

Policies & Roadmap for National Competitiveness & Innovation of Costa Rica

- I. Knowledge Economy & National Competitiveness
- II. Global Economic Trends
- III. Korea & Costa Rica
- IV. Policy Recommendation

Ji-Hong Kim
KDI School
(jihkim@kdischool.ac.kr)

Why Innovation?:Key messages

Costa Rica – Happiest country

High income country in Latin & Central America

Continent or Island?

World environment has changed: **Knowledge economy**

Innovation is a important necessary element (but **not sufficient**);
for **National Competitiveness** & for **Growth & Job creation**


Innovation is more than R&D. **Innovation** in 4 rules X 5 pillars (**broad & integrated** ways).

Inter-Ministry Coordination needed: Competitiveness Promotion Council (CPC)

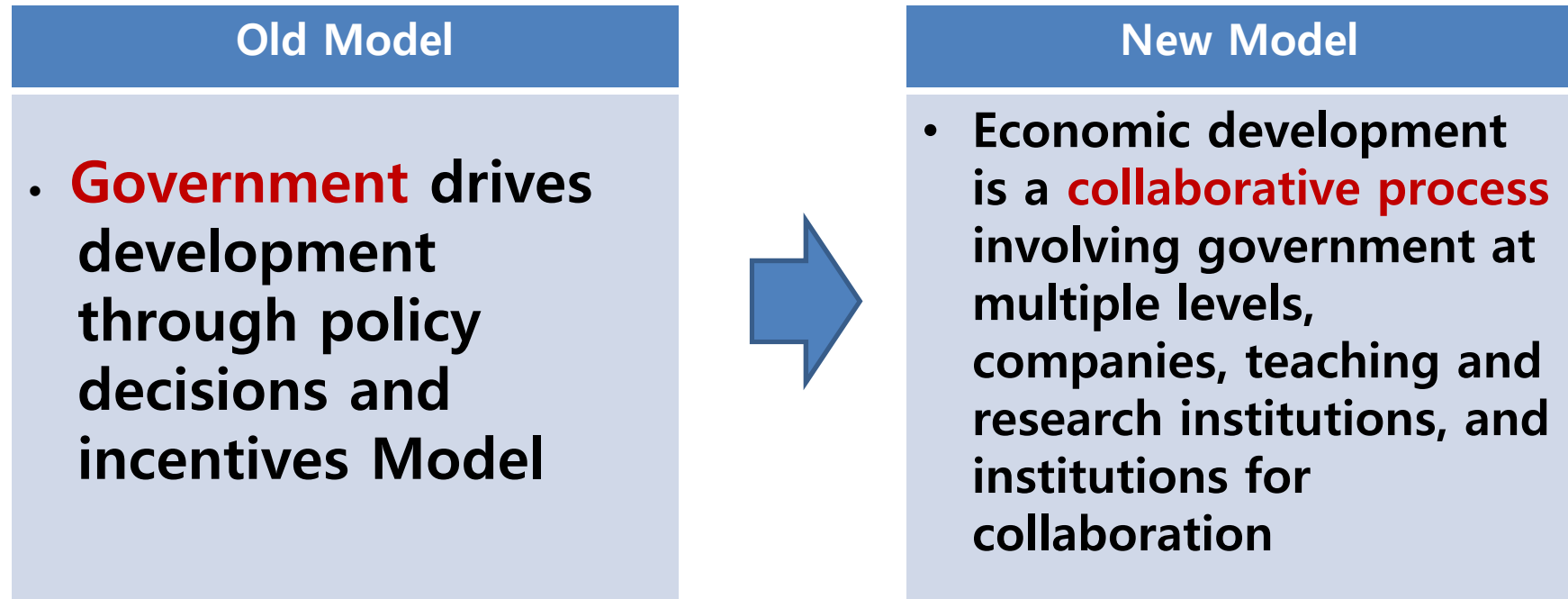
Action Plans: Several **Breakthrough Projects** suggested:

- - Advanced Railway & Highway (toll road) Eastward (San Jose-Limon/Moin)
- - Free Trade Zones at Hub Ports (Limon/Moin and Pacific coast)
- - Advanced Highway and Railway Westward (San Jose-Caldera)
- Link with Inter American Highway
- Reform in university, upgrade TVET (technical & vocational training)
- Red-Tape-Free Industry Cluster, IT support program for SMEs,
- Government Personnel Evaluation System, etc

1. National Competitiveness

- National Competitiveness traditionally based on
 - Capital and labor costs
 - Costs of inputs and infrastructure services
 - General business environment and ease of doing business (including macro stability, taxes, x rate, etc)
 - Superiority in technology or management
- 
- But it is increasingly being based on
 - Quality, skills and flexibility of **labor force (and management)**
 - Ability to **redeploy resources** to take advantage of those changing opportunities
 - Ability to constantly keep up with rapidly changing **technological and organizational advances**
 - Ability to make effective use of **information technologies** to reduce transactions costs and improve capacity to respond quickly to changing opportunities and threats
 - Effective physical and logistic **infrastructure** to reach markets

Shifting Responsibilities for Economic Development



- Competitiveness must become a **bottoms-up process** in which citizens take responsibility
- **Every** community and cluster can take steps to enhance competitiveness

II. Global Economy Trends

- Increasing **globalization**
- Acceleration in the **creation** and **dissemination** of knowledge
 - Internet, WTO, etc
- Increasing importance of **knowledge**
 - Investments in knowledge greater than investments in physical capital in advanced countries
 - High technology goods and knowledge intensive services increasing as share of GDP
 - Increasing R&D
- Competitiveness is increasingly based on innovation, education, and skills

- Influences on National Competitiveness
 - Multiple Geographic Levels**
 - : World economy - Neighboring countries - Nations
 - Provinces – Cities - Rural area

Global Value Chains

- International Production Networks:
dispersion of production stages across countries
and corresponding intra-industry trade
- Network of activities, firms, industries and countries
- Reallocation of resources across a growing number of countries: (ex) low skilled labor
- More specialization and complex production relationships, profound changes in countries' competitiveness
- Global flows of goods (final and inputs), services, capital, people, technology
- **Link** with **Global** and **Domestic Value Chains**:
need innovation cluster and infrastructures(harbor, road)

Global Value Added & Economic Policy

National Value Proposition

- What is the **unique competitive position** of the nation or region given its location, legacy, and existing and potential strengths?
 - What roles in the world, the region, and the broader world?
 - What unique value as a business location?
 - For what range and types of activities and clusters?

Developing Unique Strengths

- What **elements of macroeconomic competitiveness** and the **business environment** are crucial priorities?
- What **existing and emerging clusters** should be developed first?

Achieving and Maintaining Parity with Peers

- What **weaknesses** must be addressed to achieve parity with peer countries?

- **Priorities and Sequencing** are necessity in economic development

Regional Economic Strategy

- Defining a strategic role for the region in the continent and the world economy
- Opening **internal** (domestic) trade and investment (link)
- Achieving synergies in enhancing the business environment
- Facilitating **cross-border** cluster development
- Enhancing company capabilities and non-traditional exports



- Raising productivity
- Increasing the **attractiveness** of the region as a whole for foreign investment
- Winning greater support from the international community
Accelerating economic policy at the national level

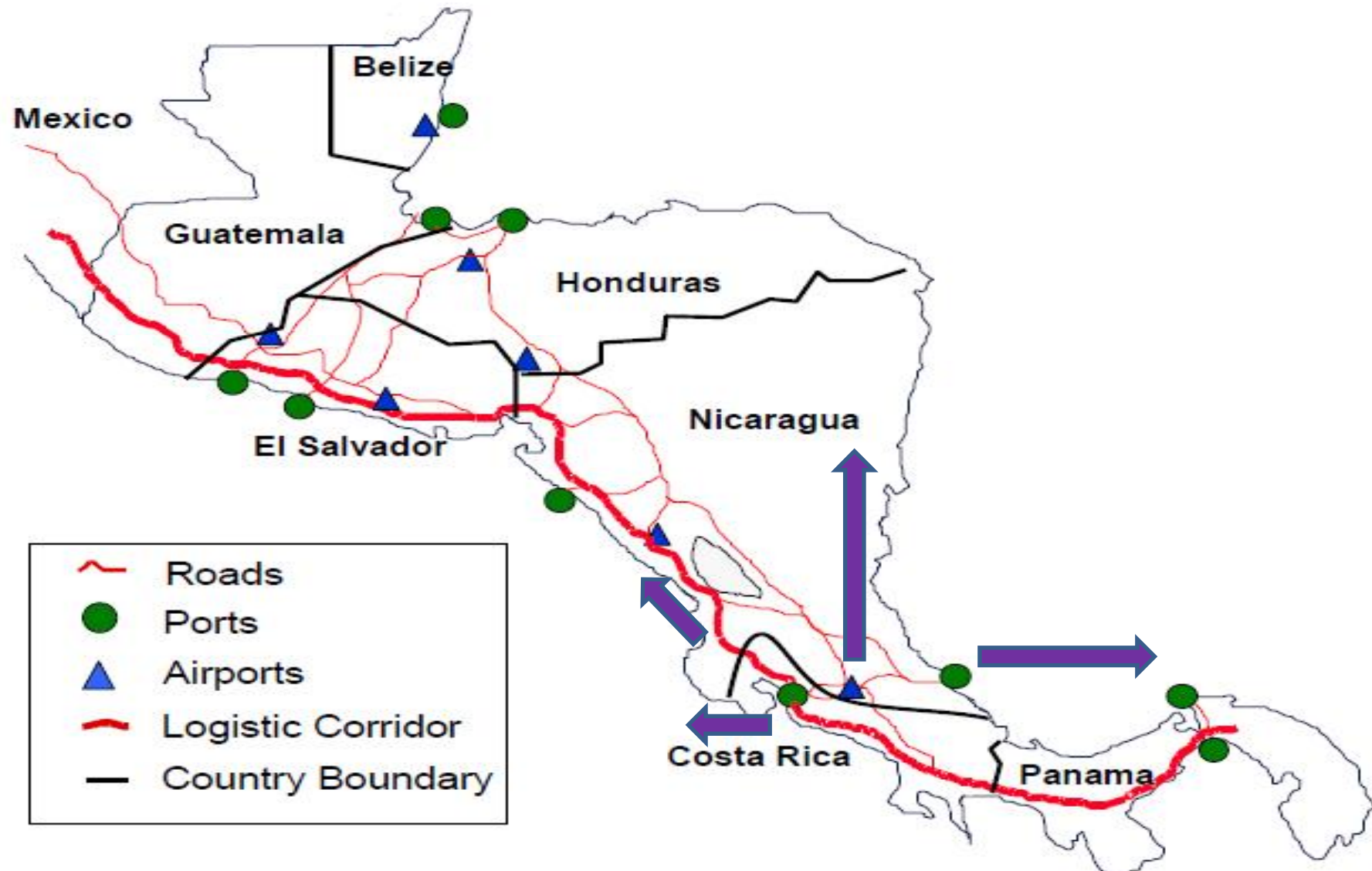
But

• Cross-national collaboration is not a substitute for national microeconomic reforms

Strategy for Cross-National Regions Central American **Logistical Corridor**

(How to be linked with Global Value Chains?)

(Is Costa Rica a part of Continent or an Island?)



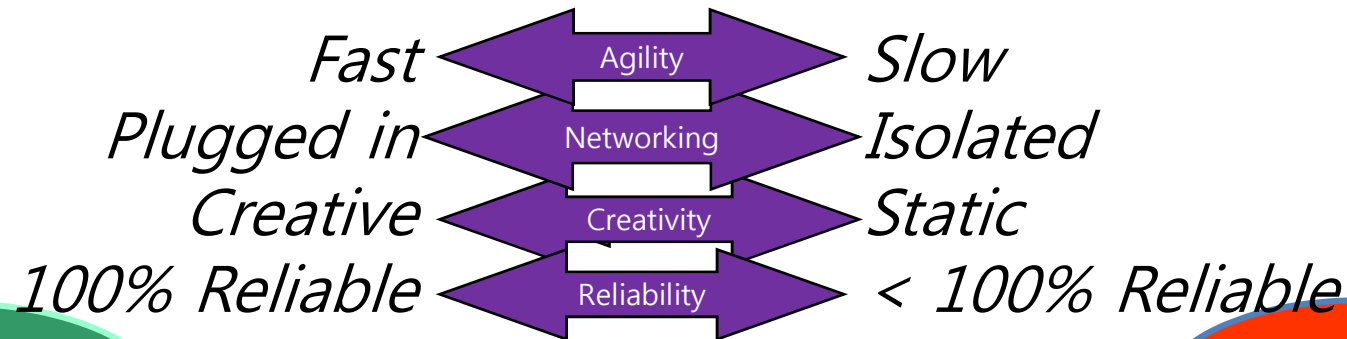
The new world economy raises the bar for everyone.

Economic Revolution

Technological Revolution

New World / Knowledge Economy

New Rules of The Game



Unprecedented Opportunities

Unprecedented Stresses

(source: Jean F. Richard)

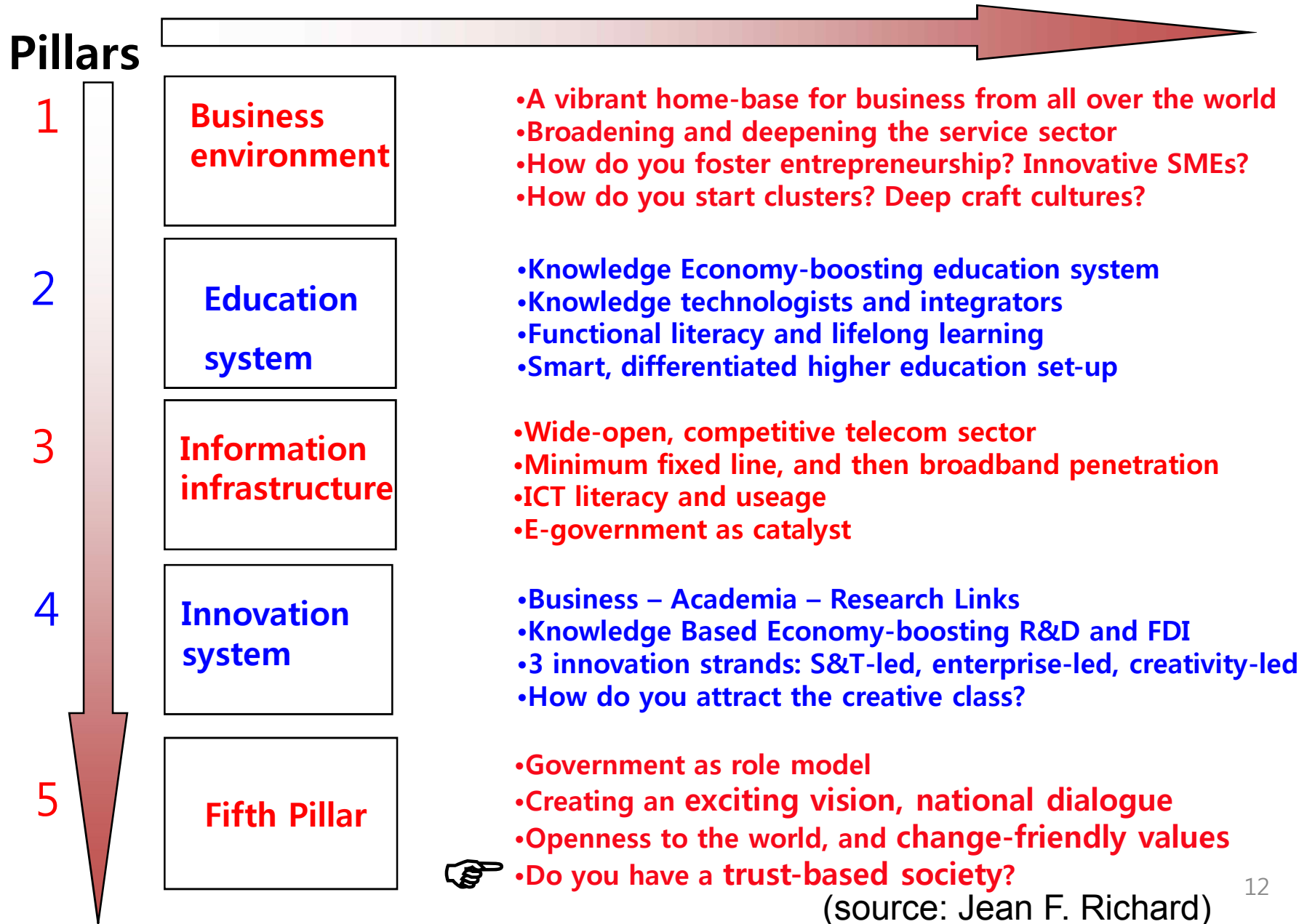
1. Think Different

Innovative nations: building a KBE advantage means adopting a KBE mindset

	<u>Liberalization Mindset</u>	<u>Modernization Mindset</u>	<u>Knowledge-based Economy Mindset</u>
Is about:	Undoing things	Building things	Building winning opportunities
Creates:	<ul style="list-style-type: none">• Freedom• Fluidity• Even playing field	<ul style="list-style-type: none">• Modern institutions• Rule of law• Good basic business environment	<ul style="list-style-type: none">• Vision• A winning mentality• A vibrant home-base for business
Main Focus:	Stability, incentives	Productivity catch-up	Becoming globally competitive
Domain:	Economy	Economic, Social	Societal
Government Role:	<ul style="list-style-type: none">• Get out of the way• Stop being an operator	<ul style="list-style-type: none">• Become a good regulator	<ul style="list-style-type: none">• Become a challenger• Become an integrator

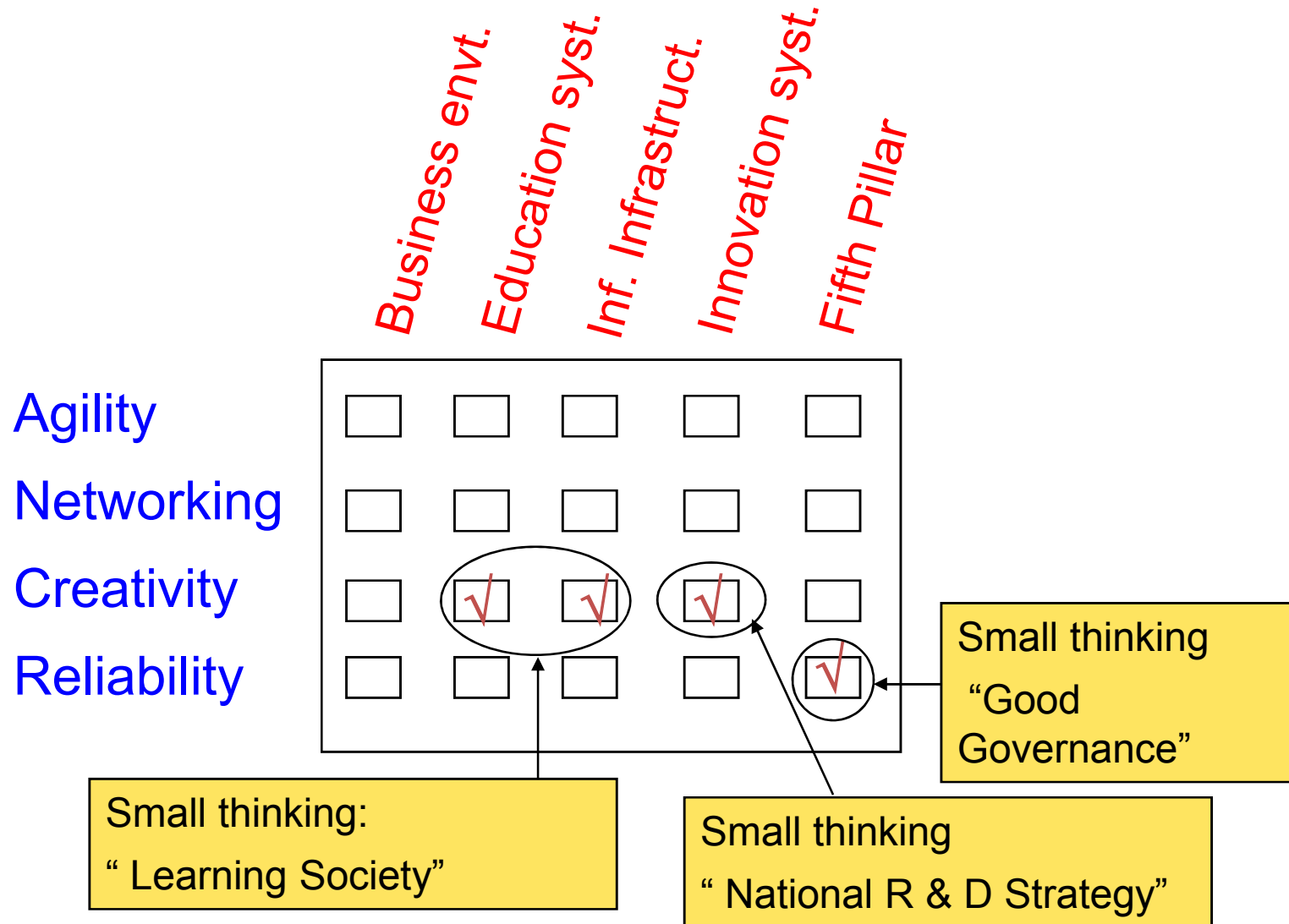
2. Think Broad

Building a KBE advantage means going for a KBE paradigm



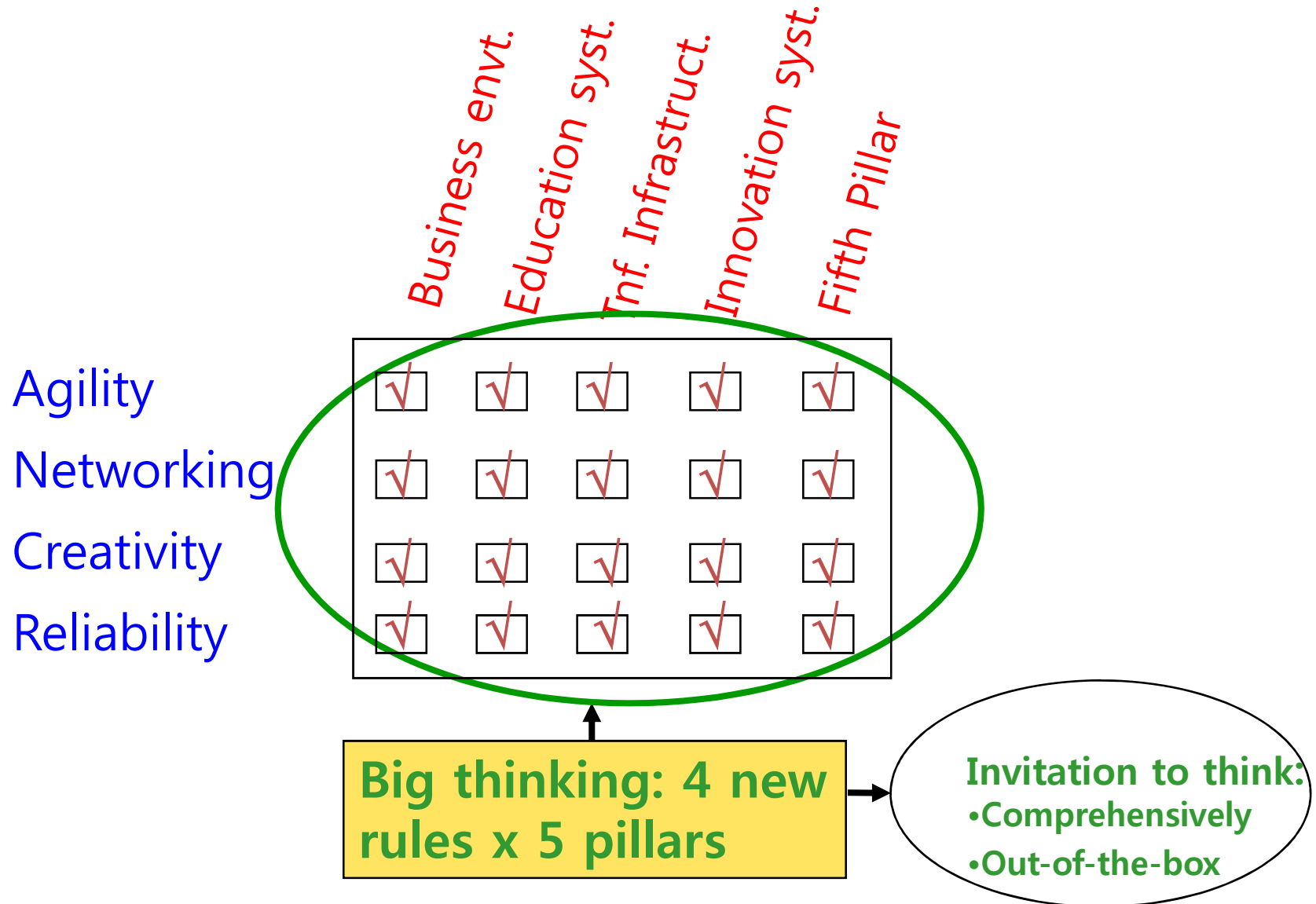
3. THINK INTEGRATED

BUILDING A KBE ADVANTAGE MEANS COVERING ALL THE BASES



3. THINK INTEGRATED

BUILDING A Knowledge Economy ADVANTAGE MEANS COVERING ALL THE BASES



4. Think New & World Class

Building a KBE advantage means re-inventing things: education as an illustration

Higher Education

- Traditional University Setup → New vision with multi-tiers
- Traditional Graduate Pattern → Knowledge integrators, Creative class
- Ivory Tower Practices → Academic-Business links
Use of Distance Learning
More Private Supply of Higher Education

Education Beyond School Walls

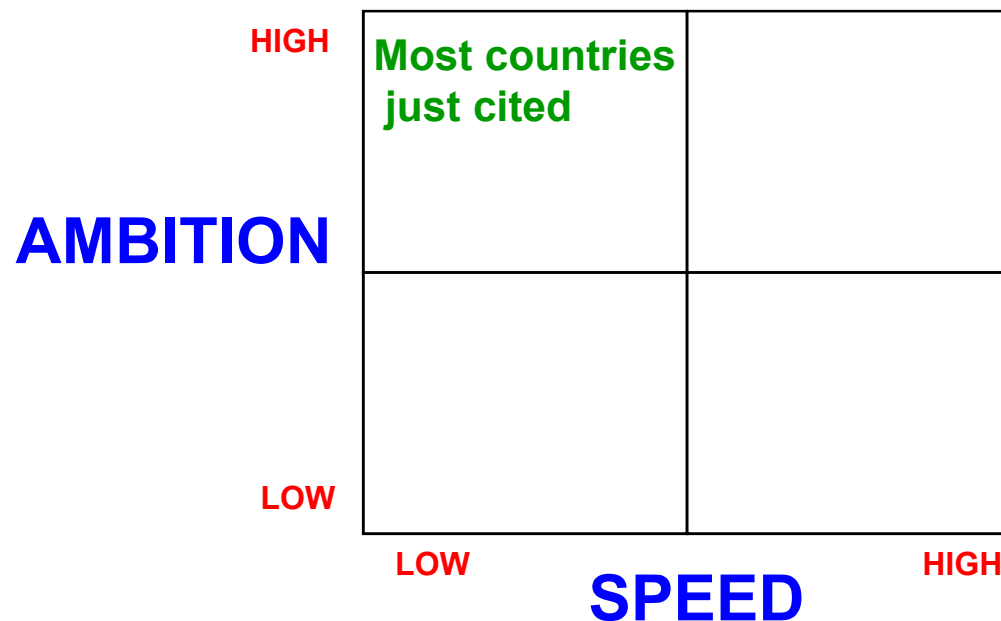
- Relying on formal degrees → Accreditation of skills
- One-Time Learning → Life-Long learning
- Knowledge by Individual learning → Knowledge through Networks
- Self-centered education system → Link with International partners, diaspora
- Old style Education Ministry → Education Ministry as a Knowledge Based conomy

5. THINK PROCESS

BUILDING A KBE DEMANDS MOBILIZATION, AMBITION, AND SPEED

In most countries, Traditional processes are unlikely to have sufficient leverage, potency and speed.

- Process often breaks down, or normal administrative channel is slow route.
- Hare to package into a nation-mobilization campaign (Resistance Risk aversion expected)



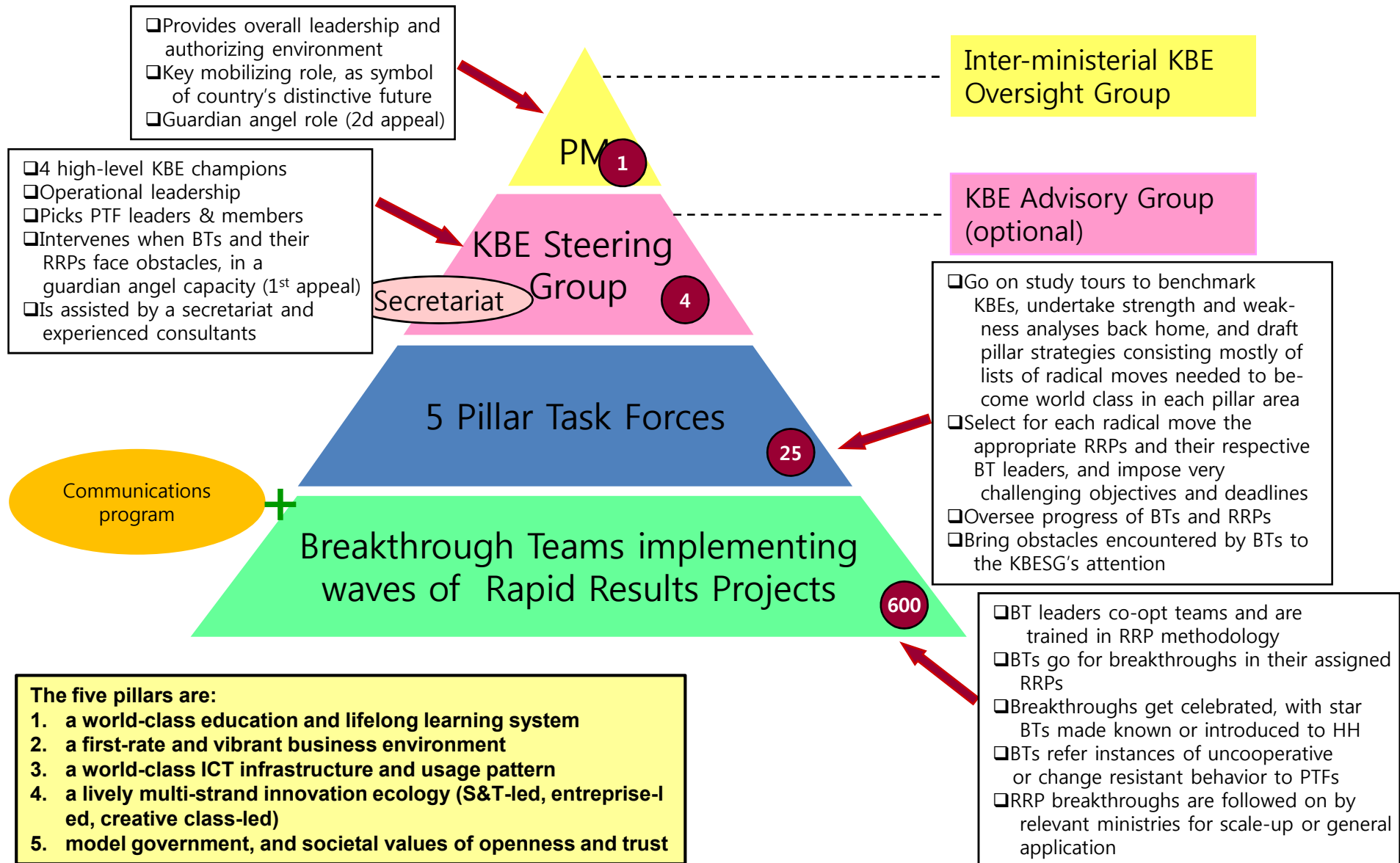
New processes squarely designed for **decisiveness, boldness and rapid execution**

- On the go strategizing immediately followed by implementation through breakthrough teams
- Breakthroughs under radical move through rapid results projects entrusted by Pillar Task Forces (need for **breakthrough projects for 5 pillar areas**).
- Pass the baton back to normal administrative channels for scale-up or general application

BUILDING A KBE DEMANDS MOBILIZATION, AMBITION, AND SPEED

5. Think Process

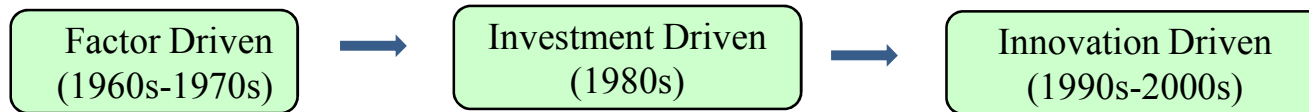
AN EXAMPLE OF A KBE CAMPAIGN SET-UP AND PROCESS



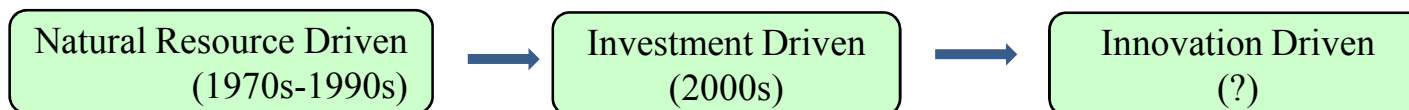
III. Korea and Costa Rica

- South Korea achieved both Economic Development and Democratization at different stages

- Stages of Economic Development

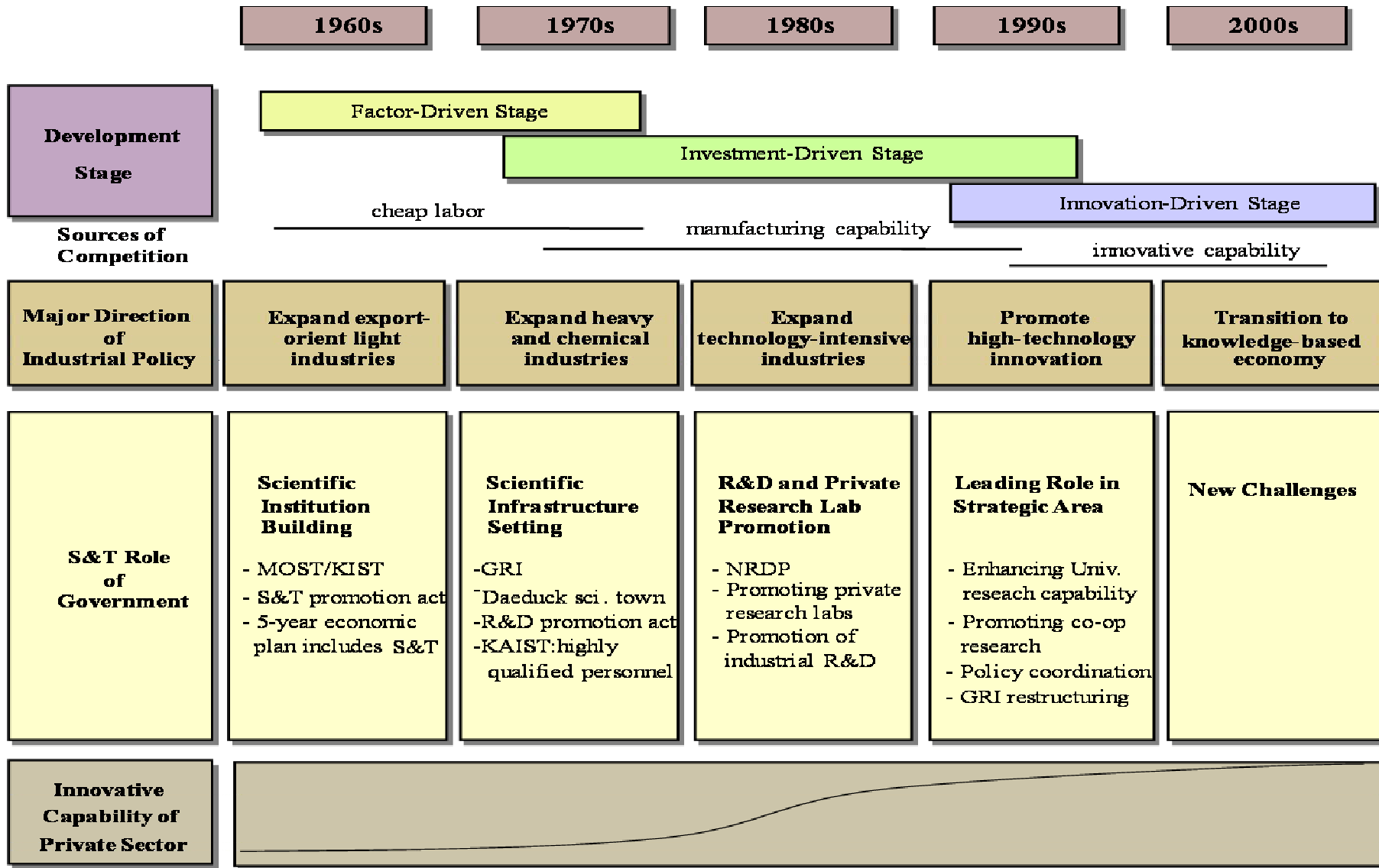


- Costa Rica has to enter Innovation Driven stage from Factor Driven stage and Efficiency Driven stage.
 - It can have positive and negative impact on Economic Development.



	Resource led growth (1990s)	Efficiency led growth (2000s)	Innovation led growth (?)
--	-----------------------------	-------------------------------	---------------------------

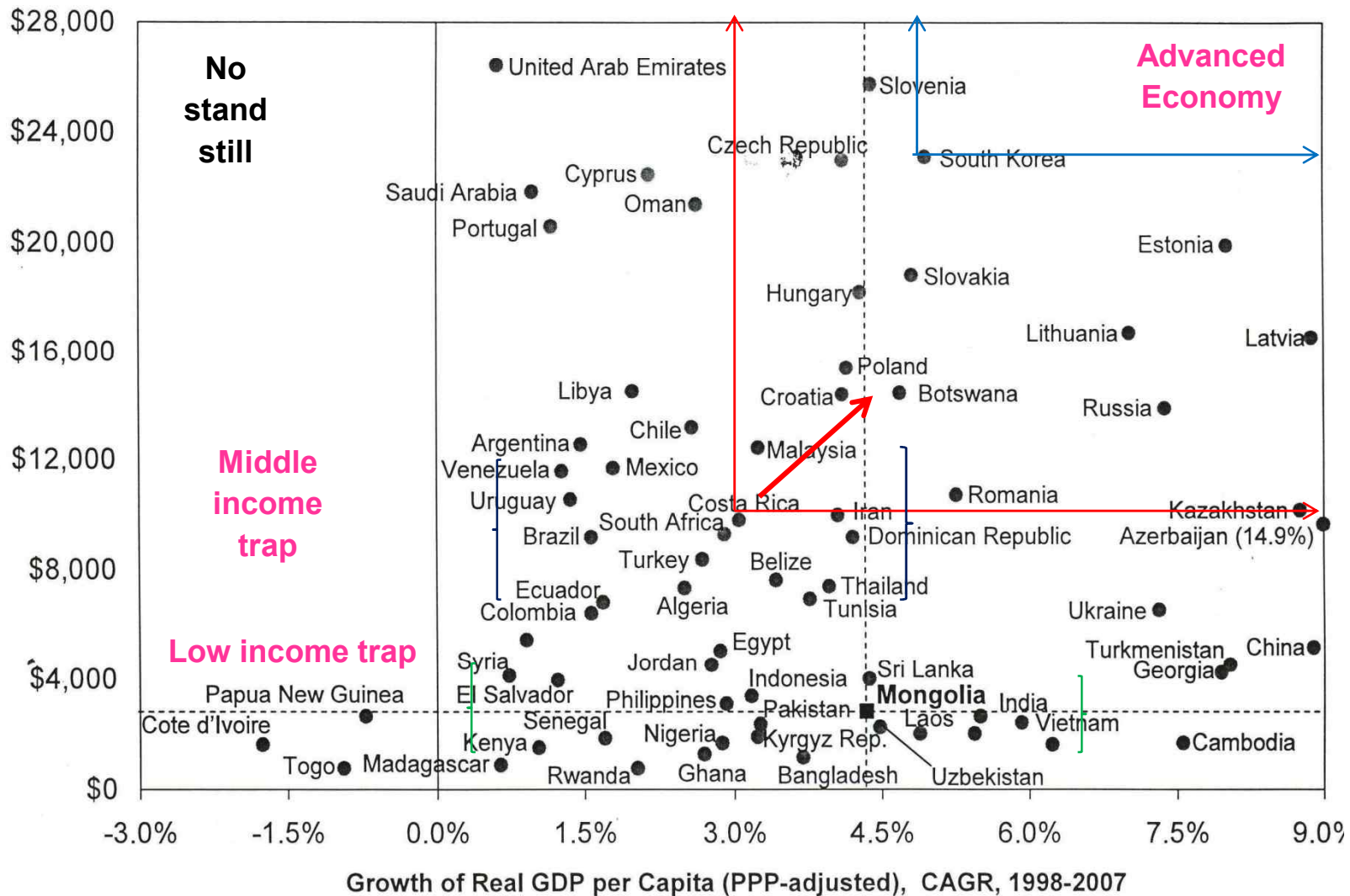
Three stages of economic growth in Korea



Prosperity Performance

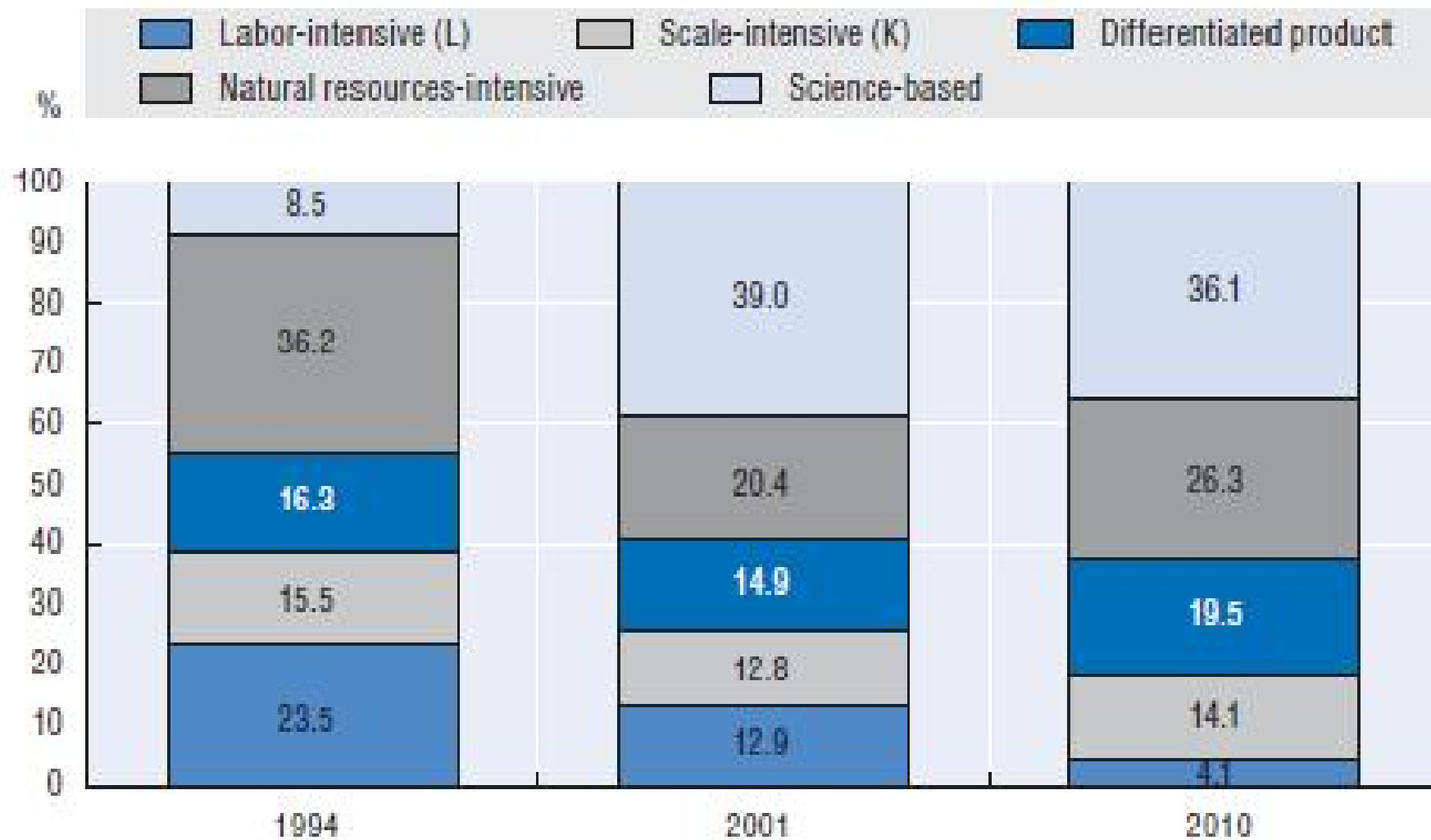
Selected Middle- and Lower-Income Countries

PPP-adjusted GDP
per Capita, 2007



Source: EIU (2008), authors calculations. Mongolia data for 1998-2006, from World Development Indicators

Structure of Industrial Exports by intensity in the use of factors of Production



Source: PROCOMER.

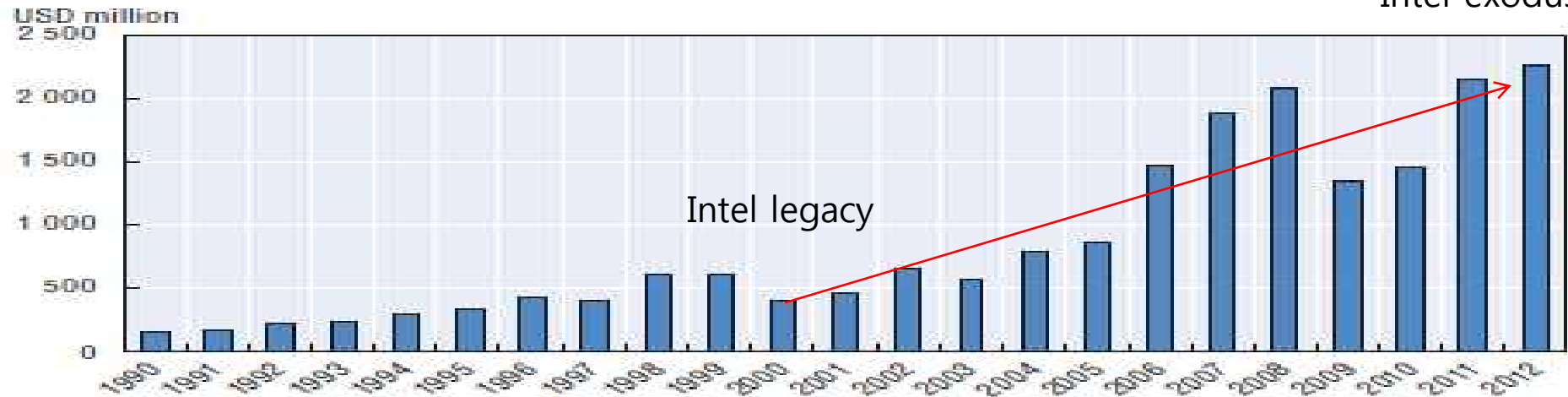
Evolution of the policy model in Costa Rica, 1950-2011

	1950-70	1980-mid-1990s	Mid-1990s-2012	Towards a new model?
Economic development model	Industrialization via Import Substitution (ISI)	Liberalization and opening of the economy	Growing by export diversification	Innovation-led growth (Costa Rica as a knowledge economy)
Main priorities	Creating domestic institutional and production capabilities; Upgrading traditional sectors	Attracting FDI; Promoting non-traditional exports	Supporting export diversification; Attracting FDI in technology-intensive sectors	Mobilizing FDI as a leverage for national development; Increasing the density, quality and dynamism of the innovation system
Main newly-founded institutions	CODESA (Corporation Costarricense de Desarrollo) INA (National Institute for Learning)	COMEX (1986) PROCOMER (1968 and 1981) CINDE (1982) MICIT (1986)	Presidential Council for Competitiveness and Innovation (PCCI) (2010)	Empowering the PCCI; Strengthening the MICIT and the Ministry of Economy
Policy tools	State-owned companies and credit support to priority sectors	FTZ (1981) Fiscal credits for non-traditional exports – CATs (Certificados de Abonos Tributarios) Active promotion of CR as investment location (CINDE before and aftercare services)	Reforms to the FTZ (2009) incentive package – extension of incentives to companies outside industrial parks Definition of new priority and strategic sectors/ activities, including R&D (2010) Incipient grants to human resources (HR) training (in partnership with MNCs) Support to local companies development (PROPYME)	Targeted support to skills development (technical and engineering capabilities) Creation of domestic research capacities in specific areas and creation of incubation support (Techno Parks) Rising articulation between FDI promotion, innovation promotion and industrial promotion
Priority markets and trade partners	Focus on domestic market	United States	United States Central America and DR (CAFTA-DR) Canada Mexico European Union	United States Asia Latin America European Union

Source: Attracting Knowledge – Intensive FDI to Costa Rica, OECD.

FDI inflows to Costa Rica 1990-2012

Intel exodus?



Notes: Figures for 2012 are preliminary.
Source: COMEX based on Central Bank.

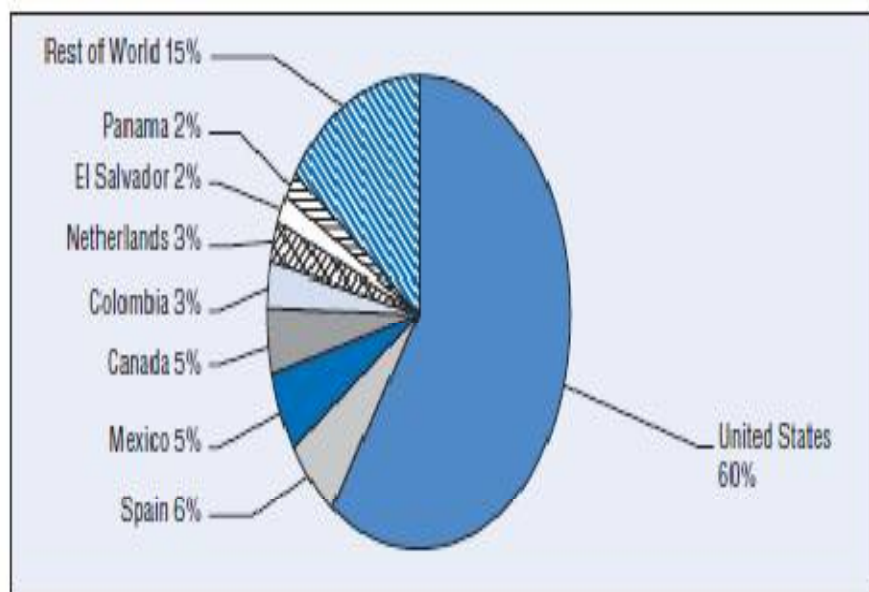


Source: World Bank Development Indicators

Source: OECD Investment Policy Reviews Costa Rica, OECD

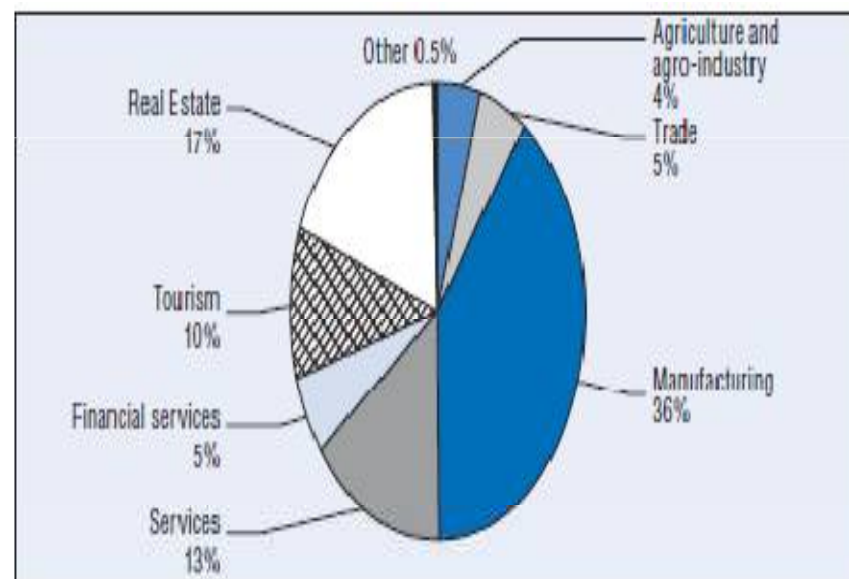
FDI in Costa Rica (2000-2012)

Cumulative FDI Inflows (2000-2012)



Source: COMEX, based on author's calculations.

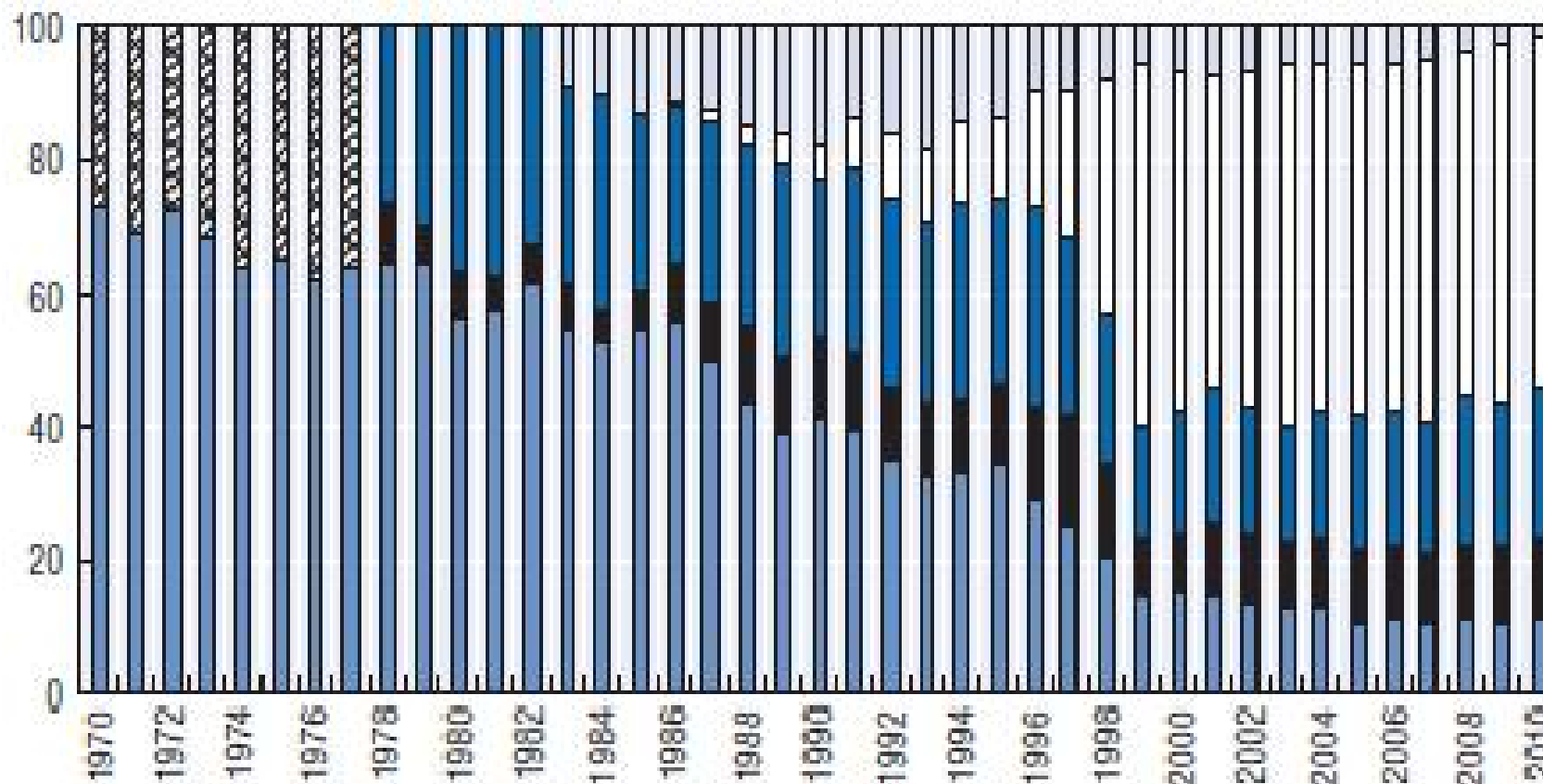
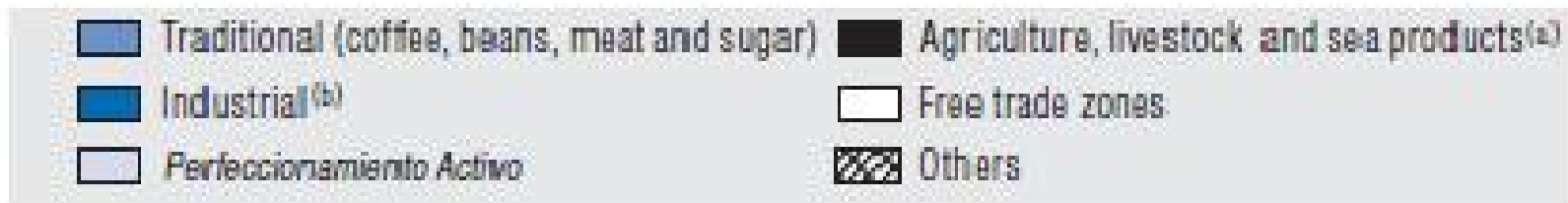
Cumulative FDI Inflows by sectors (2000-2012)



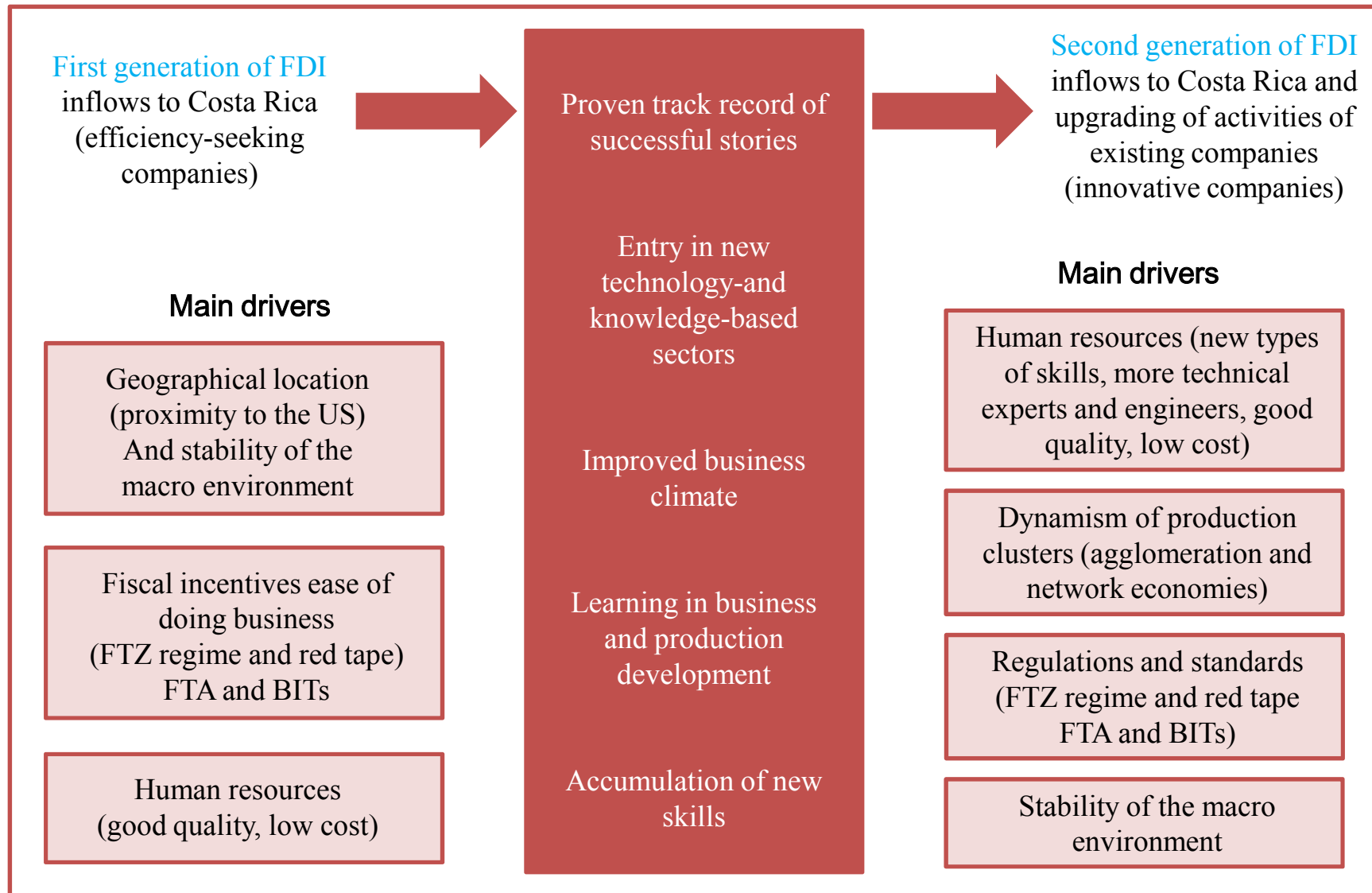
Source: Central Bank, CINDE, PROCOMER, COMEX and Costa Rica Tourism Board, based on author's calculations.

Share of Exports by Sector, Costa Rica 1970-2010

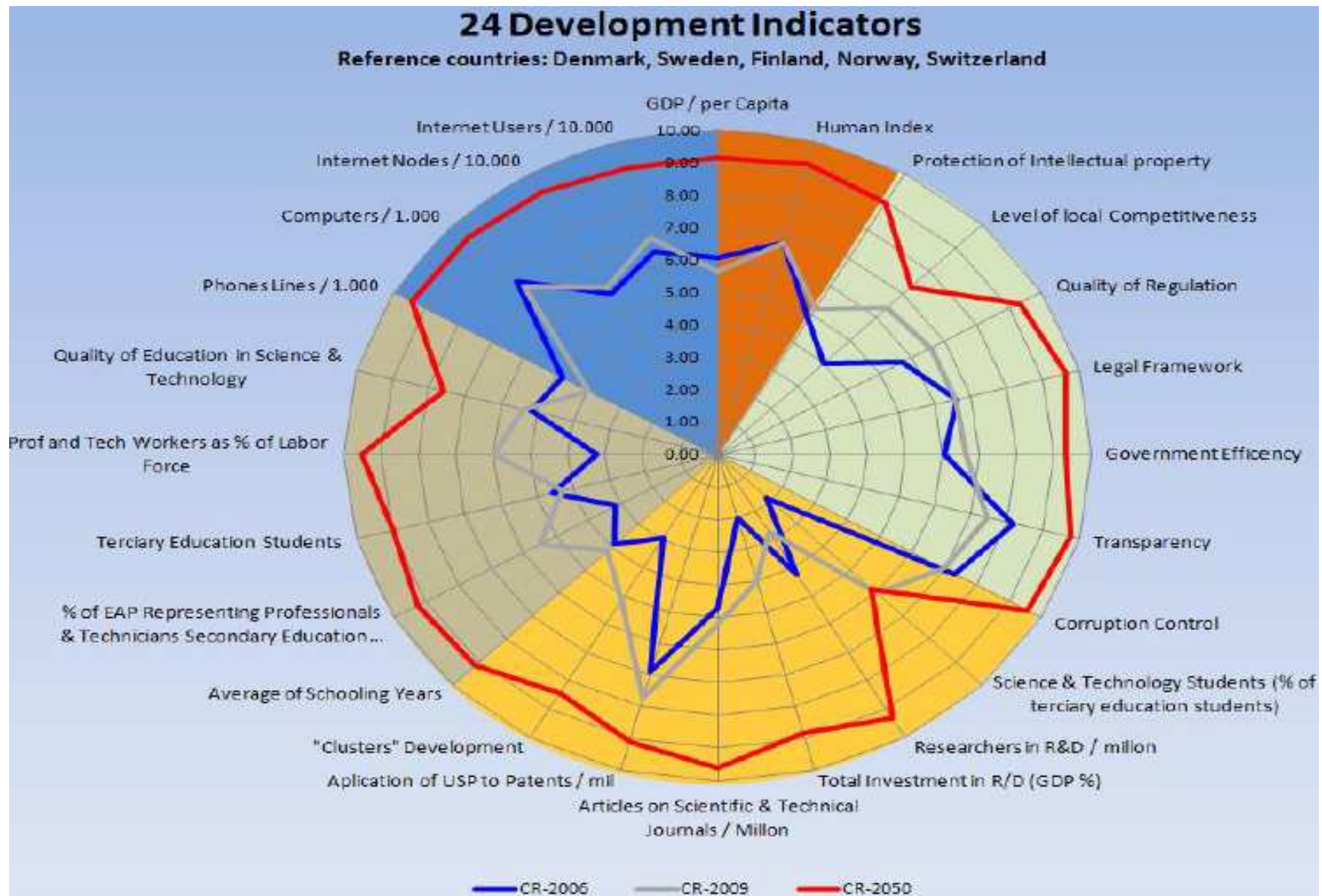
(How to be linked to [Global Value Chains?](#))



Changing drivers for FDI attraction: first and second generation of FDI in Costa Rica

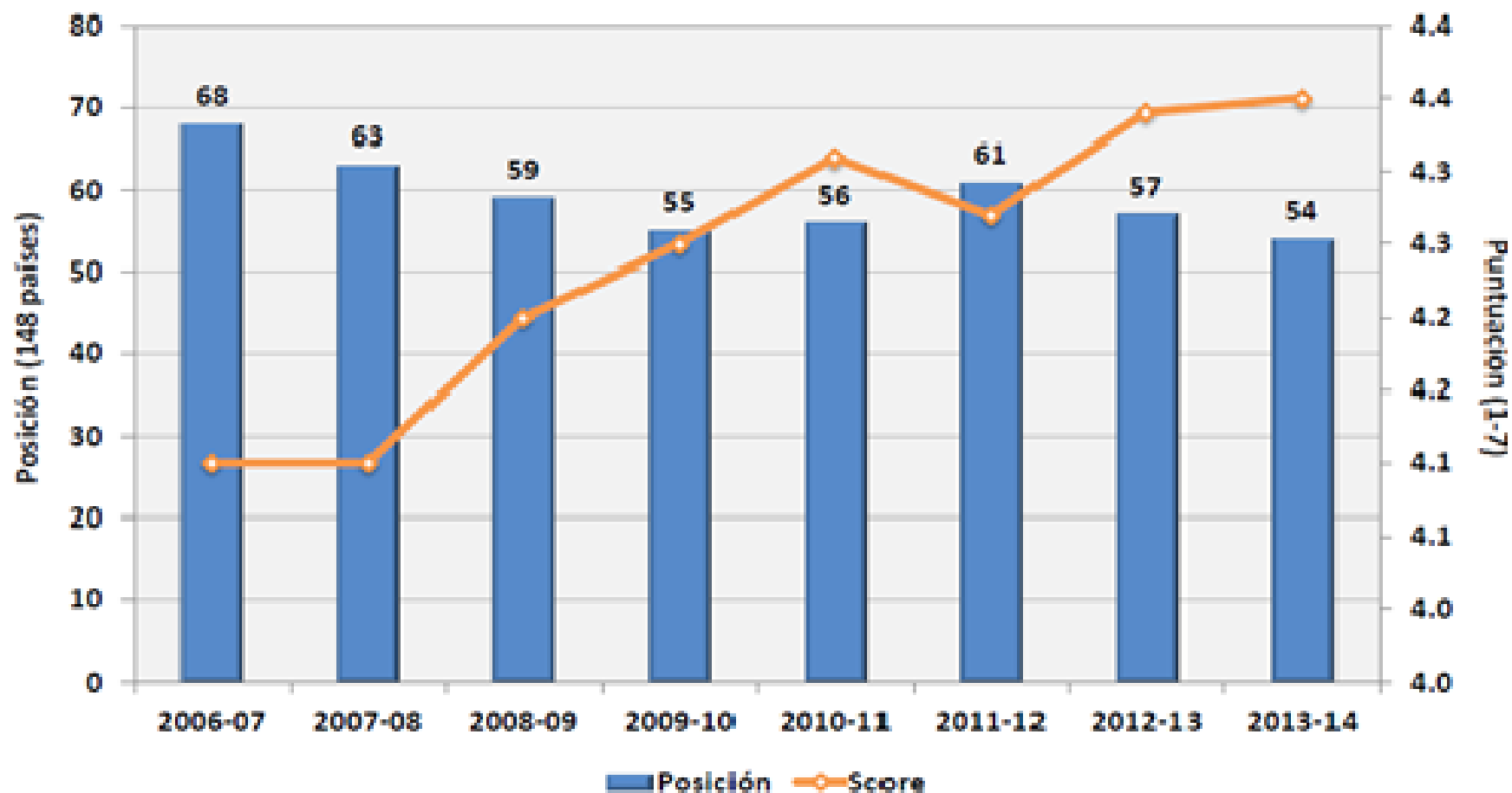


Development Indicator : Costa Rica



Source : Knowledge Assessment Methodology, World Bank

Trend of Competitiveness Index (Costa Rica)



Fuente: Informe de Competitividad Global (varios años), Foro Económico Mundial.

Source: World Economic Forum

Competitiveness Index : Comparison with peer group

Economic growth potential and performance are determined by the most binding constraints (weak areas)



Weak Areas (below 4):

- 1. Institutions**
- 2. Infrastructure**
- 3. Innovation**
- 4. Market size**
- 5. Financial market**

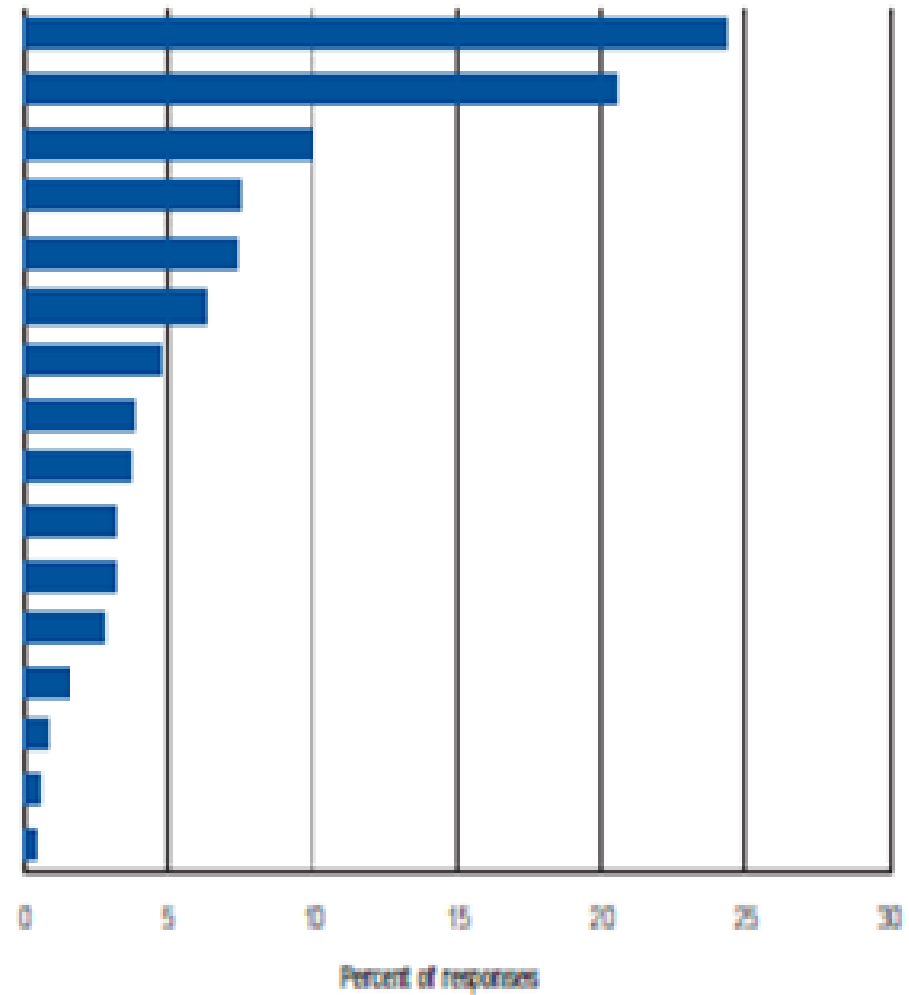
Controllable

Areas for Improvement in Costa Rica:

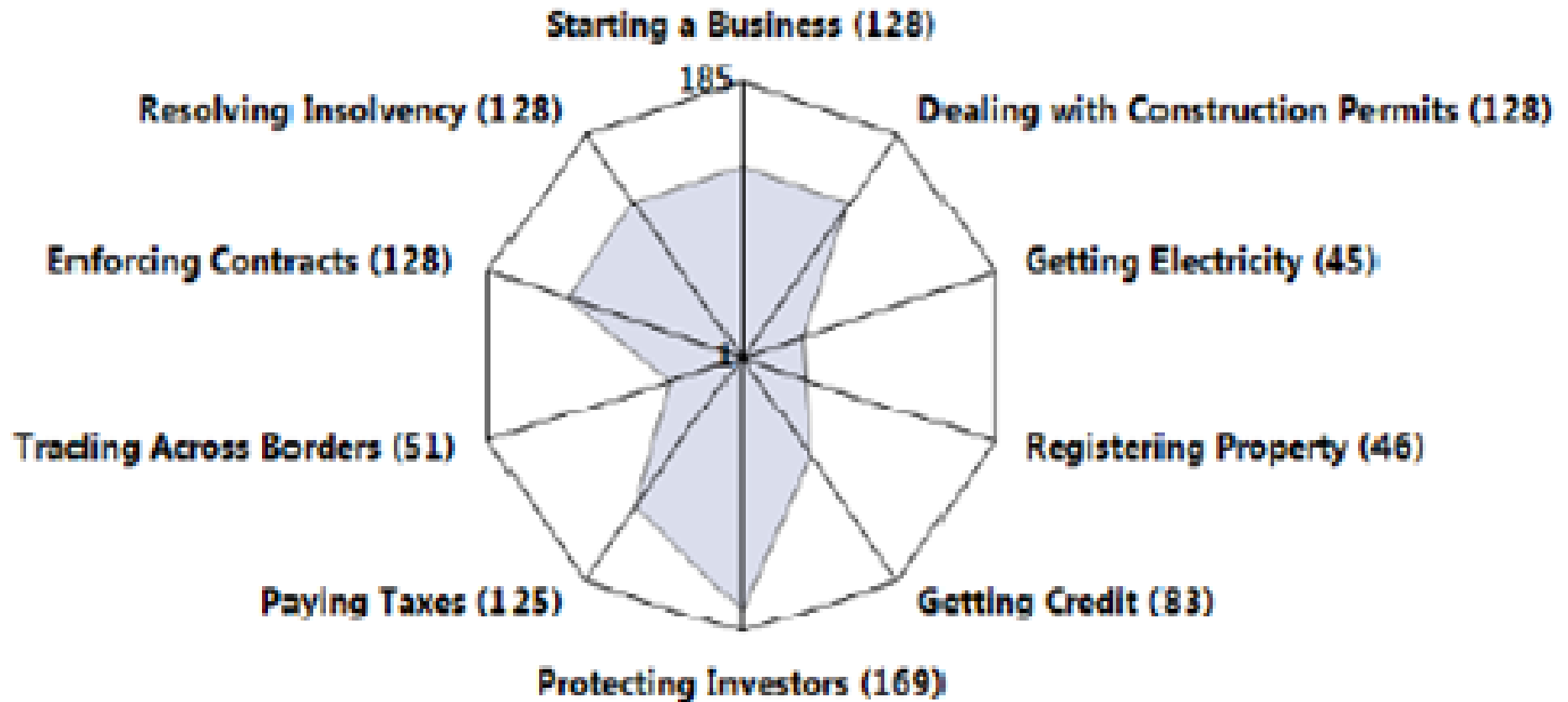
(1)Institutions(Bureaucrat system), (2)Infrastructure, (3)Access to Finance

The most problematic factors for doing business

Inefficient government bureaucracy	24.3
Inadequate supply of infrastructure.....	20.4
Access to financing	10.0
Tax regulations	7.5
Corruption	7.4
Restrictive labor regulations	6.2
Tax rates.....	4.8
Insufficient capacity to innovate	3.7
Inflation.....	3.6
Crime and theft	3.1
Foreign currency regulations.....	3.1
Inadequately educated workforce.....	2.8
Poor work ethic in national labor force	1.5
Policy instability	0.8
Government instability/coups	0.5
Poor public health	0.4



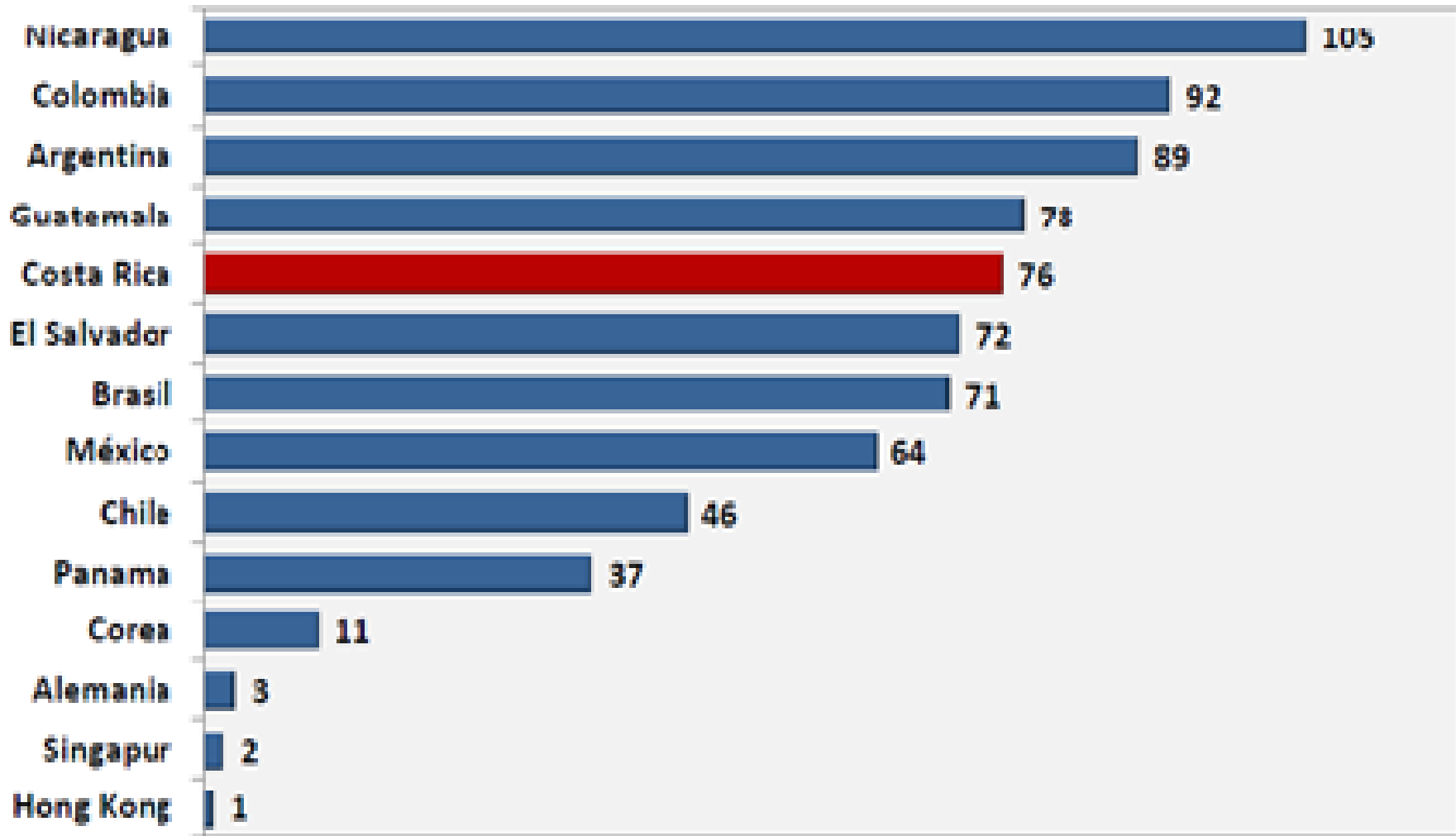
(1) Bureaucrat System



Source: Doing Business Database

(2) Infrastructure

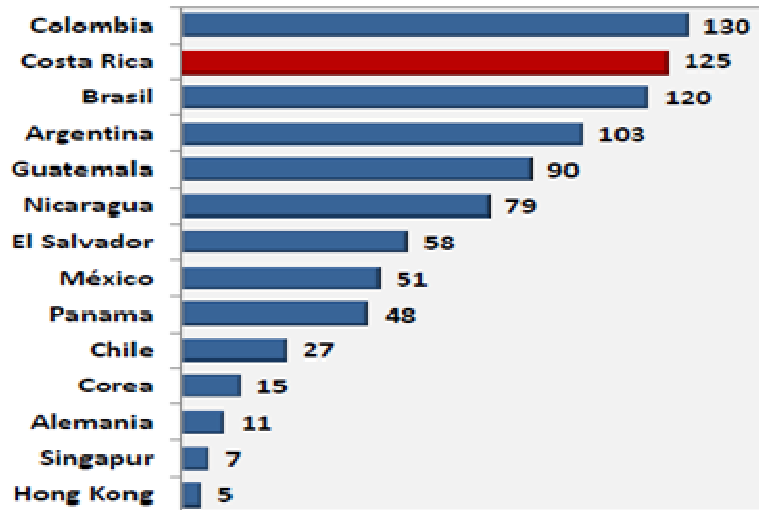
Basic Competitiveness Index(Infrastructure)



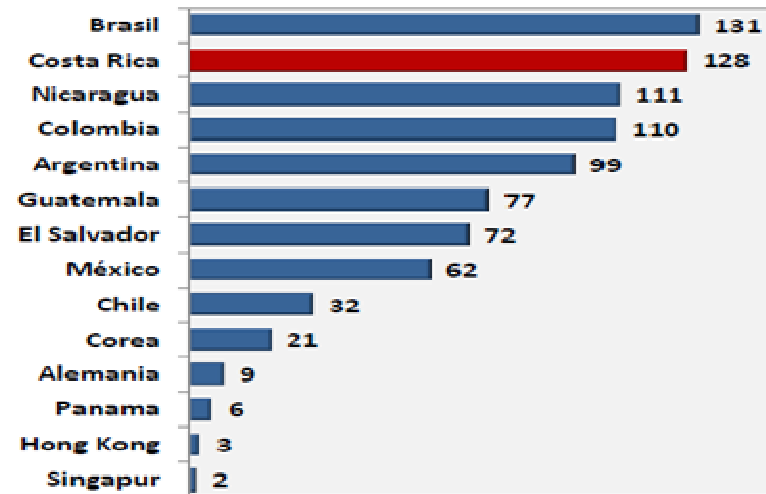
Source: World Economic Forum

Quality of Major Infrastructures

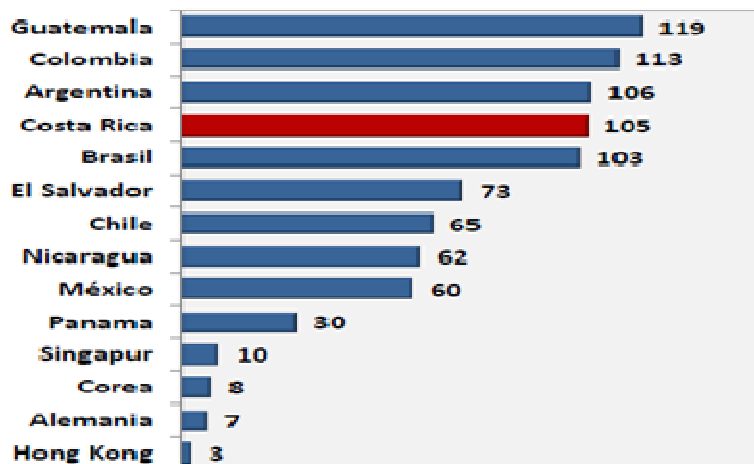
Quality of Roads



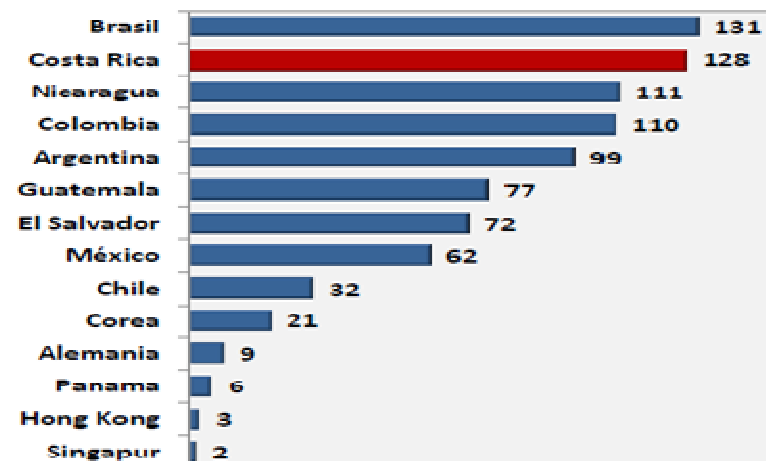
Quality of Port Infrastructure



Quality of Railroads



Quality of Air Transport Infrastructure



Strength & Weakness of Costa Rica (WEF)

Weakness

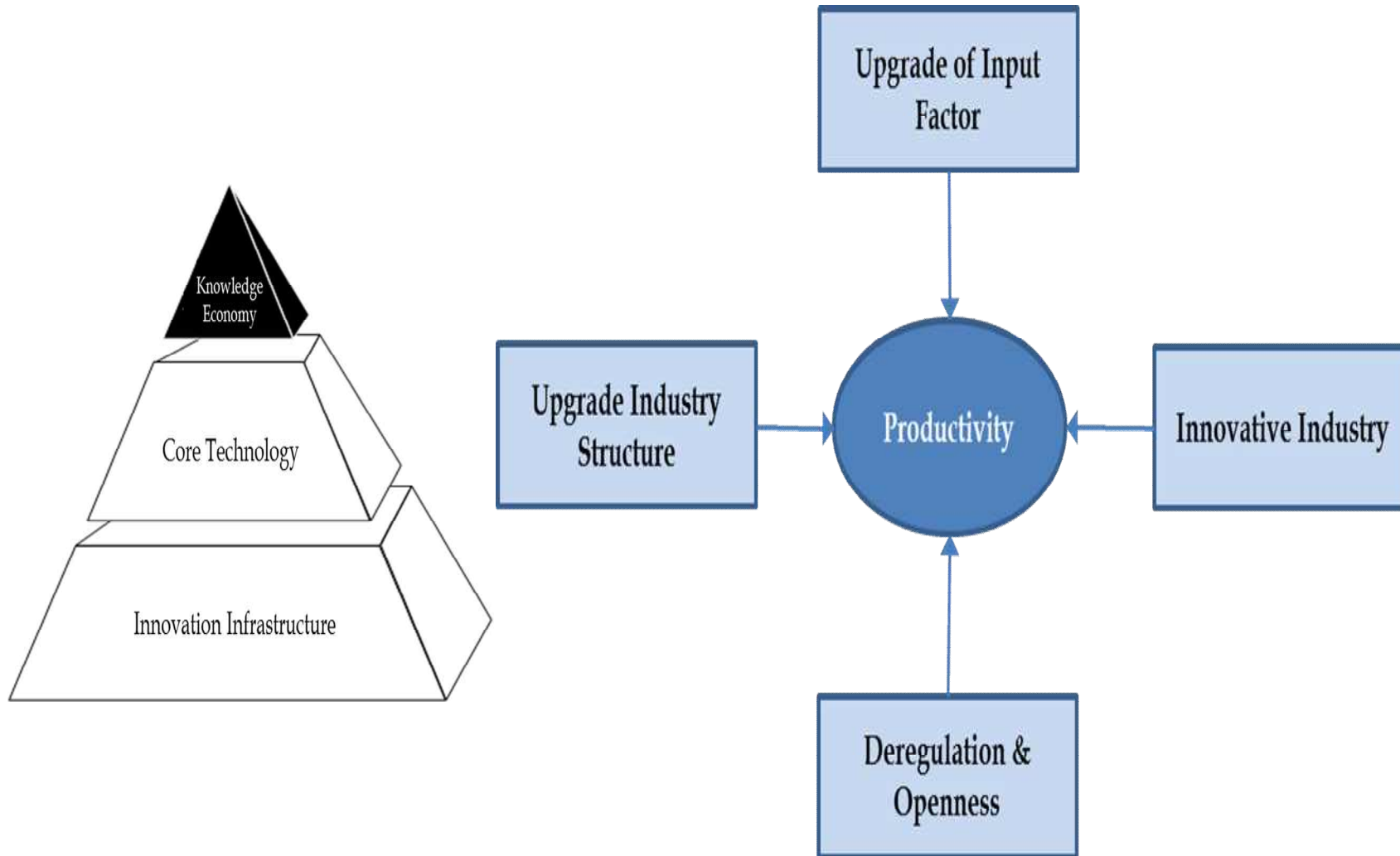
- Inefficient **government bureaucracy**
- Inadequate supply of **Infrastructure**
- Access to **financing**
- **Tax** regulations
- **Crime & theft**
- Restrictive labor regulations
- Inflation

Strength

- **Highly educated labor**
- Prevalence of foreign ownership
- Cooperative labor-employee relationship
- FDI & Tech transfer
-
- Weather
- Abundant water resources
- **Strategic location**
- **Smallness** & Fast-mover Advantages

Costa Rica: Restructuring for transition to Knowledge Economy. How?

IV. Policy Recommendation & Roadmap : Tasks for Transition to Knowledge Economy



IV. Recommendations & Main Messages

1. Global context and **value propositions** are under fast changes through a phase of **fast-forward globalization**, with unprecedented step-ups in the rates of complexity.
2. Innovative nations will do well that can depart from a business-as usual approach and create a **knowledge-based economy (KBE)** advantage for themselves.
3. Creating a KBE advantages means thinking differently, thinking broad, thinking integrated, thinking new & world class, and thinking process.
4. KBE paradigm is more than technology (R&D, S&T innovations) and attracting FDI. Enhancing **absorption capacity** and **entrepreneurship of local citizens** need to be emphasized (supply capacity).
5. Costa Rica can fall into **Middle-Income Trap**, and the transformation from Investment-driven growth to **Innovation-driven growth** is needed.
6. **Rapid Results Projects** on 5 Pillars (Infrastructure, Education System, Business Environment, Innovation System, Government) needs to be identified and focused through KBE Steering Group supported by High-level leadership.
 - **New container terminal & and Industry Cluster (ex: Limon/Moin)**,
 - **Advanced railway system (ex: San Jose- Limon, San Jose – Caldera)** ,
 - Reform in university, upgrade TVET (**technical & vocational training**)
 - **Red-Tape-Free Industry Cluster**, IT support program for SMEs,
 - Government **Personnel Evaluation System**, etc

IV. Action Plans

- **Redefine Value Proposition** in the increasing globalized world
 - Diversify the FDI Portfolio of Industries (service such as **Health Tourism**, **Eco tourism**, **Logistic support services**, business service, etc)
 - Diversify the export manufacturing items (**HI value/low volume** manufacturing)

- Multi-ministry efforts under the **High-level leadership** of the government
 - Identify & Focus on **Rapid Results Projects with Breakthrough Teams (RRBT)**
 - **First 6 month performance** determines the fate of the new government.
 - **Small early success** will invite Winning Mentality and Big future success.

- Increase in Investment on **Infrastructure**
 - Renovation of **Railway** (modernization from San Jose eastward and westward)
 - **Highway (Toll road)** : (1) **San Jose – Limon** & (2) **San Jose - Caldera**
 - Upgraded Highway link **of Inter-American Highway**,
 - Upgrade the **Container Port facility & Free Trade Zone at Limon/Moin** (Hub in Caribbean sea)
 - Modernization of **Urban transportation** (San Jose)

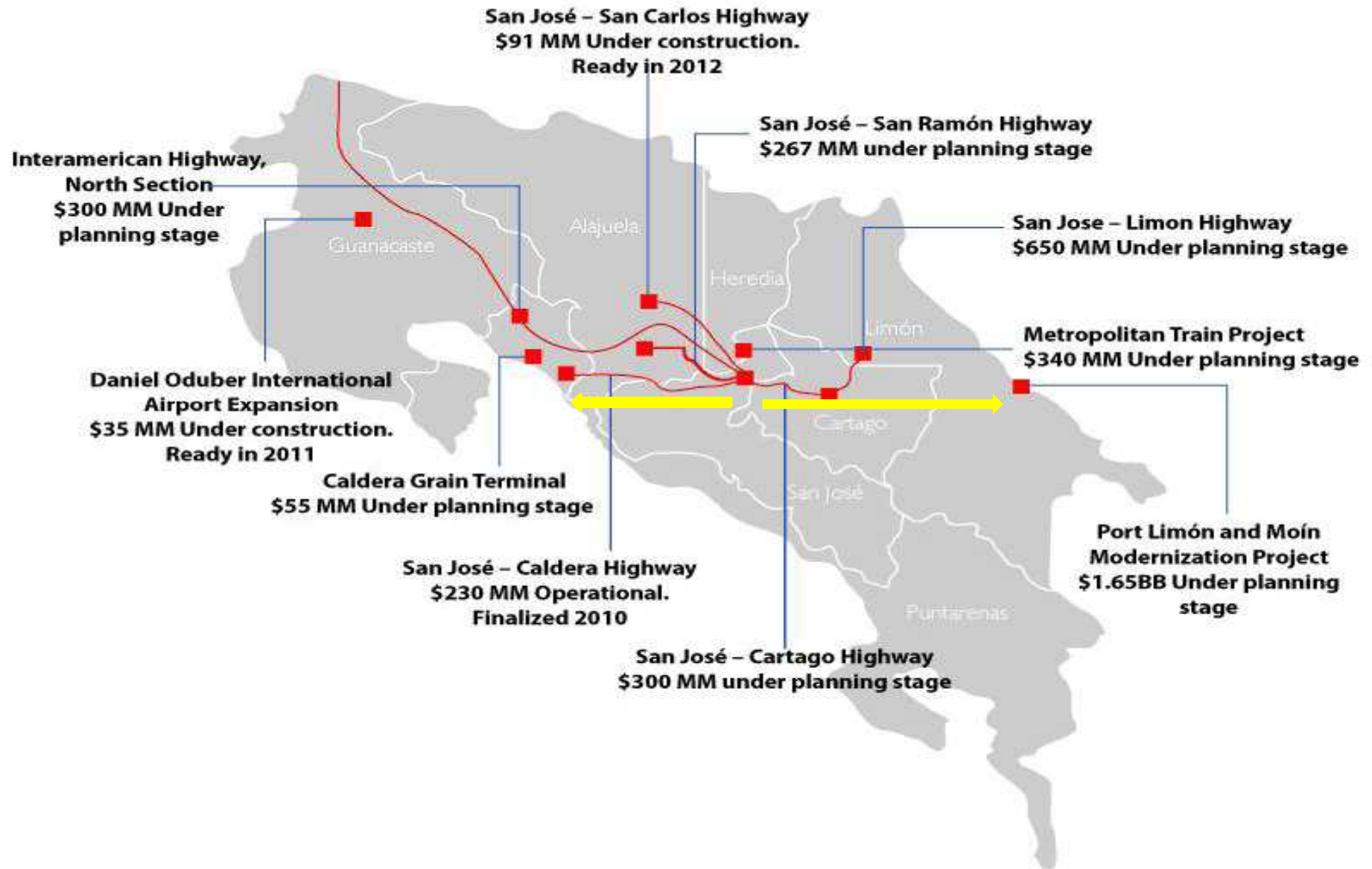
- Improve Business Environment
 - Development of **link of R&D efforts** (university, corporate, research institutes: **R&D Cluster**)
 - Incentives for cooperation (ex: tech transfer) between FDI & Domestic firms
 - **Vocational training and Lifelong learning**
 - Government personnel evaluation system
 - Where to put Cluster? How to attract creative class? regional discrepancy?, income gap?

- Link with **world R & D hubs** (domestic resources are limited)
 - Establish the Government funded research institute on selected fields

IV. Roadmap

Period	Breakthrough Projects	Financial resource	Organization
Immediate term (6 months: With min objection)	<ol style="list-style-type: none"> 1. Renovation of Railway (eastward San Jose-Cartago-Limon) 2. Modernization of Urban transportation (San Jose) 3. Upgrade the Container Port facility & Free Trade Zone at Limon/Moin (Hub port in Caribbean area) 4. Government Personnel Evaluation System, etc 5. Incentives for cooperation between FDI & Domestic firms (RRBT: Rapid Results Breakthrough Teams) 	<ol style="list-style-type: none"> 1. Budget + IDB + WB + EDCF 2. Budget + IDB 3. FDI + WB 4. Budget 	<ol style="list-style-type: none"> 1. RRBT 2. City Govnt 3. RRBT 4. Ministry
Medium term (1.5 year: With some objection)	<ol style="list-style-type: none"> 1. Renovation of Railway (westward from San Jose to Caldera) 2. Highway (Toll road) : San Jose – Cartago-Limon 3. Ring belt development around San Jose 4. Upgraded Highway link to Inter-American Highway 5. Upgrade Vocational training and Lifelong learning 6. Diversify the FDI Portfolio of Industries (service such as Eco tourism, Health tourism, Logistic support services, business service) 		<ol style="list-style-type: none"> 1. RRBT 2. Ministry 3. City + Ministry 4. Ministry 5. Ministry 6. PROCOMER
Long term (3 years: Need consensus)	<ol style="list-style-type: none"> 1. Highway (Toll road) : San Jose-Caldera 2. Diversify the export manufacturing items (HI value /low volume manufacturing) 3. Business – Academia – Research Link (R&D Cluster) 4. Reform in university, 5. Red-Tape-Free Industry Cluster, 6. IT support program for SMEs 7. Link with world R & D hubs (domestic resources are limited) 		<ol style="list-style-type: none"> 1. Ministry 2. Ministry 3. Ministry 4. Ministry 5. Ministry 6. Ministry 7. Ministry

Ref: Costa Rica Infra projects



Ref: Caribbean Marine Route, **Strategic Location** of Costa Rica :

Main Routes: Caribe



Ref: Concept of Integrated Logistics Center Operation

