

Export Activity of Greek Firms and Innovation

Innovation

*An **innovation** is a new or improved product or process (or combination thereof) that differs significantly from the unit's previous products or processes and that has been made available to potential users (product) or brought into use by the unit (process).*

(OECD/EU, 2018 and OECD, 2009)

Innovation

Dimensions to guide measurement:

- Knowledge
- Novelty with respect to potential uses
- Implementation and actual use
- Value creation

Innovation

Strategies for measurement:

- Subject- versus object-based approaches
- Qualitative and quantitative data
- Sources of innovation data
- Responsibility for primary source data collection

Innovation Activities

Business Innovation

- *Innovation activities include all developmental, financial and commercial activities undertaken by a firm that are intended to result in an innovation for the firm.*
- *A **business innovation** is a new or improved product or business process (or combination thereof) that differs significantly from the firm's previous products or business processes and that has been introduced on the market or brought into use by the firm.*

Innovation

Major types of innovation by object:

- ❑ **Product innovation:** a new or improved good or service that differs significantly from the firm's previous goods or services and that has been introduced on the market.
- ❑ **Business process innovation:** a new or improved business process for one or more business functions that differs significantly from the firm's previous business processes and that has been brought into use by the firm.

Innovation

MAIN TYPES OF PRODUCTS:

- Goods
- Services

MAIN BUSINESS FUNCTIONS:

- Production of goods or services
- Distribution and logistics
- Marketing and sales
- Information and communication systems
- Administration and management
- Product and business process development

Short term	Details and subcategories
1. Production of goods or services	Activities that transform inputs into goods or services, including engineering and related technical testing, analysis and certification activities to support production.
2. Distribution and logistics	This function includes: a) transportation and service delivery b) warehousing c) order processing.
3. Marketing and sales	This function includes: a) marketing methods including advertising (product promotion and placement, packaging of products), direct marketing (telemarketing), exhibitions and fairs, market research and other activities to develop new markets b) pricing strategies and methods c) sales and after-sales activities, including help desks other customer support and customer relationship activities.
4. Information and communication systems	The maintenance and provision of information and communication systems, including: a) hardware and software b) data processing and database c) maintenance and repair d) web-hosting and other computer-related information activities. These functions can be provided in a separate division or in divisions responsible for other functions.
5. Administration and management	This function includes: a) strategic and general business management (cross-functional decision-making), including organising work responsibilities b) corporate governance (legal, planning and public relations) c) accounting, bookkeeping, auditing, payments and other financial or insurance activities d) human resources management (training and education, staff recruitment, workplace organisation, provision of temporary personnel, payroll management, health and medical support) e) procurement f) managing external relationships with suppliers, alliances, etc.
6. Product and business process development	Activities to scope, identify, develop, or adapt products or a firm's business processes. This function can be undertaken in a systematic fashion or on an ad hoc basis, and be conducted within the firm or obtained from external sources. Responsibility for these activities can lie within a separate division or in divisions responsible for other functions, e.g. production of goods or services.

Changes that are NOT innovation

- Routine changes or updates
- Simple capital replacement or extension
- Minor aesthetic changes
- Custom production
- Mergers or the acquisition of other firms
- Ceasing to use a business process, ceasing to outsource a business process, or withdrawing a product from the market
- An advertised concept, prototype or model of a product that does not yet exist
- The outputs of creative and professional service firms
- Extend the range of products handled or offered to customers
- The activities of newly created firms
- A change due to externally determined factor prices
- The formulation of a new corporate or managerial strategy

The firm has innovation activities in the observation period

	Yes	No
The firm has at least one innovation in the observation period.	Yes	The firm has one or more innovations and is therefore an innovative firm. Innovation activities can be ongoing, put on hold, completed, or abandoned.
	No	The firm is innovation-active, but has not introduced an innovation, although it might do so in the future.
		No
		It might occur if all work to introduce an innovation was conducted before the observation period.
		The firm is not engaged in innovation activities and has not introduced any innovations in the observation period.

Innovation

□ *An innovative firm reports one or more innovations within the observation period.*

This applies equally to a firm that is individually or jointly responsible for an innovation.

□ *A non-innovative firm reports no innovations within the observation period.*

Innovation

An **innovation-active firm** is engaged at some time during the observation period in one or more activities to develop or implement new or improved products or business processes for an intended use. Both innovative and non-innovative firms can be innovation-active during an observation period.

Activities in pursuit of innovation

- Research and experimental development (R&D) activities
- Engineering, design and other creative work activities
- Marketing and brand equity activities
- IP-related activities
- Employee training activities
- Software development and database activities
- Activities related to the acquisition or lease of tangible assets
- Innovation management activities

Business Capabilities

GENERAL RESOURCES OF THE FIRM

- Firm size*
- Business assets*
- Age*
- Financing and ownership*

MANAGEMENT CAPABILITIES

- Business strategy*
- Organizational and managerial capabilities*
- Characteristics of the business owner and top management*
- Innovation management capabilities*
- Intellectual property management and appropriation*

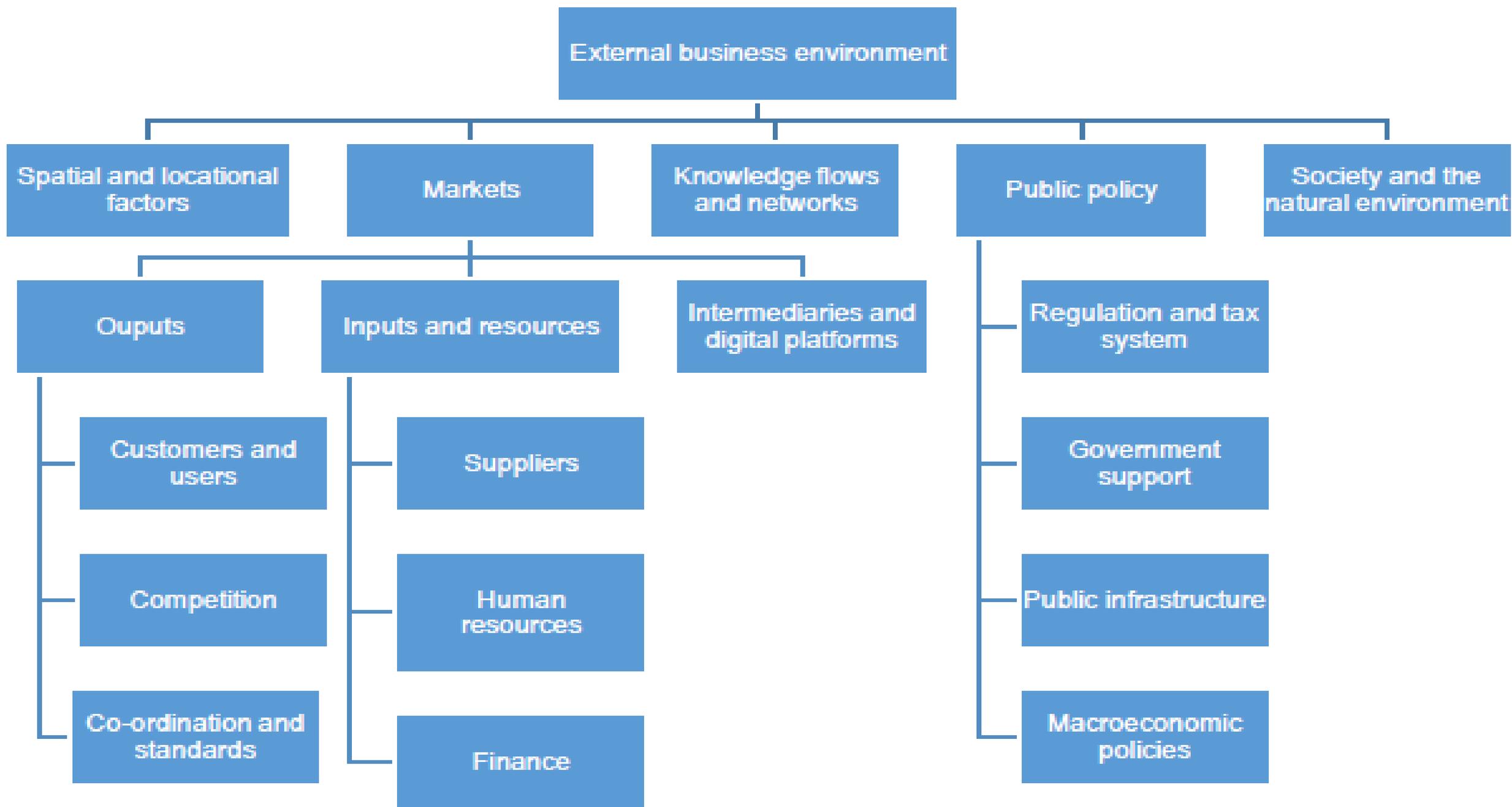
Business Capabilities

WORKFORCE SKILLS AND HUMAN RESOURCE MANAGEMENT

- Workforce qualifications, occupational structure and competences*
- Human resource management*

TECHNOLOGICAL CAPABILITIES

- Technical expertise
- Design capabilities
- Capabilities related to digital technologies and data analytics



Innovation

External Factors:

- ❑ Location of business activities
- ❑ Markets and the environment for business innovation
- ❑ The public policy environment for business innovation
- ❑ The social and natural environment for innovation
- ❖ Drivers of innovation
- ❖ Barriers/obstacles to innovation

Innovation

Objectives and Outcomes :

- Markets
- Production and delivery
- Business organization
- Economy, society or the environment

Table 3.1. Which firms are more likely to be innovative?

	Belonging to a group	Operating in a foreign market	Being large (size)	Barriers related to knowledge ¹	Barriers related to markets ²	Barriers related to costs ³	Rho ⁴	No. obs.	P-value ⁵
Australia	0.352***		0.153***	0.232***	0.207***	0.348***		3 697	0.522
Austria	0.213*	0.454***	0.253***	-0.0765	-0.182	-0.00122	0.223	1 001	0.226
Belgium	0.198***	0.617***	0.267***	0.0427	-0.0500	0.455***	0.41	2 695	0.0012
Brazil	0.424***	-0.264***	0.123***	0.152***	0.131***	0.0320	2.019***	9 384	0.000
Canada	-0.105*	0.290***	0.140***				1.005***	5 355	0.000
Denmark	0.186**	0.637***	0.253***	0.243**	0.0288	0.391***	0.324**	1 729	0.0202
Finland	0.0649	0.532***	0.254***	0.190**	0.259***	-0.0266	0.477***	2 155	0.00178
France	0.227***	0.778***	0.204***	0.201***	0.0678***	0.227***	0.643***	18 056	0.000
Germany	0.144***	0.529***	0.0884***	0.0144	-0.107	0.173***	0.256**	3 242	0.0656
Italy	0.203***	0.478***	0.185***	0.110***	-0.0680**	0.0908***	0.753***	15 915	0.000
Korea	-0.064		0.202***	0.201***	0.006	0.136*	0.662	1 335	0.007
Luxembourg	0.267*	0.314**	0.248***	0.191	-0.101	0.359*	0.192	545	0.701
Netherlands	0.164***	0.546***	0.213***	0.175***	-0.111**	0.0123	0.727***	6 858	0.000
New Zealand	0.113**	0.349***	0.0785***	0.0892*	0.0270	0.138***	1.337***	3 426	0.000
Norway	-0.0724	0.643***	0.320***	0.301***	0.0478	0.301***	0.739***	1 852	0.000
Sweden	0.173***	0.576***	0.09***	0.556***	0.16***	0.119**		2 954	0.563
Switzerland		0.312***	0.045*	0.075	0.201*	-0.065	0.927***	1 964	0.000
United Kingdom	0.174***	0.464***	0.0468***	0.287***	0.0883**	0.0883**	(0.040)	11 162	0.261

References

OECD/Eurostat (2018), Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation, 4th Edition, The Measurement of Scientific, Technological and Innovation Activities, OECD Publishing, Paris/Eurostat, Luxembourg.

OECD (2009), Innovation in Firms: A Microeconomic Perspective, OECD Publishing, Paris, <https://doi.org/10.1787/9789264056213-en>.