



Infrastructure & Logistics: Key to MENASA Economic & Financial Growth

Presentation at DIFC Economics Workshop: Dubai Aerotropolis

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Agenda

Role of Infrastructure in Transforming Economies

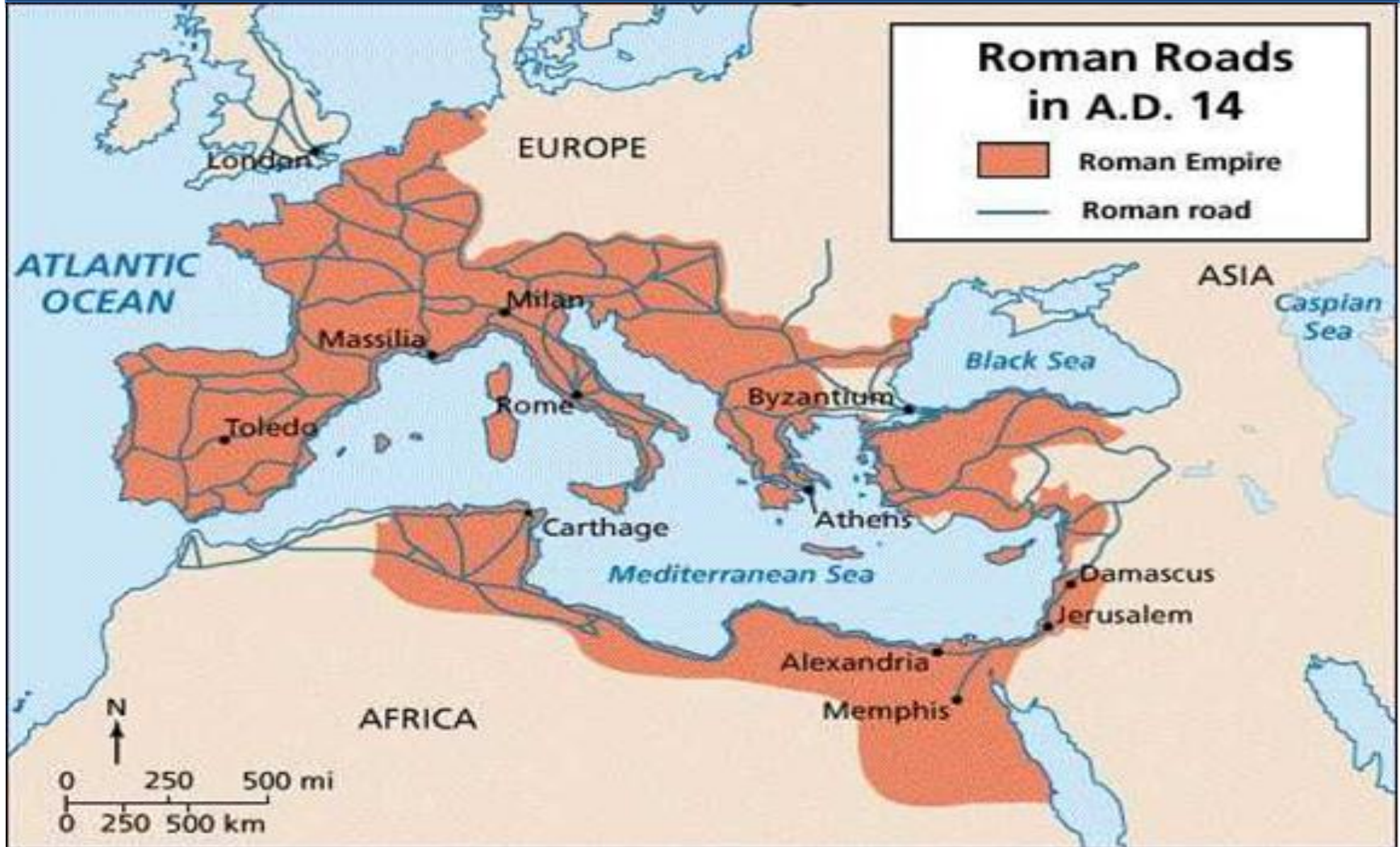
MENASA Infrastructure Gaps

Infrastructure Financing & Role of the DIFC

Introducing the Aerotropolis

Bottomline

Infrastructure, Trade & Empires: Roman Roads



The Old Silk Road



The Old Silk Route: Sea Routes



Infrastructure + Logistics = Transforming Economies

The role of infrastructure in contributing to economic growth is well-documented

- Higher Infrastructure capital = Directly Productive + Increases productivity of private sector capital + Complementarity effects
- Investment in Infrastructure also:
 - ✓ **Improves productivity and returns on human capital investments** by improving health, longevity & quality of human capital
 - ✓ Through waste management, water, sewage etc. **preserves environment** with spillover effects on agriculture, tourism and overall quality of life
 - ✓ Generates **Network Economies** and Externality effects
 - ✓ Lowers Costs of Adjustment to structural changes and shocks
- Infrastructure + Logistics= Lower Cost of Doing Business
- Infrastructure + Logistics= major determinants of Openness and Trade effectiveness

Role of Core Infrastructure

Core infrastructure Sectors => Transport, Water, Energy and Information and Communication Technologies (ICT)

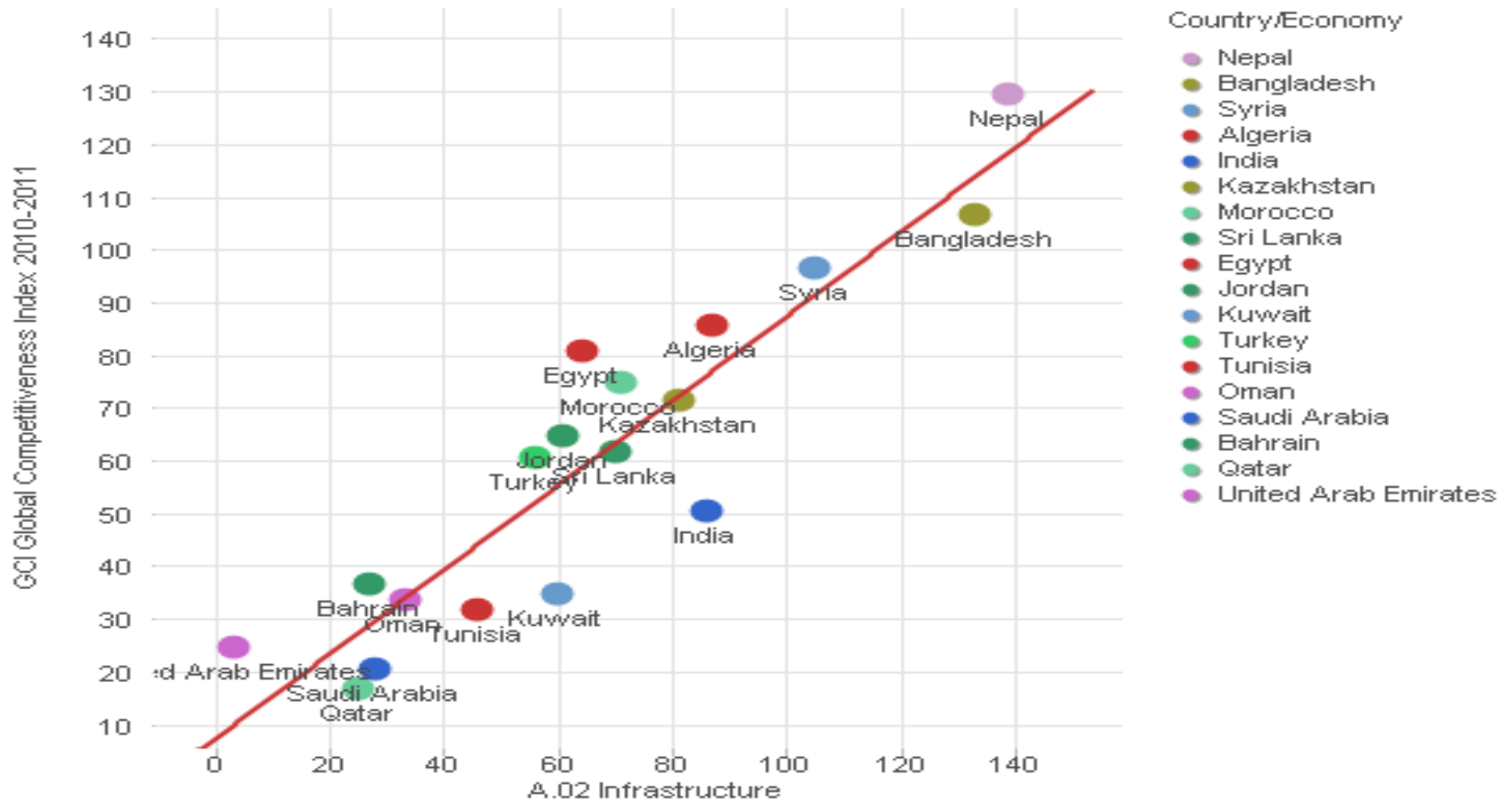
- Core infrastructure access agenda: strengthen sectorial policies & institutions to **improve efficiency, affordability, quality and reach of basic services.**
- WB estimates **884mn** people without access to safe **water**, **1.6bn** without **electricity**, **2.5bn** without **sanitation** & more than **1bn** without access to **telephone services** in the developing world (2008)
- **Infrastructure investment needs** in developing countries ~ **about 7-9% of GDP**, while only about half of the required amount was spent on infrastructure investment.

What is required?

- **Transport sector** – Diversification from roads to all transport modes, including rail, ports, airports, and the design of multi-modal transport and logistics operations.
- **Water** –sustainable management of the water resource base and efficient and equitable delivery of water services
- **Energy** – address the energy access gap, respond to challenges of energy security and climate change + implementation of the Clean Energy Investment Framework
- **ICT** - expand access to information infrastructure, mainstreaming and innovation

Relation between Competitiveness and Infrastructure

A.02 Infrastructure vs. GCI Global Competitiveness Index 2010-2011



World Bank Logistics Performance Index

1. Efficiency of the clearance process by customs and other border agencies.
2. Quality of transport and information technology infrastructure for logistics.
3. Ease and affordability of arranging international shipments.
4. Competence of the local logistics industry.
5. Ability to track and trace international shipments.
6. Domestic logistics costs.
7. Timeliness of shipments in reaching destination.

WB Logistics performance index (LPI)

- World Bank's LPI undertakes multidimensional assessment of logistics performance, comparing trade logistics profiles of 155 countries.
- LPI is directly correlated with sustainable economic growth.
- In 2010, UAE ranked 24th on the list which is topped by Germany, Singapore and Sweden.

Country	<u>LPI</u>	<u>Customs</u>	<u>Infrastructure</u>	<u>International shipments</u>	<u>Logistics competence</u>	<u>Tracking & tracing</u>	<u>Timeliness</u>
<u>Germany</u>	4.11	4.00	4.34	3.66	4.14	4.18	4.48
<u>Singapore</u>	4.09	4.02	4.22	3.86	4.12	4.15	4.23
<u>Sweden</u>	4.08	3.88	4.03	3.83	4.22	4.22	4.32
<u>Netherlands</u>	4.07	3.98	4.25	3.61	4.15	4.12	4.41
<u>Luxembourg</u>	3.98	4.04	4.06	3.67	3.67	3.92	4.58
<u>Switzerland</u>	3.97	3.73	4.17	3.32	4.32	4.27	4.20
<u>Japan</u>	3.97	3.79	4.19	3.55	4.00	4.13	4.26
<u>United Arab Emirates</u>	3.63	3.49	3.81	3.48	3.53	3.58	3.94
<u>Bahrain</u>	3.37	3.05	3.36	3.05	3.36	3.63	3.85
<u>Saudi Arabia</u>	3.22	2.91	3.27	2.80	3.33	3.32	3.78
<u>Qatar</u>	2.95	2.25	2.75	2.92	2.57	3.09	4.09

UAE can improve across all criteria

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Kuwait	3.28	3.03	3.33	3.12	3.11	3.44	3.70
Saudi Arabia	3.22	2.91	3.27	2.80	3.33	3.32	3.78
Qatar	2.95	2.25	2.75	2.92	2.57	3.09	4.09
Oman	2.84	3.38	3.06	2.31	2.37	2.04	3.94

3 Main Drivers of Infrastructure Growth

I. Demographics:

- I. Size and Age Structure of the population
- II. Middle Class

II. Urbanisation:

- I. breeding ground for growth of market economy, enterprise localization, talent pooling, clusters of competencies & specialization
- II. Implies investment requirements in power generation, aqueducts, water and sewage systems, commercial property, office space, ports and airports.

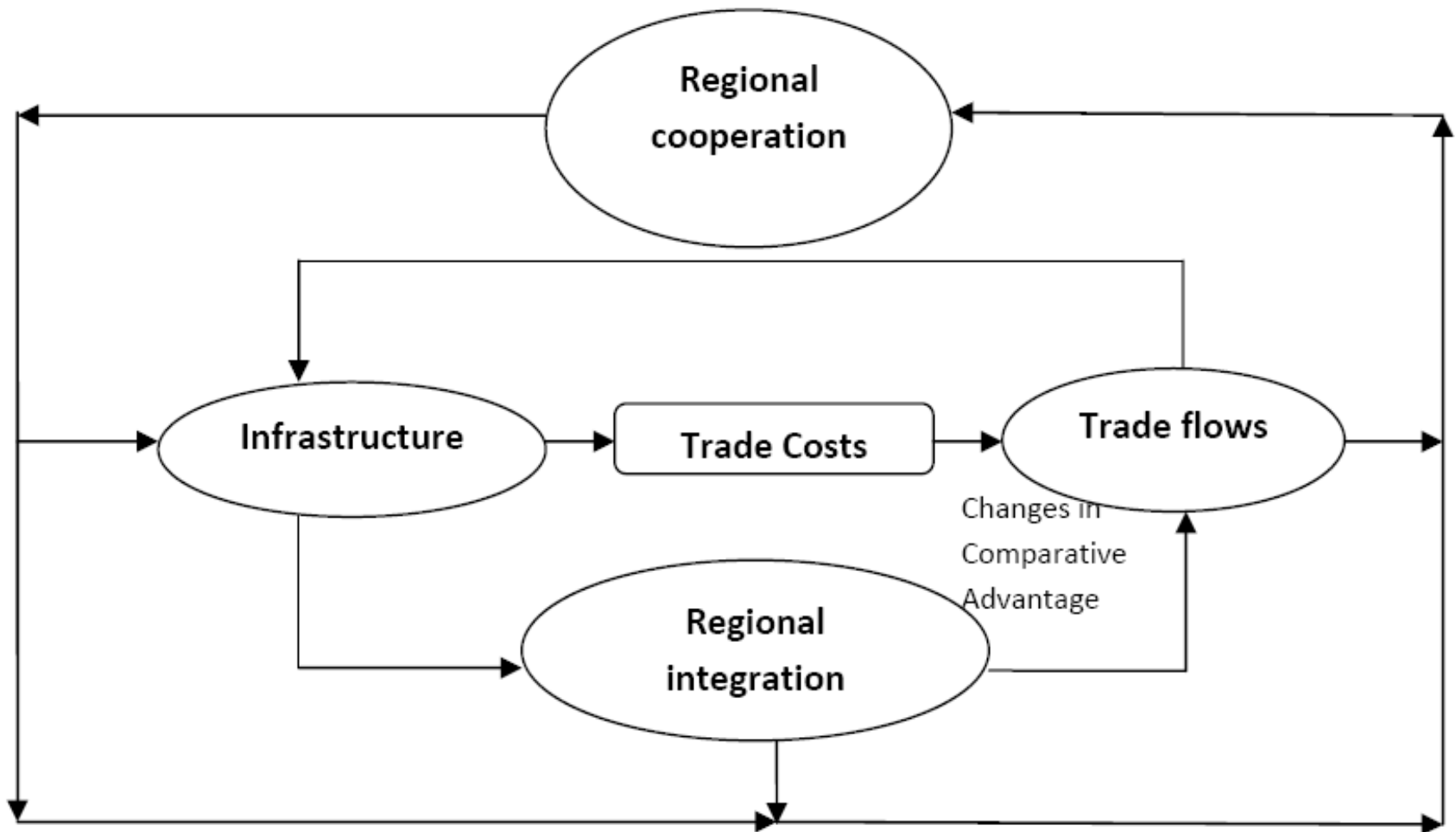
III. Trade:

- I. Countries have to become producers and exporters to move up the global chain,
- II. Infrastructure investment that reduces trade costs spurs regional economic integration much more than models of export led demand

Urbanisation & Infrastructure Development: 7 of top-20 most-populated cities are in MENASA => Growing demand for Infrastructure

<i>Urban agglomeration</i>	<i>Population (millions)</i>			<i>Average annual rate of change (percentage)</i>	
	<i>1975</i>	<i>2007</i>	<i>2025</i>	<i>1975-2007</i>	<i>2007-2025</i>
Tokyo, Japan	26.6	35.7	36.4	0.92	0.11
New York-Newark, USA	15.9	19.0	20.6	0.57	0.44
Ciudad de México (Mexico City), Mexico.....	10.7	19.0	21.0	1.80	0.55
Mumbai (Bombay), India	7.1	19.0	26.4	3.08	1.83
São Paulo, Brazil	9.6	18.8	21.4	2.10	0.71
Delhi, India.....	4.4	15.9	22.5	4.00	1.92
Shanghai, China.....	7.3	15.0	19.4	2.24	1.44
Kolkata (Calcutta), India	7.9	14.8	20.6	1.96	1.83
Dhaka, Bangladesh.....	2.2	13.5	22.0	5.64	2.72
Buenos Aires, Argentina	8.7	12.8	13.8	1.19	0.41
Los Angeles-Long Beach-Santa Ana, USA....	8.9	12.5	13.7	1.05	0.50
Karachi, Pakistan.....	4.0	12.1	19.1	3.48	2.52
Al-Qahirah (Cairo), Egypt.....	6.4	11.9	15.6	1.91	1.49
Rio de Janeiro, Brazil	7.6	11.7	13.4	1.38	0.74
Osaka-Kobe, Japan.....	9.8	11.3	11.4	0.43	0.04
Beijing, China.....	6.0	11.1	14.5	1.91	1.50
Manila, Philippines.....	5.0	11.1	14.8	2.49	1.60
Moskva (Moscow), Russian Federation	7.6	10.5	10.5	0.99	0.04
Istanbul, Turkey	3.6	10.1	12.1	3.21	1.03

Link between Infrastructure & Trade Flows



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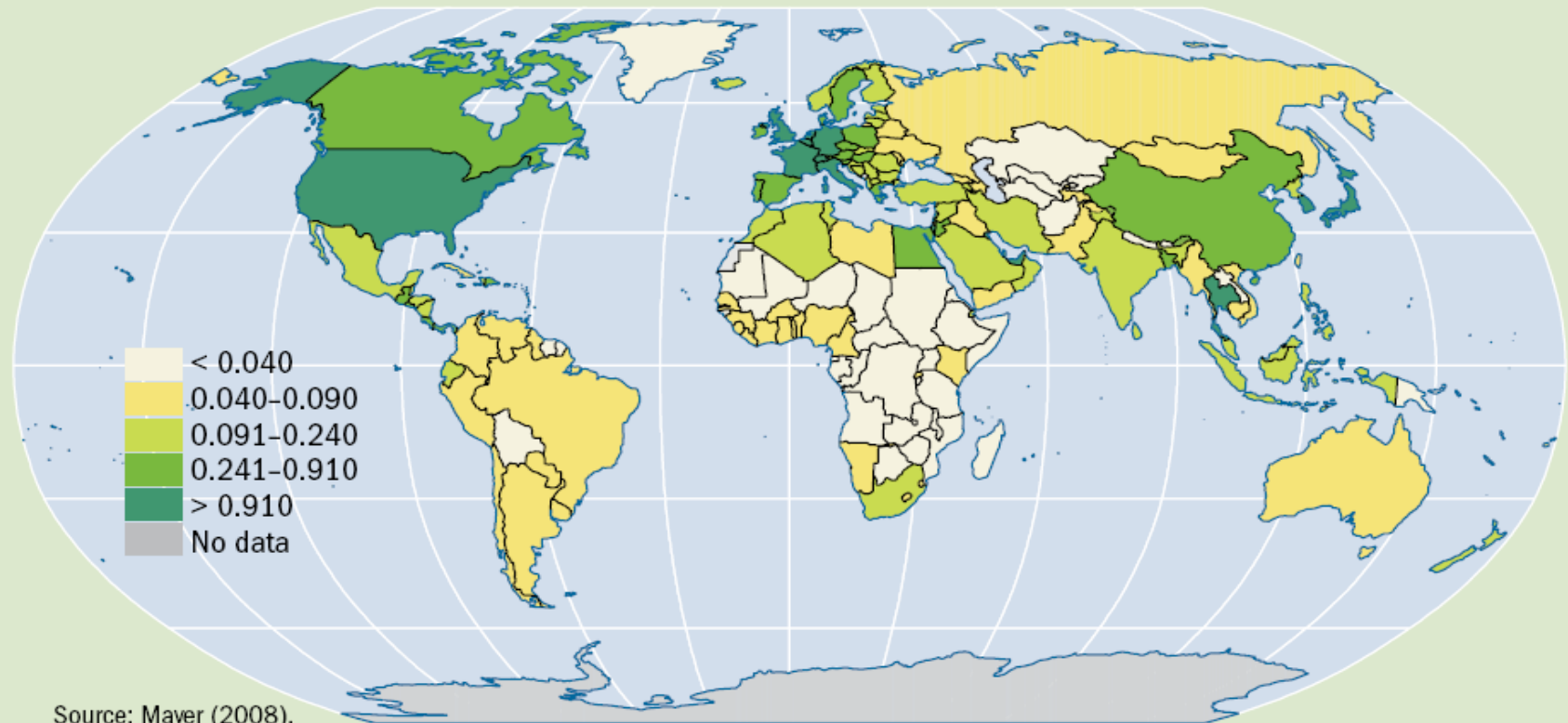
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Think Global – Access to World Markets

Shared regional infrastructure hubs - such as transportation corridors - give countries access to previously unreachable world markets.

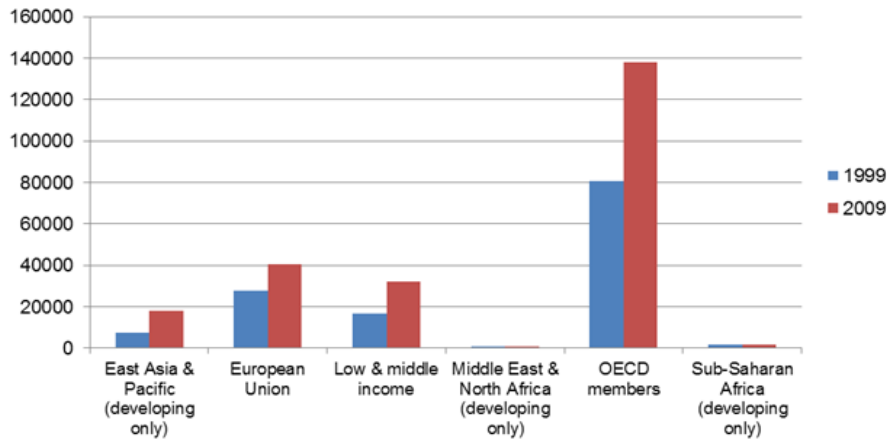
Proximity to prosperous places shapes development prospects.

(real market access relative to the United States, index, 2003)

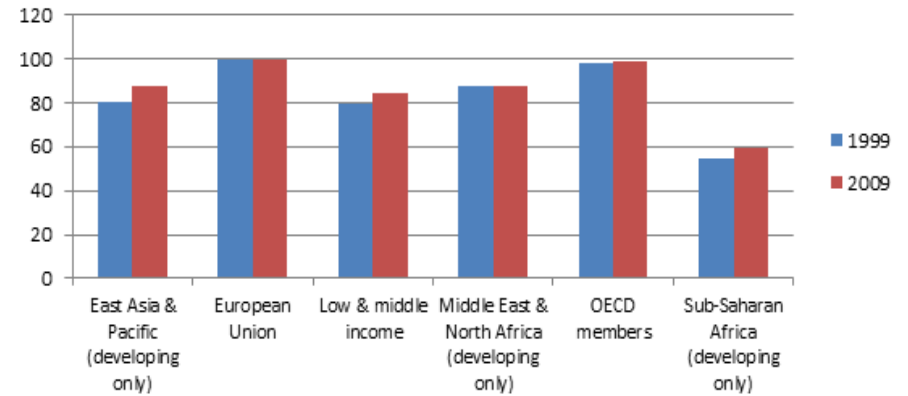


Regional Infrastructure Gaps are Evident

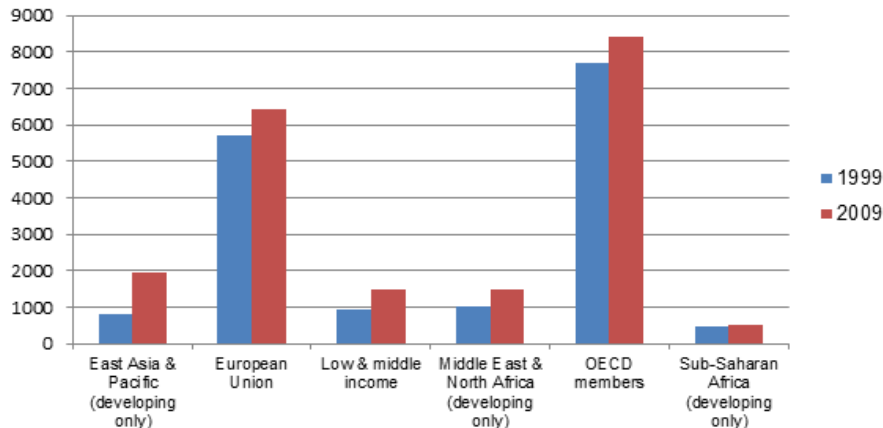
Air transport, freight (million ton-km)



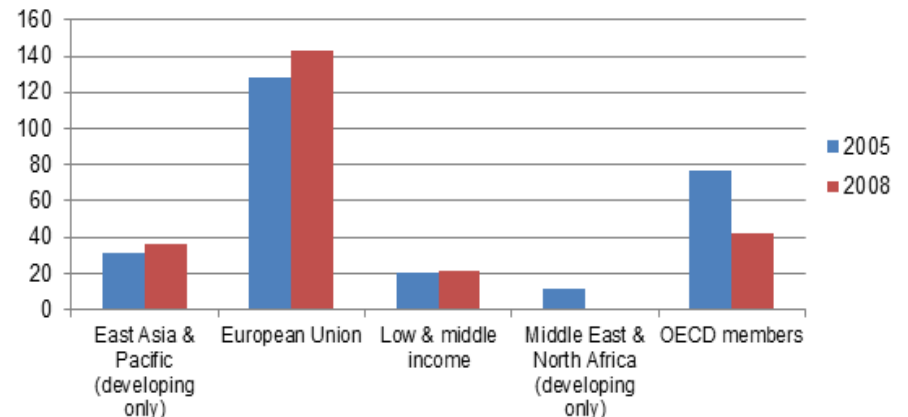
Improved water source (% of population with access)



Electric power consumption (kWh per capita)

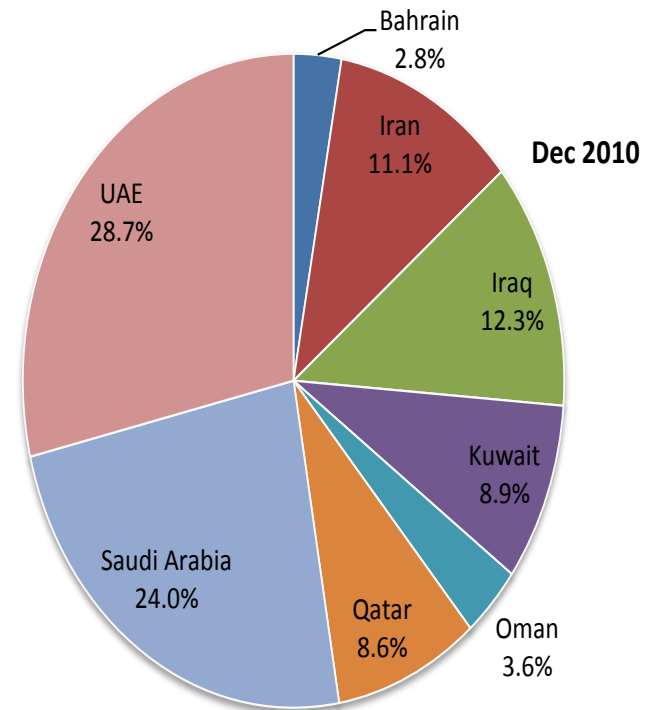
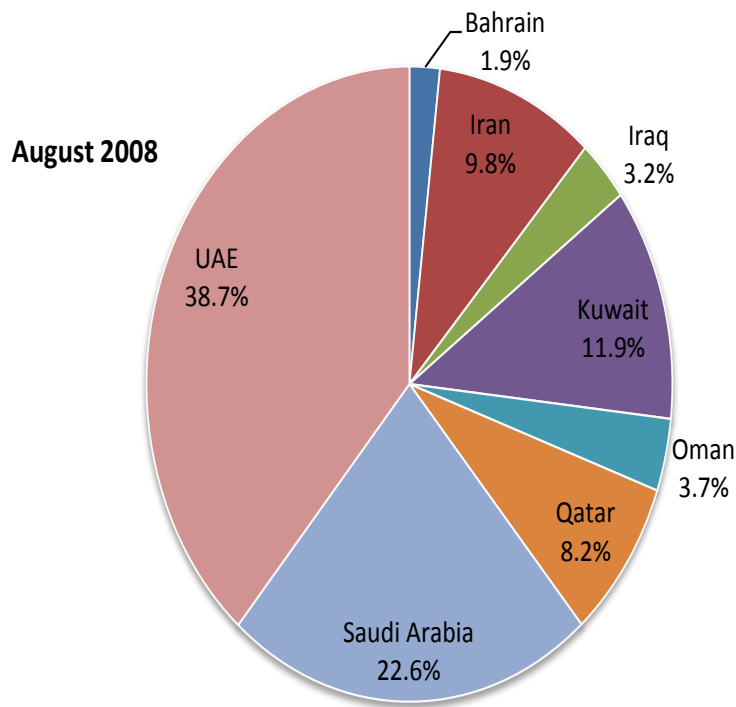


Passenger cars (per 1,000 people)



Gulf Infrastructure Projects by Sector & Country

- Total value of projects planned, under way or completed in the Gulf region is US\$2.6 trillion. Iraq reconstruction & development : major opportunity (Data: MEED Project Tracker, Feb 2011)
- Projects: Power, Water & Desalination, Waste Management, Energy, Transport, Ports & Airports, Telecommunications



Untapped Potential of Regional Integration

Geography & proximity, density & intensity of traffic = **high returns to integrated infrastructure investments**: standards, policies, pricing, integrated network

For the MENASA region and particularly for GCC, the lessons are very clear - greater regional economic integration requires:

-Investment in Regional Infrastructure:

- ✓Transport: rail, road, air

- ✓Energy: oil & gas, electricity

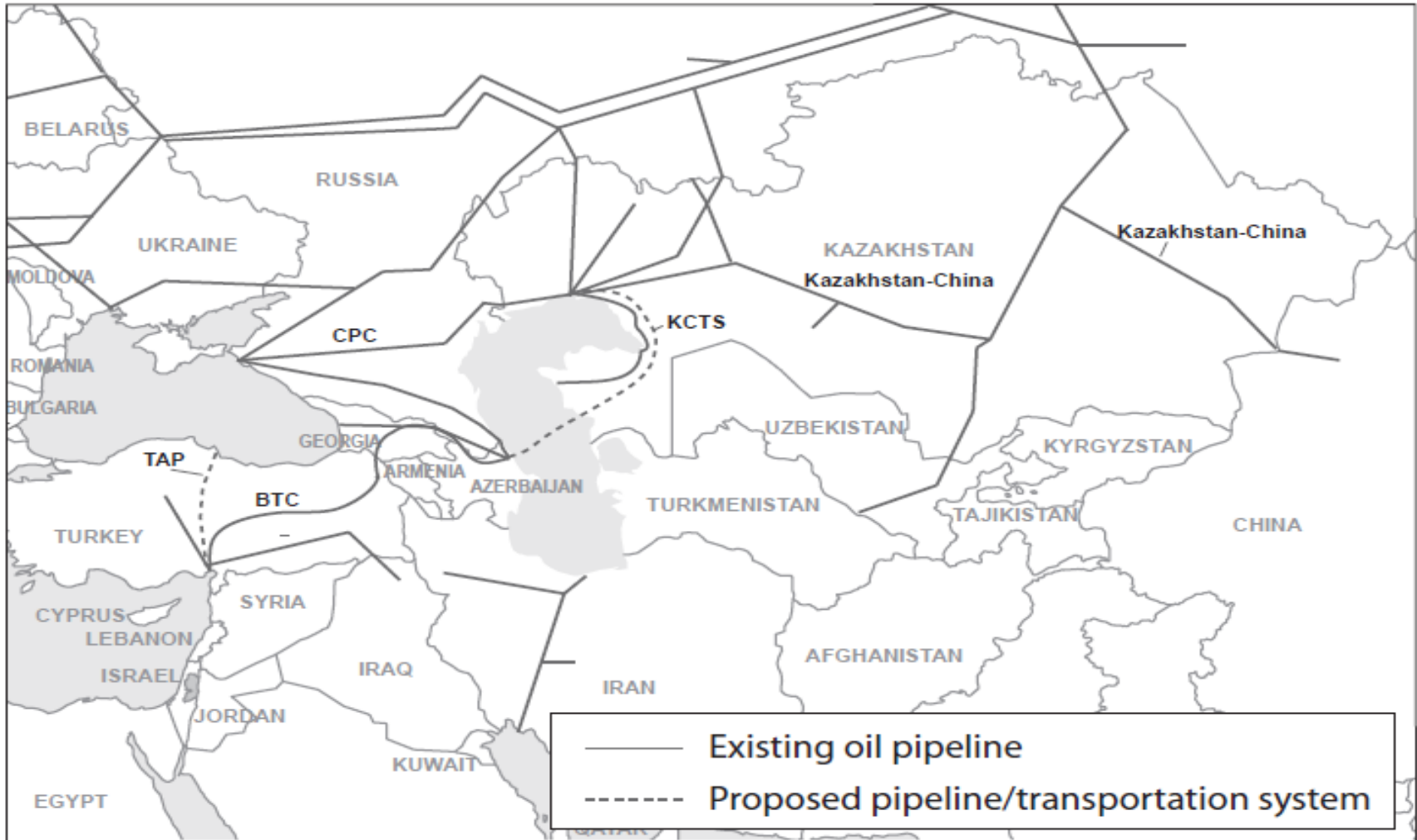
- ✓Telecommunications & Infostructure (broadband+)

- ✓Payment Networks: facilitate trade & markets payments & settlements

- ✓Financial Market Infrastructure: integrated capital markets

-Regional cooperation on trade facilitation, streamlining & simplifying international trade procedures, customs and standards

China's Energy Infrastructure: Moving West



GCC Infrastructure Integration

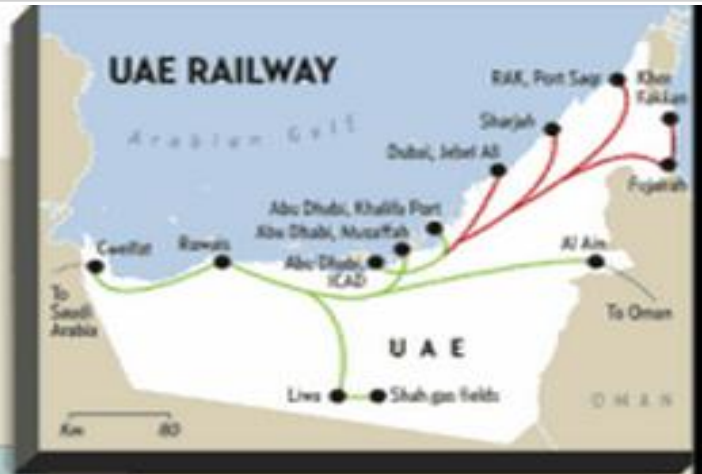
GCC on track

Dh220 billion are being invested by Gulf countries in high-speed railway projects. On completion, the railway network would connect the GCC countries together, and even include Jordan, Syria and Turkey. Here are the tentative connections within each country.

Kuwait is planning a 1,500-km railway line linking Kuwait's border with Iraq down the Gulf coast to the Qasbi port of Salah on the southern tip of the Arabian Peninsula.

LEGEND

- Rail Line
- Electric grid
 - GCC power grid
 - UAE system (ENG)
- Control Centre
- Substations
- HVDC converter

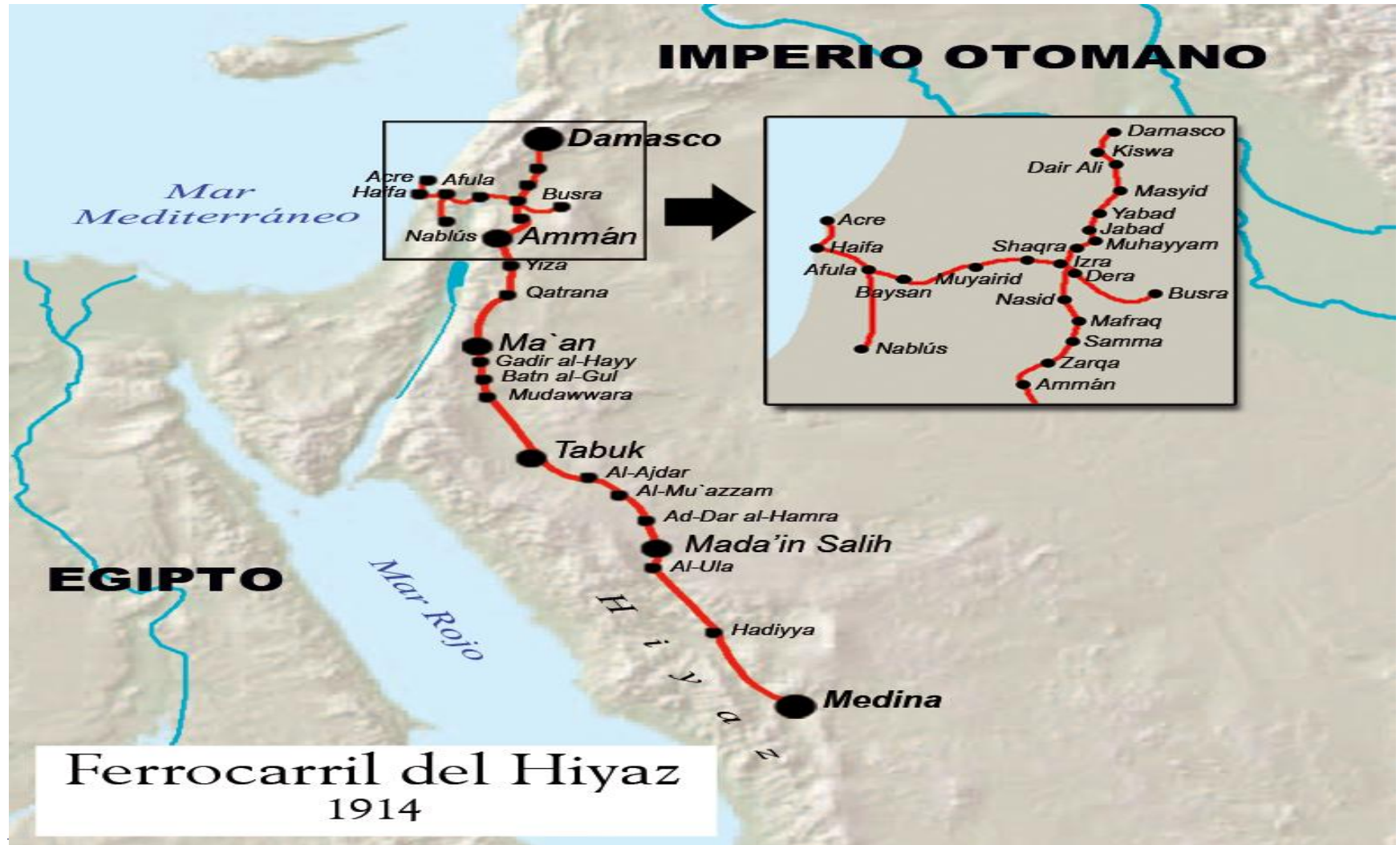


Rediscovering our Past: Berlin-Baghdad Railroad



FIG. 5.

Rediscovering our Past: The Hejaz Railroad, 1914



Infrastructure Financing

Infrastructure investment is capital intensive, requires long gestation, with revenue generation subject to policy uncertainty => Higher risk

Hence, bulk of financing has traditionally come from the government or government owned companies such as public utilities.

MENA has Underinvested in Infrastructure: \$40 bn annual funding gap

What is required?

- **Shift to Market Finance:** Develop local currency bond markets; housing finance
- **Shift to Private Sector** via Privatisation and PPP projects: need to develop PPP framework of laws, regulations & regulatory agencies
- **Shift to Institutional Investors:** SWFs investing in infrastructure has risen from 47% in 2010 to 61% at the beginning of 2011 (Preqin)
- Role of IFIs & Development banks

MENA needs a Bank for Reconstruction & Development

Aerotropolis: The Concept

What is an Aerotropolis? Dr. John Kasarda

- New type of **urban form** comprising aviation-intensive businesses and related enterprises "extending as far as sixty miles from the inner clusters of hotel, offices, distribution, and logistics facilities", with an **airport city at its core** and is **surrounded by clusters of aviation-related enterprises**.
- Airports evolved as **drivers of business location and urban development** in the 21st century => engines of local/national economic development, attracting air-commerce-linked businesses to the land surrounding major airports.

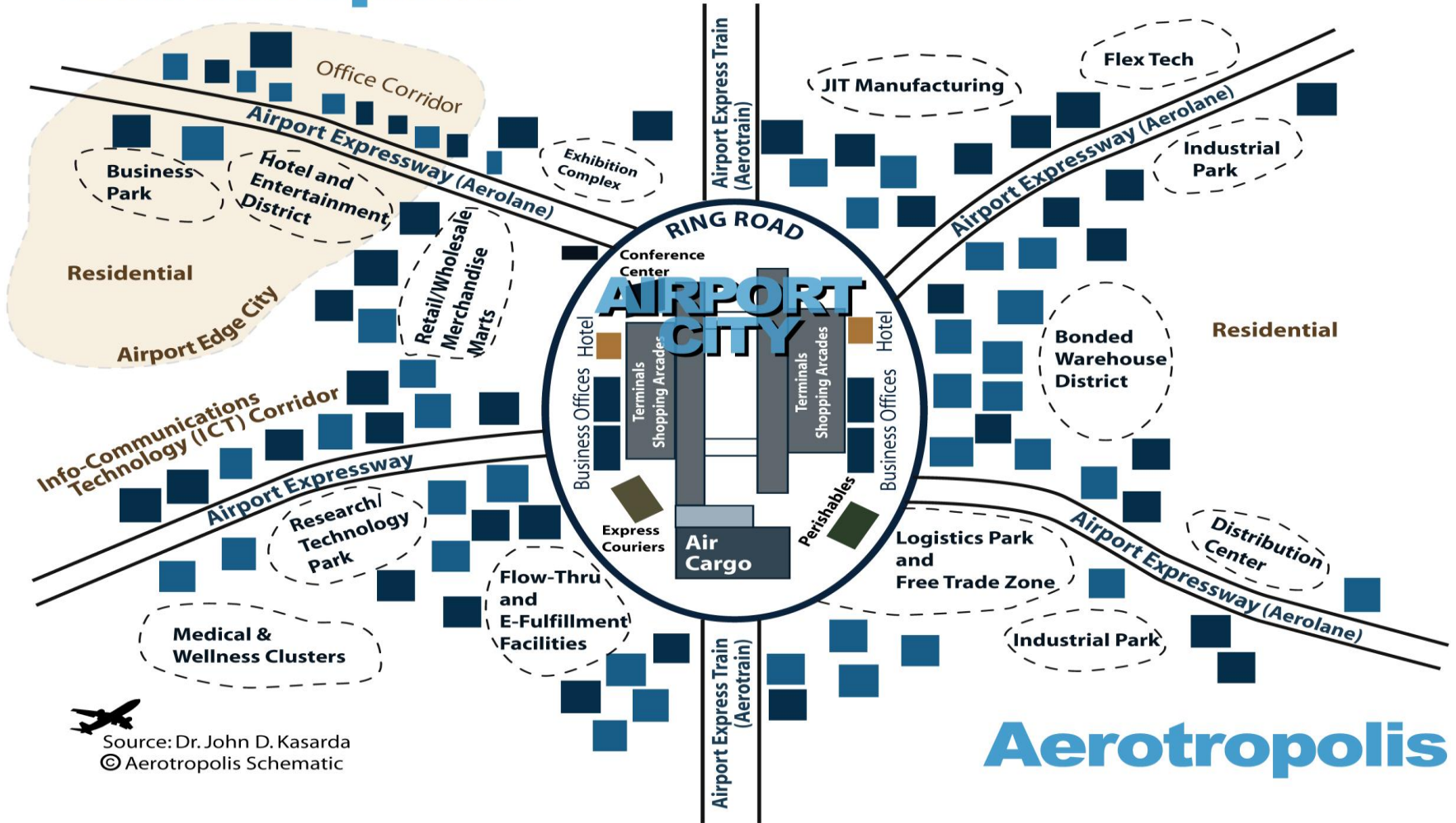
Aerotropolis plays crucial role in:

- ✓ **Enhancing interconnectedness**
- ✓ **Enabling entry into the global supply chain**
- ✓ **Integrates logistics and facilitates trade**

Dubai World Central is Transforming Dubai into an Aerotropolis

Aerotropolis Schematic

Aerotropolis



Source: Dr. John D. Kasarda
© Aerotropolis Schematic

Role of the DIFC

- DIFC offers sophisticated framework of laws, regulations & governance, modeled on international best practices, knowledge & skills cluster
- DIFC has comprehensive platform for raising, deploying and managing capital across the region: Listing, IPOs, Privatization, Leasing, Project & Infrastructure Finance, Securitization.
- DIFC has put in place an agreement with WB MIGA: securities financing eligible projects can obtain guarantee against political & payment risk
- Region benefits from a vast pool of wealth & liquidity and a growing appetite for specialist investment products
- **Infrastructure Financing is basis for Developing Regional Capital Market:**
 - Infrastructure Development through Public-Private Partnerships
 - Infrastructure Funds/ Country Funds: e.g. Arab Financing Facility for Infrastructure
 - Islamic Finance: issuance of Sukuk to finance infrastructure
 - Establish vehicles (PE funds): give regional investors exposure to MENASA markets

Concluding Comments

- Infrastructure & Logistics Investments can Transform National, Regional & International Economic Geography
- Investment in Infrastructure & Logistics critical to Development, Growth & International Integration of MENASA region:
 - Housing Finance & Mortgage Market
 - Equity Market for SMEs
 - Development of Local Currency Bond & Sukuk Markets
 - Infrastructure Funds/ Country Funds
 - Islamic Finance: issuance of Sukuk to finance infrastructure
- Countries of the Middle East (Iraq, Sudan, Lebanon, Libya, Palestine) have been devastated by war and violence. Current Turmoil is an opportune time for the set-up of a **MENA Reconstruction & Development Bank (MENA BRD)**.

Thank You!
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