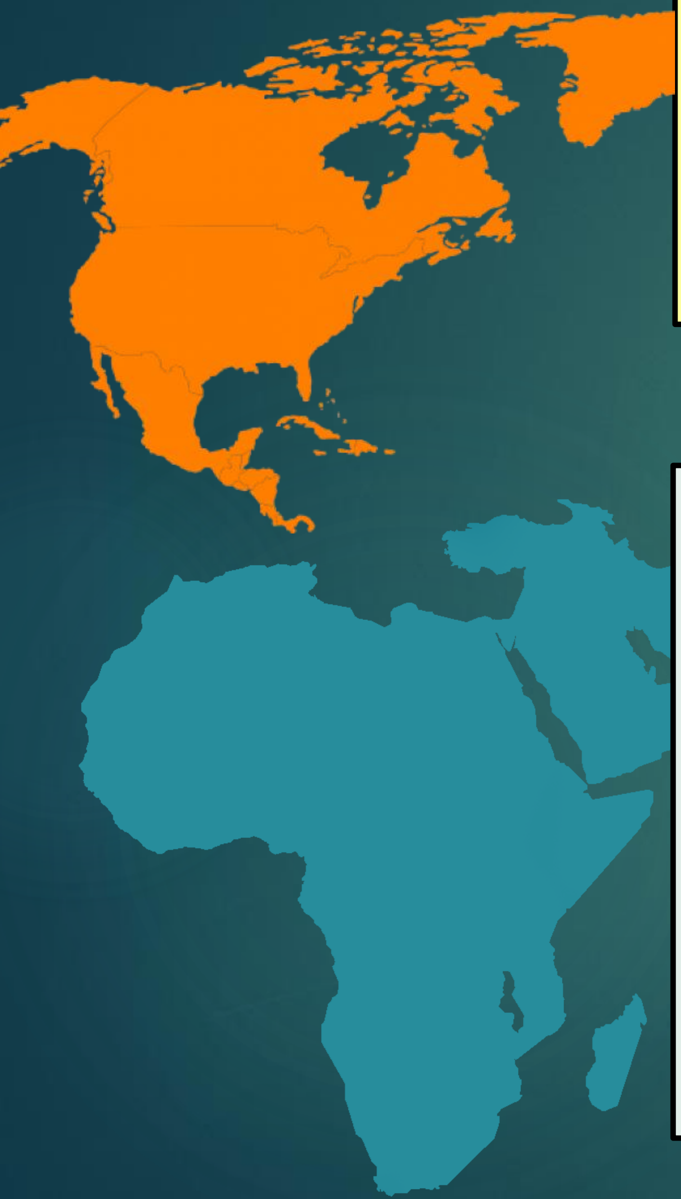
On the contrary..

Africa possesses huge amounts of minerals including strategic minerals: Cobalt (52.4%), Bauxite for aluminium production (24.7%); Graphite (21.2%), Manganese (46%) and Vanadium (16%).

The economic backwardness of Africa's mineral-dependent countries in the midst of metals and minerals abundance has largely been due to the **lack of critical scientific infrastructure, investment and human skills**.

DRC supplies
70% of the world's cobalt ,
but countries with the
technological capabilities
reap **the gains across the value chain.**

GROWTH TRAJECTORIES



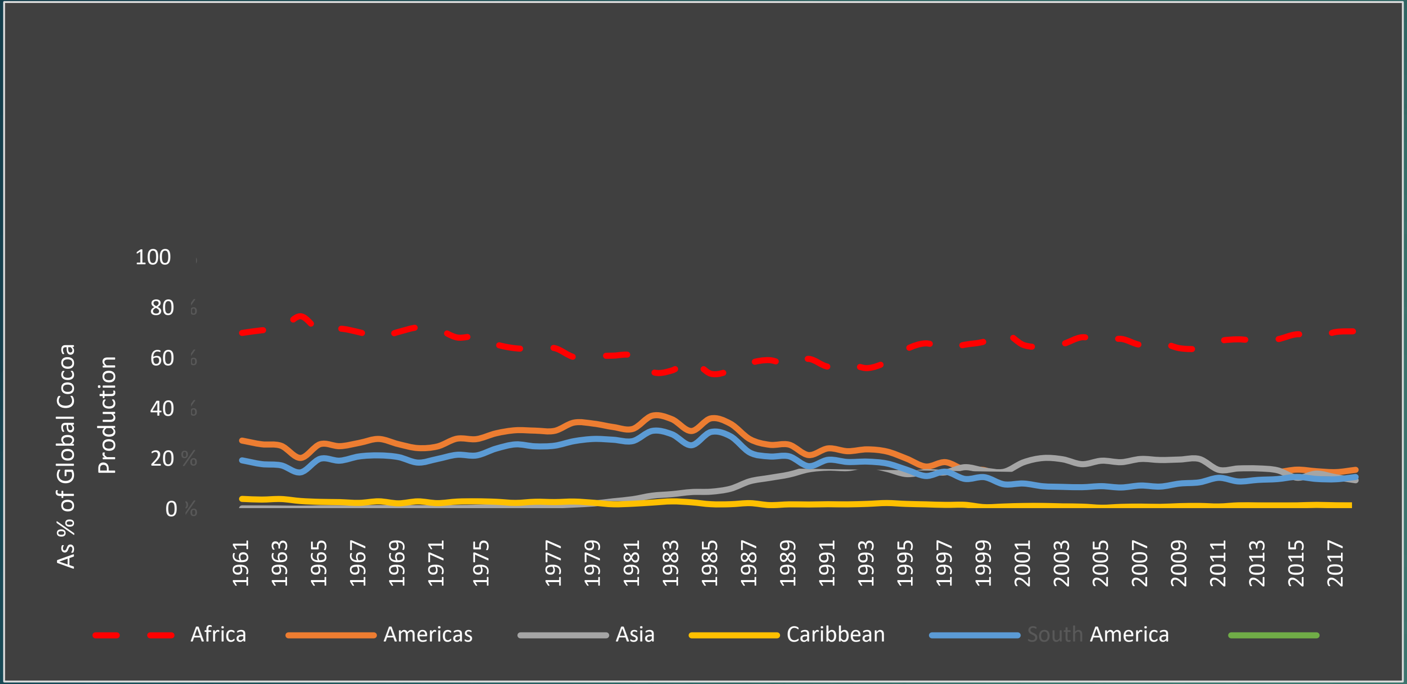
- Many Asian countries without natural commodities innovated to maximize their competitive advantages while most African countries have remained reliant of the easy money from resource exports.
- Asian nations assimilated manufacturing technologies and other aspects of the value chain that multiply the value of resources and create higher value jobs.

→ The success of Asia proves that in less than three decades, focused leadership, and sustained industrialization can drag nations out of poverty.

- Since 1950s African economies derived revenue from their vast commodities. The legacy of colonialism and slave trade meant inadequate labor to build new industry. Institutions, governance and human behaviour explain in large part what has shaped the history of resource-dependent nations.
- The DRC was once a colony of Belgium's King Leopold II, who exploited the colony's abundant resources. In 1960, the Belgian government abruptly <u>awarded the colony its independence</u>, resulting in a nation without the experience to govern itself efficiently. In its infancy, the nation suffered from civil war and dictatorship, both of which drained natural resources.

This is the story of most African countries.

COCOA PRODUCTION IN THE WORLD, 1961 - 2019



Africa accounts for 70 % world production of cocoa beans

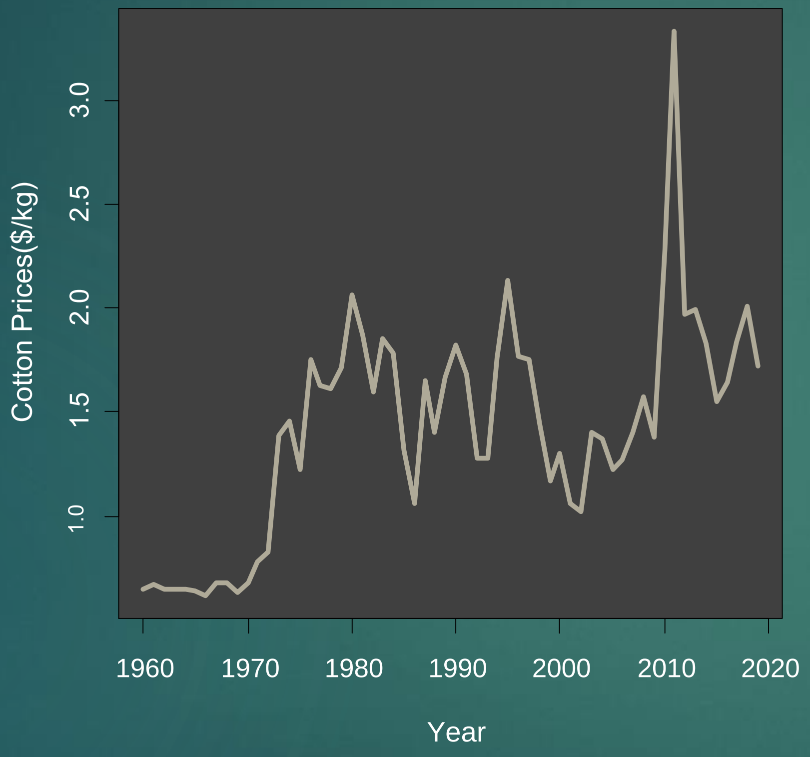
- 80% of Africa's cocoa production is already sold even before it is harvested.
- Africa accounts for about 21% of world's cocoa grinding, but at most 1% of the global chocolate market.

- Raw cocoa export = exporting jobs from Africa.
- In 2018 the chocolate industry employed about 70,000 people in the EU and USA.
- The global chocolate industry market in 2019 was valued at US$ 106.6 billion; & $147 billion by 2025.
- Africa's share of Cocoa beans export = $6 billion
  - Africa only earns 3 – 6% of the chocolate industry's retail market value even though it is the main producer of cocoa.

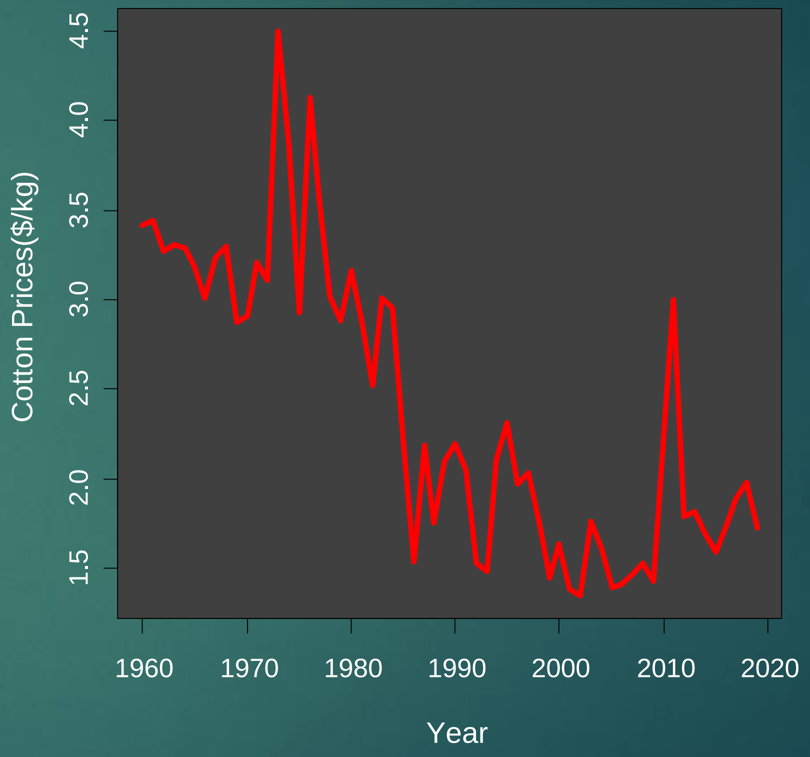
REVERSAL OF FORTUNE: COTTON

NOMINAL AND REAL PRICES OF COTTON IN US$ (1960-2020)

Nominal Prices Cotton US$(1960-2020)



Real Prices Cotton US$(1960-2020)



Data Source: https://datacatalog.worldbank.org (Pink Sheet Accessed on 04-05-2020)

The **REAL PRICE** of cotton has **TRENDED DOWNWARDS** since 1960.

- This means that countries exporting the same quantities of cotton annually since 1960 receive **less export revenue today** than they did in **1960.**

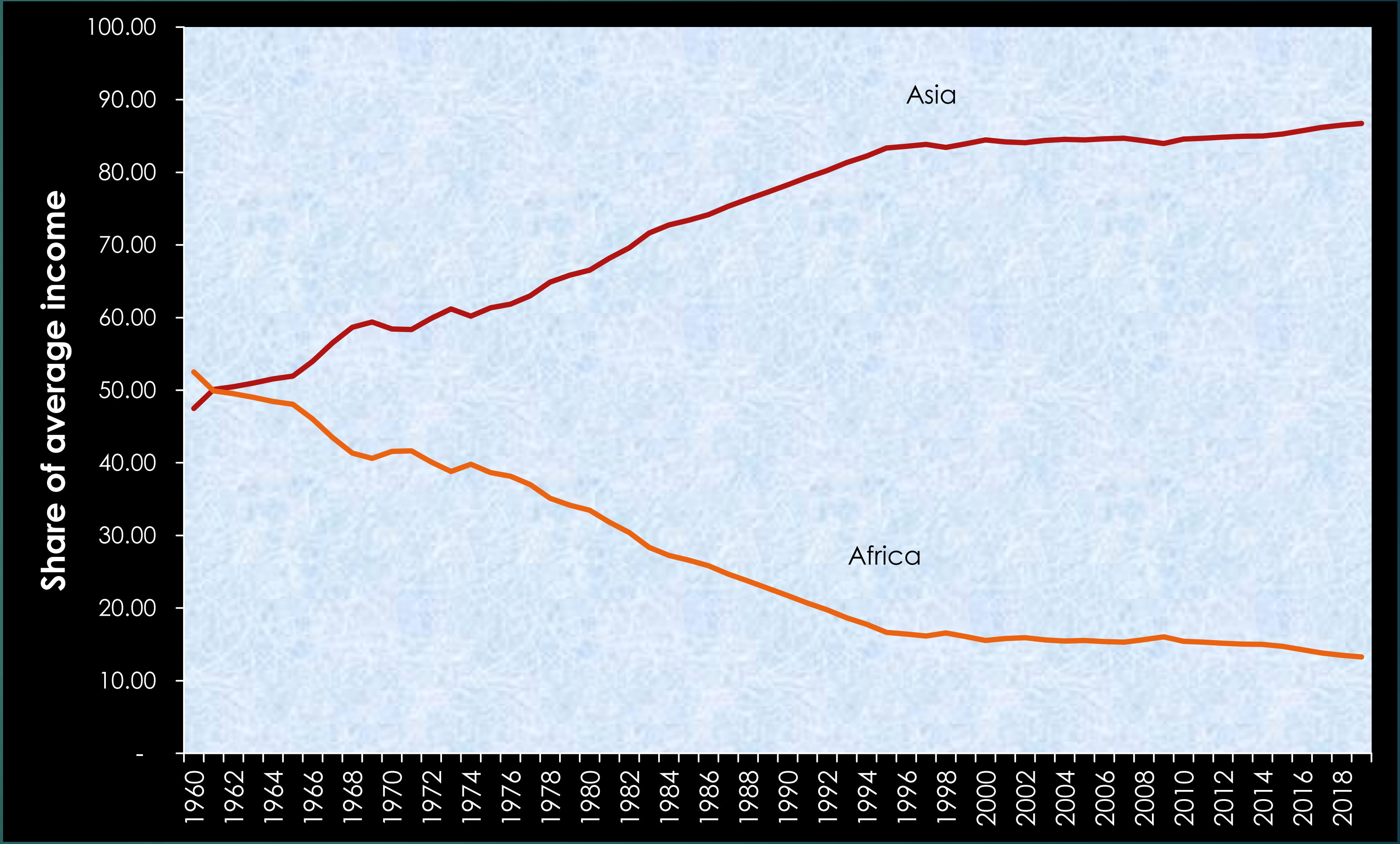
REVERSAL OF FORTUNE

REVERSAL OF FORTUNE

- To demonstrate the contrasting fortunes and performance of Asian and African economies, we *present average per capita income* of all major economy of the Asia.
- Similarly, we generate the relative movement of income in both the continents.

The graph depicts the movements of relative per capita income. From the figure, it is clear that on the one hand the average income of African economies has been declining while the relative per capita income of Asian countries is increasing on the other.

SHARE OF AVERAGE INCOME IN ASIA AND AFRICA



Bangladesh, Bhutan, China, Dem. People's Rep. of Korea, India, Indonesia, Japan, Malaysia, Maldives, Myanmar, Nepal, Pakistan, Philippines, Republic of Korea, Sri Lanka, Singapore, Thailand, and Vietnam)

Income are estimated based on constant USD in 2010

- Reversal of Africa's fortune manifests in economic, social, technological and industrial conditions. Compared with comparator Asian countries the differences are stark.

- All the Asian countries in the sample recorded continuous growth rates and some very rapidly while African countries increased relatively slowly and some declined.

BY 2019…
the income of Korea was 6x that of Algeria & 9x of Angola!
All these countries had had similar income levels in 1980.

40 YEARS AGO…
Nigeria's income 6x that of China!
Sudan had almost 2.5x of China's income.

IN 2019…
Chinese income became almost 3.45x to that of Nigeria and 4.79x times of Sudan

The widening disparities are truly shocking to say the least.

- Historically countries suffer reversals in fortune due to political upheavals, civil wars and more commonly so for mineral-dependent countries, through fluctuations in commodity prices etc.

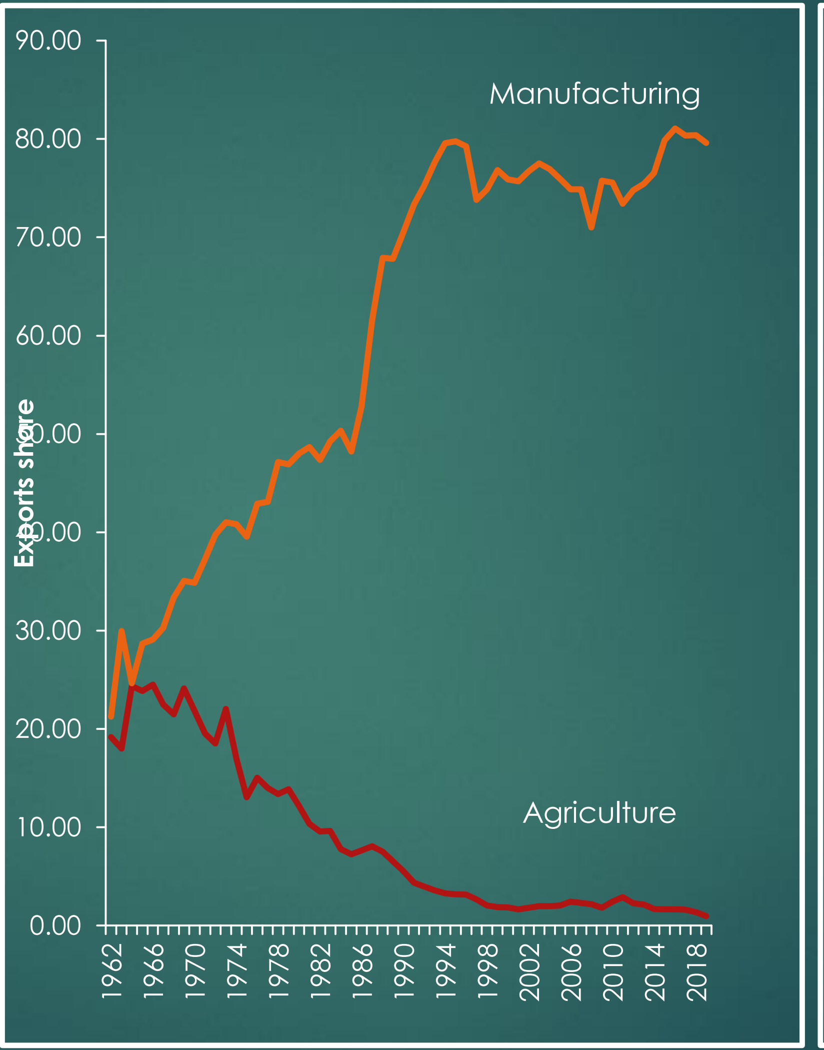
EXPORTS SHARES OF MANUFACTURING AND AGRICULTURE IN ASIA

- Exports share of manufacturing in Asia grew faster and overtook that of agriculture right from the late 1960s, a typical manifestation of positive structural transformation.

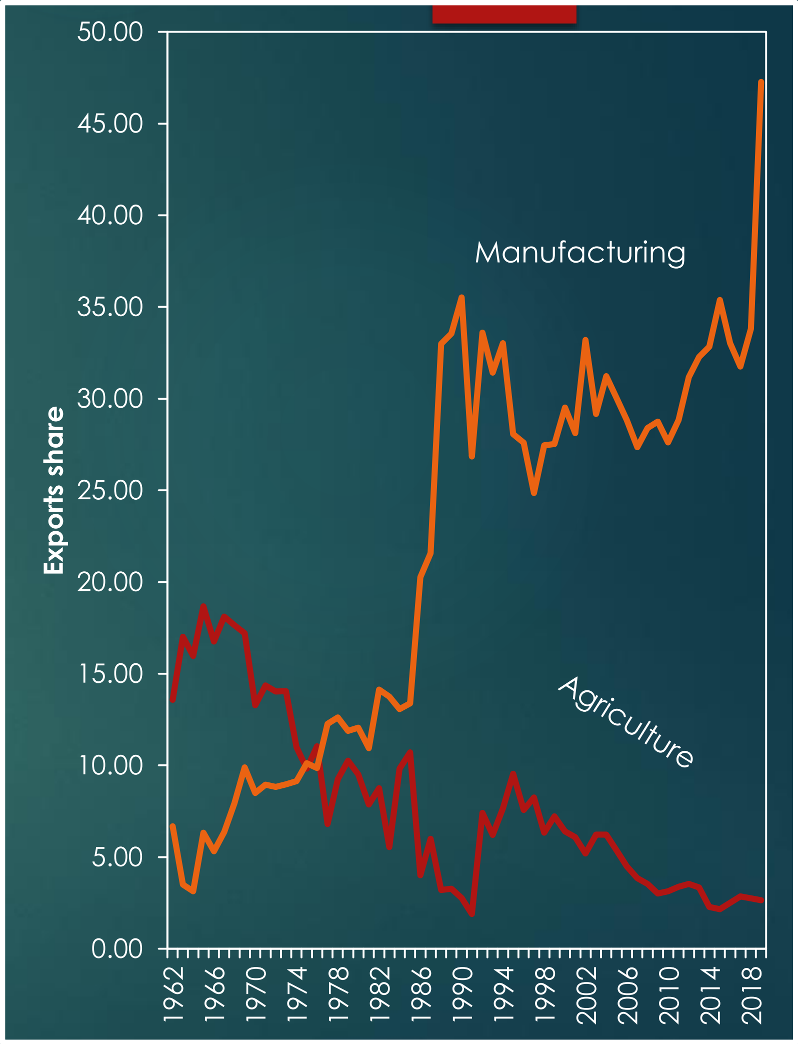
- The gap between the two shares was marginal in the beginning of the study period. The gap narrowed down to almost zero in 1964, but has been increasing since then.

Asian countries have been **DIVERSIFYING INTO MANUFACTURING** exports consistently leading to higher export share.

ASIA

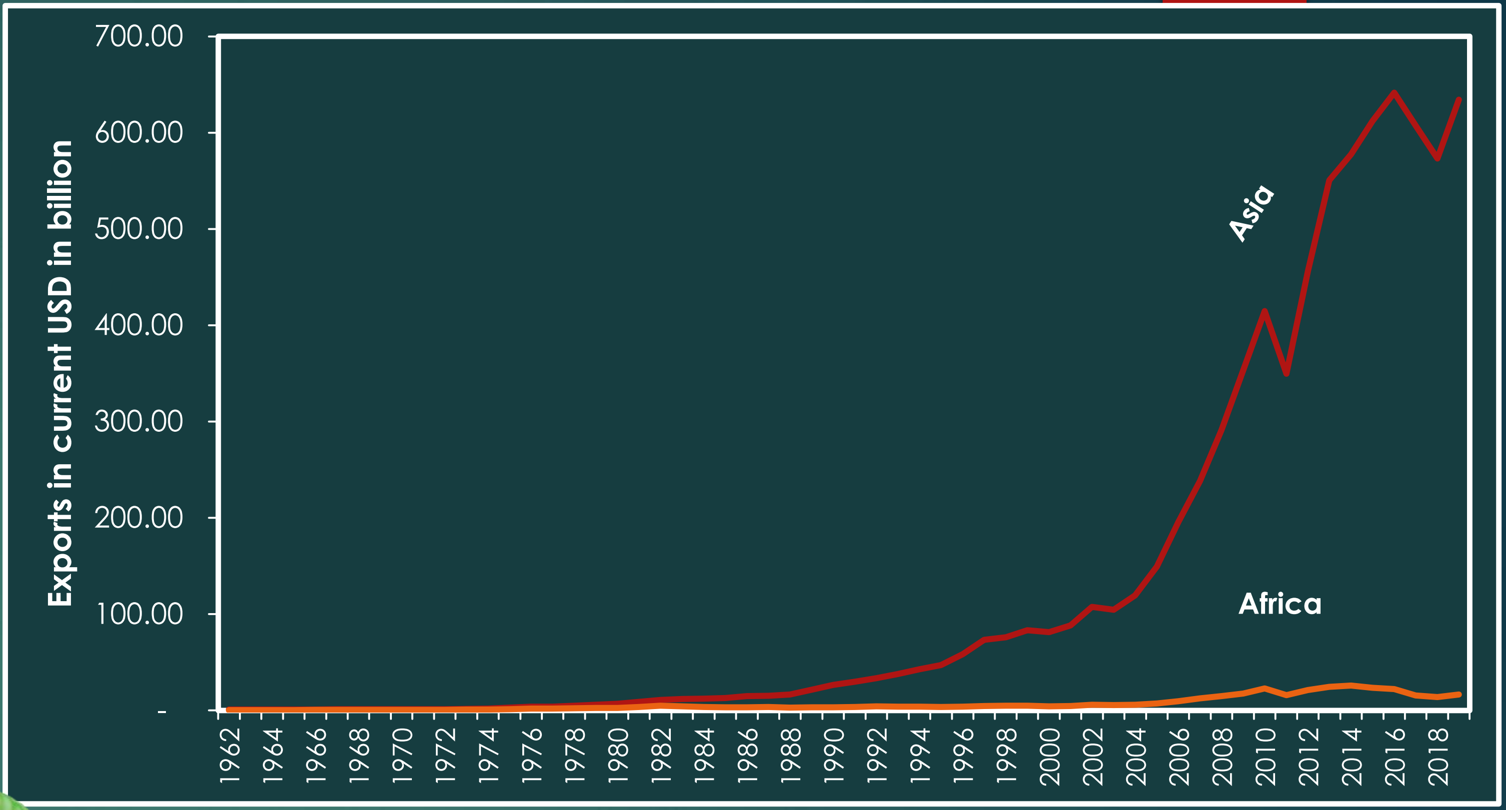


AFRICA



EXPORTS GROWTH IN ASIA AND AFRICA (USD)

- **Africa continues to lag behind Asia (& other developing regions) in manufacturing exports performance.**
- **Compared with Asia, Africa's total export performance has been disappointingly flat over decades measured in USD from 1962 (See fig.)**
- **Asia gradually took off into a strong export-performing region around the mid-1980s; this sustaining this growth trajectory.**
- **Until the mid-1990s, the pattern of growth of African export was similar to Asia; this was the period of Africa's renewed growth after the disruption caused by the Structural Adjustment Programme (SAPs) of the 1980s.**



Africa's best performance in exports growth was a 17% growth rate in 2000–2005, (compared with Asia's of 15 %)

THE REGION COULD NOT SUSTAIN THIS TRAJECTORY.

Consistent with resource-dependent lock-in behaviour, exports from African countries have demonstrated a **high degree of dependence on a few primary agricultural or mineral exports**.

Estimates:

- Unprocessed mineral and energy accounts for **80% on avg.** of African exports.
- Agriculture employs **between 65 – 80%** of the workforce in the region

EXPLAINING:

AFRICA'S REVERSAL OF FORTUNE

EXPLAINING AFRICA'S REVERSAL OF FORTUNE

Africa relied on the low-growth pathway of commodity extraction and export.

Asia made spectacular progress as through learning and mastering of technologies that undergird industrialization.

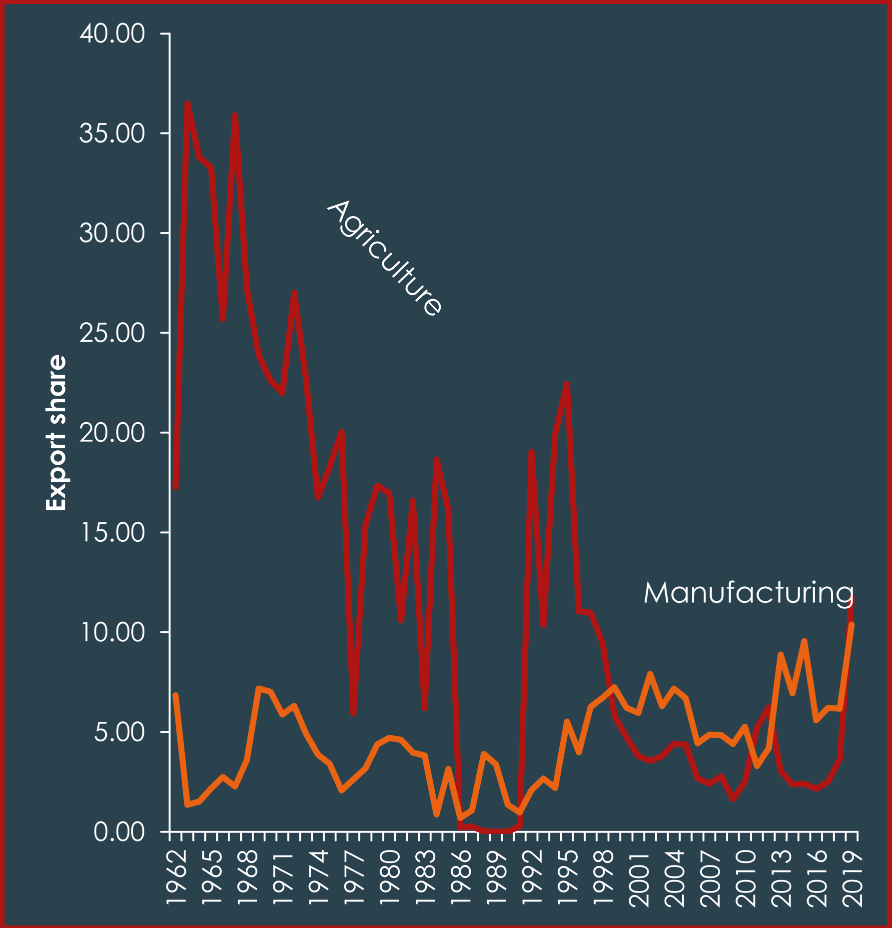
Of the fifteen LEAST DIVERSIFIED countries in the world,
eight are in Africa.

SO…

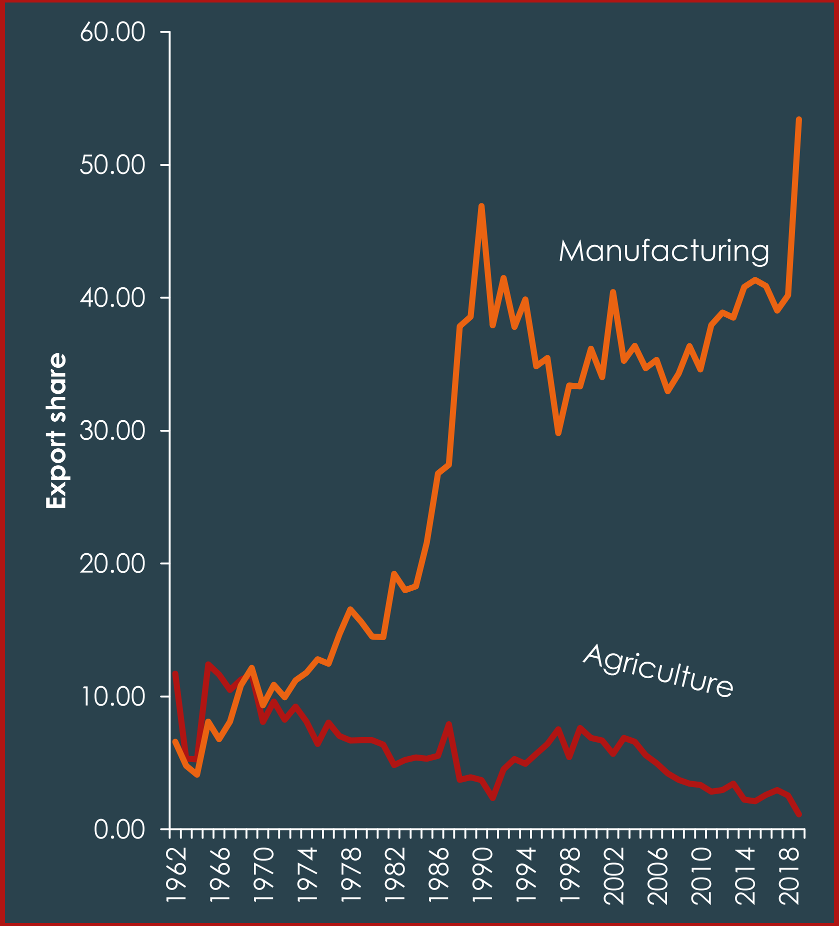
IS AFRICA'S ABUNDANCE OF NATURAL RESOURCES A CURSE OR A BLESSING?

EXPORTS SHARES OF MANUFACTURING AND AGRICULTURE IN OIL AND NON- OIL-EXPORTING COUNTRIES IN AFRICA

OIL-EXPORTING



NON-OIL EXPORTING



I. THE IMPLICATIONS OF NATURAL RESOURCE-DEPENDENCE ON INDUSTRIALIZATION & INNOVATION

Countries that made successful use of natural wealth by converting such into assets for their citizens do so by constructing framework of sustainable macroeconomic policies, equitable governance system, and intolerance of corruption

II. NATURAL RESOURCE-DEPENDENCE UNDERMINES INDUSTRIALIZATION AND INNOVATION

Older literature attributes economic development of earlier industrial nations to their mineral and commodities abundance and as the driver of economic development.

III. INDUSTRIALIZATION THROUGH DIVERSIFICATION AND STRUCTURAL TRANSFORMATION IS POSSIBLE IN THE 21ST CENTURY

Capacity to produce, trade, specialize and export sophisticated manufactures is a proxy for a country's technological capability for three reasons

IV. NATURAL RESOURCE-DEPENDENCE JEOPARDIZES TECHNOLOGICAL LEARNING AND ECONOMIC GROWTH

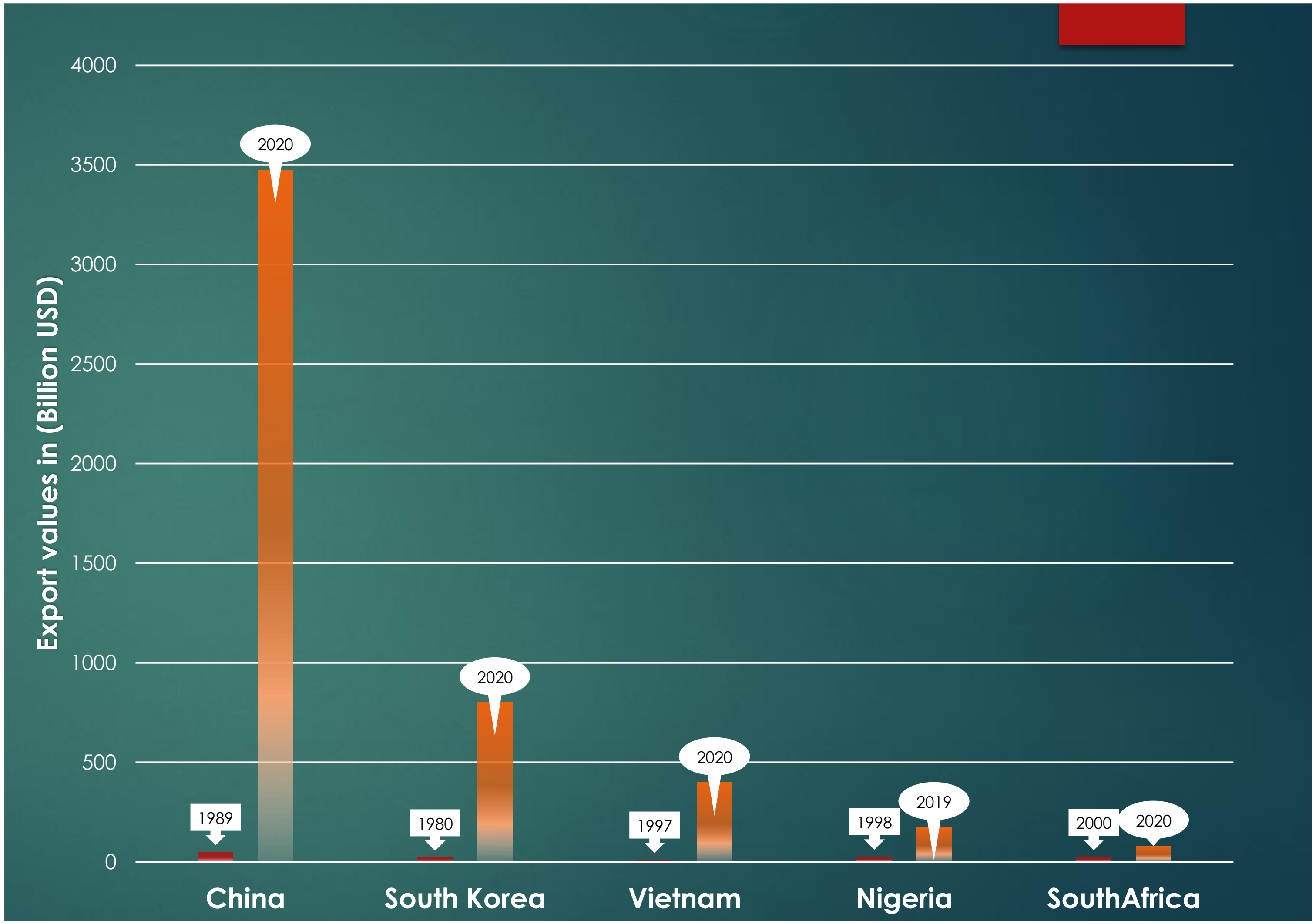
Industrial manufacturing largely drives economic development. The key requirement is continuous technological learning, which underpins economic diversification and structural transformation. When a country is locked-in into resource extraction and trade, it tends to record a decline in the traded sector once they begin to enjoy resource trade boom.

EXPORT MARKET DIVERSIFICATION

I

I therefore emphasize the importance of **BROADER EXPORT DIVERSIFICATION**, rather than export specialization.

- Export diversification favourably influences the pattern of growth and structural transformation.
- Export diversification increases a country's ability to meet social goals including job creation and improved income distribution.
- Export diversification can reduce export revenue instability and volatilities in imports and capital, which tend to be growth inhibiting.



TO MITIGATE PARTICULARLY THE CHALLENGES OF RELATIVE INSTABILITIES ASSOCIATED WITH CONCENTRATING IN COMMODITY EXPORTS, THE CURRENT VIEW IS THAT COUNTRIES SHOULD DIVERSIFY THEIR ECONOMIES

FUTURE INDUSTRIAL POLICY DIRECTION

FUTURE INDUSTRIAL-INNOVATION POLICY DIRECTION FOR AFRICA

- The choice of policies and the dedicated leadership that propelled the use of industrial policy in the post-Second World War period enabled the bulk of Asian economies to achieve sustained GDP per capita growth.
- Neoliberal policies—based on the principles of privatization, liberalization, and stabilization—have commonly brought about a decline in industrial dynamism.
- There is no one-size-fits-all that will work in all situations and for all seasons. Policies can be misapplied and misused which is what makes the difference between success and failure.
- → What distinguishes the less successful performers is less the policy tools used than the neglect of the objectives crucial for achieving industrial catch-up, such as the achievement of scale economies and the development of domestic productive capabilities.

SO, WHAT IS NEEDED?

1. URGENT DIVERSIFICATION

Africa must pursue an active industrial strategy taking agri-business as its base while continuing to promote other industrial sectors, and the services sector that have driven most African economies. While the region has challenges of poor infrastructure, use the strategy of *localization of industrial zones* such as the AfDB's Special Agro-Industrial Processing Zones (SAPZs). *Economic history has shown that without diversification into industrial manufacturing including **modernized agribusiness** and services*, and away from simple resource extraction, the long-term development prospects of such countries are always bleak

2. CLUSTERING AND AGGLOMERATION AS INDUSTRIAL POLICY INSTRUMENT

From a development perspective, as well as an investment policy perspective, special economic zones should be seen as models of industrial strategies and an integral instrument of industrial Policy that stimulate clustering.

Asia has 75% of all 4046 Special Economic Zones (SEZs) in the world as at 2018 out of which China alone has over 2,500. Korea ha 900 industrial parks; 50% are Agro-Industrial parks. Vietnam had 376 industrial parks in 2019

THE NEXUS OF INNOVATION AND INDUSTRIALIZATION

Industrialization, the process through which nations transform from agrarian into modern societies by growing specialization, increasing complexity and differentiation. This was a process enabled by technical alterations to existing techniques.

THERE IS THEREFORE NO SEPARATION OF TECHNOLOGICAL INNOVATION AND INDUSTRIALIZATION.

The textile industry that remains relevant to developing nation's economies today was transformed through mechanization.

INDUSTRIAL-INNOVATION POLICIES in the context of Latecomer Countries should aim at fostering manufacturing but also address the critical challenges of the SDGs 1-3: poverty, hunger and diseases that determine the speed of development.

Africa should tackle the challenges associated rapid technological innovation use the opportunities inherent in a knowledge-driven age to acquire industrial manufacturing capacity.

THANK YOU

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