



2017

INNOSCORECARD



InnoScores
for Albania / BalkanMed Region

PREPARED BY: UET Centre

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| 0.2 | 15.11.2017 | Second Draft for Review | | |
| | | | | |

The main aim of the BalkanMed Innoscorecard is twofold: to promote the opportunities of the BalkanMed region and to address its weaknesses when it comes to the innovation potential.

The main objectives of the BalkanMed Innoscorecard are:

- to adjust and introduce methodology and indicators for closely following the innovation potential of the BalkanMed region and nations in the Balkan Mediterranean area:
 - FYROM
 - Albania
 - Greece
 - Cyprus
 - Bulgaria
- to map the government stakeholders for each of the innovations indicators;
- to map the government documents which cover measures for each concerned indicator;
- to provide data for comparative analysis of the indicators at national and macro regional level;
- to identify the strengths and the weaknesses in the innovation potential of the BalkanMed region, BM nations and regions; and
- to provide an interactive tool for visualising the data.

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Background

Methodology

Innovation within the Innovation Union Plan

Literature and practice provide no agreed definition on what is defined under the term innovation today. There is no one single definition, while the issue is explored on a larger scale and at many levels: organizational, regional, national, EU. Within this grand understanding for the Innovations and their impact, measuring and monitoring the concept is equally challenging and complex.

For the purpose of the project Innoplatform, we will use the definition sustained in the Innovation Union plan. As described by the Innovation Union plan, Innovation “broadly means change that speeds up and improves the way we conceive, develop, produce and access new products, industrial processes and services. Changes that create more jobs, improve people's lives and build greener and better societies.”

Having in mind these expectations from the innovations, it is of no surprise that the “Innovation Union is key to achieving the goals of the Europe 2020 Strategy for a smart, sustainable and inclusive economy. It aims to improve conditions and access to finance for research and innovation in Europe, to ensure that innovative ideas can be turned into products and services that create growth and jobs.”

General overview of the Methodology

The BalkanMed Innoscorecard is developed based on the methodology of the EU Innovation Scoreboard 2017 (EUIS, 2017). Several important drivers reflect the choice of the methodology:

1. Balkan Med countries are EU member countries, or EU applicant countries, it is important to be able to follow their progress when it comes to innovative potential against the other EU countries;
2. Compared to other available methodologies as are the methodologies behind the Global Competitiveness Report (2017/2018) and the WIPO Innovation index (2016), EU Innovation Scoreboard (2017) provides a focused methodology which is adjusted to the EU context. This is achieved through the use of selective, yet very significant indicators on the issue of concern i.e. the innovation potential of EU national economies.

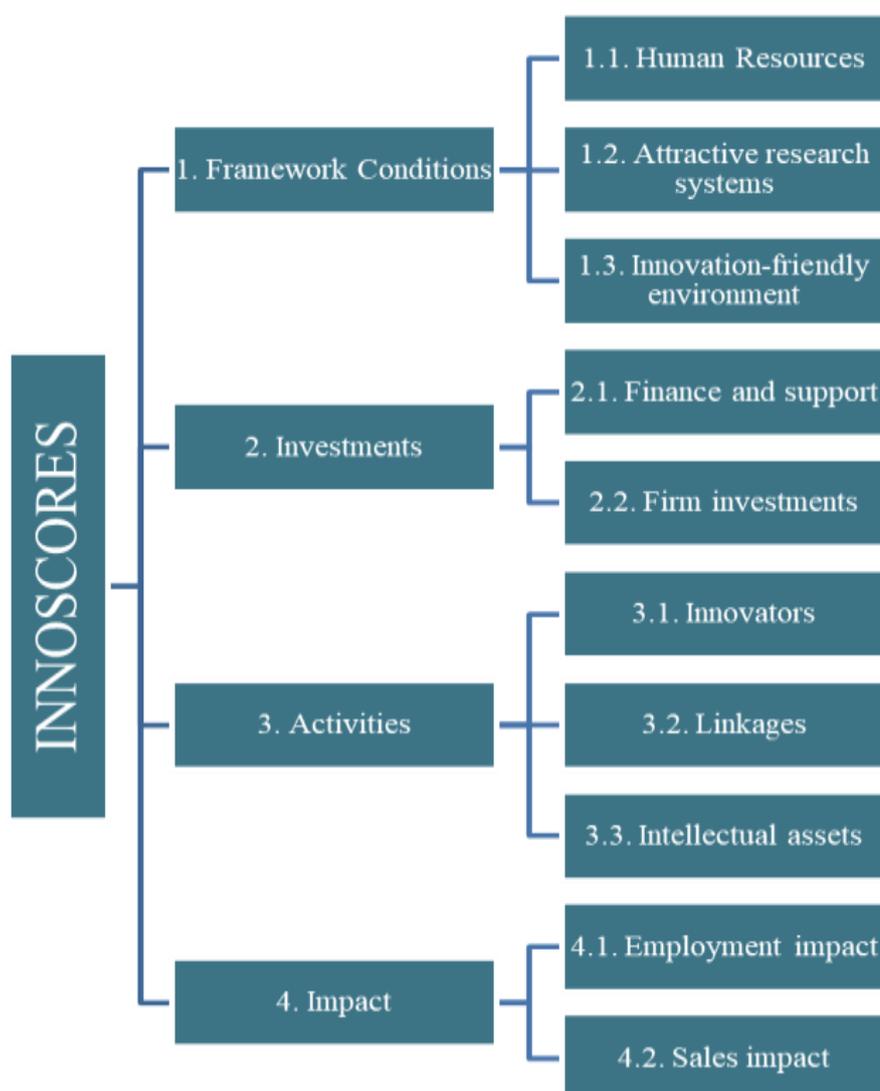
Based on the EU Innovation Scoreboard (2017), the BalkanMed Innoscorecard consists of two specific outputs:

1. National Summary Innovation Indexes for each of the BalkanMed countries with:

- a. Data repository on all important national and regional documents,
 - b. Mapping of government stakeholders; (FYROM, Albania, Greece, Bulgaria, Cyprus);
2. Balkan macro-regional Summary Innovation Index – developed for the purpose of the project Innoplatform.

In line with the EU Innovation Scoreboard 2017, both types of Innoscores (National and BalkanMed Score) will be based on four combined factors, i.e. pillars provided in Figure 1.1.

Figure 1. InnoScorecard Indicators



In the further elaboration of this document, each of the indicators is explained through the following key parameters:

- Name of the Indicator:

- Numerator:
- Denominator:
- Interpretation i.e. the basic principle (assumption) for its use:
- Source of data and available years for the concerned country:
- Remark: commentary which explains the numerator or describes certain specifics of the national context
- Results/Analysis based on the data collected with the excel document under D.3.x.2.
- Government stakeholders:
- Government strategies, programmes, and measures covering the indicator, if any:

NOTE: The analysis of each of the four combined factors/pillars for the particular country is performed within the Deliverable 3.1. i.e. the National Study of the Business Environment and the National Innovation Potential.

National Summary Innovation Indexes

The National Summary Innovation Index is the unweighted average of the re-scaled scores for all indicators where all indicators receive the same weight (1/27 if data are available for all 27 indicators).

The EUIS (2017a) national summary innovation indexes need to be used for all BalkanMed countries for which there is a score in the EUIS (2017). A new one for Albania, will be constructed within this project, which fully follows the EUIS methodology (EUIS 2017b), if minimum 75% of the required data is collected.

For each indicator, a reference year is identified for all countries based on data availability for all those countries for which data availability is at least 75%. For most indicators, this reference year will be lagging for one or two years (EUIS, 2017b, p.22). ***The same should be noted in the Remark section for each of the indicators of the Innoscores.*** If data for a year-in-between are not available, missing values are replaced with the value for the previous year. If data are not available at the beginning of the time series, missing values are replaced with the next available year. If data are missing for all years, no data will be imputed. (EUIS, 2017, p.22).

Performance scores relative to the EU, and the other BalkanMed countries are then calculated in the following way:

- the SII of the respective country is divided by the SII of the EU multiplied by 100;
- the SII of the respective country is divided by the SII of the BalkanMed region multiplied by 100;

Relative performance scores are calculated for the full period (2010-2017) compared to the performance in 2010 and for the latest year also compared to that of the EU and BM.

BalkanMed Regional Summary Innovation Index

The BalkanMed Regional Summary Innovation index covers data from all five countries involved in the project for the explored period (2010- 2016): Albania, Bulgaria, Cuprys, FYROM, and Greece. As the size of the population data might not be adequate for constructing the index based on the methodology used for the EU Composite Innovation Index, the methodology for constructing the BalkanMed Regional Summary Innovation index will be based on the assumption: that the macro region is one political and territorial unit, where each country is a specific region.

Considering the case of Albania, outcomes are problematic, especially in terms of indicators related to the overall level of innovation in the public and private sector. It is worth emphasizing that in both of these indices (GCI and GII) the focus is on macroeconomic innovation and the comparison among countries involved in the analysis is done in general terms of innovation development. As per regarding to innovation at the business level, especially the development of innovation in SMEs in Albania, available data are quite limited. One of the main reasons for this relates to the fact that Albania fails to report in regular basis to international bodies such Eurostat (Community Innovation Survey), Community Survey of ICT Usage, European Innovation Scoreboard, Global Entrepreneurship Monitor (GEM), DG Research and Innovation, CWTS (Leiden University) etc.

This report is based on desk research and secondary data. The analysis is largely descriptive and comparative based on obtained data for Albania the 2010-2016 time period. The focus of the study is innovation in SMEs in Albania.

Data collection

Data are collected from secondary sources such as reports, publications, and various national and international studies. INSTAT, Eurostat, UNESCO, OECD, World Bank etc., are the primar data sources used to collect necessary data. Data collection was structured in four main categories as per Innoplatform indicators: Framework Conditions, Investments, Innovation Activities and Impact.

Limitation

One of the main limitations of this study is the lack of data on some indicators of SMEs innovation in Albania. The second limitation relates to the fact that even when these data exist, in many cases they are not public by the companies. A third limitation is the lack of reports published by international bodies such as Eurostat (Community Innovation Survey), Community Innovation Scoreboard, Global Entrepreneurship Monitor (GEM), DG Research and Innovation, CWTS (Leiden University) etc. on Albanian case of innovation management.

1. FRAMEWORK CONDITIONS

1.1 Human resources

| Indicator | 1.a.1. New doctorate graduates per 1000 population aged 25-34 |
|---|---|
| Numerator | Number of doctorate graduates |
| Denominator | Population between and including 25 and 34 years |
| Interpretation | The indicator is a measure of the supply of new second-stage tertiary graduates in all fields of training (ISCED 8). For most countries, ISCED 8 captures PhD graduates. |
| Source of data and available years for the concerned country | European Innovation Scoreboard 2017 for the indicator; Eurostat for the values of the numerator and denominator; If not available use official national sources for the numerator and denominator. http://ec.europa.eu/eurostat/data/databaseEurostat |

Remark

Doctorate Programs are offered by Public and Private Universities in Albania. Number of doctorate graduates is increased from 28 in 2011 to 240 in 2015. Although data for 2010 and 2016 are missing, it is again noted a considerable increase in the number of doctorate graduates, in correlation to the increased number of population for the 25-34 age group, from 355,811 in 2011 to 398,941 in 2016. Missing data for nominator (2010, 2016) and denominator (2010) are replaced with previous/ subsequent data, in line with recommendations stated in the methodology session.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|--------|--------|--------|--------|--------|--------|--------|
| Nominator | 28 | 28 | 117 | 209 | 57 | 240 | 240 |
| Denominator | 355811 | 355811 | 414787 | 381730 | 389422 | 398940 | 409641 |
| EUIS | 7.9 | 7.9 | 2.8 | 5.5 | 1.5 | 6 | 5.8 |

Government stakeholders:

Ministry of Education, Sports and Youth; INSTAT

Important documents:

<https://arsimi.gov.al/al/arsimi/shkolla/statistika> (Annual Reports: 2010-2016)

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[http://www.instat.gov.al/al/temat/treguesit-demografik%C3%AB-dhe-social%C3%AB/popullsia/ \(2010-2016\)](http://www.instat.gov.al/al/temat/treguesit-demografik%C3%AB-dhe-social%C3%AB/popullsia/(2010-2016))

<https://shtetiweb.org/wp-content/uploads/2012/10/Strategjia-Kombetare-e-Shkences-Teknologjise-dhe-Inovacionit.pdf>

1 FRAMEWORK CONDITIONS

1.1. Human resources

| Indicator | 1.a.2. Percentage population aged 25-34 having completed tertiary education |
|---|---|
| Numerator | Number of persons in age class with some form of post-secondary education |
| Denominator | Population between and including 25 and 34 years |
| Interpretation | This is a general indicator of the supply of advanced skills. It is not limited to science and technical fields, because the adoption of innovations in many areas, in particular in the service sectors, depends on a wide range of skills. The indicator focuses on a relatively young age cohort of the population, aged 25 to 34, and will therefore easily and quickly reflect changes in educational policies leading to more tertiary graduates. |
| Source of data and available years for the concerned country | European Innovation Scoreboard 2017 for the indicator; Eurostat for the values of the numerator and denominator; If not available use official national sources for the numerator and denominator. http://ec.europa.eu/eurostat/data/database |

Remark

Number of people falling under the considered age group with some form of post-secondary education from 2010 to 2016 has increased, following the same trend with the number of population between and including 25 and 34 years. As Post-secondary education are considered Bachelor, Master and PhD graduated students. Missing data for nominator (2010, 2016) and denominator (2010) are replaced with previous/subsequent data, in line with recommendations stated in the methodology session.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|--------|--------|--------|--------|--------|--------|--------|
| Nominator | 22687 | 22687 | 25002 | 30510 | 29550 | 33335 | 33335 |
| Denominator | 355811 | 355811 | 414788 | 381730 | 389422 | 398940 | 409641 |
| EUIS | 6.4% | 6.4% | 6.03% | 8% | 7.6% | 8.4% | 8.1% |

Government stakeholders:

Ministry of Education, Sports and Youth; INSTAT

Important documents:

<https://arsimi.gov.al/al/arsimi/shkolla/statistika> (2010-2016)

<http://www.instat.gov.al/al/temat/treguesit-demografik%C3%AB-dhe-social%C3%AB/popullsia/> (2010-2016)

1 FRAMEWORK CONDITIONS

1.1.Human resources

| Indicator | 1.a.1. Percentage population aged 25-64 participating in lifelong learning |
|---|---|
| Numerator | The target population for lifelong learning statistics refers to all persons in private households aged between 25 and 64 years. The information collected relates to all education or training, whether or not relevant to the respondent's current or possible future job. Data are collected through the EU Labour Force Survey. The reference period for the participation in education and training is the four weeks preceding the interview, as is usual in the Labour Force Survey. |
| Denominator | Total population of the same age group, excluding those who did not answer the question concerning participation in (formal and non-formal) education and training |
| Interpretation | Lifelong learning encompasses all purposeful learning activity, whether formal, non-formal or informal, undertaken on an ongoing basis with the aim of improving knowledge, skills and competence. The intention or aim to learn is the critical point that distinguishes these activities from non-learning activities, such as cultural or sporting activities. |
| Source of data and available years for the concerned country | European Innovation Scoreboard 2017 for the indicator; Eurostat for the values of the numerator and denominator; If not available use official national sources for the numerator and denominator. http://ec.europa.eu/eurostat/data/database |

Remark

In 2015, the Swiss Agency for Development and Cooperation (SDC) in collaboration with the Government of Albania developed the ‘Skills for Jobs’ (S4J) Project with the main aim ‘to contribute in developing Albania into a more competitive economy and socially inclusive society, by improving and increasing Vocational and Education Training (VSD) offers for unemployed and underemployed women and men in Albania. There is no clear information about number of participants in lifelong learning aged 25-64 years for the whole period 2010-2016. Nevertheless, there some evidences for 2010 and 2011 about the number of participants in lifelong learning in Albania. This number is decreased from 3801 (0.27%) in 2010 to 3615 (0.26%) in 2011. In 2012, according to Labor Force Survey (2012) this number is highly

increased to 1.1%, but this result is still low, compared to EU27 (2012), which is 9.1%.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Nominator | 3801 | 3615 | - | - | - | - | - |
| Denominator | 1391596 | 1391596 | 1445274 | 1451578 | 1462555 | 1472128 | 1484468 |
| EUIS | 0.27% | 0.26% | 1.1% | - | - | - | - |

Government stakeholders:

Ministry of Social Welfare and Youth; INSTAT

Important documents:

http://www.seecel.hr/UserDocsImages/Documents/EMP-SKILLS-STRATEGY_Albania.pdf

[http://www.instat.gov.al/al/temat/treguesit-demografik%C3%AB-dhe-social%C3%AB/popullsia/ \(2010-2016\)](http://www.instat.gov.al/al/temat/treguesit-demografik%C3%AB-dhe-social%C3%AB/popullsia/(2010-2016))

<http://ec.europa.eu/eurostat/documents/45004/6182541/Report+SectorReview+LFS+Albania+2016.pdf/6bba3769-419f-4835-a0b6-8a6f7b914e81>

[http://www.etf.europa.eu/webatt.nsf/0/2F2ABAD2B5A1126EC1257B650030CA17/\\$file/TRP%202012%20Albania_EN.pdf](http://www.etf.europa.eu/webatt.nsf/0/2F2ABAD2B5A1126EC1257B650030CA17/$file/TRP%202012%20Albania_EN.pdf)

<http://skillsforjobs.al/wp-content/uploads/2016/11/JobSkills-EN-web.pdf>

1 FRAMEWORK CONDITIONS

1.2 Attractive research systems

| Indicator | 1.a.1. International scientific co-publications per million population |
|---|---|
| Numerator | Number of scientific publications with at least one co-author based abroad (where abroad is non-EU for the EU28) |
| Denominator | Total population |
| Interpretation | International scientific co-publications are a proxy for the quality of scientific research as collaboration increases scientific productivity. |
| Source of data and available years for the concerned country | Publication data provided by CWTS (Leiden University) as part of a contract to European Commission (DG Research and Innovation); Population data from Eurostat; http://www.stat.gov.mk/ |

Remark

Regarding the scientific research system, shortcomings in concrete evidence are apparent. The only information that can be obtained is about the number of scientific publications/ year. This number is increased from 2010 (88 publications) to 2014 (154 publications). Meanwhile, data for 2015 and 2016 are missing. Also, there is no evidence about number of scientific publications with at least one co-author based abroad.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|---------|---------|---------|---------|---------|---------|---------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 2800138 | 2800138 | 2900401 | 2895092 | 2889104 | 2880703 | 2876101 |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders:

Ministry of Education, Sports and Youth; INSTAT

Important documents:

<http://www.instat.gov.al/al/temat/treguesit-demografik%C3%AB-dhe-social%C3%AB/popullsia/>

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<http://www.worldbank.org/content/dam/Worldbank/document/eca/Western-Balkans-R&D-Albania.pdf>

<http://www.euraxess.al/documents/NationalStrategyofSTI.pdf>

1 FRAMEWORK CONDITIONS

1.2. Attractive research systems

| Indicator | 1.a.2. Scientific publications among the top-10% most cited publications worldwide as percentage of total scientific publications of the country |
|---|---|
| Numerator | Number of scientific publications among the top-10% most cited publications worldwide |
| Denominator | Total number of scientific publications |
| Interpretation | The indicator is a measure for the efficiency of the research system, as highly cited publications are assumed to be of higher quality. There could be a bias towards small or English-speaking countries given the coverage of Scopus' publication data. |
| Source of data and available years for the concerned country | Data provided by CWTS (Leiden University) as part of a contract to the European Commission (DG Research and Innovation); European Innovation Scoreboard 2017; http://www.stat.gov.mk/ |

Remark

There is no information regarding the number of scientific publications in the top 10% most cited world publications for Albania. The only information that can be obtained is about the number of scientific publications/ year. This number is increased from 88 in 2010 to 154 in 2014.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|------|------|------|------|------|------|------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 88 | 146 | 127 | 144 | 154 | - | - |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders:

Ministry of Education, Sports and Youth

Important documents:

https://en.unesco.org/unesco_science_report

<http://www.euraxess.al/documents/NationalStrategyofSTI.pdf>

1 FRAMEWORK CONDITIONS

1.2. Attractive research systems

| Indicator | 1.a.3. Foreign doctorate students as a percentage of all doctorate students |
|---|---|
| Numerator | Number of doctorate students from foreign countries |
| Denominator | Total number of doctorate students |
| Interpretation | The share of foreign doctorate students reflects the mobility of students as an effective way of diffusing knowledge. Attracting high-skilled foreign doctorate students will secure a continuous supply of researchers. |
| Source of data and available years for the concerned country | European Innovation Scoreboard 2017 for the indicator; Eurostat for the values of the numerator and denominator; If not available use official national sources for the numerator and denominator. http://ec.europa.eu/eurostat/data/database |

Remark

It is also difficult to provide information regarding the number of foreign doctors who have completed the third level of studies in Albania. In 2017, a publication at Monitor Journals, announced that according to UNESCO, there is a total number of 2705 foreign students that study in Albania: 529 students from Italy, 308 students from Turkey, 202 students from FYRM, 200 students from Montenegro, 166 students from Serbia, 20 students from Greece and 6 students from Bulgaria. There are also 1269 students from Kosovo which are not included at UNESCO report.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|------|------|------|------|------|------|------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 28 | 28 | 117 | 209 | 57 | 240 | 240 |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders:

Ministry of Education, Sports and Youth; INSTAT

Important documents:

<https://arsimi.gov.al/al/arsimi/shkolla/statistika> (2010-2016)

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<http://www.monitor.al/harta-te-huajt-qe-studiojne-ne-shqiperi/> (2017)

<http://unesdoc.unesco.org/images/0024/002479/247993e.pdf>

1 FRAMEWORK CONDITIONS

1.3 Innovation-friendly environment

| Indicator | 1.a.1. Broadband penetration |
|---|---|
| Numerator | Number of enterprises with a maximum contracted download speed of the fastest fixed internet connection of at least 100 Mb/s |
| Denominator | Total number of enterprises |
| Interpretation | Realising Europe's full e-potential depends on creating the conditions for electronic commerce and the Internet to flourish. This indicator captures the relative use of this e-potential by the share of enterprises that have access to fast broadband. |
| Source of data and available years for the concerned country | Eurostat; Community Survey of ICT Usage; E-commerce in Enterprises; European Innovation Scoreboard 2017; http://www.stat.gov.mk/ |

Remark

Broadband has become a key priority of the 21st Century. The broadband access has grown in both its segments: from fixed and mobile networks. Penetration in the fixed-line and broadband sectors remains very low in Albania, by international standards. Due to the fact that Albania is not part of GEM (Global Entrepreneurship Monitor), there are no available data on broadband penetration in business sector. There is no specific information about the number of enterprises with a maximum contracted download speed of the fastest fixed internet connection of at least 100 Mb/s. Nevertheless,

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|--------|--------|--------|--------|--------|--------|--------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 190469 | 201217 | 196711 | 206029 | 209020 | 156372 | 164703 |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders:

INSTAT

Important documents:

<http://www.instat.gov.al/al/temat/shkenc%C3%AB-teknologji-dhe-shoq%C3%ABria-dixhitale/informacioni-dhe-teknologjit%C3%AB-e-komunikimit/#tab2>

https://www.itu.int/ITU-D/treg/publications/BBD_MDG_Albania_Final.pdf

[http://www.mod.gov.tr/Lists/RecentPublications/Attachments/131/Broadband%20Internet%20Penetration%20Report-final%20report%2003.05.2017%20%20\(003\).pdf](http://www.mod.gov.tr/Lists/RecentPublications/Attachments/131/Broadband%20Internet%20Penetration%20Report-final%20report%2003.05.2017%20%20(003).pdf)

http://aida.gov.al/images/publikime/docs/RISIAlbania_Business_Case_Final.pdf

https://akshi.gov.al/images/Strategjia_Axhenda_Dixhitale_e_Shqiperise_2015-2020.pdf

1 FRAMEWORK CONDITIONS

1.3. Innovation-friendly environment

| Indicator | 1.a.2. Opportunity-driven entrepreneurship (Motivational index) |
|-----------|---|
|-----------|---|

Definition This index is calculated as the ratio between the share of persons involved in improvement-driven entrepreneurship and the share of persons involved in necessity-driven entrepreneurship.

Interpretation Data from GEM distinguish between two types of entrepreneurship: 1) opportunity-driven entrepreneurship and 2) necessity-driven entrepreneurship. The first includes persons involved in TEA (Total Early-Stage Entrepreneurial Activity) who (i) claim to be driven by opportunity as opposed to finding no other option for work; and (ii) who indicate the main driver for being involved in this opportunity is being independent or increasing their income, rather than just maintaining their income; the second includes persons involved in TEA who are involved in entrepreneurship because they had no other option for work. GEM has constructed the Motivational index to measure the relative degree of improvement-driven entrepreneurship.

Source of data and available years for the concerned country Global Entrepreneurship Monitor (GEM) for the numerator and denominator and ; European Innovation Scoreboard 2017 for the final value.

Remark

Due to the fact that Albania is not part of GEM (Global Entrepreneurship Monitor), there are no available data on opportunity-driven entrepreneurship in Albania.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|------|------|------|------|------|------|------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | - | - | - | - | - | - | - |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders:

AIDA; Ministry of Finance and Economy

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Important documents:

<http://aida.gov.al/faqe/nvm-dhe-eksporte>

<http://aida.gov.al/faqe/qendra-e-ndermjetesimit-dhe-inovacionit-qni>

2. INVESTMENTS

2.1 Finance and support

| Indicator | 1.a.1. R&D expenditure in the public sector (percentage of GDP) |
|---|--|
| Numerator | All R&D expenditures in the government sector (GOVERD) and the higher education sector (HERD) |
| Denominator | Gross Domestic Product |
| Interpretation | R&D expenditure represents one of the major drivers of economic growth in a knowledge-based economy. As such, trends in the R&D expenditure indicator provide key indications of the future competitiveness and wealth of the EU. Research and development spending is essential for making the transition to a knowledge-based economy as well as for improving production technologies and stimulating growth. |
| Source of data and available years for the concerned country | European Innovation Scoreboard 2017 for the indicator; Eurostat for the values of the numerator and denominator; If not available use official national sources for the numerator and denominator. http://ec.europa.eu/eurostat/data/database |

Remark

R&D expenditures in public sector and education increased (data available until 2015). This investment has been duplicated, showing a positive impact for the innovation in public sector and education.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------|------|-------|-------|-------|-------|-------|
| Nominator | 19.2 | 22.3 | 24.3 | 28.9 | 33 | 39 | 39 |
| Denominator | 11.94 | 12.9 | 12.32 | 12.78 | 13.25 | 11.34 | 11.87 |
| EUIS | 1.6% | 1.7% | 2% | 2.3% | 2.5% | 3.5% | 3.2% |

Government stakeholders:

INSTAT; Ministry of Finance and Economy; Ministry of Education, Sports and Youth

Important documents:

<https://www.gfmag.com/global-data/country-data/albania-gdp-country-report>

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<http://www.instat.gov.al/al/temat/ekonomi-dhe-financ%C3%AB/llogarit%C3%AB-komb%C3%ABtare-gdp/>

2 INVESTMENTS

2.1.Finance and support

| Indicator | 1.a.2. Venture capital (percentage of GDP) |
|---|---|
| Numerator | Venture capital investment is defined as private equity being raised for investment in companies. Management buyouts, management buy-ins, and venture purchase of quoted shares are excluded. Venture capital includes early-stage (seed + start-up) and expansion and replacement capital. |
| Denominator | Gross Domestic Product |
| Interpretation | The amount of venture capital is a proxy for the relative dynamism of new business creation. In particular for enterprises using or developing new (risky) technologies, venture capital is often the only available means of financing their (expanding) business. |
| Source of data and available years for the concerned country | Venture capital data from Invest Europe as the numerator; GDP data from Eurostat as the denominator; European Innovation Scoreboard 2017 for the value of the indicator; http://ec.europa.eu/eurostat/data/database |

Remark

Venture capital investment (defined as private equity being raised for investment in companies) is increased from 621mill EUR in 2010 to 1616 mill EUR in 2016. Data on firm investment in R&D are missing for the whole considered period.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------|------|-------|-------|-------|-------|-------|
| Nominator | 621 | 902 | 1028 | 1164 | 1295 | 1487 | 1616 |
| Denominator | 11.94 | 12.9 | 12.32 | 12.78 | 13.25 | 11.34 | 11.87 |
| EUIS | 52 | 70 | 83.5 | 91 | 97 | 131 | 136 |

Government stakeholders:

INSTAT;

Important documents:

http://www.instat.gov.al/media/1981/asn_2010.pdf

<http://www.instat.gov.al/media/3498/rezultate-t%C3%AB-anket%C3%ABs-strukture-re->

vjetore-pran%C3%AB-nd%C3%ABrmarjeve-2011.pdf

http://www.instat.gov.al/media/1996/asnpdf_2012.pdf

http://www.instat.gov.al/media/2002/asn_2013.pdf

http://www.instat.gov.al/media/2016/asn_2014.pdf

http://www.instat.gov.al/media/2019/asn_2015.pdf

http://www.instat.gov.al/media/3615/rezultatet-paraprake-asn-2016__.pdf

https://www.bankofalbania.org/web/Statistika_230_1.php?evn=agregate_detaje&evb=agregate&cregtab_id=645&periudha_id=1

2 INVESTMENTS

2.2 Firm investments

| Indicator | 1.a.1. R&D expenditure in the business sector (percentage of GDP) |
|---|---|
| Numerator | All R&D expenditures in the business sector (BERD) |
| Denominator | Gross Domestic Product |
| Interpretation | The indicator captures the formal creation of new knowledge within firms. It is particularly important in the science-based sectors (pharmaceuticals, chemicals and some areas of electronics) where most new knowledge is created in or near R&D laboratories. |
| Source of data and available years for the concerned country | European Innovation Scoreboard 2017 for the indicator; Eurostat for the values of the numerator and denominator; If not available use official national sources for the numerator and denominator. http://ec.europa.eu/eurostat/data/database |

Remark

There is no data on investment in R & D in business. SME and large companies do not publish any data on their R&D investment. In most cases, they consider this information as confidential. UNESCO Institute of Statistics provides data only for 2007 and 2008.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------|------|-------|-------|-------|-------|-------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 11.94 | 12.9 | 12.32 | 12.78 | 13.25 | 11.34 | 11.87 |
| EUIS | - | -- | - | - | - | - | - |

Government stakeholders:

INSTAT

Important documents:

http://www.instat.gov.al/media/1981/asn_2010.pdf

<http://acer.org.al/new/images/downloads/ERAWATCH2012.pdf>

<http://acer.org.al/new/images/downloads/ERAWATCH20130508.pdf>

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<http://uis.unesco.org/en/country/al?theme=science-technology-and-innovation>

<https://www.itu.int/en/ITU-D/Innovation/Documents/Publications/Albania%20Country%20Review%20Innovation%20June%202016.pdf>

2 INVESTMENTS

2.2.Firm investments

| Indicator | 1.a.2. Non-R&D innovation expenditures (percentage of turnover) |
|---|---|
| Numerator | Sum of total innovation expenditure for enterprises, excluding intramural and extramural R&D expenditures |
| Denominator | Total turnover for all enterprises |
| Interpretation | This indicator measures non-R&D innovation expenditure as a percentage of total turnover. Several of the components of innovation expenditure, such as investment in equipment and machinery and the acquisition of patents and licenses, measure the diffusion of new production technology and ideas. |
| Source of data and available years for the concerned country | European Innovation Scoreboard 2017 for the indicator; Eurostat for the values of the numerator and denominator; If not available use official national sources for the numerator and denominator. http://www.stat.gov.mk/ |

Remark

Data on firm investment in Non-R&D innovation expenditures are missing for the whole considered period.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|------|------|-------|-------|-------|-------|-------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 9072 | 9744 | 10748 | 11693 | 12425 | 12874 | 13739 |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders:

INSTAT

Important documents:

http://www.instat.gov.al/media/1981/asn_2010.pdf

<http://www.instat.gov.al/media/3498/rezultate-t%C3%AB-anket%C3%ABs-strukturore-vjetore-pran%C3%AB-nd%C3%ABrmarrjeve-2011.pdf>

http://www.instat.gov.al/media/1996/asnpdf_2012.pdf

http://www.instat.gov.al/media/2002/asn_2013.pdf

INNOPLATFORM

Innovations Platform and Tools for increasing the innovation capacity of SMEs in the Balkan Mediterranean Area

http://www.instat.gov.al/media/2016/asn_2014.pdf

http://www.instat.gov.al/media/2019/asn_2015.pdf

http://www.instat.gov.al/media/3615/rezultatet-paraprake-asn-2016__.pdf

2 INVESTMENTS

2.2.Firm investments

| Indicator | 1.a.3. Enterprises providing training to develop or upgrade ICT skills of their personnel |
|---|--|
| Numerator | Number of enterprises that provided any type of training to develop ICT related skills of their personnel |
| Denominator | Total number of enterprises |
| Interpretation | ICT skills are particularly important for innovation in an increasingly digital economy. The share of enterprises providing training in that respect is a proxy for the overall skills development of employees. |
| Source of data and available years for the concerned country | Eurostat; Community Survey of ICT Usage; E-commerce in Enterprises; European Innovation Scoreboard 2017; Use of official national sources; http://www.stat.gov.mk/ |

Remark

There are approximately 1800 registered IT companies in Albania as SMEs, i.e. 1.9% of the total number of registered companies, but only 200 of them are active (AITA, 2012: 10). The ICTs companies operate mainly at the domestic level and there is need to gain better recognition at the regional and international level. The ICTs companies operating in Tirana are mainly registered as SMEs and work in the local market. Nevertheless, there are no evidences about other enterprises (Non-ICT enterprises) that might train their staff in ICT issues and skills.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|--------|--------|--------|--------|--------|--------|--------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 190469 | 201217 | 196711 | 206029 | 209020 | 156372 | 164703 |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders

Protik; MIAP; AKSHI; AKTI;

Important documents:

Protik Market Research on ICT (2014)

3. INNOVATION ACTIVITIES

3.1 Innovators

| Indicator | 1.a.1. SMEs introducing product or process innovations (percentage of SMEs) |
|---|---|
| Numerator | Number of SMEs who introduced at least one new product or a new process to one of their markets |
| Denominator | Total number of SMEs |
| Interpretation | Technological innovation, as measured by the introduction of new products (goods or services) and processes, is a key ingredient to innovation in manufacturing activities. Higher shares of technological innovators should reflect a higher level of innovation activities. |
| Source of data and available years for the concerned country | Eurostat (Community Innovation Survey) for the numerator and the denominator; European Innovation Scoreboard 2017 for the value of the score; http://www.stat.gov.mk/ |

Remark

Data about number of firms introducing product or process innovation in Albania are not available. For sure, most of SMEs have their own statistics about this indicator but there is no general statistic in national level about this indicator. There are also missing data about in-house innovation activities.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------|-------|-------|--------|--------|-------|-------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 94808 | 99847 | 97532 | 101795 | 103039 | 14166 | 13533 |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders

INSTAT; AIDA

Important documents:

www.instat.gov.al

www.aida.gov.al

3 INNOVATION ACTIVITIES

3.1. Innovators

| Indicator | 1.a.2. SMEs introducing marketing or organisational innovations (percentage of SMEs) |
|---|--|
| Numerator | Number of SMEs who introduced at least one new marketing innovation or organisational innovation to one of their markets |
| Denominator | Total number of SMEs |
| Interpretation | The Community Innovation Survey mainly asks firms about their technological innovation. Many firms, in particular in the services sectors, innovate through other non-technological forms of innovation. Examples of these are marketing and organisational innovations. This indicator captures the extent to which SMEs innovate through non-technological innovation. |
| Source of data and available years for the concerned country | Eurostat (Community Innovation Survey); European Innovation Scoreboard 2017 for the value of the score; http://www.stat.gov.mk/ |

Remark

Data about number of firms introducing marketing or organizational innovation in Albania are not available. Most of SMEs have their own statistics about this indicator but there is no general statistic in national level about this indicator. There are also missing data about in-house innovation activities.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------|-------|-------|--------|--------|-------|-------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 94808 | 99847 | 97532 | 101795 | 103039 | 14166 | 13533 |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders

INSTAT; AIDA

Important documents:

www.instat.gov.al

www.aida.gov.al

3 INNOVATION ACTIVITIES

3.1. Innovators

| Indicator | 1.a.3. SMEs innovating in-house (percentage of SMEs) |
|---|---|
| Numerator | Number of SMEs with in-house innovation activities. Innovative enterprises are defined as enterprises which have introduced new products or processes either in-house or in combination with other firms. |
| Denominator | Total number of SMEs |
| Interpretation | This indicator measures the degree to which SMEs, that have introduced any new or significantly improved products or production processes, have innovated in-house. The indicator is limited to SMEs, because almost all large firms innovate and because countries with an industrial structure weighted towards larger firms tend to do better. |
| Source of data and available years for the concerned country | Eurostat (Community Innovation Survey) for the numerator and the denominator; European Innovation Scoreboard 2017 for the value of the score; http://www.stat.gov.mk/ |

Remark

There is no data available about closed innovation in SMEs in Albania.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------|-------|-------|--------|--------|-------|-------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 94808 | 99847 | 97532 | 101795 | 103039 | 14166 | 13533 |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders:

AIDA; INSTAT

Important documents:

www.instat.gov.al

www.aida.gov.al

3 INNOVATION ACTIVITIES

3.2 Linkages

| Indicator | 1.a.1. Innovative SMEs collaborating with others (percentage of SMEs) |
|---|---|
| Numerator | Number of SMEs with innovation co-operation activities, i.e. those firms that had any co-operation agreements on innovation activities with other enterprises or institutions in the three years of the survey period |
| Denominator | Total number of SMEs |
| Interpretation | This indicator measures the degree to which SMEs are involved in innovation co-operation. Complex innovations, in particular in ICT, often depend on the ability to draw on diverse sources of information and knowledge, or to collaborate in the development of an innovation. This indicator measures the flow of knowledge between public research institutions and firms, and between firms and other firms. The indicator is limited to SMEs, because almost all large firms are involved in innovation co-operation. |
| Source of data and available years for the concerned country | Eurostat (Community Innovation Survey) for the numerator and the denominator; European Innovation Scoreboard 2017 for the value of the score; http://www.stat.gov.mk/ |

Remark There is no data about open innovation (collaborative innovation) in SMEs in Albania.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------|-------|-------|--------|--------|-------|-------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 94808 | 99847 | 97532 | 101795 | 103039 | 14166 | 13533 |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders:

AIDA; INSTAT

Important documents:

www.instat.gov.al

www.aida.gov.al

3 INNOVATION ACTIVITIES

3.2.Linkages

| Indicator | 1.a.2. Public-private co-publications per million population |
|---|--|
| Numerator | Number of public-private co-authored research publications. The definition of the "private sector" excludes the private medical and health sector. Publications are assigned to the country/countries in which the business companies or other private sector organisations are located. |
| Denominator | Total population |
| Interpretation | This indicator captures public-private research linkages and active collaboration activities between business sector researchers and public sector researchers resulting in academic publications. |
| Source of data and available years for the concerned country | Publication data provided by CWTS (Leiden University) as part of a contract to European Commission (DG Research and Innovation); Population data from Eurostat; European Innovation Scoreboard 2017; http://www.stat.gov.mk/ |

Remark

There are missing data about the number of public-private co-authored research publications.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|---------|---------|---------|---------|---------|---------|---------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 2913021 | 2905195 | 2900401 | 2895092 | 2889104 | 2880703 | 2876101 |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders:

INSTAT

Important documents:

www.instat.gov.al

3 INNOVATION ACTIVITIES

3.2.Linkages

| Indicator | 1.a.3. Private co-funding of public R&D expenditures (percentage of GDP) |
|---|--|
| Numerator | All R&D expenditures in the government sector (GOVERD) and the higher education sector (HERD) financed by the business sector |
| Denominator | Gross Domestic Product |
| Interpretation | This indicator measures public-private co-operation. University and government R&D financed by the business sector are expected to explicitly serve the more short-term research needs of the business sector. |
| Source of data and available years for the concerned country | Eurostat; European Innovation Scoreboard 2017; http://ec.europa.eu/eurostat/data/database |

Remark

It is also difficult to find data about all R&D expenditures in the government sector and the higher education sector, financed by the business sector, but there are data available about all R&D expenditures in the government sector and the higher education sector, financed by all sources of founding such as national found, world bank, Agency of Research, Grant programs etc. These funding have increased significantly since 2010 (19.2 mill EUR) until 2016 (39 mill EUR).

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------|------|-------|-------|-------|-------|-------|
| Nominator | 19.2 | 22.3 | 24.3 | 28.9 | 33 | 39 | 39 |
| Denominator | 11.94 | 12.9 | 12.32 | 12.78 | 13.25 | 11.34 | 11.87 |
| EUIS | 1.6 | 1.73 | 1.97 | 2.26 | 2.5 | 3.44 | - |

Government stakeholders:

Ministry of Education, Sports and Youth; INSTAT

Important documents:

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<http://www.worldbank.org/content/dam/Worldbank/document/eca/Western-Balkans-R&D-Albania.pdf>

3 INNOVATION ACTIVITIES

3.3 Intellectual assets

| Indicator | 1.a.1. PCT patent applications per billion GDP (in PPS) |
|---|--|
| Numerator | Number of patent applications filed under the PCT, at international phase, designating the European Patent Office (EPO). Patent counts are based on the priority date, the inventor's country of residence and fractional counts. |
| Denominator | Gross Domestic Product in Purchasing Power Standard |
| Interpretation | The capacity of firms to develop new products will determine their competitive advantage. One indicator of the rate of new product innovation is the number of patents. This indicator measures the number of PCT patent applications. |
| Source of data and available years for the concerned country | Patent data from the OECD; Population data from Eurostat; European Innovation Scoreboard 2017; http://ec.europa.eu/eurostat/data/database |

Remark

PCT patent applications in 2014 (13 applications) and 2015 (14 applications) can be considered as a positive result compared with 0 applications in 2010, 2012 and 2013.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------|-------|-------|-------|-------|-------|------|
| Nominator | 0 | 3 | 0 | 0 | 13 | 14 | - |
| Denominator | 27.34 | 28.62 | 29.56 | 30.33 | 31.43 | 32.48 | 34 |
| EUIS | - | 0.1 | - | - | 0.4 | 0.43 | - |

Government stakeholders:

General Directory of Marks and Patents;

Important documents:

<https://knoema.com/atlas/Albania/topics/Research-and-Development>

http://www.wipo.int/ipstats/en/statistics/country_profile/profile.jsp?code=AL

3 INNOVATION ACTIVITIES

3.3. Intellectual assets

| Indicator | 1.a.2. Trademark applications per billion GDP (in PPS) |
|---|---|
| Numerator | Number of trademark applications applied for at European Union Intellectual Property Office (EUIPO) plus number of trademark applications applied for at World Intellectual Property Office (WIPO) ("yearly Madrid applications by origin") |
| Denominator | Gross Domestic Product in Purchasing Power Standard |
| Interpretation | Trademarks are an important innovation indicator, especially for the service sector. The Community trademark gives its proprietor a uniform right applicable in all Member States of the European Union through a single procedure which simplifies trademark policies at European level. It fulfils the three essential functions of a trademark: it identifies the origin of goods and services, guarantees consistent quality through evidence of the company's commitment vis-à-vis the consumer, and it is a form of communication, a basis for publicity and advertising. |
| Source of data and available years for the concerned country | Trademark data from European Union Intellectual Property Office (EUIPO) and World Intellectual Property Office (WIPO); Population data from Eurostat; European Innovation Scoreboard 2017; http://ec.europa.eu/eurostat/data/database |

Remark

Number of trademark applications from 2010 to 2014 is decreased from 3,848 applications to 3,326 applications. There is no evidence for number of trademark applications in 2015 and 2016.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------|--------|-------|-------|-------|-------|------|
| Nominator | 3848 | 3834 | 2700 | 3308 | 3326 | - | - |
| Denominator | 27.34 | 28.62 | 29.56 | 30.33 | 31.43 | 32.48 | 34 |
| EUIS | 140.6 | 133.96 | 91.34 | 109 | 105.8 | - | - |

Government stakeholders:

General Directory of Marks and Patents;

Important documents:

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<https://knoema.com/atlas/Albania/topics/Research-and-Development>

http://www.wipo.int/ipstats/en/statistics/country_profile/profile.jsp?code=AL

3 INNOVATION ACTIVITIES

3.3. Intellectual assets

| Indicator | 1.a.3. Design applications per billion GDP (in PPS) |
|---|---|
| Numerator | Number of individual designs applied for at European Union Intellectual Property Office (EUIPO) |
| Denominator | Gross Domestic Product in Purchasing Power Standard |
| Interpretation | A design is the outward appearance of a product or part of it resulting from the lines, contours, colours, shape, texture, materials and/or its ornamentation. A product can be any industrial or handicraft item including packaging, graphic symbols and typographic typefaces but excluding computer programmes. It also includes products that are composed of multiple components, which may be disassembled and reassembled. Community design protection is directly enforceable in each Member State and it provides both the option of an unregistered and a registered Community design right for one area encompassing all Member States. |
| Source of data and available years for the concerned country | Design data from European Union Intellectual Property Office (EUIPO); Population data from Eurostat; European Innovation Scoreboard 2017; http://ec.europa.eu/eurostat/data/database |

Remark

Number of individual designs applied for at EU Intellectual Property Office (EUIPO), is higher in 2011 (12 application) and 2014 (14 applications) and the lowest one in 2012 (0 application).

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------|-------|-------|-------|-------|-------|------|
| Nominator | 6 | 12 | 0 | 8 | 14 | 4 | - |
| Denominator | 27.34 | 28.62 | 29.56 | 30.33 | 31.43 | 32.48 | 34 |
| EUIS | 0.22 | 0.42 | - | 0.26 | 0.45 | 0.12 | - |

Government stakeholders:

General Directory of Marks and Patents;

Important documents:

INNOPLATFORM

Innovations Platform and Tools for increasing the innovation capacity of SMEs in the Balkan Mediterranean Area

<https://knoema.com/atlas/Albania/topics/Research-and-Development>

http://www.wipo.int/ipstats/en/statistics/country_profile/profile.jsp?code=AL

4. IMPACT

4.1 Employment impact

| Indicator | 1.a.1. Employment in knowledge-intensive activities (percentage of total employment) |
|---|--|
| Numerator | Number of employed persons in knowledge-intensive activities in business industries. Knowledge-intensive activities are defined, based on EU Labour Force Survey data, as all NACE Rev.2 industries at 2-digit level where at least 33% of employment has a tertiary education degree (ISCED 5-8). |
| Denominator | Gross Domestic Product in Purchasing Power Standard |
| Interpretation | Knowledge-intensive activities provide services directly to consumers, such as telecommunications, and provide inputs to the innovative activities of other firms in all sectors of the economy. |
| Source of data and available years for the concerned country | European Innovation Scoreboard 2017 for the indicator; Eurostat for the values of the numerator and denominator; If not available use official national sources for the numerator and denominator. http://ec.europa.eu/eurostat/data/database |

Remark

There is no evidence about number of employed persons in knowledge-intensive activities in business industries.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-------|-------|-------|-------|-------|-------|------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 27.34 | 28.62 | 29.56 | 30.33 | 31.43 | 32.48 | 34 |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders:

INSTAT

Important documents:

www.instat.gov.al

http://www.akti.gov.al/dokumenta/struktura_kshi.pdf

4 IMPACT

4.1 Employment impact

| Indicator | 1.a.2. Employment in fast-growing enterprises (percentage of total employment) |
|------------------|--|
| Numerator | Number of employees in high-growth enterprises in 50% ‘most innovative’ industries, defined as: B06 (Extraction of crude petroleum and natural gas) B09 (Mining support service activities) C11 (Manufacture of beverages) C12 (Manufacture of tobacco products) C19 (Manufacture of coke and refined petroleum product) C20 (Manufacture of chemicals and chemical products) C21 (Manufacture of basic pharmaceutical products and pharmaceutical preparations) C26 (Manufacture of computer, electronic and optical products) C27 (Manufacture of electrical equipment) C28 (Manufacture of machinery and equipment not elsewhere classified) C29 (Manufacture of motor vehicles, trailers and semi-trailers) C30 (Manufacture of other transport equipment) C32 (Other manufacturing) D35 (Electricity, gas, steam and air conditioning supply) E39 (Remediation activities and other waste management services) G46 (Wholesale trade, except of motor vehicles and motorcycle) H51 (Air transport) J58 (Publishing activities) J59 (Motion picture, video and television programme production, sound recording and music publishing activities) J60 (Programming and broadcasting activities) J61 (Telecommunications) J62 (Computer programming, consultancy and related activities) J63 (Information service activities) K64 (Financial service activities, except insurance and pension funding) K65 (Insurance, reinsurance and pension funding, except compulsory social security) K66 (Activities auxiliary to financial services and insurance activities) L68 (Real estate activities) M69 (Legal and accounting activities) |

| | |
|---|---|
| | M70 (Activities of head offices; management consultancy activities) |
| | M71 (Architectural and engineering activities; technical testing and analysis) |
| | M72 (Scientific research and development) |
| | M73 (Advertising and market research) |
| | M74 (Other professional, scientific and technical activities) |
| | M75 (Veterinary activities) |
| | N79 (Travel agency, tour operator and other reservation service and related activities) |
| Denominator | Total employment for enterprises with 10 or more employees |
| Interpretation | This indicator provides an indication of the dynamism of fast-growing firms in innovative sectors as compared to all fast-growing business activities. It captures the capacity of a country to rapidly transform its economy to respond to new needs and to take advantage of emerging demand. |
| Source of data and available years for the concerned country | Calculations by European Commission (Joint Research Centre); European Innovation Scoreboard 2017; http://www.stat.gov.mk/ |

Remark

Number of employees in high-growth enterprises in 50% ‘most innovative’ industries is also missing.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|--------|--------|--------|--------|---------|--------|------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 150330 | 159080 | 174896 | 194095 | 2241322 | 254389 | - |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders:

INSTAT

Important documents:

www.instat.gov.al

4 IMPACT

4.2 Sales impact

| Indicator | 1.a.1. Exports of medium and high technology products as a share of total product exports |
|---|--|
| Numerator | Value of medium and high tech exports, in national currency and current prices, including exports of the following SITC Rev.3 products: 266, 267, 512, 513, 525, 533, 54, 553, 554, 562, 57, 58, 591, 593, 597, 598, 629, 653, 671, 672, 679, 71, 72, 731, 733, 737, 74, 751, 752, 759, 76, 77, 78, 79, 812, 87, 88 and 891 |
| Denominator | Value of total product exports |
| Interpretation | The indicator measures the technological competitiveness of the EU, i.e. the ability to commercialise the results of research and development (R&D) and innovation in international markets. It also reflects product specialisation by country. Creating, exploiting and commercialising new technologies are vital for the competitiveness of a country in the modern economy. Medium and high technology products are key drivers for economic growth, productivity and welfare, and are generally a source of high value added and well-paid employment. |
| Source of data and available years for the concerned country | Eurostat (ComExt) for Member States; UN ComTrade for non-EU countries; European Innovation Scoreboard 2017; https://comtrade.un.org/data/ |

Remark

As per regarding to data on medium and high-tech exports, the highest result is in 2015 (15,123,662 \$) and the lowest one in 2014 (917,486 \$). These results are interesting compared to value of total product exports, which in 2015 and 2015 have been almost the lowest one.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|-----------|-----------|------------|------------|------------|-----------|-----------|
| Nominator | 8585833 | 6202700 | 4819147 | 6256686 | 917486 | 15123662 | 15123662 |
| Denominator | 737486228 | 962077700 | 1124326466 | 1394843159 | 1240603621 | 854705313 | 789167981 |
| EUIS | 0.01 | 0.006 | 0.004 | 0.004 | 0.0007 | 0.02 | 0.02 |

Government stakeholders:

INSTAT

Important documents:

Unesco Institute of Statistics

Knoema: <https://knoema.com/atlas/Albania/topics/Research-and-Development>;

4 IMPACT

4.2.Sales impact

| Indicator | 1.a.2. Knowledge-intensive services exports as percentage of total services exports |
|---|---|
| Numerator | Exports of knowledge-intensive services is defined as the sum of credits in EBOPS 2010 (Extended Balance of Payments Services Classification) items: SC1 (Sea transport) SC2 (Air transport) SC3A (Space transport) SF (Insurance and pension services) SG (Financial services) SH (Charges for the use of intellectual property) SI (Telecommunications, computer, and information services) SJ (Other business services) SK1 (Audio-visual and related services) |
| Denominator | Total value of services exports |
| Interpretation | The indicator measures the competitiveness of the knowledge-intensive services sector. Competitiveness-enhancing measures and innovation strategies can be mutually reinforcing for the growth of employment, export shares, and turnover at the firm level. The indicator reflects the ability of an economy, notably resulting from innovation, to export services with high levels of value added, and successfully take part in knowledge-intensive global value chains. |
| Source of data and available years for the concerned country | Calculations by European Commission (Joint Research Centre); European Innovation Scoreboard 2017; https://comtrade.un.org/data/ |

Remark

According to exports of knowledge-intensive services data, ICT export services can be considered. According to World Bank (2010-2016), the highest level of these exports is in 2016 (327,381,791 \$).

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Nominator | 280700042.77 | 296619954.09 | 282135521.91 | 269228304.43 | 247276338.48 | 226651279.89 | 327381790.95 |

INNOPLATFORM

Innovations Platform and Tools for increasing the innovation capacity of SMEs in the Balkan Mediterranean Area

| | | | | | | | |
|--------------------|------------|------------|------------|------------|------------|------------|------------|
| Denominator | 2588175557 | 2814440810 | 2433254166 | 2281820588 | 2492741400 | 2250466760 | 2650801993 |
| EUIS | 0.1 | 0.1 | 0.1 | 0.1 | 0.09 | 0.1 | 0.1 |

Government stakeholders:

INSTAT; AIDA;

Important documents:

<https://wits.worldbank.org/CountryProfile/en/Country/ALB/Year/2010>

<https://wits.worldbank.org/CountryProfile/en/Country/ALB/Year/2016>

4 IMPACT

4.2.Sales impact

| Indicator | 1.a.3. Sales of new-to-market and new-to-firm innovations as percentage of turnover |
|---|---|
| Numerator | Sum of total turnover of new or significantly improved products, either new-to-the-firm or new-to-the-market, for all enterprises |
| Denominator | Total turnover for all enterprises |
| Interpretation | This indicator measures the turnover of new or significantly improved products and includes both products which are only new to the firm and products which are also new to the market. The indicator thus captures both the creation of state-of-the-art technologies (new-to-market products) and the diffusion of these technologies (new-to-firm products). |
| Source of data and available years for the concerned country | European Innovation Scoreboard 2017 for the indicator; Eurostat for the values of the numerator and denominator; If not available use official national sources for the numerator and denominator. http://www.stat.gov.mk/ |

Remark

There are positive evidences about total turnover for all enterprises, especially during last three years of the considered period but there is no data available on sum of total turnover of new or significantly improved products, either new-to-the-firm or new-to-the-market, for these enterprises in Albania.

Results/Analysis:

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|--------------------|---------|---------|---------|---------|---------|---------|---------|
| Nominator | - | - | - | - | - | - | - |
| Denominator | 1251952 | 1364120 | 1493931 | 1637015 | 1739465 | 1802364 | 1882247 |
| EUIS | - | - | - | - | - | - | - |

Government stakeholders:

INSTAT

Important documents:

www.instat.gov.al

5. Conclusions – National Summative Innovation Score

SMEs are the backbone of economic development in Albania. The development of SME innovation would strongly support Albania in its way towards a long-term sustainable development and provide a good prospect for an increase in its competitiveness in international markets. Nonetheless, existing data regarding the level of SME development in Albania is very limited. This study attempts to summarize in a single material all possible existing scenarios with regard to indicators that measure innovation at the firms' level.

Beside the lack of data regarding innovation management in Albania, existing data provide some good hints as per regarding to country's approach to innovation. In principle, it can be concluded that Albanian economy and specifically private sector with specific focus on SMEs are not innovation driven. In a nutshell, the most problematic results are the lack of evidence regarding R & D investment, number of employees in R & D and the level of cooperation among ICT & innovation ecosystem.

The Government in Albania has put a special attention to innovation development through developing the Digital Agenda 2015-2020. This Agenda takes into consideration the Regional development objectives stated in SEE 2020 Strategy and the EU Digital Agenda Objectives. Nevertheless, the low level of innovation development, mostly concentrated in public sector (public services), underline the necessity to undertake some crucial steps toward innovation development in business sector (SMEs), in national level (external environment) and firms level (internal environment).

First of all, the external and macroeconomic environment should play a crucial role in the development of innovation in SMEs in Albania. Each actor of the ecosystem (every stakeholder) needs to recognize their role in the development of the ICT and Innovation Ecosystem. They should increase the level of collaboration, especially, to

produce and provide innovative outputs and outcomes. Government support need to be not only strategically, but also financial.

Secondly, the internal environment plays also a critical role to the level of innovation in SMEs in Albania. It can be improved through changing the culture of organization, from traditional one, to more innovative oriented one. Also, the organizational structure of SMEs should change from hierarchy to more flexible and open one.

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INNOPLATFORM

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