

The ICT Sector and Knowledge-Based Economies in the ESCWA Region: Investing in Innovation

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Knowledge society/economy – Early definition



“For countries in the vanguard of the world economy, the balance between knowledge and resources has shifted so far towards the former that knowledge has become perhaps the most important factor determining the standard of living — more than land, than tools, than labor. Today’s most technologically advanced economies are truly knowledge-based”

World Bank (1999)

Knowledge and information is today produced like cars and steel were produced a hundred years ago.

➤ **In a knowledge economy**, generation and exploitation of knowledge are at the centre of the economic processes. Such an economy effectively acquires, creates, disseminates and uses knowledge as the main driver for economic growth.



knowledge becomes the prime source of competitive advantage.

➤ **A knowledge society** is generally defined as a group of people with similar interests who try to make use of their combined knowledge. It is not just confined to the high-technology and ICT sectors. It has gradually spread across the entire economy and the society as a whole is shifting to knowledge-intensive activities (Anderson, 2008)



ICTs do not create transformations in society, but ICT industries are themselves knowledge industries in the sense that they employ knowledge intensive research, design, and production processes (Ein-Dor et al., 2006).

- Increasing role of **innovation** and technological research
- **Continuous learning** as a basis for increased productivity and economic competitiveness
- Capacity of **HR to quickly adapt** to new realities
- Adequate **economic enabling environment**
- A significant role of the **ICT sector** in economic growth

ICT sector in the ESCWA region: Challenges

- Very few ICT products developed/manufactured in the region
- Insufficient R & D in the ICT sector in the region
- ICT sector, particularly the software industry, is not recognized as an industry in the region



Weak ICT sector leads to negative impact on the productivity and competitiveness of all other sectors of the economy, growth, job creation and economic diversity

Past...

ESCWA ICT Sector and Knowledge Economy Related Activities in 2003-2009



ICT sector in the ESCWA region: ESCWA Involvement



Regional Plan Of Action (RPoA)

Programme 5 : *Developing the ICT sector*

- **Objective:** Develop the ICT sector in the region, including software (systems and applications), services (product services, professional and outsourcing services) and hardware (computer systems, networking, handsets and semi-conductors).

Since 2003

- **Action plan:** Implementing a number of regional projects, to facilitate partnerships among stakeholders in the ICT sector, encourage the establishment of ICT incubators, and produce favorable legislative environment for the development of the ICT sector.

Since 2005

Developing the ICT sector in the ESCWA region: ESCWA Initiatives - 2007



➤ **2007:** Publication on “**Broadband for Development in the ESCWA Region: Enhancing Access to ICT Services in a Global Knowledge Society**”

• This report highlighted the vast development potential in Western Asia as it moves towards the broadband revolution, with examples of concrete business cases focused on selected countries in the region.

• It also provided an assessment of factors that hinder the deployment and spread of broadband, while proposing concrete actions to guide ESCWA countries in their quest for enhanced infrastructure.

• The report targeted various stakeholders - governments, regulators, operators, service providers and civil society – and aimed mainly at fostering the development of broadband in the ESCWA region.

Developing the ICT sector in the ESCWA region: ESCWA Initiatives - 2007

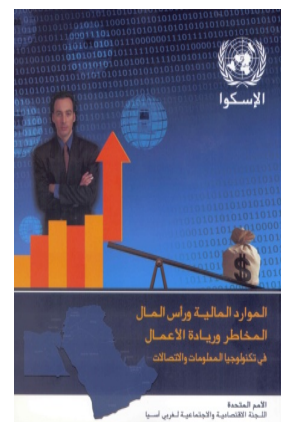


➤ **2007:** Publication on “**ICT Finance, Venture Capital and Entrepreneurship**”.

The creation of a knowledge-based economy in the ESCWA region necessitates the development of appropriate financial instruments, the provision of financial resources and venture capital.

This study sheds light on :

- the need to assign the highest priority to mechanisms for financing innovation
- venture capital as one of the most important mechanisms for financing ICT



➤ **2007 & 2008:** Two Workshops on “**Establishing Public Private Partnerships for ICT Initiatives**”.

•A look at public/private partnerships (PPP) reveals that, while this mechanism is considered important for the achievement of the information society in the ESCWA region, many stakeholders have not yet addressed the challenges or taken advantage of the opportunities associated with cooperating and partnering together.

•The main objective was to increase the capacity of public and private institutions to establish PPPs that would be focused on building the information society.

➤ **2007 & 2008:** Two Workshops on “**Establishing Public Private Partnerships for ICT Initiatives**”.

•Major topics included the strategic, operational and organizational aspects of PPPs, rationale and objectives, legal and regulatory frameworks, project finance, tendering and procurement.

•The Workshops recommended setting priorities for PPP projects and for the building of trust between the public and private sectors. The need for transparency and accountability from both sides was also stressed, as was the importance of a government’s role in leadership and law enforcement.

Developing the ICT sector in the ESCWA region: ESCWA Initiatives - 2009



➤ Expert Group Meeting on **“Developing the ICT Sector in the ESCWA Region”** -
issues addressed:

- Developing the ICT sector in the region from the national and regional perspectives
- ICT financing, venture capital and entrepreneurship
- Human and financial resources needed for the development of the ICT sector
- National ICT strategies and policies and their implementation
- Regulatory status of the sector in member countries
- Trade considerations for ICT products
- Contributions of the sector to the Gross Domestic Product of member countries
- Measuring performance of the sector
- Tools for sustainability of the ICT sector

Developing the ICT sector in the ESCWA region: ESCWA Initiatives - 2009



➤ Workshop on **“Investment in the ICT sector”** aimed at raising awareness on the policies, strategies, mechanisms and tools for promoting ICT investments in the region and implementation modalities for increasing ICT sector finances.

Topics addressed include:

- Venture capital, angel financing and entrepreneurship for innovation in the ICT sector
- State of economy, trade and investment in the Arab countries
- Financial markets and the ICT sector
- Investment in telecom infrastructure
- Investment, entrepreneurship and innovation
- Investment in digital Arabic content
- Opportunities for and challenges facing investment in the ICT sector

Past...

ESCWA ICT Sector and Knowledge Economy Related Activities

in 2010-2011



Promoting the ICT Sector to meet the challenges of the knowledge economy - **Background**



- While growing at a healthy pace during the last few years, **the ICT sector as a stand-alone economic sector in the ESCWA region remains underdeveloped**, especially when compared to the ICT sector of countries which are part of the knowledge economy.
- Even when implementing projects which target the development of a knowledge economy in the region, the public and the private sectors are still **consumers** of existing technology instead of being creators and innovators.

- Publication on “Promoting the ICT Sector to meet the challenges of the knowledge economy”
- Workshop on “Promoting and Benchmarking the ICT Sector in the ESCWA Region”



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The latest Study 2010-2011



Promoting the ICT Sector to meet the challenges of the knowledge economy - **Objectives**



Analyze the status of the ICT sector and **determine relevant options** for developing it in the region. This is from 2 points of view:

- From **governmental perspective**, the study reviewed the role of governments in the EMCs in promoting the ICT sector and proposed guidelines to accelerate the evolution of this sector in order to satisfy the needs of the emerging knowledge economy in the ESCWA region.
- From the perspective of **business community**, this study focused on determining the problems and challenges hindering the development of an ICT economic sector and suggested solutions to increase the contribution of this sector national economies.

Promoting the ICT Sector to meet the challenges of the knowledge economy – **Topics covered**



- Reviewing the status of the ICT sector in the region, including obstacles and challenges that the ICT sector is facing in the current economic situation
- Assessing of the role of governments and pinpointed the gaps hindering the building of needed enabling environments
- Identifying the socio-economic priorities related of the ICT sector in the ESCWA region
- Proposing actions to increase the contribution of the ICT sector to the socio-economic development of EMCs
- Presenting case studies from selected EMCs with regard to the contribution of the ICT sector to economic growth
- Highlighting methodologies and indicators to measure the contribution of the ICT sector in national economies
- Proposing a future vision

Promoting the ICT sector to meet the challenges of the knowledge economy – Findings



مؤشرات اقتصاد المعرفة في بعض البلدان الأعضاء في الإسكوا

مؤشر تكنولوجيا المعلومات والاتصالات	مؤشر التعليم	مؤشر الابتكار	مؤشر الحوافز الاقتصادية والنظام المؤسسي	مؤشر المعرفة	مؤشر اقتصاد المعرفة	البلد	الترتيب
8.06	5.37	6.45	7.05	6.63	6.73	قطر	1
8.59	4.90	6.69	6.75	6.72	6.73	الإمارات العربية المتحدة	2
7.30	5.83	4.29	6.75	5.80	6.04	البحرين	3
6.96	4.93	4.98	6.50	5.63	5.85	الكويت	4
4.95	5.62	5.59	5.99	5.39	5.54	الأردن	5
4.90	4.47	4.94	7.15	4.77	5.36	عمان	6
6.43	4.89	3.97	5.94	5.10	5.31	المملكة العربية السعودية	7
5.35	4.92	4.53	4.42	4.93	4.81	لبنان	8
3.92	4.35	4.44	3.59	4.24	4.08	مصر	9
4.43	3.10	3.17	1.65	3.57	3.09	الجمهورية العربية السورية	10
1.67	1.79	2.67	2.66	2.04	2.20	اليمن	11
3.52	1.28	1.86	0.48	2.22	1.78	السودان	12

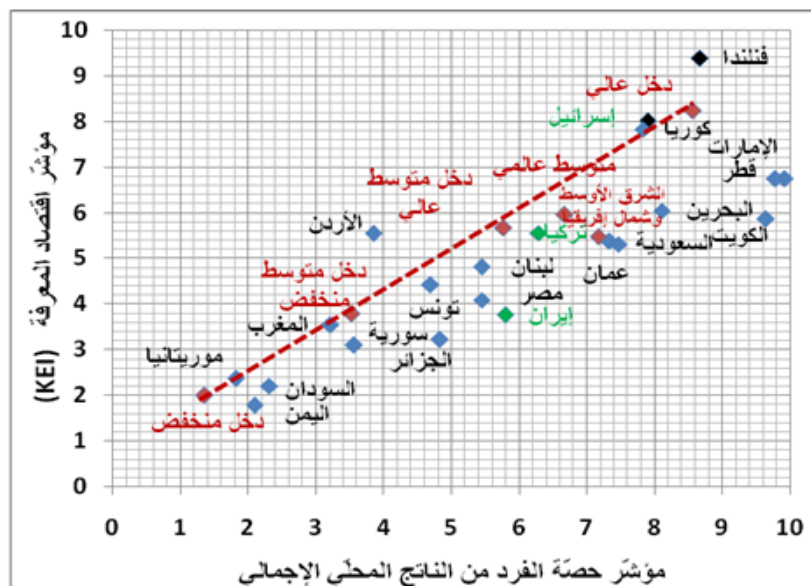
مؤشرات اقتصاد المعرفة في بلدان مختارة

مؤشر تكنولوجيا المعلومات والاتصالات	مؤشر التعليم	مؤشر الابتكار	مؤشر الحوافز الاقتصادية والنظام المؤسسي	مؤشر المعرفة	مؤشر اقتصاد المعرفة	البلد	الترتيب
8.73	9.77	9.67	9.31	9.39	9.37	فنلندا	1
7.54	6.86	9.40	8.24	7.93	8.01	إسرائيل	2
8.60	8.09	8.60	6.00	8.43	7.82	كوريا الجنوبية	3
4.92	4.46	5.83	6.98	5.07	5.55	تركيا	4
5.65	3.80	4.56	0.99	4.67	3.75	إيران	5

Promoting the ICT sector to meet the challenges of the knowledge economy – Findings



مؤشر اقتصاد المعرفة منسوباً إلى حصة الفرد من الناتج المحلي الإجمالي



Future vision to promote the ICT sector

- Based on the World Bank's Knowledge Economy Framework
- Takes into consideration the main findings of the ICT sector status analysis



Help Arab countries articulate strategies for their transition to a knowledge economy

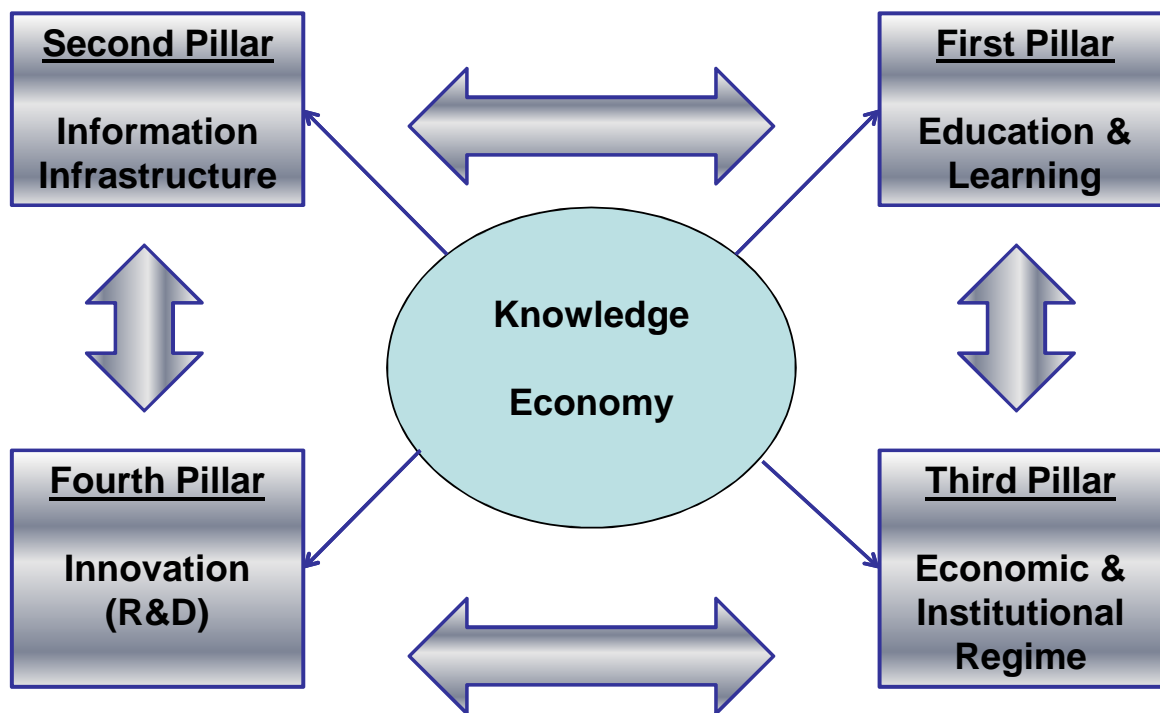
It consists of **four pillars**:

- I. **Education and Training** : An educated and skilled population that can create, share, and use knowledge well
- II. **A dynamic information infrastructure**: that can facilitate the effective communication, dissemination, processing of information and sharing knowledge
- III. **An economic and institutional regime**: that provides incentives for the efficient use of existing and new knowledge and promotes investment and entrepreneurship in the ICT sector
- IV. **An efficient innovation system** of firms, research centers, universities, think tanks, consultants, and other organizations that can tap into the growing stock of global knowledge, assimilate and adapt it to local needs, and create new technology



Making effective use of knowledge in any country requires developing appropriate policies, institutions, investments, and coordination across the above four functional areas.

Framework of the Knowledge Economy



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The latest Workshop in 2011



- Workshop on “Promoting and Benchmarking the ICT Sector in the ESCWA Region”
 - Aimed at creating awareness of the solutions for the development of a more productive ICT sector in the ESCWA region
 - Presented an opportunity for participants to contribute to the enhancement of the above-mentioned study and the resulting future vision.
 - Sought to build the capacity of member states to benchmark the ICT sector and to conceive policies, mechanisms and modalities related to the impact of the sector on socio-economic development

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Present...

**ESCWA ICT Sector and Knowledge
Economy Related Activities**

in 2012-2013



- A publication on “Regional competitiveness of the ICT sector in ESCWA Member Countries” (June 2013)
- EGM on “Regional R&D in the ICT Sector” (March 2013)

Both aiming at :
Enhancing the competitiveness of the ICT sector in the region with a focus on R&D, Innovation, Partnerships, and Investment

Still in the **Planning Process**

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Supporting Additional Activities
in 2012-2013:
Innovation Track



➤ Promoting knowledge economy and innovation through
Establishing Arab network of Living Labs, a potential joint
project with the World Bank

- Ballon et al., (2005) define Living Lab as an experimentation environment in which technology is given shape in real-life contexts and in which (end) users are considered 'co-producers'.
- In this approach, the aim is to collaborate on promoting innovation in the region and among innovators
- The idea is to establish the Arab Network of Living Labs. This network would involve policy makers promoting the business sector, entrepreneurs, chambers of commerce and stakeholders in Science Technology and Innovation.

Still in the **Planning Process**

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Supporting Additional Activities
in 2012-2013 :
Investment Track



➤ International Conference on Investment in the Arab ICT Sector (**Tunis, December 2012**)

- With the collaboration of the Union of Arab Banks, the Arab Information and Communication Technology Organization (AICTO) and the Tunisian Ministry of Industry and Technology and potentially the World Bank
- The main objective is to promote Investments, Venture Capital, and Business entrepreneurships in the ICT sector
- Potential Survey on the Arab Banks perspective on Investment in the ICT Sector.

Still in the Planning Process

Supporting additional activities

On the **Innovation** and **Investment** Tracks



Programmed Activities

A publication on “**Regional competitiveness of the ICT sector in ESCWA Member Countries**” (June 2013)

EGM on “**Regional R&D in the ICT Sector**” (March 2013)

Future...

ESCWA ICT Sector and Knowledge Economy Related Activities in 2014-2015



Developing the ICT sector in the ESCWA region: ESCWA Initiatives – **Future**



- **Workshop** on “Promoting Innovation for Knowledge-Based Economies” (2014)
- **Field Project** on “Promoting Private Sector Involvement in ICT Infrastructure”(2013-2015)
- **Publication** on “Ecosystem for a Knowledge Based Economy in the ESCWA Region” (2015)
- **EGM** on “Innovation Indicators: Measuring the Engine of Knowledge Based Economies in the ESCWA Region” (2015)

Still in the Planning Process

Thank You

