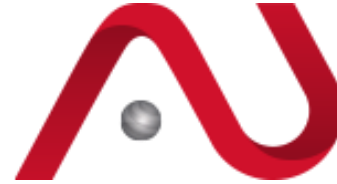




ابتكار ebtikar

نقود مسيرة الإبداع Driving Innovation



الجامعة الأهلية
AHLIA UNIVERSITY
BAHRAIN

The GCC Innovation Ecosystem Strategy

Amina Al-Hawaj





AGENDA

1 Objectives

2 Need for Innovation in Bahrain

2a Economic Indicators

2b Bahrain's Strengths and Limitations

2c Sectors of Relevance (Directional)

3 Existing Innovation Ecosystem

4 Case Studies – Examples of Innovation Initiatives



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'INNOVATION'

Let us start by defining what innovation actually means...

- **OECD defines innovation as...**

'The implementation of a new or significantly improved product (good or service), process, new marketing method or a new organizational method in business practices, workplace organization or external relations.'

- **Types of innovation...**

- Innovation as creation (invention) – New to the world
- Innovation as diffusion and learning – The focus is on acquiring, supporting or using a product, service or idea
- Innovation as a (stream of innovations) trajectory – This is the recognition that a single act of innovation can facilitate a family of innovations to be derived from the original source
- Innovation as change (incremental or radical) – Innovation enacts change

...but can all types of innovation be an effective tool for the growth of the country?

- Innovation could be defined as...

'The conversion of new concepts and knowledge into new products and processes that deliver new customer value in the market place.'

- Key characteristics of such innovation include...

- Innovation which has commercial applicability
- Innovation which can create employment, impact the growth of the country and society at large
- Innovation which has a defined ROI (Return on Investment)



Does being entrepreneurial mean being innovative?

- In differentiating from entrepreneurship, management guru Peter Drucker says...
'Innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity for a different business or service.'
- The 'idea' or 'new thing', as it relates to business, can be the innovation of something new to the world (invention), new to the firm (products, systems, services), improvement or adaptation of existing product/system/services that provide new opportunity (Ahmed and Shepherd, 2010)
- *'Entrepreneurship is the most raw, dynamic type of innovation. It is a new company, and very often a new product or even a new category or industry. Entrepreneurship is where many disruptive changes are being made.'* – Professor Michael Gibbs, Chicago Booth

...but is all entrepreneurship equivalent to innovation?

Conclusively...

'Innovation is the combination of an inventive process and an entrepreneurial process to create new economic value for defined stakeholders.'



KEY OBJECTIVES

Innovation to drive sustainable economic development

Divided into two phases...

Phase 1 – Looking at the future

- What is the need for fostering innovation in Bahrain and how critical is it to do so?
- What do we want to see in the next 5–10 years regarding innovation in Bahrain ?

Phase 2 – Actions to be taken to implement

- What should be proposed to the government regarding key initiatives around innovation?
- What should be some quick wins in the next 6–12 months?

The guiding principles for the roundtable include:

- to create jobs for Bahrainis
- economic growth
- to create a 'knowledge-based economy'



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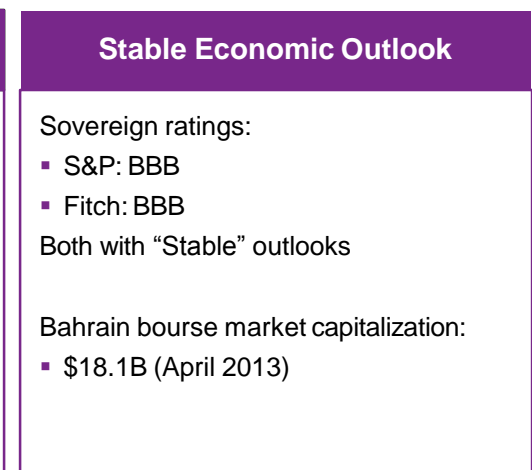
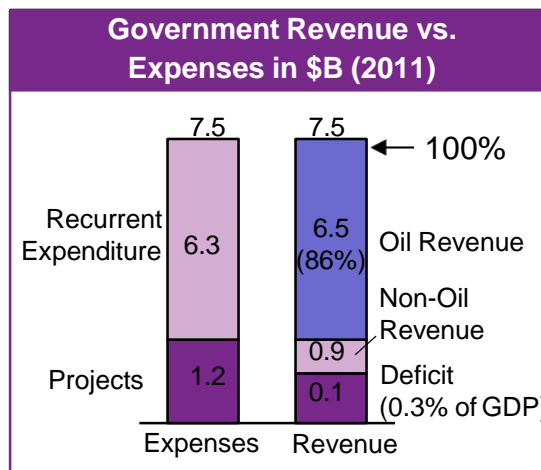
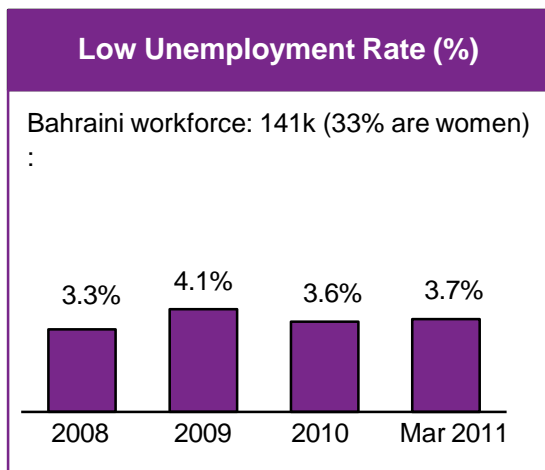
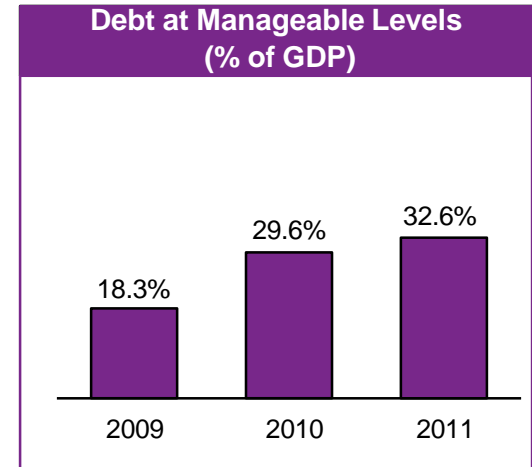
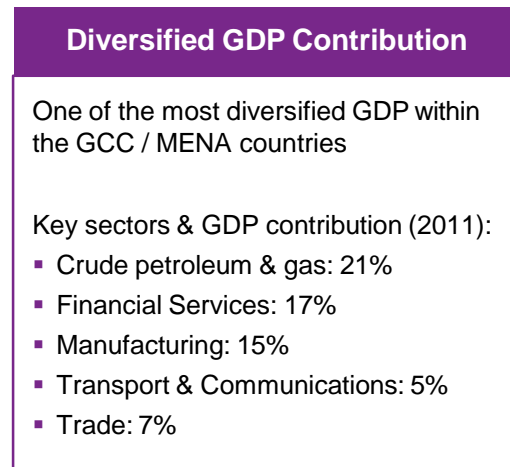
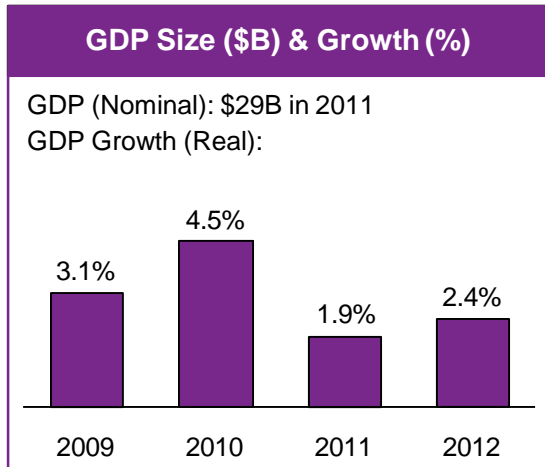
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KEY ECONOMIC STATISTICS

Bahrain is doing well on several economic indicators...



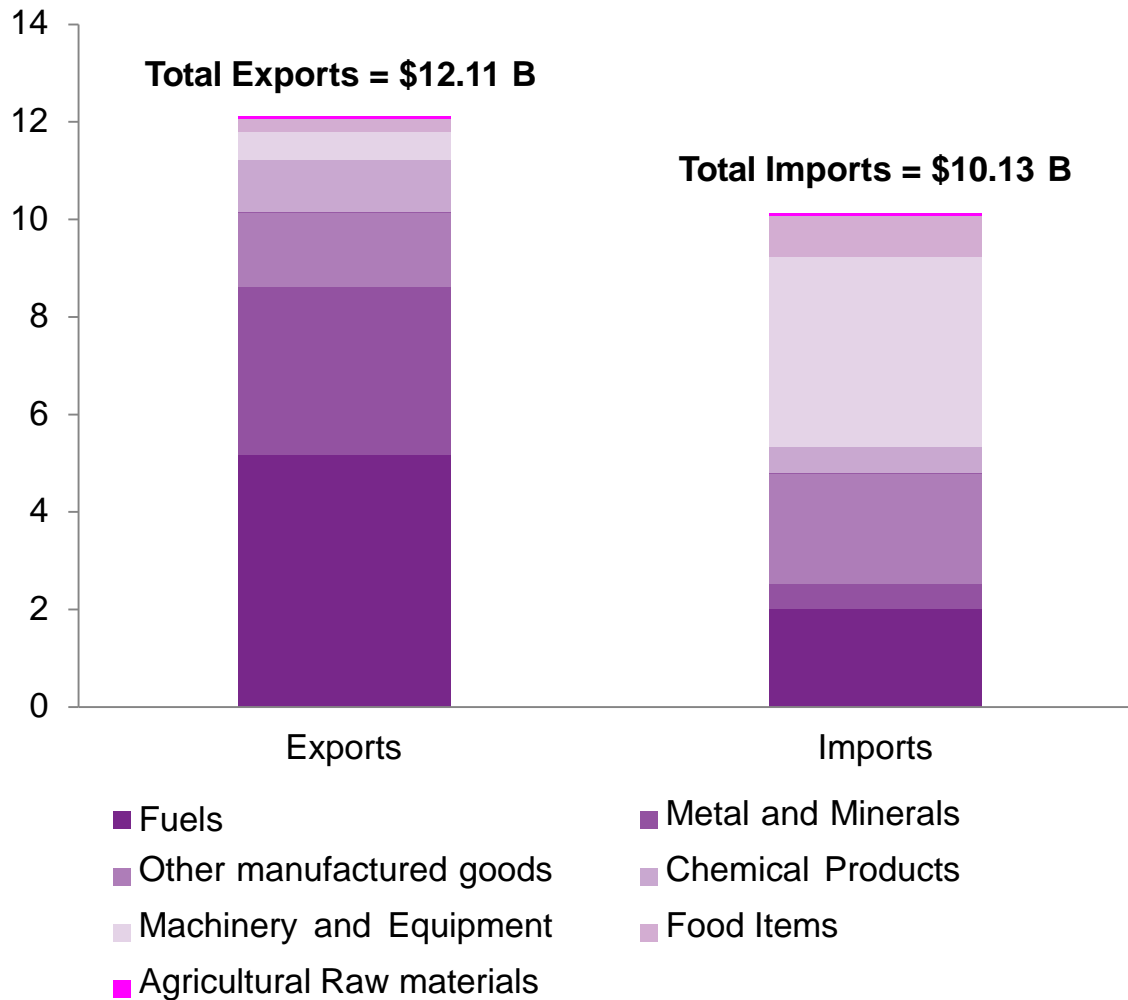
BAHRAIN'S COMPETITIVE RANKING

... however, Bahrain requires improvements in its 'Innovation Capabilities'

Criteria	Bahrain's Rank in		GCC Leader
	GCC (Out of 6)	World (Out of 133)	
Technological Readiness	3 rd	39 th	Qatar
Global Competitiveness Index	4 th	35 th	Qatar
Higher Education & Training	3 rd	34 th	Qatar
Innovation	5 th	72 nd	Qatar
Business Sophistication	6 th	39 th	Qatar



Positive Balance of Trade



Potential impact of innovation?

On Imports:

- Reduced dependence, with indigenous manufacturing in:
 - Machines and equipment
 - Food items

On Exports:

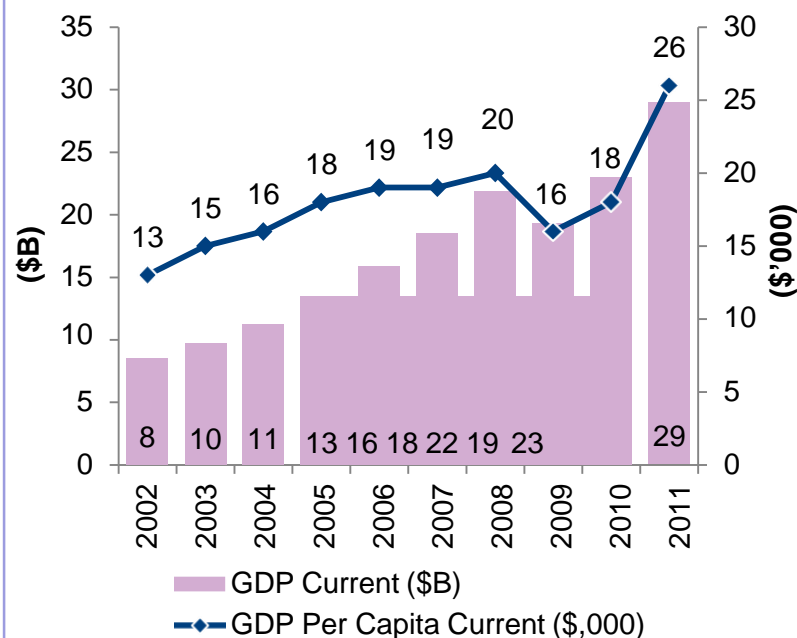
- Reduced dependence on fuels and natural resources
- Increased share of manufactured goods and equipment



GDP CONTRIBUTION BY SECTOR – 2011

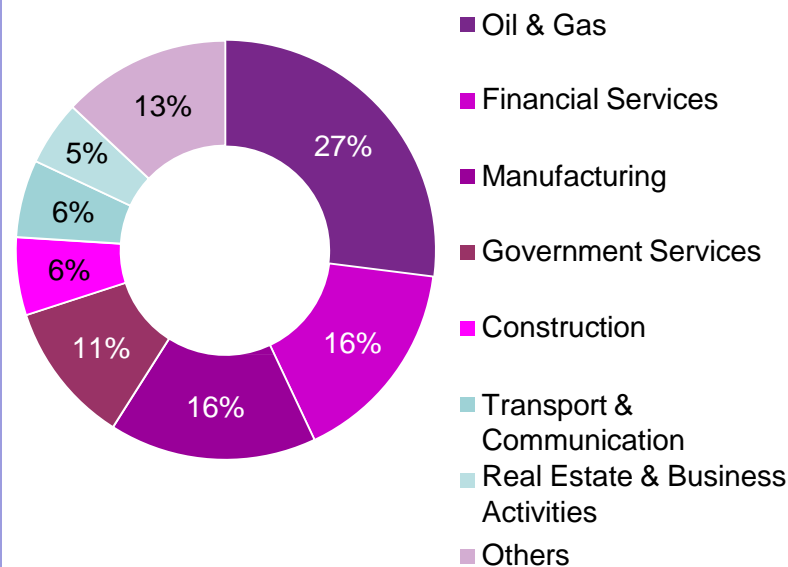
Oil and Gas, Financial Services, Manufacturing and Government Services- highest contributors to GDP

Change in Bahrain's GDP (2002–2011)⁽¹⁾



- In 2011, Bahrain's overall GDP was \$29B and per capita GDP \$29,000
- GDP grew at a CAGR of ~15%
- GDP growth of ~17% from 2009–2011

Break-up of GDP by Sector – (%), (2011)^{(2),(A)}



- Oil & Gas, Financial Services and Manufacturing ~60% of the total GDP

Note:

(A) Refer Appendix for a detailed break-up of the manufacturing sector by different sub-sectors

Sources:

(1) World Bank

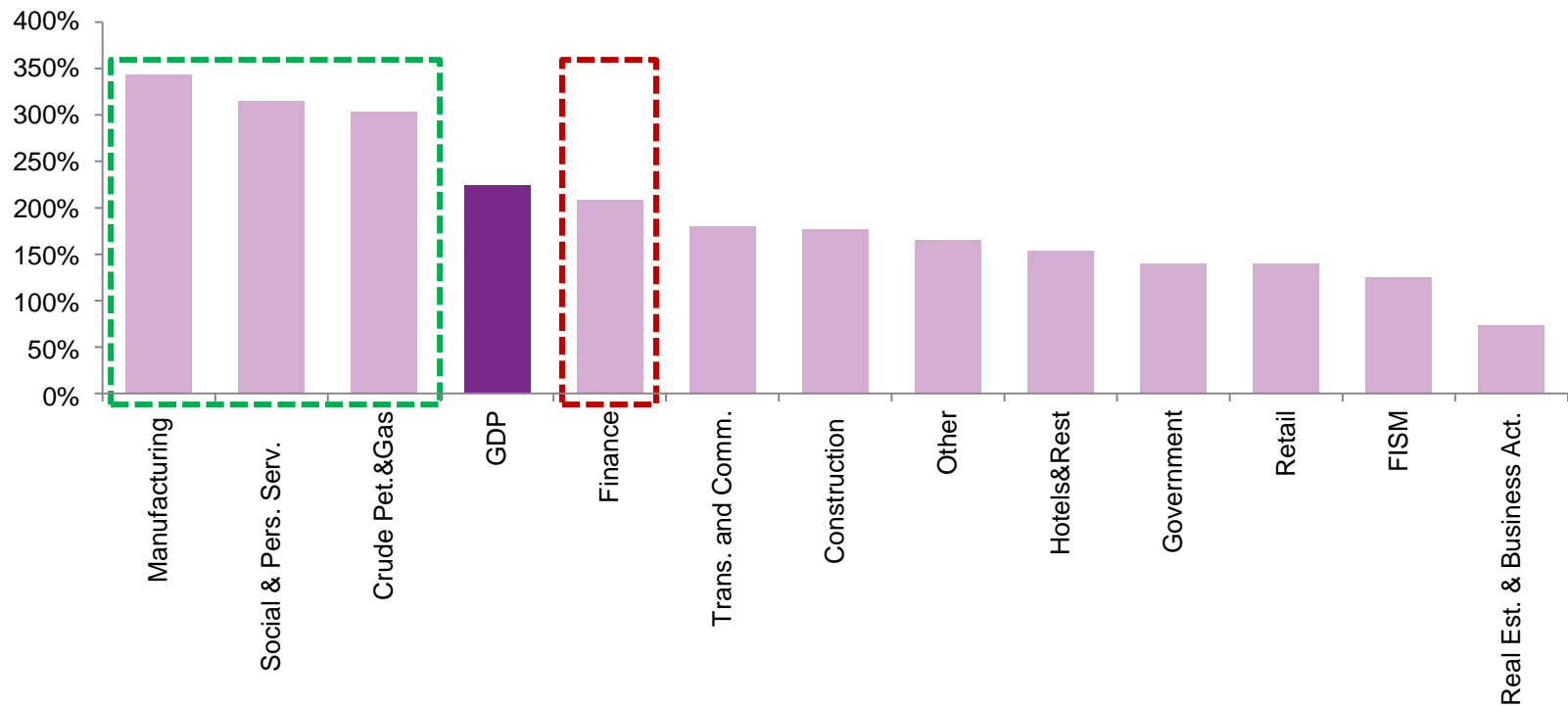
(2) Central Informatics Organization, www.cio.gov.bh/, (accessed on April 19, 2013)



GDP GROWTH PER SECTOR OVER 2001–2011

Growth driven by Manufacturing, Social and Personal Services and Oil & Gas

GDP growth per sector in Bahrain (2001–2011)

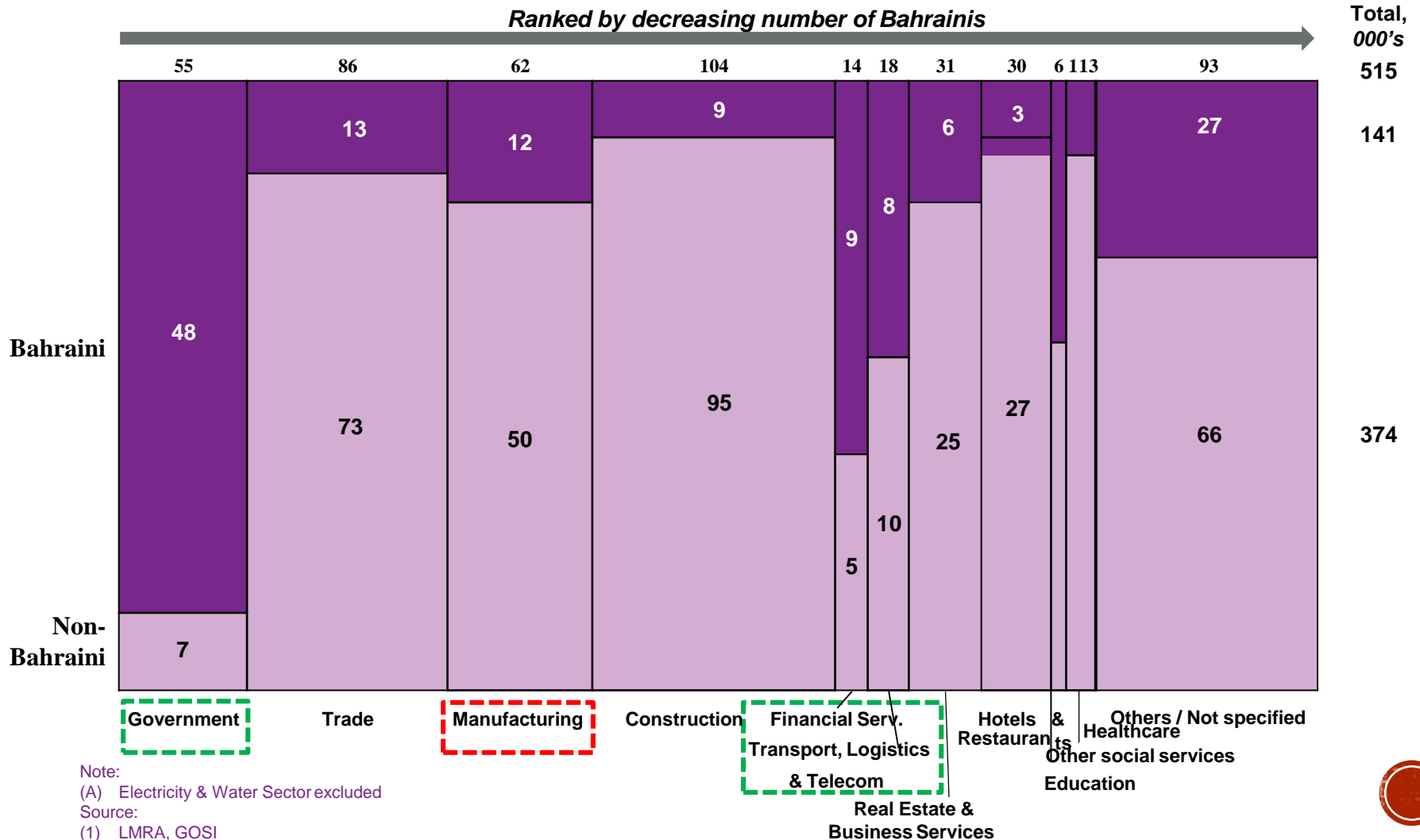


Sources:
(1) CIO
(2) EDB



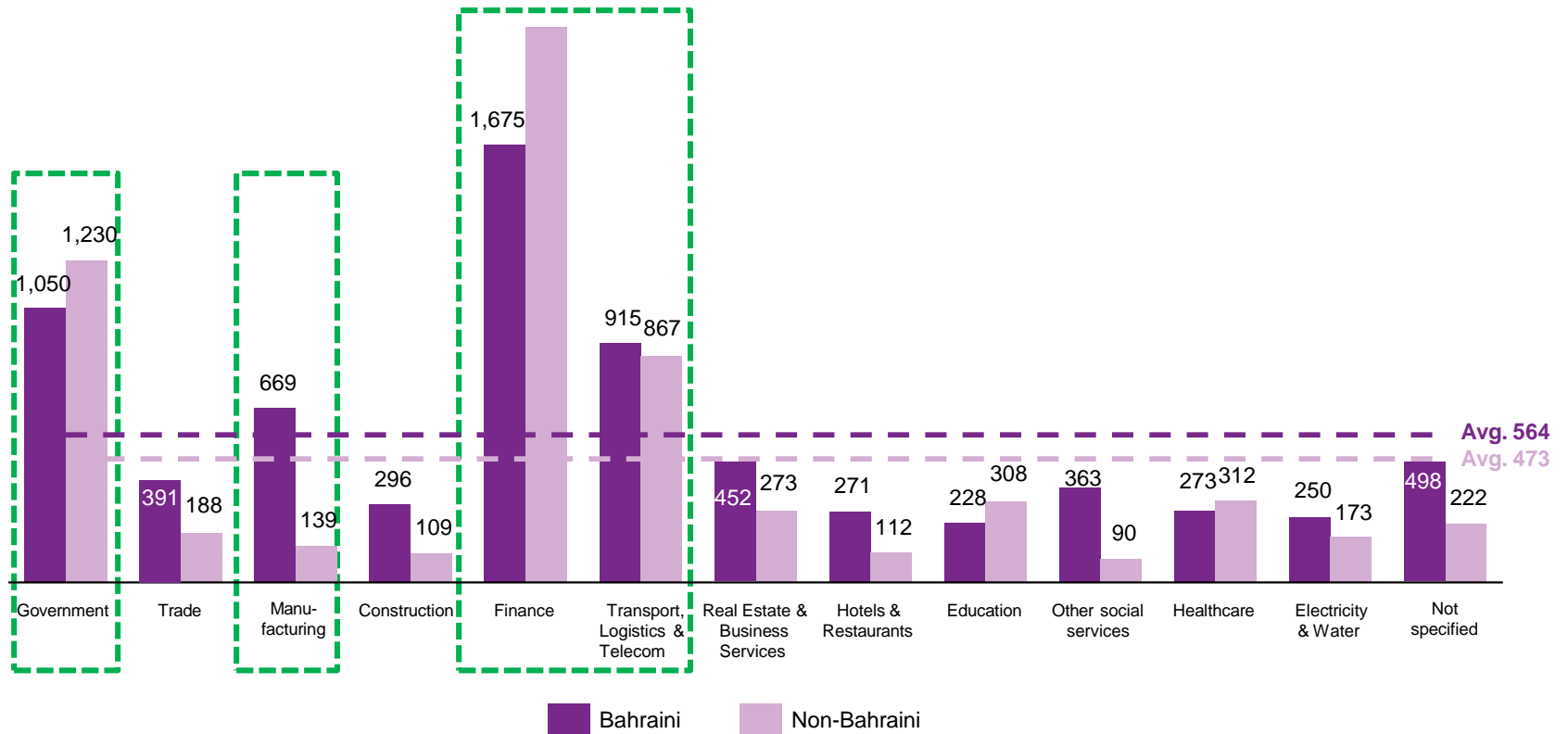
BAHRAIN'S LABOR FORCE BREAKDOWN IN 2010 (000'S)

Bahraini employment penetration highest in Government, Financial Services



AVERAGE MONTHLY WAGES BY SECTOR (BD)

Financial Services, Government, Transport, Logistics & Telecom and Manufacturing lead in wages



Note:

(A) All numbers are in Bahraini Dinars

Source:

(1) LMRA, GOSI



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BAHRAIN: STRENGTHS AND STRATEGIC POSITIONING

Bahrain benefits from 6 key strengths

Strategic Location at the Heart of the GCC Markets	<ul style="list-style-type: none">▪ Strategic location at the heart of the GCC – A \$1.4T GDP market (\$2 Tr in 2020)▪ Quick and efficient access to export markets:<ul style="list-style-type: none">– By air: Bahrain International Airport– By sea: State-of-the-art Khalifa bin Salman Port established in November 2009– By road: Bahrain–KSA causeway	One of the Region's Most Liberal Markets	<ul style="list-style-type: none">▪ Possibility of 100% foreign ownership▪ Free trade access throughout the GCC and to the US via a bilateral FTA▪ 12th 'most free economy in the world' and top in the Middle East in 2013 (Index of Economic Freedom published by The Heritage Foundation and WSJ)
Highly Educated & Skilled National Workforce in Comparison to Other GCC Countries	<ul style="list-style-type: none">▪ Educated and skilled workforce with proficiency in English▪ Training subsidies (Tamkeen)▪ Well educated and represented female workforce	Competitive Costs	<ul style="list-style-type: none">▪ Low cost of doing business▪ Lowest taxes in the GCC
Long and Successful Track Record of Flourishing Industries	<ul style="list-style-type: none">▪ Regulatory regime that provides a free, open and transparent business environment▪ Companies' rights protected with the BCDR^(A) established with the AAA^(A)▪ Middle East's leading financial services hub (404 licensed financial institutions; CBB recognized as a preeminent single regulator)▪ Large industrial base: Alba, Bapco, GPIC	Advanced Infrastructure and a Progressive Atmosphere	<ul style="list-style-type: none">▪ Modern infrastructure▪ International schools, excellent public and private hospitals, sports and family entertainment facilities▪ Modern outlook, rich history and culture

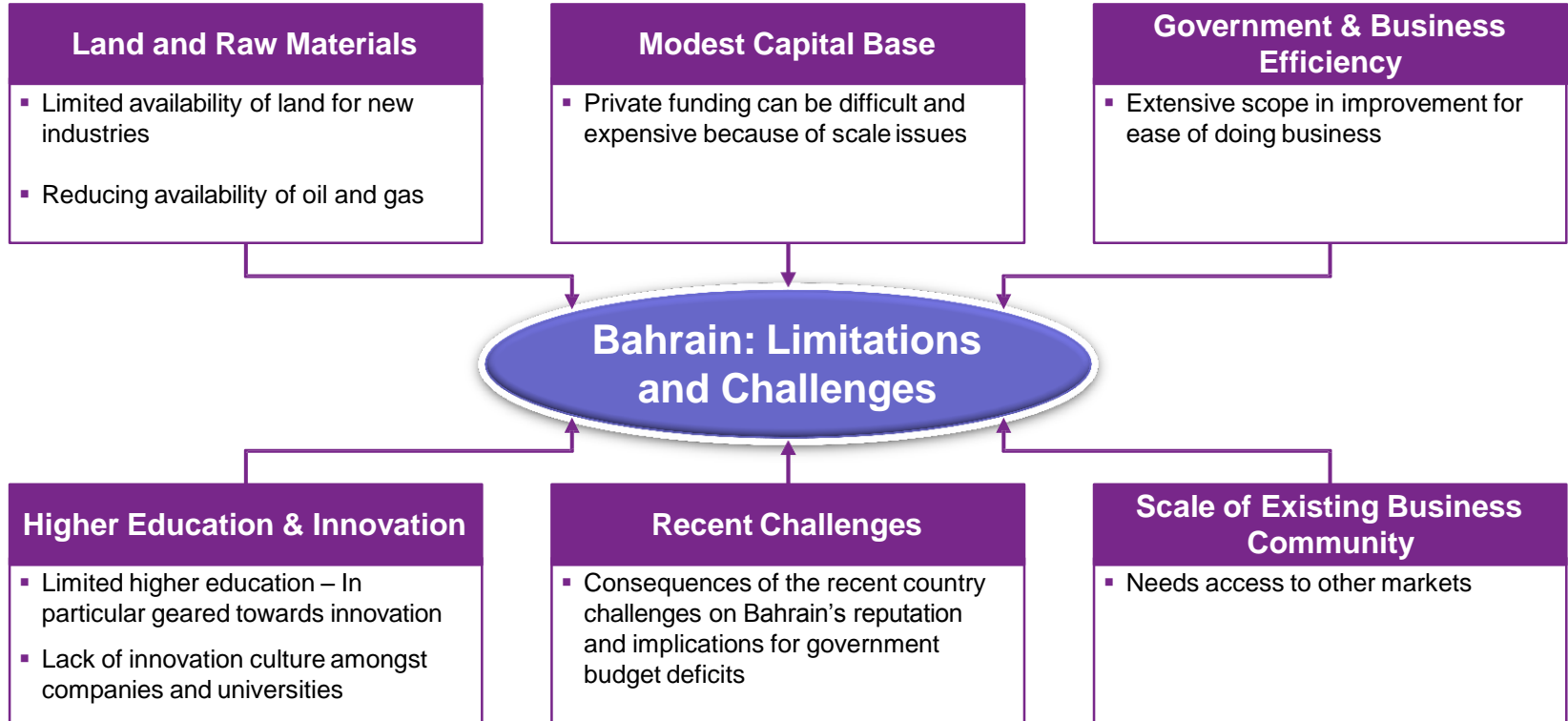
Note:

(A) Bahrain Chamber of Dispute Resolution ; American Arbitration Association



BAHRAIN: LIMITATIONS AND CHALLENGES

Can Innovation provide solutions?



Innovation Drivers:

- Not natural resource intensive
- Create employment – high on human capital
- Drive GDP growth
- Be scalable to capitalize on opportunities in the GCC region



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SECTORS OF RELEVANCE IN BAHRAIN (DIRECTIONAL)

Historical vs. New Sectors

Sectors of Historical Relevance

GDP: Oil & Gas, FS, Manufacturing and Government services

Workforce: Construction, Trade and Repair, Manufacturing and Real Estate

Wages: FS, Transport, Logistics & Telecom, Manufacturing, Trade and Social Services sectors

Strengths: Strategic location, skilled workforce, track record, competitive costs, good infrastructure, progressive atmosphere

Limitations: Land, availability of raw materials, modest capital base, government and efficiency, budget deficits, scalability

- **Oil and Gas**
- **Financial Services**
- **Construction**
- **Manufacturing and Repair**
- **Trade**
- **Real Estate**

Sectors of Strategic Relevance

- **Knowledge-intensive services**
 - **Finance** (Insurance, Asset management, Back office, Ancillary services: Legal, Accounting, Risk Management, etc.)
 - **Consultancy**
 - **Research, Advisory**
 - **ICT**
 - **Architecture/Design**
- **Value-added manufacturing**
 - **Downstream products/operations** for existing manufacturing services
 - **Pharmaceuticals**
 - **Innovative designs/ideas**
 - **Luxury products**
- **Education**
- **Healthcare**
- **Transportation**
 - **Logistics**



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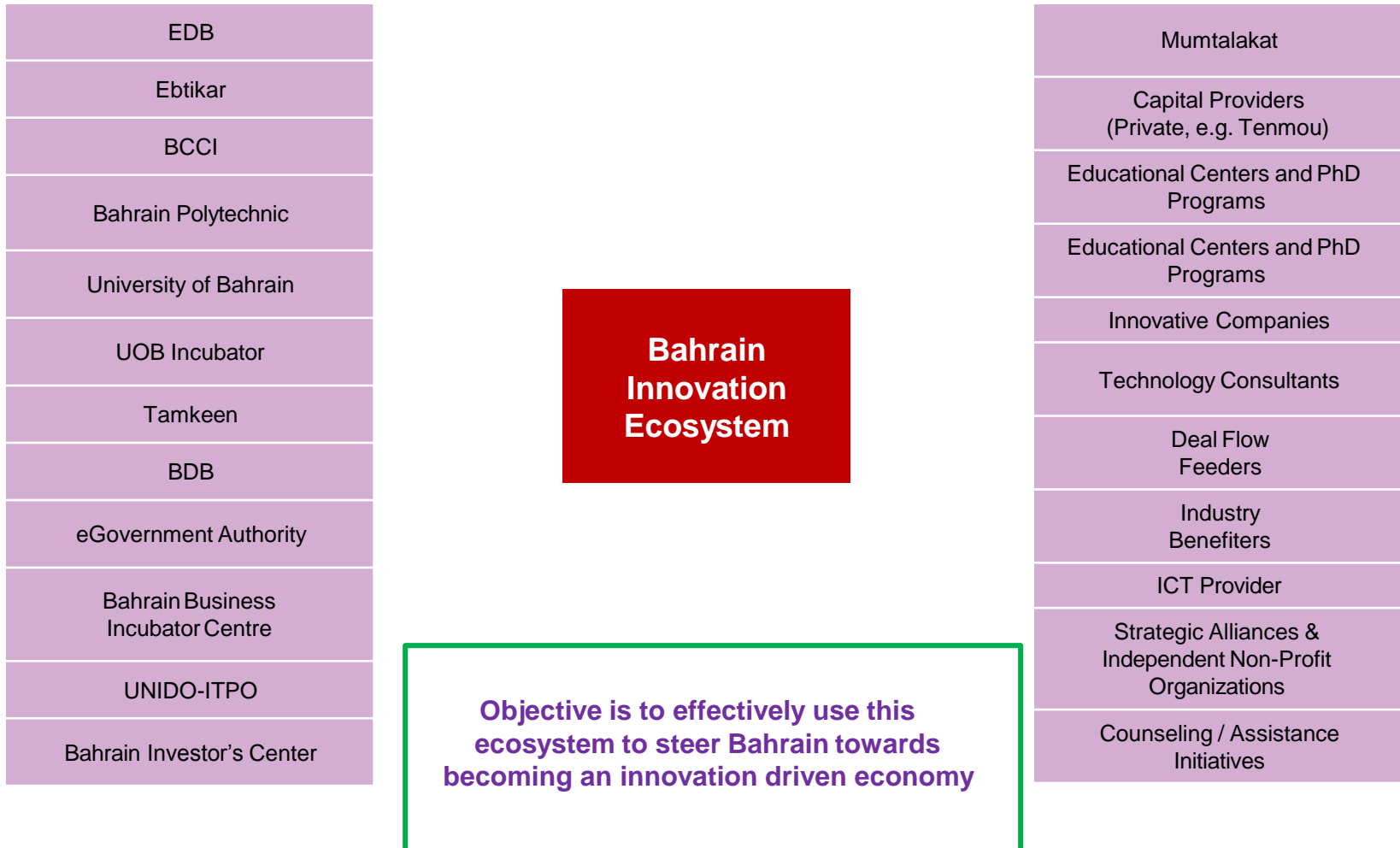
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INNOVATION ECOSYSTEM IN BAHRAIN

Bahrain has the right elements of an active innovation ecosystem



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>21 incubators to promote technology transfer, create new enterprises and new jobs

Riyadh Technology Incubation Centre (RTIC), KSA

- RTIC is a technology incubator set up by King Saud University (KSU)
- Provides infrastructure, research facilities, mentoring, seed funding etc. to support an innovative environment

Science and Technology Park, Qatar

- Established in 2008 for commercializing research
- Develops profitable enterprises and raises awareness among potential entrepreneurs to promote applied research technology and commercialization
- Model is governmental not-for-profit

Dubai Business Incubation Center, UAE

- Setup to foster development of technology ventures involving the internet, information technology and other related technology sectors by the Dubai Enterprise Council (DEC)
- DEC¹ is open to all industries and to Emiratis and expatriates
- Entrepreneurs are assigned mentors to help develop the venture smoothly

Knowledge Oasis Muscat (KOM), Oman

- KOM established business incubation programs as joint ventures with UK technology park programs
- Main services are business information finance and incubation development with technology transfer
- Program is a non-profit governmental model

Note:

(A) DEC: Dubai Enterprise Council

Source:

(1) International Journal of Innovation and Knowledge Management in MENA Vol.1 No .1,2012



GLOBAL EXAMPLES -- CHILE, JAPAN, GERMANY AND THE US

...and other global examples provide guidelines for Bahrain

Chile

- 'Start-up Chile' is a program set up by the Chilean government to attract early stage, high-potential entrepreneurs to bootstrap their startups
- \$40,000 in seed capital to 22 startups from 14 countries
- Over 650 startups applied in 2011 for 100 spots in the Start-Up Chile program

Japan

- Japan ranks third in terms of global R&D spending with a GERD of \$160 B in 2012
- Automotive, information and communication, electronics equipment and pharmaceuticals are the top three sectors contributing ~43% to the R&D spend

Germany

- Germany ranks fourth in terms of R&D spending in the world with a GERD of \$91B in 2012
- In 2009, the automotive sector accounted for the highest R&D spend, followed by electronic equipment and pharmaceuticals
- The Federal Ministry of Education and Research (BMBF) launched the 'Pharma-Initiative' to boost Germany's biotechnology and pharmaceuticals industries

- The US has the highest global R&D spend with a GERD of \$419 B in 2012
- In 2009, computing and electronics had the highest R&D spend, followed by chemicals (includes pharmaceuticals) and professional/scientific/ technical services sectors
- Example: Invent, a consortium that includes IBM, Infineon, AMD and Micron invested ~\$600 M to seek ways to develop chips with smaller features and provide a training environment. They provided 5,000 additional jobs, and over 500 research opportunities

Note:

(A) GERD: Gross Expenditure on R&D



THANKS FOR YOUR ATTENTION!

