Firm Innovation in South Med countries
Panel on Innovation in South Med countries: status and prospects

Helena Schweiger, EBRD

What is innovation at the firm level?

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- Goes well beyond R&D in high-tech sectors
- Products, processes, organisational and marketing methods new to the firm
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- Goes well beyond R&D in high-tech sectors
- Products, processes, organisational and marketing methods **new to the firm**
- Firms need to adopt, adapt and advance towards the technological frontier
WBG-EBRD-EIB MENA Enterprise Survey (ES) (2013-15)

- Firm-level survey with the objective to gain an understanding of firms’ perception of the environment in which they operate.
- Representative sample, stratified by sector, size and region (5+ employees, manufacturing and services).
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- Firm-level survey with the objective to gain an understanding of firms’ perception of the environment in which they operate
- Representative sample, stratified by sector, size and region (5+ employees, manufacturing and services)
- Approximately 6,500 face-to-face interviews with top managers of registered firms in 9 economies, of which almost 5,500 in South Med economies (excl. Israel)
- Comparable data are available for 30 economies in Europe and Central Asia (ECA) → EBRD-WB BEEPS
MENA ES characteristics

Number of surveyed firms
- < 500
- 500 - 2000
- > 2000

Firm Size
- Small
- Medium
- Large

Firm Sector
- Manufacturing
- Retail
- Other Services
Main questionnaire:

- Yes/no questions on whether their firm has introduced any new or significantly improved products, processes, organisational or marketing methods or spent on R&D in the last three years
- Cards containing examples of innovative products, processes, organisational or marketing methods to foster a common understanding of what innovation is (some differences by sector)
Measurement of innovation in MENA ES

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- **Innovation Module:**
  - More detailed questions, including description of the main product or process innovation
Most innovations are not ground-breaking

- The adoption (and adaptation) of existing products and processes is particularly important for emerging markets and developing economies - including those in South Med.

![Bar chart showing percentage of firms in different regions.](chart.png)
South Med firms engage in all types of innovation

- Firms in less developed economies may find it easier to innovate by adapting existing products to local conditions or upgrading machinery and equipment.
Firms can use a range of different approaches to acquire knowledge

1. Create ("make") it themselves through in-house spending on research and development (R&D)
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2. “Buy” this knowledge by contracting R&D with other companies and institutions or by purchasing or licensing patented technologies, non-patented inventions and know-how
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Acquisition of knowledge does not always lead to successful innovation and vice versa.
South Med’s low-tech sectors are less likely to acquire knowledge than their ECA peers.
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- South Med compares favorably to ECA in higher-tech and medium-low-tech manufacturing sectors, but lags statistically significantly behind in low-tech sectors
- Differences due to exposure to the international market, participation in global value chains (GVCs)
CDM Model: What are the determinants of innovation and does it pay off?

- Acquisition of knowledge
- Innovation
- Productivity
CDM Model: What are the determinants of innovation and does it pay off?

Manager’s education - university

Size
Age
Ownership
Trading status
Skilled workforce
Sector- and economy fixed effects

Acquisition of knowledge

Access to finance
Manager’s sector experience

Use of foreign technology
Develop new ideas
Formal training
Main market - local
ICT usage

Innovation

Location type
Fuel intensity
Capacity utilisation
Capital per worker
Management practices

Productivity
Suitably skilled workforce

Firm-specific human capital matters

Firms that

- provide formal training for their employees
- give employees time to develop new approaches and ideas

are more likely to innovate
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**Formal level of education does not appear to play a role**

- Exception: formal level of manager’s education matters for the decision to acquire knowledge
Access to knowledge and information

Most firms do not introduce innovation new to the technological frontier; they often rely on existing knowledge of what their peers are doing.
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More likely to engage in innovative activities

- Manufacturers that both export and import (and possibly participate in GVCs): acquire knowledge, technological innovation
- Firms with at least 10 percent foreign ownership: acquire knowledge, technological innovation
- Firms that use email to communicate with their clients or suppliers: technological and non-technological innovation
Access to finance

Banks

- might not be willing or able to fund innovative firms at the technological frontier, but they might fund firms that innovate by imitation
- provide firms with working capital or short-term loans, which can free up internal resources that the firms can use to finance innovation
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Firms with a loan or a line of credit are more likely to introduce new products, processes or both
All types of innovation are associated with higher labour productivity in both the full private sector and in particular in the manufacturing sector with more than 20 employees.
Productivity pay-offs by technological intensity

- High-tech manufacturing firms benefit most from product innovation, while low-tech manufacturing firms benefit most from non-technological innovation.
Firms would benefit from greater openness to international trade, and in particular more effective customs and trade regulations, both when exporting and importing.
Policy implications

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2. Government should facilitate improvements in the skills of the workforce.

3. Restrictions to firm entry and exit as well as restrictions that give incumbent firms undue advantage should be removed.
Some of the results on innovation will be published in a joint report by the WBG, EBRD and EIB in May 2016.

Analysis of innovation in transition countries, including Israel, Jordan and Turkey from South Med economies, is available in the EBRD Transition Report 2014.

MENA ES documentation and raw data are available free of charge on EBRD BEEPS website (registration required).

THANK YOU!

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### Breakdown of interviews in MENA ES

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<thead>
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<th>Country</th>
<th>Completed</th>
<th>Manufacturing</th>
<th>Services</th>
<th>Innovation</th>
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<td>202</td>
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<td>West Bank and Gaza</td>
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