

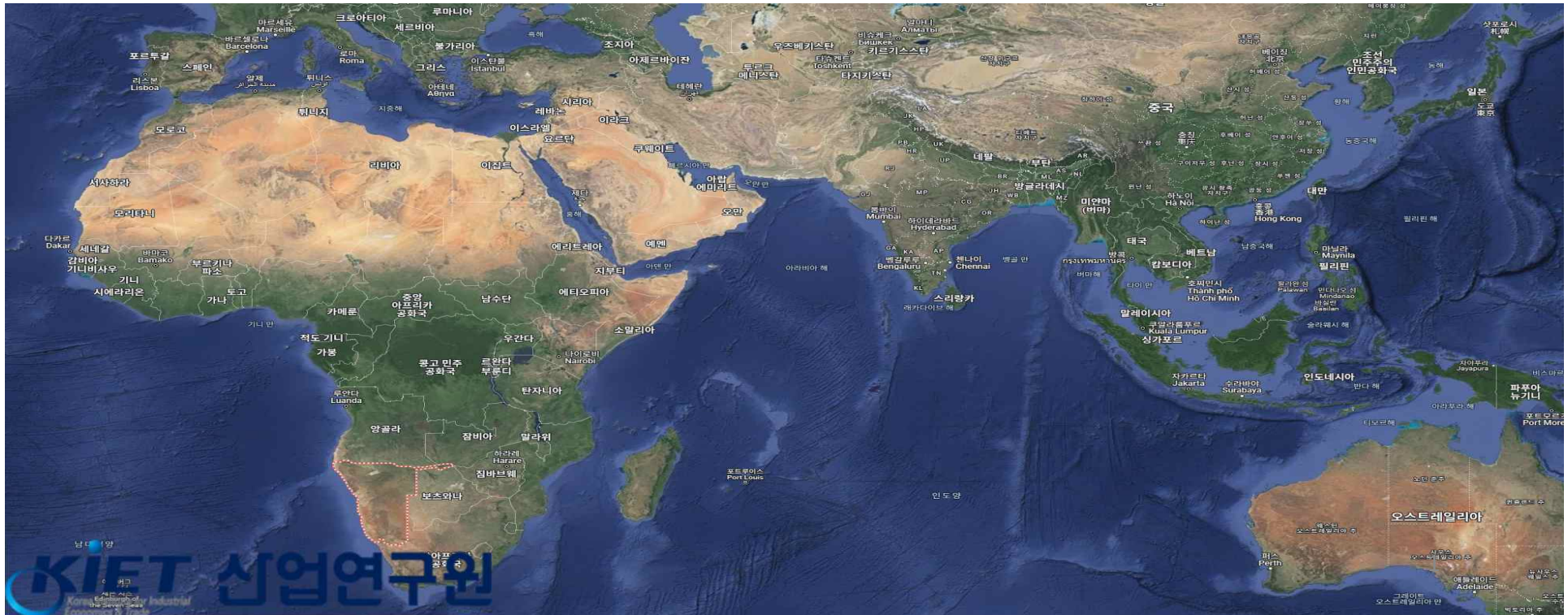
# Industrial Development in Korea and Implication to Namibia

## Benchmarking Mission of the National Planning Commission of Namibia

Sejong, Korea

April 3, 2024

Dongsoo Kim in KIET





**Dongsoo Kim**

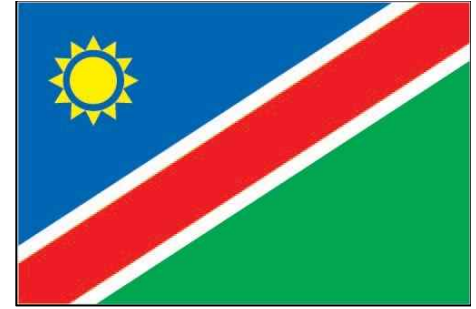
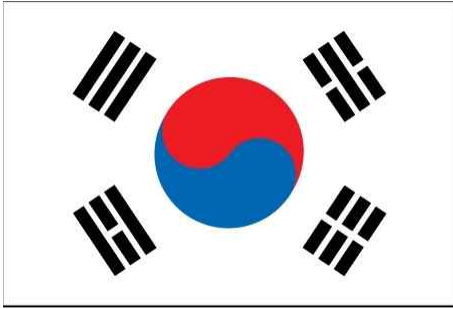
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## Prime Minister's Office

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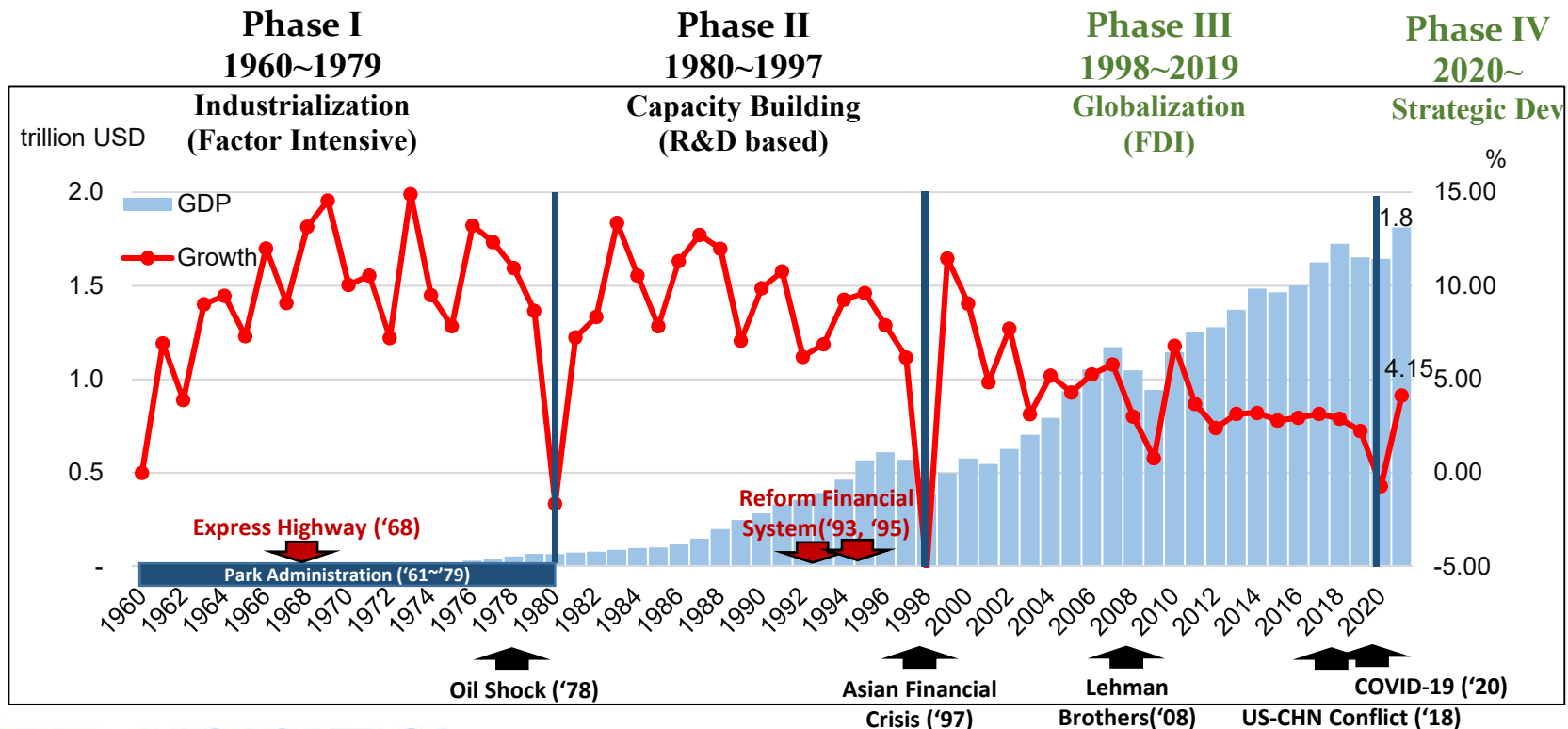
## Contents

- I . Economic Development in Korea
- II . Factors of Industrial Development in Korea
- III. Challenges in Manufacturing Industry in Korea
- IV. Current Industrial Issues in Namibia
- V. Implications for Namibia

# I. Economic Development in Korea

- **Characteristics of Economic Development in Korea**

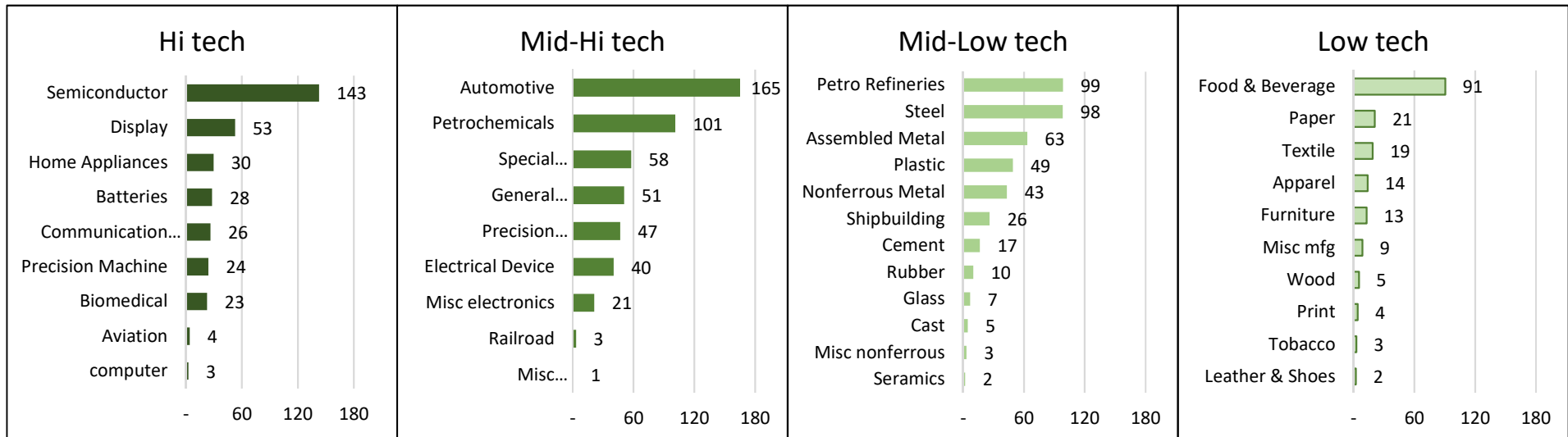
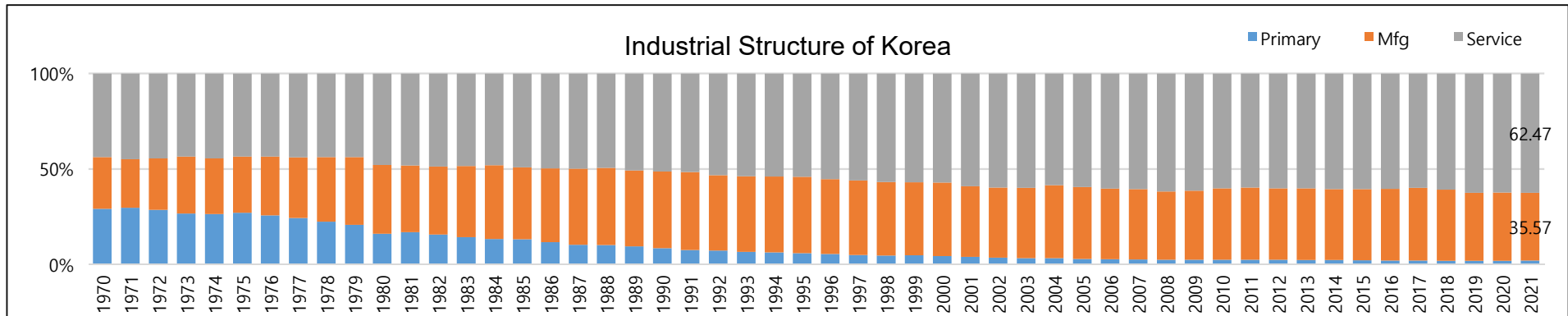
- ✓ Compressed growth in two generations: from the poorest country to an advanced country (GDP per capita in 1960 was 158 USD and it is 32,255 in 2022)
- ✓ Based on political stability, industrialization was going successfully.
- ✓ Development without FDI



# I. Economic Development in Korea

- **Manufacturing Industries in Korea**

✓ Automotive, Semiconductor, Petrochemicals, Petro refining, Steel, Food & Beverage



# I. Economic Development in Korea

- **Establishment Legal Framework for Industrialization**

- ✓ Light industries to Heavy & Chemical Industries in 60s and 70s
- ✓ To promote industries, legal framework has been established.
- ✓ After 1986, policies are shifted from the direct governments intervention to autonomy and market competition.
- ✓ Industrial Development Act + Industrial Cluster Development & Factory Establishment Act + Act on Special Measures for Strengthening Competitiveness for Materials, Components and Equipment Industries + Industrial Technology Innovation

Machinery Industry Promotion Act (1967)

Shipbuilding Industry Promotion Act (1967)

Electronics Industry Promotion Act (1969)

Petrochemical Industry Promotion Act (1970)

Steel Industry Promotion Act (1970)

Nonferrous Metals Smelting Business Act (1971)

Textile Industry Modernization Promotion Act (1980)

Industrial Development Act ('86)

Industrial Development Act (1999)



## II. Factors of Industrial Development in Korea

- **Strong Leadership with Transparency**
  - ✓ Policy Confidence and Social Consensus
  - ✓ Great Industrial Ecology
- **Designing and Implementing Strategic Roadmap for Industrial Development**
  - ✓ Selection and Concentration based on Industrial Linkage

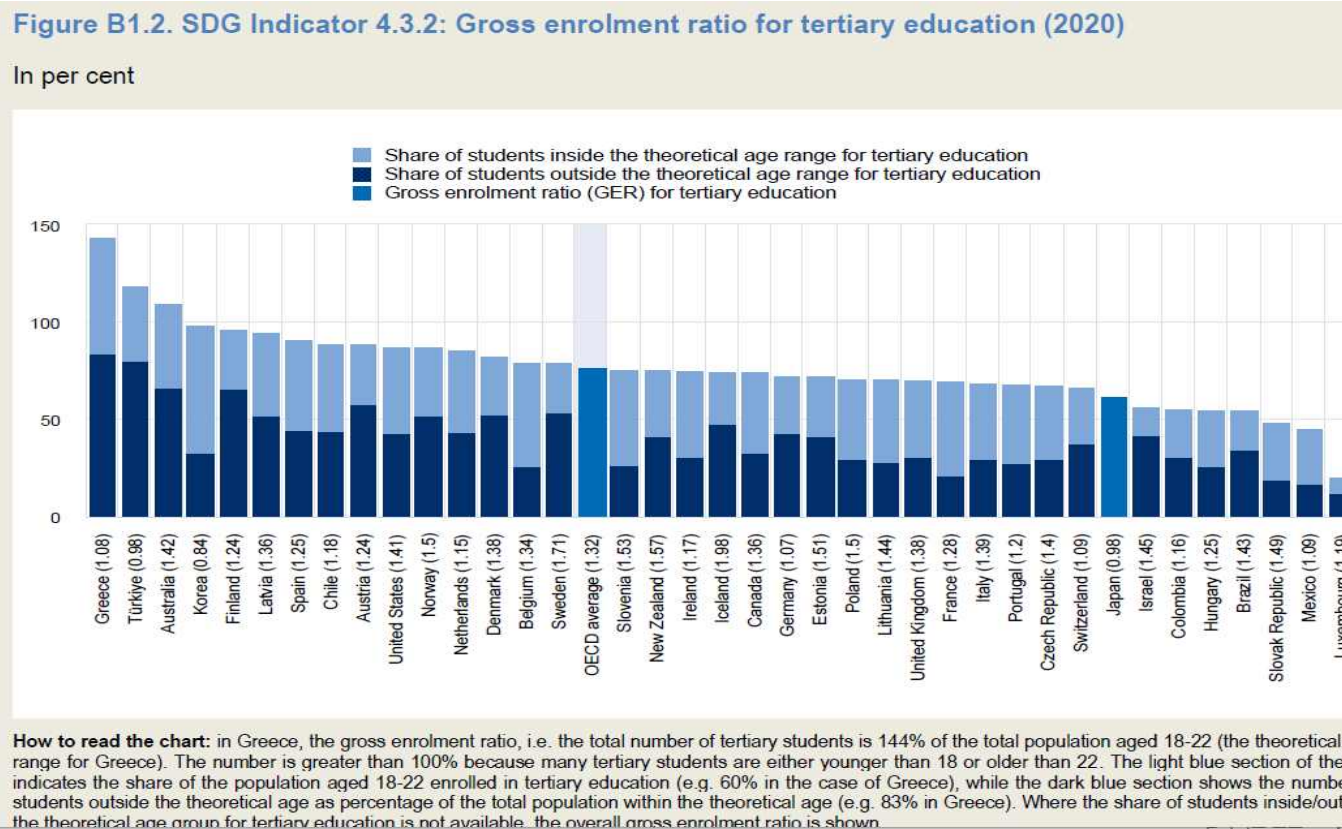


- **Development for Industrial Infrastructure**
  - ✓ Express Highway and Railway, Power Plants, Dam, & HUMAN CAPITAL



## II. Factors of Industrial Development in Korea

- **Skilled & Qualified Human Capital by Education Fever**
  - ✓ More than 73.3% of high school students enrolled bachelor program in 2022.



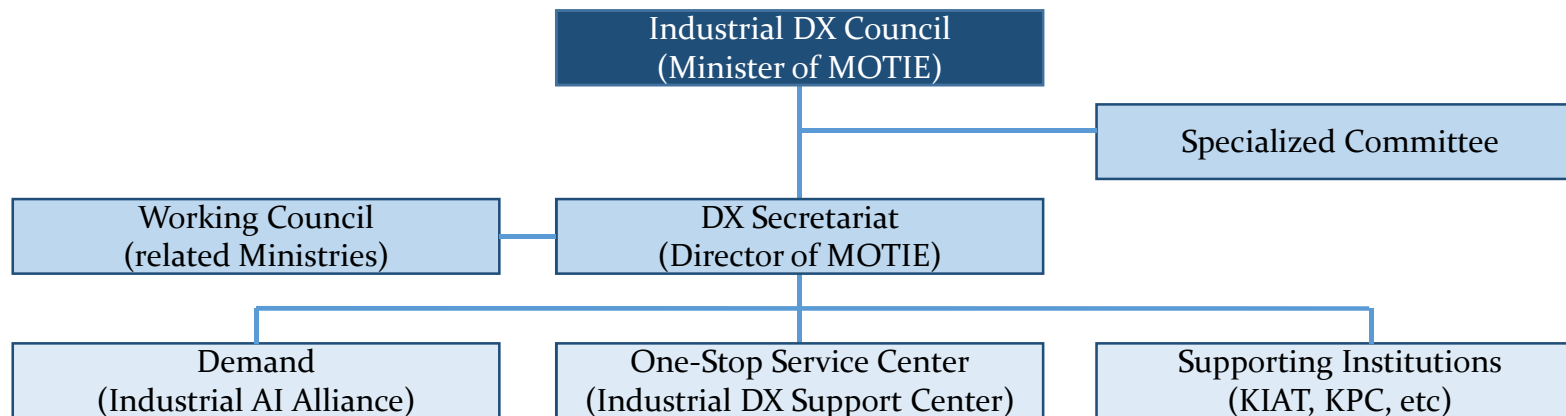
Source: Education at a Glance 2022, OECD

### III. Challenges in Manufacturing Industry in Korea

- **Digitalization & Green Transformation is challenging now in Korea, which is supposed to be driven by private sector.**
  - ✓ Digital technology can make productivity jump up.
  - ✓ Even though technology level is quite high in Korea, those are more in hardware area such as semiconductors and displays but not much in software area (AI, quantum computing, big data, etc)
  - ✓ The role of Government for digitalization is improving regulations and reallocating national resources.
  - ✓ Decarbonization is inevitable not because of environment but because of hegemony in manufacturing industry.
  - ✓ Decarbonization is supposed to be driven by restructuring industries.
  - ✓ The role of Government for decarbonization is implementing proper regulations, changing energy for generating power, and construct energy efficient system such as energy Grid.

### III. Challenges in Manufacturing Industry in Korea

- **Digital Transformation Promotion Act (2022.1.4)**
  - ✓ (Purpose) Enhancing industrial competitiveness by digital transformation.
  - ✓ Comprehensive Plan for DX with governance
  - ✓ DX project, Regulation, Industrial DB, R&D, Human Resources, Financial Support, International Cooperation



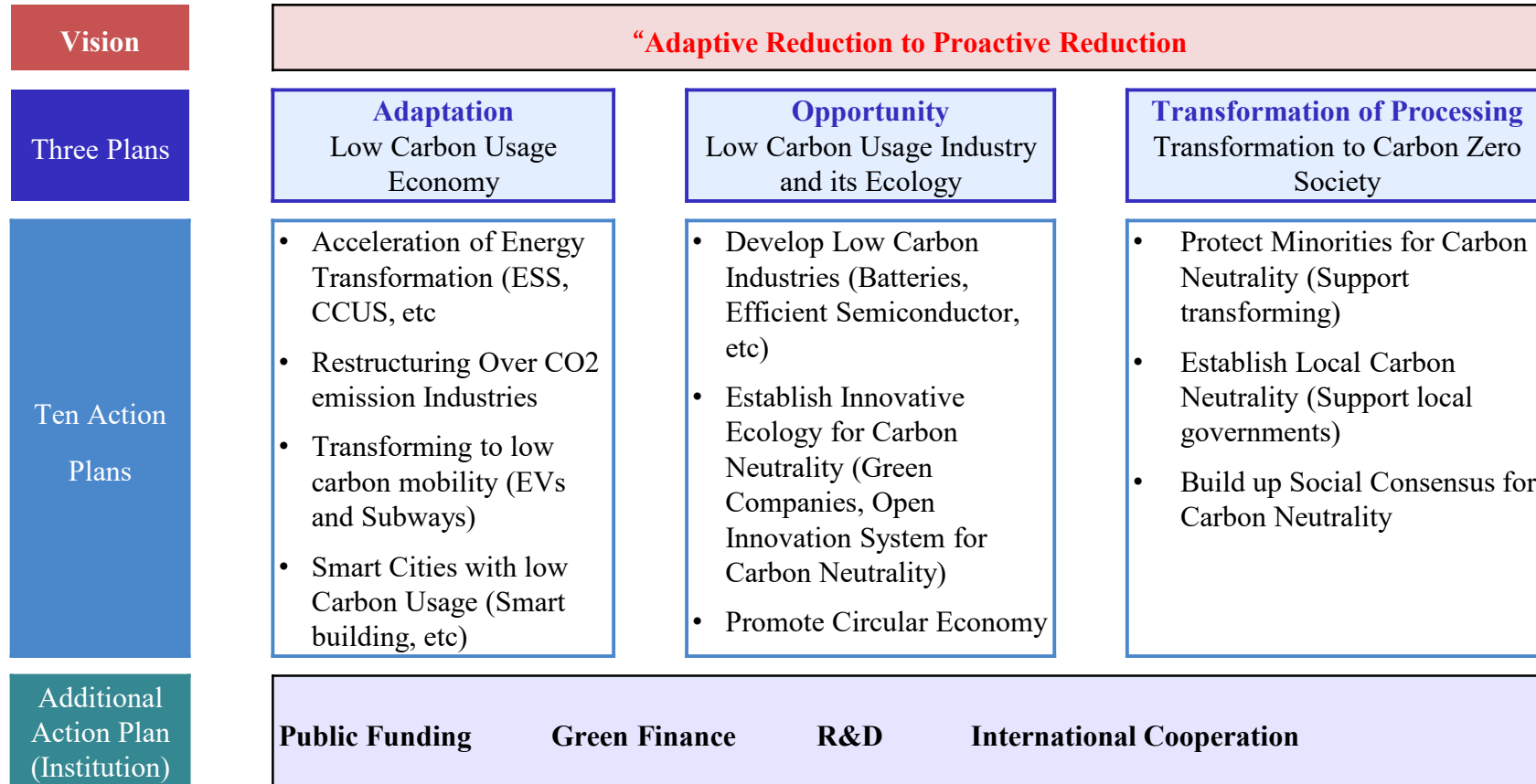
- **Digital Transformation is a more private sector issue.**

## III. Challenges in Manufacturing Industry in Korea

- **Carbon Neutrality (2021.7)**
  - ✓ Total 134 countries including Korea made public announcement of “carbon neutrality”.
  - ✓ China (by 2060, ‘20.9), Japan (by 2050, ‘20.10), Korea (by 2050, ‘20.10)
  - ✓ Korean government announced “Action Plan for Carbon Neutrality by 2050” on the 7<sup>th</sup> of December in 2020.
- **Current Address of Korea**
  - ✓ Carbon neutrality is very challenging issue to Korea, which has energy over-consumption industries.
  - ✓ Carbon Peak set up by 2030 but it may not be realistic.
  - ✓ Still, the portion of electricity has been generated by coal is about 40%, which is relatively high comparing to US(24%), Japan(32%), and Germany(30%) in 2019.

# III. Challenges in Manufacturing Industry in Korea

- Action Plan for Carbon Neutrality by 2050: Visions & 3+1 Strategy



## IV. Current Industrial Issues in Namibia

- Comparison between Korea and Namibia (CIA factbook)

	Korea	Namibia
Industrialization Start	Korean War (1950~1953)	Independence (1990)
Area (km <sup>2</sup> )	99,720	824,292
Population	51,966,948 ('23 est.)	2,777,232 ('23 est.)
Ethnic	Homogeneous	Ovambo 50%
GDP_PPP	\$ 2,289 billion ('23 est.)	\$ 23.12 billion ('21 est.)
GDP per capita, PPP	\$ 44,200 ('21 est.)	\$ 9,100 ('21 est.)
Industries	electronics, telecommunications, automobile, chemicals, shipbuiding	mining, tourism, fishing, agriculture
Exports	\$ 771 billion ('21 est.) China(24%), US(15%), Vietnam(9%)	\$ 3.955 billion ('21 est.) China(29%), South Africa(20%)
Imports	\$ 698 billion ('21 est.) China(24%), US(12%), Japan(9%)	\$ 6.055 billion ('21 est.) South Africa(40%), Zambia(20%)
Natural Resources	Coal, Tungsten, Graphite	Diamonds, Copper, Uranium, Gold, Silver, Lead, Tin, Lithium, Cadmium, Tungsten, etc
Climate	Temperate	Desert

## IV. Current Industrial Issues in Namibia

- **Lack of Scaled Economy**
  - ✓ Small size of population and low urbanization
- **Lack of Capital Accumulation**
  - ✓ Generating vicious circle
- **Lack of Social Consensus**
  - ✓ Geographical distance & emotional distance
- **Lack of Industrial Infrastructure**
  - ✓ Infrastructure for manufacturing and human resources
  
- **Abundant Natural Resources**
  - ✓ How to add value with these natural resources

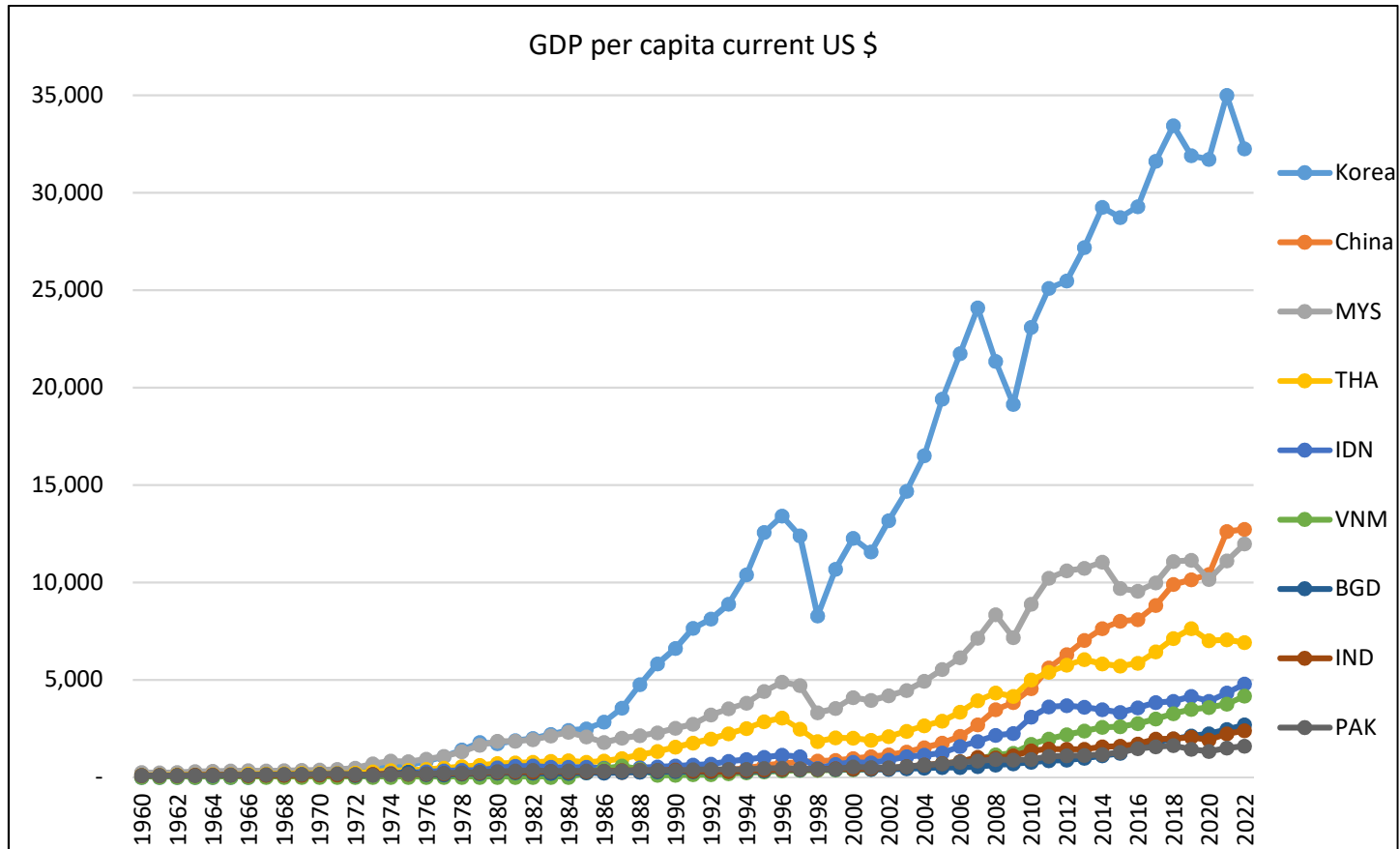


## V. Implication for Namibia

- **Golden Rule for Economic Development**
  - ✓ Importance of Manufacturing
  - ✓ Compressed Growth but not possible to skip
  - ✓ Investment is necessary but not sufficient
  - ✓ Industrial Development Plan and Linkage
  - ✓ Good leadership
  - ✓ Qualified Human Resources

## V. Implication for Namibia

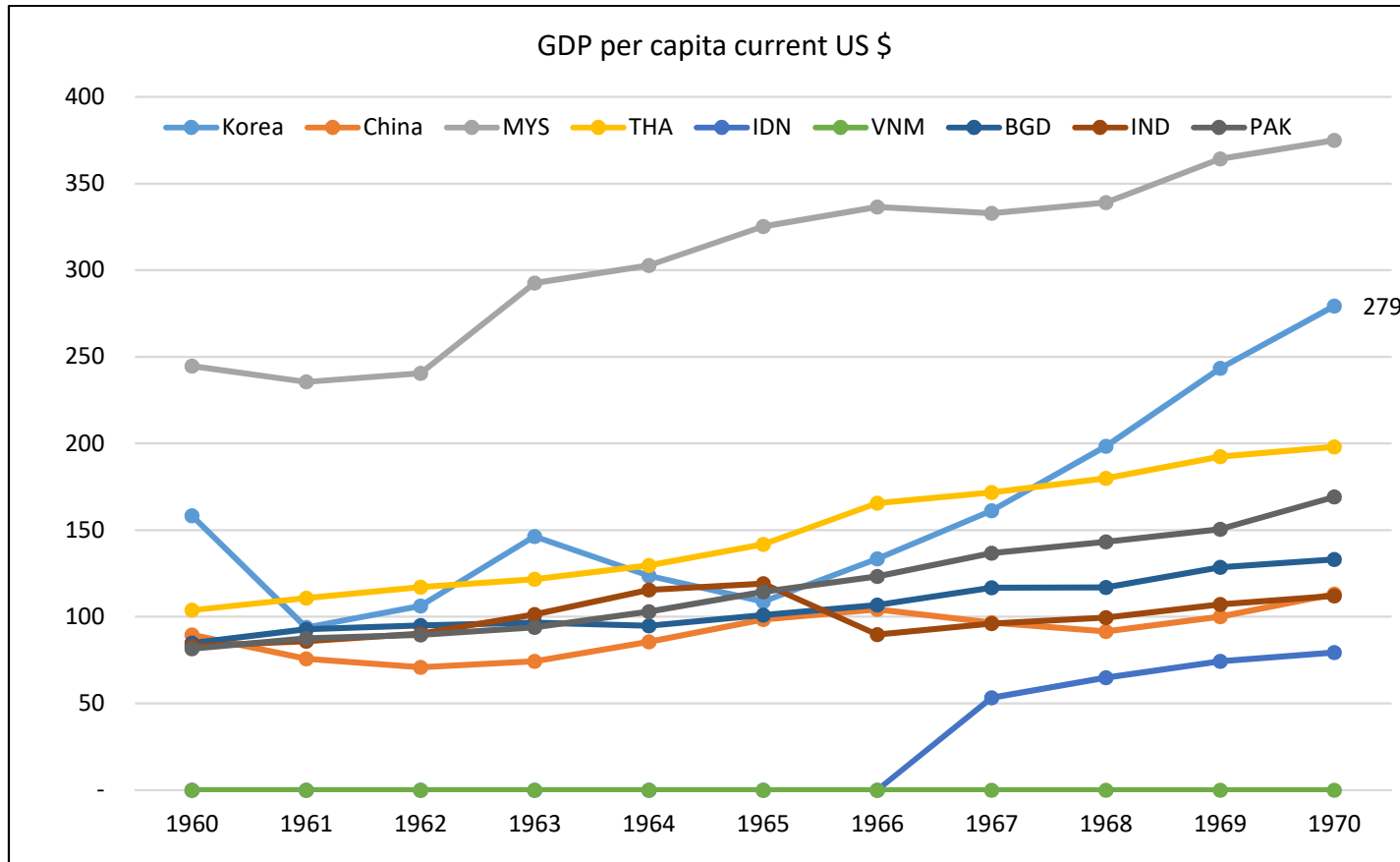
- Strong Leadership with Transparency



Source: World Development Indicator, Worldbank

## V. Implication for Namibia

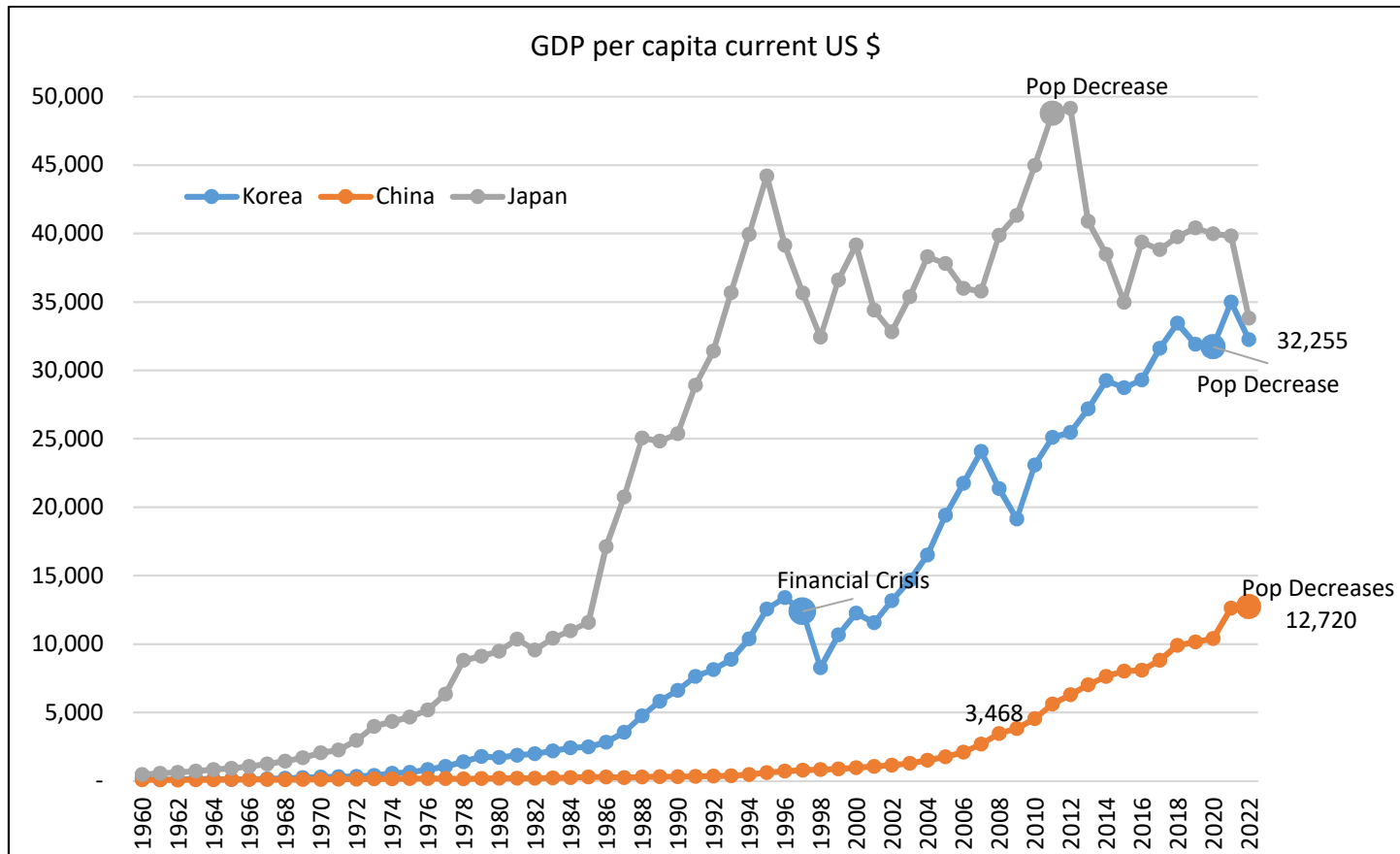
- Capacity Building including Infrastructure



Source: World Development Indicator, Worldbank

# V. Implication for Namibia

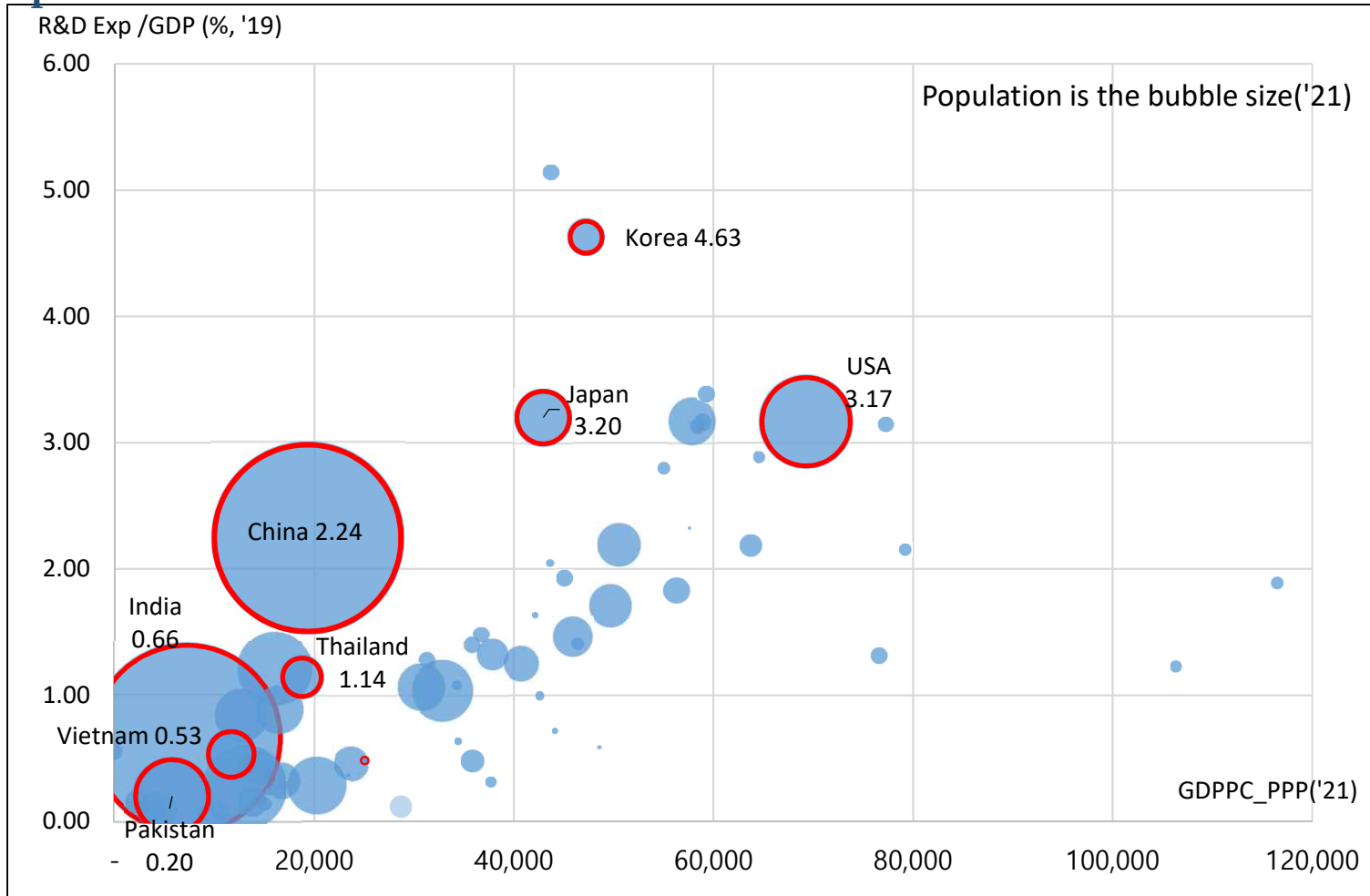
- Open to the Global Economy



Source: World Development Indicator, Worldbank

# V. Implication for Namibia

- Importance of Investment

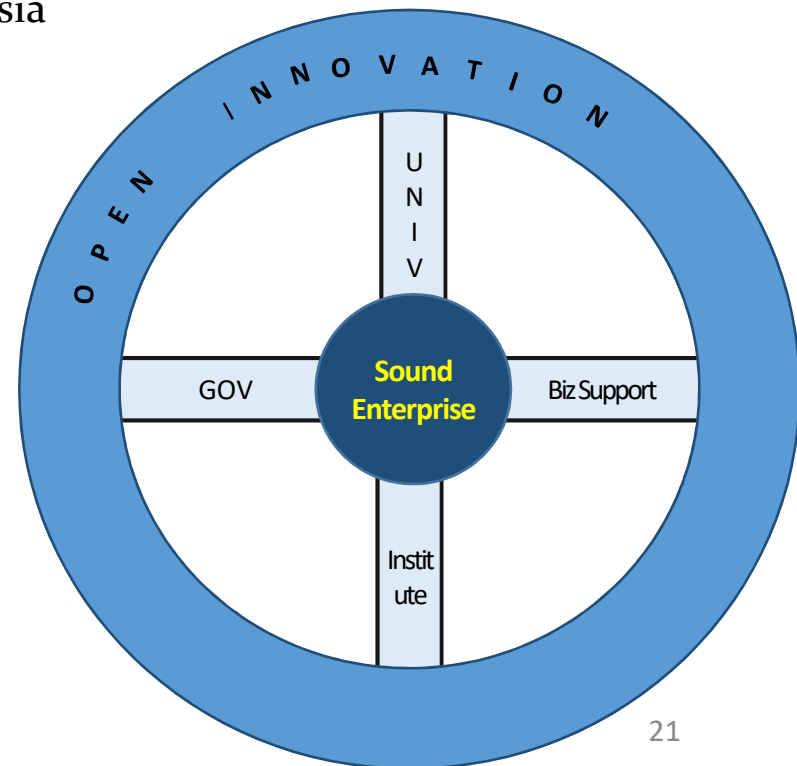


Source: World Development Indicator, Worldbank

## V. Implication for Namibia

- **Golden Rule for Industrial Development**
  - ✓ Balanced Industrial Structure by Selection & Concentration
  - ✓ Establishment of Industrial Ecology.
  - ✓ Building Infrastructure
  - ✓ Good Institution: proper regulation
  - ✓ Utilizing FDI for internalization: China vs Malaysia

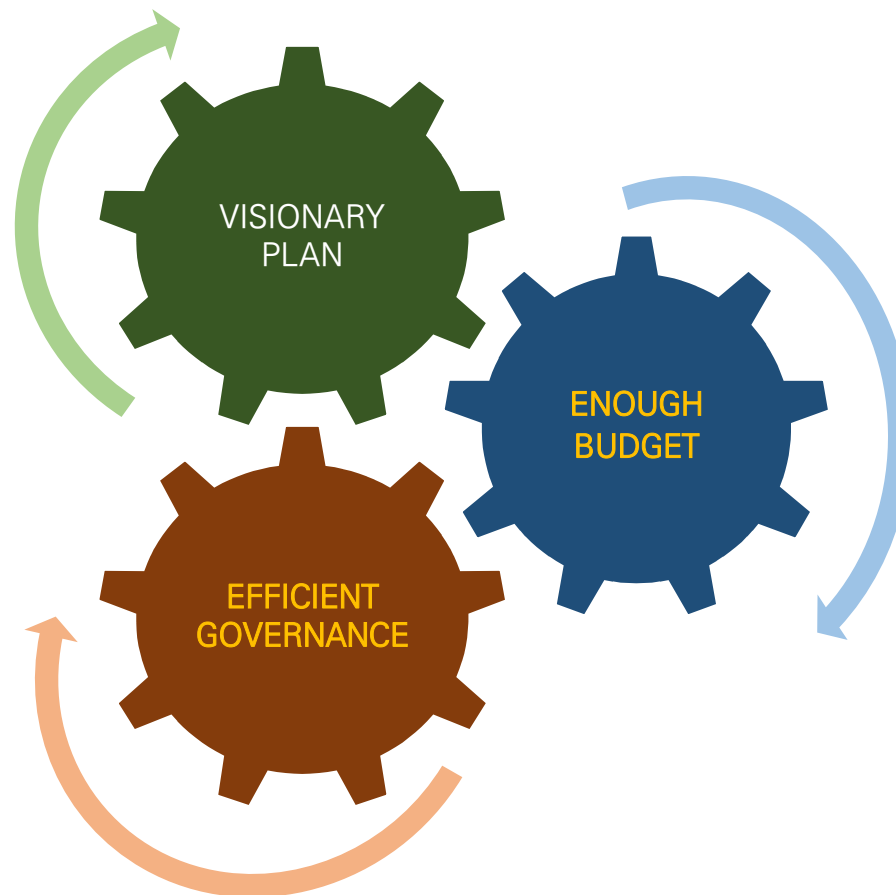
To be drivable, hub should be strong enough and spokes should have same length.



## V. Implication for Namibia

- **Golden Rule for Industrial Development**
  - ✓ THREE Components for industrial development.
  - ✓ Social consensus is lubricating oil.

Vision 2030  
through NDP



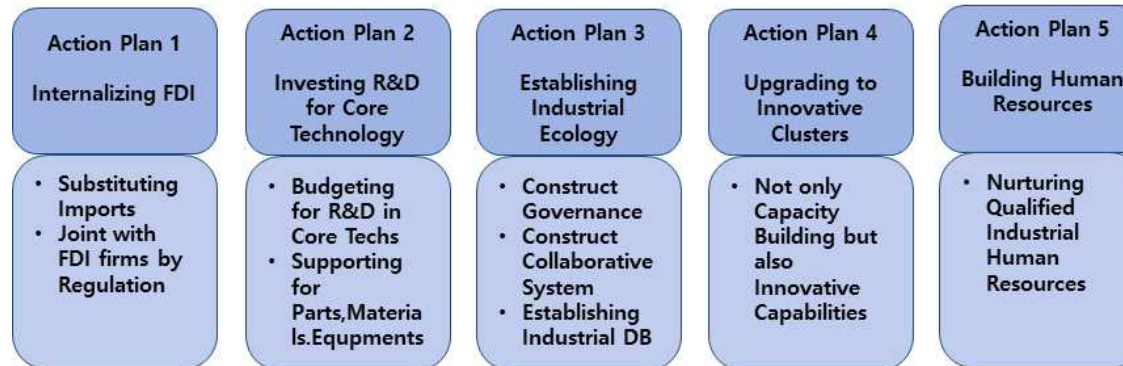


## V. Implication for Namibia

- **Industrial Development Plan**
  - ✓ Select & Target some sectors STRATEGICALLY
  - ✓ Establishment of Industrial Ecology.
  - ✓ Building up Human Resources

**VISION : Enhancement of Industrial Competitiveness by Establishing Industrial Ecology**

**Goals : Replacing Imports, Building Industrial Infrastructure, Establishing Ecology**



## V. Implication for Namibia

- **Governance**

- ✓ Transparent & Efficient Governance for Planning, Operating, and Evaluation
- ✓ R&D for technology & nurturing human resources

