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Project Insights



Assessment of the Kosovo* Innovation System





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March 2013

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FOREWORD

Between 2000 and 2008 the Western Balkan economies experienced rapid growth, modest inflation, and increased macro-economic stability. The onset of the global economic crisis, however, saw a sharp drop in external trade and industrial production across the region. The crisis underscored the fact that buoyant growth prior to 2008 relied to a large extent on external financial flows – particularly FDI flows and international capital transfers that offset large and unsustainable trade and current account deficits.

The economic crisis is forcing governments in the region to make policy choices that will have implications for their long-term competitiveness. To assist Western Balkan governments in the design and implementation of those policies, the OECD Investment Compact for South East Europe (OECD IC) implemented a three year EU-financed project called the Regional Competitiveness Initiative (RCI). The RCI's goal is to help governments in the region with the design of sustainable economic policies to support innovation and human capital development. Between 2010 and 2013, the RCI led pilot projects in seven Western Balkan economies: Albania, Bosnia and Herzegovina, Croatia, The Former Yugoslav Republic of Macedonia, Kosovo, Montenegro, and Serbia.

Beginning in 2011, each Western Balkan economy had the opportunity to implement a capacity building pilot project with the OECD IC. As its RCI pilot project, Kosovo requested assistance with the development of an innovation strategy. The decision to seek OECD support on this topic came as a result of a roundtable meeting on 25 October 2011 in Pristina between members of the business community, researchers, public officials and the OECD IC.

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ABBREVIATIONS

ACC	American Chamber of Commerce
BAC	Business Advisory Council
BAS	Business Advisory Services
BEEPS	Business Environment and Enterprise Performance Survey
BGG	Brain Gain Grant
BIC	Business Innovation Centre
BiH	Bosnia and Herzegovina
BSCK	Business Support Centre Kosovo
CBK	Central Bank Kosovo
CEED	Centre for Entrepreneurship and Executive Development
CEFTA	Central European Free Trade Agreement
CIP	Competitiveness and Innovation Framework Programme
CITT	Centre for Innovation and Technology Transfer
CPI	Consumer Price Index
CVET	Council for Vocational Education and Training for Kosovo
DCA	Development Credit Authority
DST	Department for Science and Technology (MEST)
EAR	European Agency for Reconstruction
EBRD	European Bank for Reconstruction and Development
EC	European Commission
ECTS	European Credit Transfer and Accumulation System
EHEA	European Higher Education Area
EIP	EU Entrepreneurship and Innovation Programme
ENQA	European Association for Quality Assurance in Higher Education
ERA	European Research Area
EU	European Union
FDI	Foreign Direct Investment
FINCA	Foundation for International Community Assistance
FP7	Seventh Framework Programme
GERD	Government Expenditure on R&D
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GDP	Gross Domestic Product
ICT	Information and communication technology
ICK	Innovation Centre of Kosovo
ICTPSP	Information and Communications Technology Policy Support Programme
IDA	International Development Association
IDEP	Institutional Development for Education Project
IFC	International Finance Cooperation
IMF	International Monetary Fund
IPAK	Investment Promotion Agency of Kosovo
IPO	Industrial Property Office
IPR	Intellectual Property Rights

ISO	International Organisation for Standardisation
IT	Information technology
KAA	Kosovo Accreditation Agency
KAS	Kosovo Agency of Statistics
KBA	Kosovo Business Alliance
KCC	Kosovo Chamber of Commerce
KIKT	Kosovo Interdisciplinary Knowledge Triangle Centre
KYSAP	Kosovo Youth Strategy and Action Plan
K-CIRT	Kosovo Centre for International Higher Education, Research and Technology Cooperation
LHE	Law on Higher Education
LFS	Labour Force Survey
MED	Ministry of Economic Development
MEST	Ministry of Education, Science and Technology (Kosovo)
MFIS	Microfinance institutions
MTI	Ministry of Trade and Industry (Kosovo)
NEDC	National Economic Development Council (Kosovo)
NRC	National Research Council (Kosovo)
NRP	National Research Programme (Kosovo)
OECD	Organisation for Economic Cooperation and Development
R&D	Research and development
RCI	Regional Competitiveness Initiative
RDA	Regional Development Agency
REA	Pristina Regional Enterprise Agency
RTD	Research and technological development
SAA	Stabilisation and Association Agreement
SEAF	Small Enterprise Assistance Fund
SEE	South East Europe
SKYL	Supporting Kosovo's Young Leaders Youth Programme
SME	Small and medium-sized enterprises
SMESA	SME Support Agency (Kosovo)
SPS	Sanitary and phytosanitary standards
STI	Science, technology, and innovation
STIKK	Kosovo Association of Information and Communication Technology
TAM	TurnAround Management
TIT	Telecommunication Information Technology
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNMIK	United Nations Interim Administration Mission in Kosovo
USAID	United States Agency for International Development
USD	United States Dollars
VET	Vocational education training
WTO	World Trade Organization

EXECUTIVE SUMMARY

This report reviews the performance of Kosovo's innovation system and will be used to guide the development of an innovation strategy for the period 2013-2020. The government sees innovation as having an important role in Kosovo's economic and social development. In this regard, the OECD Investment Compact for South East Europe (OECD IC) has been asked to provide assistance with the development of a first ever innovation strategy. The report was produced using a variety of sources including desk research, surveys of businesses, universities and research institutions as well as interviews and consultations with stakeholders in public administration, industry, research community and international organisations present in Kosovo.

The report is divided into four sections: 1) general economic performance and framework conditions; 2) institutional framework for innovation; 3) education and research; and 4) innovation in the business sector. The report concludes with recommendations on how a future innovation strategy might be developed.

An innovation strategy for Kosovo will need to find a balance between building upon specific economic strengths and addressing persistent challenges. A notable strength is Kosovo's economic performance in the face of a global economic crisis. Average real GDP growth in Kosovo between 2006 and 2011 amounted to 5.2%, while GDP *per capita* rose by 25% over the same period. The latter is tempered by the fact GDP *per capita* remains three times lower than the average for the South East Europe (SEE) region. Nonetheless, the positive economic performance has been accompanied by efforts to improve the business climate. These efforts are reflected in Kosovo's ranking in the World Bank's Doing Business report. In the most recent issue for 2013, Kosovo improved by 19 places from 117th out of 183 economies in 2012 to 98th out of 185 economies. Efforts to improve the business climate are also reflected in the development of new institutions and legal frameworks. A newly established *National Economic Development Council (NEDC)*, a consultative body to co-ordinate policy elaboration and implementation, aims to facilitate public-private dialogue on economic development issues. Alongside business climate improvements, innovation is increasingly receiving attention by policy makers. A new *National Research Programme* to orient science, technology, and innovation policy has been passed while a draft *Law on Scientific Research, Innovation and Technology* that aims to provide a clearer legal framework around public financial support for innovation is in discussion.

At the firm level, data on the innovation performance of Kosovo's companies is sparse. In surveys conducted for this report, the findings show that innovation in businesses tends to be driven by external competitive pressures and customer requirements. Many firms face financial obstacles to innovating while a small number manage to do so in spite of the obstacles. For both firms that claim to innovate and those that cite constraints, a significant opportunity is seen in establishing deeper linkages with large diaspora communities abroad. These linkages with business leaders and researchers in the diaspora are viewed as a potential conduit for channelling new transfers of knowledge and ideas to Kosovo's innovation system.

The network of business support organisations and local business associations have an important reinforcing role in the development of the innovation system. The primary contribution of these

organisations is to: facilitate entrepreneurship and business development; promote the interests of the business sector in Kosovo; provide training opportunities; and expand commercial networks within and outside of Kosovo. The issue confronting these organisations is that they themselves are new and require increased capacity building support to meet the expectations of their members. In addition, the complementary role of research institutions and their contributions to the innovation system merits attention. This report finds that the capacity of universities and institutes is under pressure as evidenced by low numbers of staff dedicated to research. This will limit the ability of universities and institutes to perform more applied research in support of Kosovo's economic development.

Kosovo's most daunting economic challenge, however, is its unemployment rate of 45 %, the highest in the SEE region. This is exacerbated by nearly 25-35,000 young individuals entering the labour market each year with only a small portion of graduates finding employment; resulting in youth unemployment estimated to be the highest in Europe at near 73%. The threats to the innovation system are three-fold: first, is that the best and brightest leave Kosovo altogether; second, that the skills of previous graduates become obsolete as a result of not being used; and, third, the education system is not producing graduates with the skills needed by the private sector. The latter point, in particular, can be seen in selected sectors, such as in information and communication technology (ICT), where skills gaps are present. One of the effects from such high unemployment levels is that remittances from abroad, estimated to account for nearly 13% of GDP, are primarily used to finance household consumption. Reversing these trends will be difficult, but an important start will be improving consultation with the private sector to ensure secondary and tertiary education institutions are sensitised to the needs of the business community.

The international donor community has made significant contributions in Kosovo. Donor-financed activities and aid account for approximately 8.5% of Kosovo's GDP. These resources present an important opportunity for improving the innovation system by supporting capacity building initiatives to enhance policy co-ordination and data collection for policy design. Regarding the former, capacity building is needed to improve whole-of-government collaboration and consultation with stakeholders. With respect to the latter, the absence of basic innovation-related data constrains the development of meaningful analysis and policy responses. For example, data collection on basic indicators on commercialisation and human resources dedicated to R&D were difficult to obtain, if at all for this study. The ability of newly established institutions and programmes to improve the innovation system will depend on component staff and accurate data.

Next steps and way forward

The issues identified in this background report support the need for an innovation strategy in Kosovo. On the basis of the report's findings, the strategic pillars of the innovation strategy could be based on the following:

Establishing inter-ministerial co-ordination, design and implementation of innovation policies

This pillar would aim to raise the capacity of government to elaborate, implement, monitor, and evaluate its innovation policies and measures. An emphasis would be placed on actions to promote inter-institutional dialogue and public consultation on innovation. A concrete action under this pillar would be to have innovation appear as a regular discussion point on the agenda of cabinet level meetings of ministers, in particular those meetings where the ministry of education and science, ministry of trade and industry, and the ministry of economic development are present. This could be done by integrating innovation as a fixed component to the agenda of the *NEDC*.

Building stronger and market relevant research institutions

This pillar would centre on raising the capacity of research institutions to perform greater market-oriented and applied research. This could focus on stimulating applied research and services for improving SME productivity. One option would be to examine how ‘triple helix’-like partnerships between SMEs, researchers and government could be encouraged in Kosovo. ‘Triple helix’ partnerships involve co-operation between academia, business and local government in innovation projects. It advocates the notion that value creation in innovation is accelerated when the actions of these three stakeholders are coordinated. Other measures could include facilitating greater collaboration between domestic R&D institutions and the international research community as well as encouraging sabbatical leaves of the Diaspora in Kosovo institutions.

Enhancing the business sector’s propensity to innovate

This third pillar would focus on stimulating greater business sector innovation through measures fostering greater science-industry networks and partnerships. Actions under this pillar would involve promoting the benefits of innovation to SMEs and dispelling views that innovation only involves radical technological development. While other measures might include industry extension services, vouchers, and credit guarantee schemes. An additional action could support SMEs to access off-the-shelf technologies via assistance with patent searches.

Aligning human resources and skills development with labour market needs

This fourth pillar would focus on human capital development in higher education institutions and vocational and educational training schools. The emphasis in this pillar would be on actions to engage greater private sector involvement in programme design, with a view to raising the skill sets of recent graduates in line with labour market needs. Other actions could include developing a framework that facilitates lifelong learning. The framework would provide opportunities and incentives for adults to be retrained in order to raise their employability.

CHAPTER 1

ECONOMIC PERFORMANCE AND FRAMEWORK CONDITIONS

Both economic theory and empirical studies suggest that innovation is a key driver of productivity and economic growth (Schumpeter, 1939; OECD, 2010a). Innovation needs a business environment which is conducive to long-term investment in new activities (OECD, 2011). The development of an innovation policy thus forms a significant building block of any government's economic strategy (OECD, 2010a). In the European Union (EU), this can be seen in the development of the EU 2020 and the related Innovation Union strategies (Barroso, 2011). Focusing on innovation activities and the development of an innovation policy is relevant for Kosovo's economic development, as it would help domestic businesses increase their productivity, competitiveness and export opportunities.

This chapter provides an overview of the economic performance and framework conditions in Kosovo (see Table 1.1.). In order to better identify the broad challenges that Kosovo's innovation policy needs to address, it reviews recent economic developments in the economy, focusing on macroeconomic data such as GDP growth, FDI flows, trade balance, and unemployment rates. As statistical data for Kosovo is scarce and often incomplete, the main data sources are the World Bank Group and the Kosovo Statistical Agency for the period 2006-2011. This chapter also evaluates the conditions for innovation in Kosovo, considering the business climate, access to finance, policies for investment, competition and trade, and intellectual property rights.

Table 1.1 Main macroeconomic indicators of Kosovo (2008-11)

		2008	2009	2010	2011
GDP growth	%, y-o-y	6.9	2.9	3.9	5.0
CPI inflation	%, average	10.6	4.0	4.0	n/a
Government balance	% of GDP	n/a	n/a	n/a	n/a
Current account balance	% of GDP	-15.3	-15.4	-17.4	-20.3
Net FDI	EUR million	365	293	344	392
External debt	% of GDP	n/a	n/a	n/a	n/a
Nominal GDP	EUR billion	3.7	3.9	4.2	4.6
GDP <i>per capita</i>	EUR	2 100	2 330	2 520	2 530

Source: data collected from World Bank (World Development Indicators), IMF (World Economic Outlook), Kosovo Statistical Agency and Central Bank. CPI (consumer price index); FDI (foreign direct investment).

Despite the global financial crisis, Kosovo's economy maintained macroeconomic stability, reflected in an average real GDP growth rate of 5.2% (2006-11). The economy is still highly

dependent on inflows of remittances and donor activity (OECD, 2012a). Remittances from the diaspora are estimated to account for about 13% of GDP, and donor-financed activities and aid approximately 11% (UNDP, 2009). Kosovo's nominal GDP remains low compared with neighbouring economies. For example, the nominal GDP of the Former Yugoslav Republic of Macedonia – with a similar population – is almost double that of Kosovo's (EUR 7.4 billion vs. EUR 4.6 billion). A key challenge for Kosovo's economy is its labour market. It has the highest unemployment rate in Europe, consistently over 45%. More than 30% of the population lives below the poverty line, on less than EUR 1.42 per day (European Commission, 2011). Exports account for only 10% of Kosovo's total external trade, a figure which underlines how uncompetitive most Kosovo businesses are. Private sector innovation and increased competitiveness will be indispensable if companies are to satisfy local market needs, and this will also have a positive effect on export volume and job creation.

Kosovo is gradually developing the overall conditions and policies conducive to innovation. The major policies and laws¹ to support its economic development are in place, but its weak administrative capacity has hampered their implementation. In 2013, Kosovo was ranked 98th out of 185 economies in the World Bank *Doing Business* Index. Even though it has improved its ranking by 28 places since 2012, crucial challenges remain for businesses dealing with construction permits, starting a business and protecting investors' rights. While the banking system has been developing since 1999, sources of external finance for entrepreneurs remain scarce. The collateral requirements for small and medium-sized enterprises (SMEs) are prohibitive, with SMEs in Kosovo having to provide collateral of around 200% of the loan amount.

1.1 Economic environment

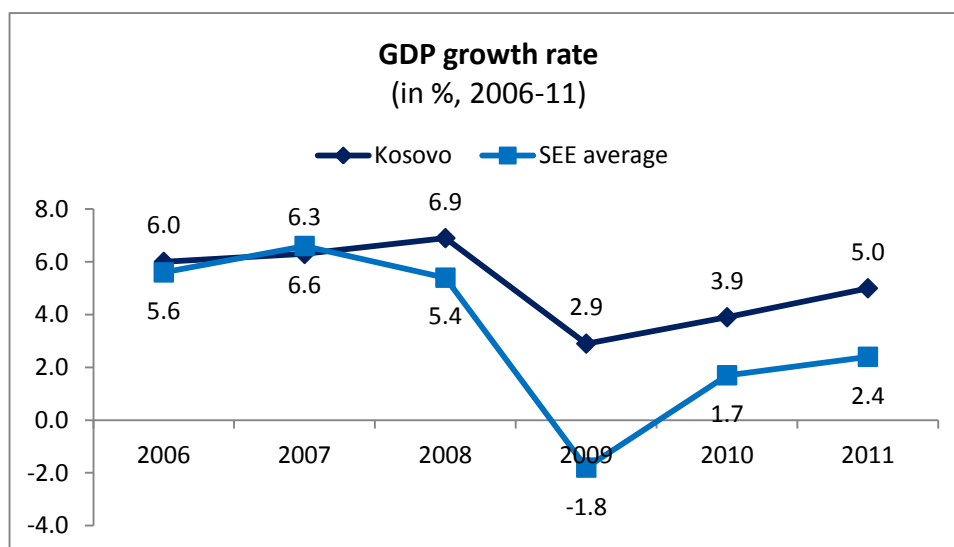
1.1.1 Growth rate remained stable

The global financial crisis had only a small impact on Kosovo's real economic growth due to its limited financial and trade linkages with countries affected by the financial crisis (IMF, 2012). The average real GDP growth in Kosovo between 2006 and 2011 was 5.2%, which exceeds the South East European (SEE) region² average of 3.3% for the same period (World Bank, 2013). Real GDP growth slowed from about 7% in 2008 to about 3% in 2009, before recovering to 5% in 2011 (see Figure 1.1). In 2012, growth was projected to slow modestly to 3.8% according to the IMF, but still expected to be robust. This performance was mostly owed to a strong domestic demand largely due to remittances and capital inflows that originate, from the Kosovo diaspora, located mainly in Germany, Switzerland, and the Nordic countries. However, the economy remains vulnerable to a possible deterioration in labour markets conditions in these countries, which could trigger a drop in remittances and capital inflows, with negative repercussions for growth, the fiscal position, and financial stability (IMF, 2012).

¹ For example the Investment Strategy, SME development strategy, Law on Protection of Competition, and laws on patent, trademark and industrial design.

² The SEE region covers the EU pre-accession economies Albania, Bosnia and Herzegovina, Croatia, Kosovo, the Former Yugoslav Republic of Macedonia, Montenegro and Serbia.

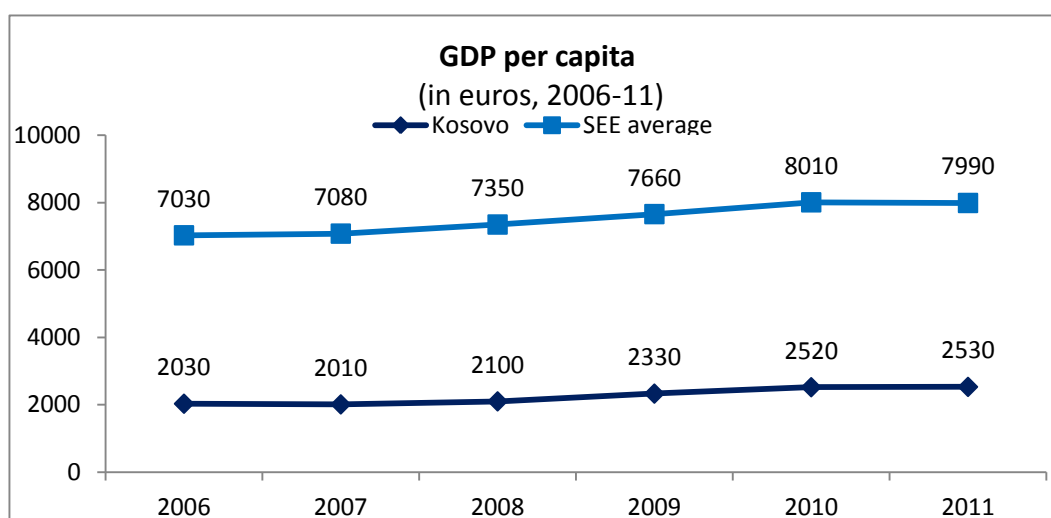
Figure 1.1 Real GDP growth rate in Kosovo (2006-11)



Source: World Bank (World Development Indicators)

GDP *per capita* in Kosovo increased by 25% between 2006 and 2011. However, it remains one-third of the average for South East Europe (see Figure 1.2). The growth of GDP *per capita* appears to have been stimulated by increased public sector wages - which have risen more than 60% in the last three years, far surpassing productivity gains (EC, 2012). These increases in public sector wages are part of an expansionary fiscal stance adopted in 2008 that also includes higher social spending. The resulting deficits have been financed with donor support and by drawing down cash buffers, keeping general government debt at low levels (IMF, 2012). The growth rate of both overall GDP and GDP *per capita* in Kosovo are comparable with the rest of SEE region, although other economies (such as Croatia and Serbia) were more strongly affected by the financial crisis.

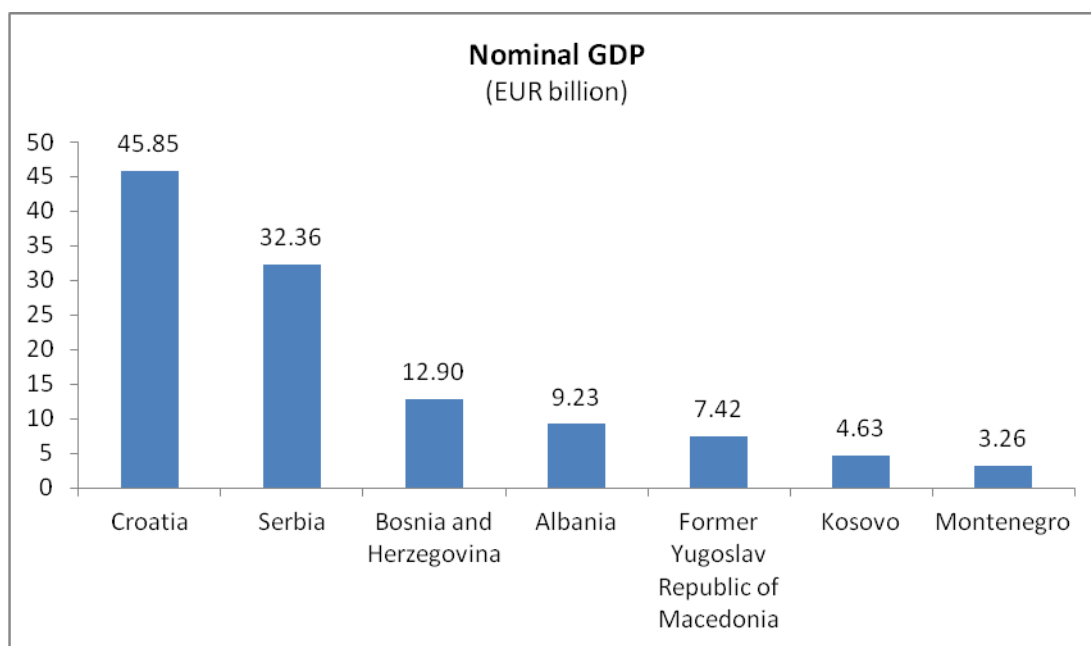
Figure 1.2 GDP *per capita* in Kosovo (2006-11)



Source: World Bank (World Development Indicators)

Despite economic recovery and recommenced growth, the level of GDP remains low at EUR 4.63 billion in 2011 (IMF, 2011). Kosovo has the second lowest nominal GDP in the Western Balkans after Montenegro, which has one-third of Kosovo's population. A neighbouring economy with a comparable population size is the Former Yugoslav Republic of Macedonia, but its GDP is almost twice that of Kosovo (see Figure 1.3).

Figure 1.3 GDP in the SEE region (2011)



Source: IMF statistics for 2011

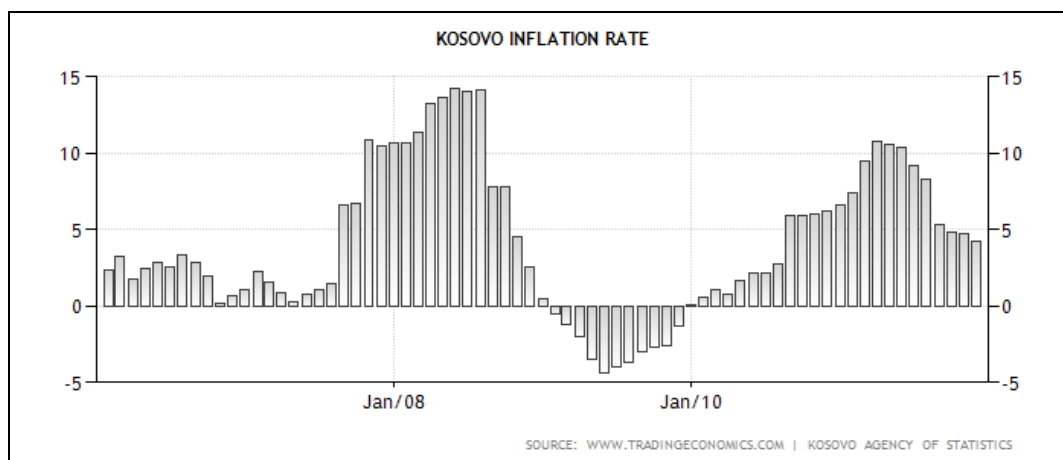
It is estimated that the service sector makes up the largest part of Kosovo's GDP (65%), followed by the industrial and agricultural sectors,³ which contribute 22% and 13% respectively. This breakdown corresponds to the Western Balkans regional average.

1.1.2 Inflation is volatile despite the usage of the euro

The official currency of Kosovo is the euro, but the Serbian dinar is also used in some areas of northern Kosovo. Kosovo's tie to the euro has helped keep core inflation low, which is reflected in the average inflation rate of 2.8% between 2003 and 2012 (see Figure 1.4). However, inflation reached an all-time high of 14.2% in May 2008 and a record low of -4.4% in May of 2009 (Trading Economics, 2012). Food prices were the main contributor to inflation, followed by energy-related items (European Commission, 2011).

³ The industrial sector mainly comprises mineral mining, energy, telecommunications, metal processing, construction materials and base metals and the agricultural embraces products such as fruits, vegetables, wheat, corn and beef.

Figure 1.4 Inflation rate in Kosovo (2006-11)



1.1.3 Unemployment rate is the highest in SEE

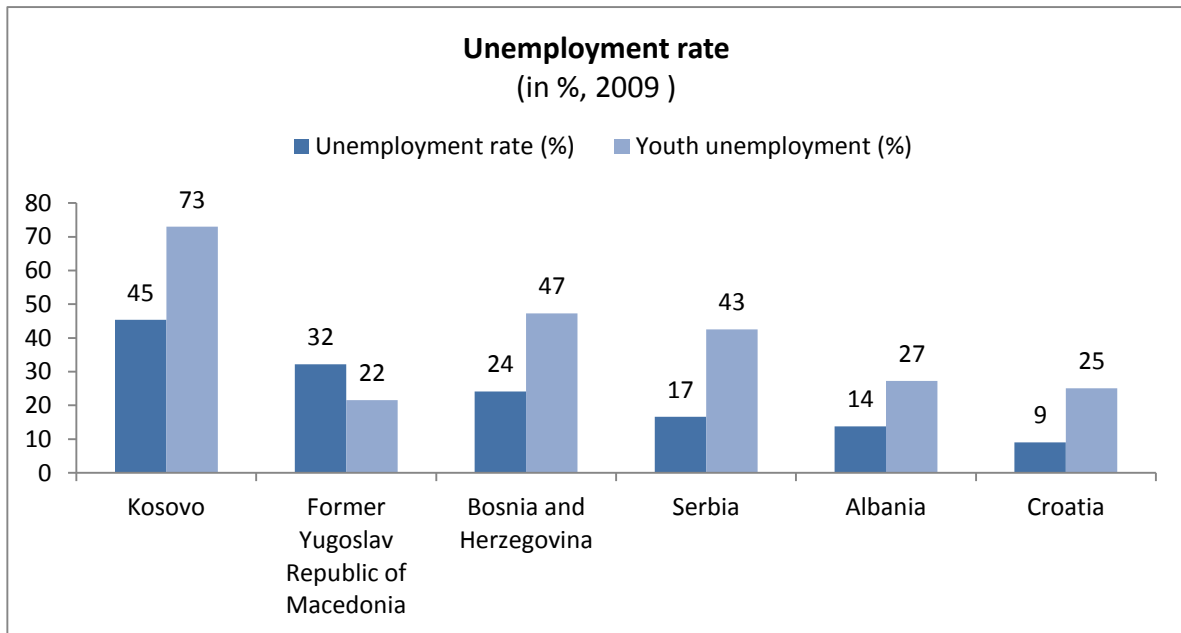
With a rate of 45% Kosovo has the highest unemployment level in the SEE region. Unskilled workers account for 60% of total registered job-seekers. The number of unemployed university graduates has steadily increased, although it remains relatively low. Data from the Kosovo Pension and Savings Trust Fund indicate that in 2010 the number of contributors increased by 2.3%, almost equally divided between the government and non-government sectors (European Commission, 2011). Overall, information about the labour market is scarce and doubts about its accuracy persist.

As in most economies in the SEE region (with the exception of the Former Yugoslav Republic of Macedonia) the rate of youth unemployment⁴ exceeds the average unemployment rate. Youth unemployment in Kosovo is around 73%, above the SEE average (see Figure 1.5). The number of new labour force entrants in Kosovo is significantly higher than other economies in the region. The level of economic activity is insufficient to absorb the 30 000 young people entering the labour market each year (SMESA, 2012). Unemployment, particularly long-term unemployment, remains a critical challenge (OECD, 2010b).

The government recognises that high youth unemployment is a major constraint to social and economic development. Efforts to address this issue include the Kosovo Youth Strategy and Action Plan 2010-2012 (KYSAP), which is intended to provide mechanisms for youth participation, education, employment, health care, and human security. In particular, its actions include enhancing job-finding opportunities for youth and improving co-operation between institutions over their youth employment policies. The Ministry of Labour and Social Welfare developed a Sectoral Strategy 2009-13 to increase the employment rate in Kosovo and establish an employment and vocational training infrastructure that corresponds to labour market demands. The impact of these strategies has not yet been assessed.

⁴ The youth unemployment rate measures the unemployment rate (%) of the total labour force aged between 15-24 years.

Figure 1.5 Unemployment rate and youth unemployment in the SEE region (2009)



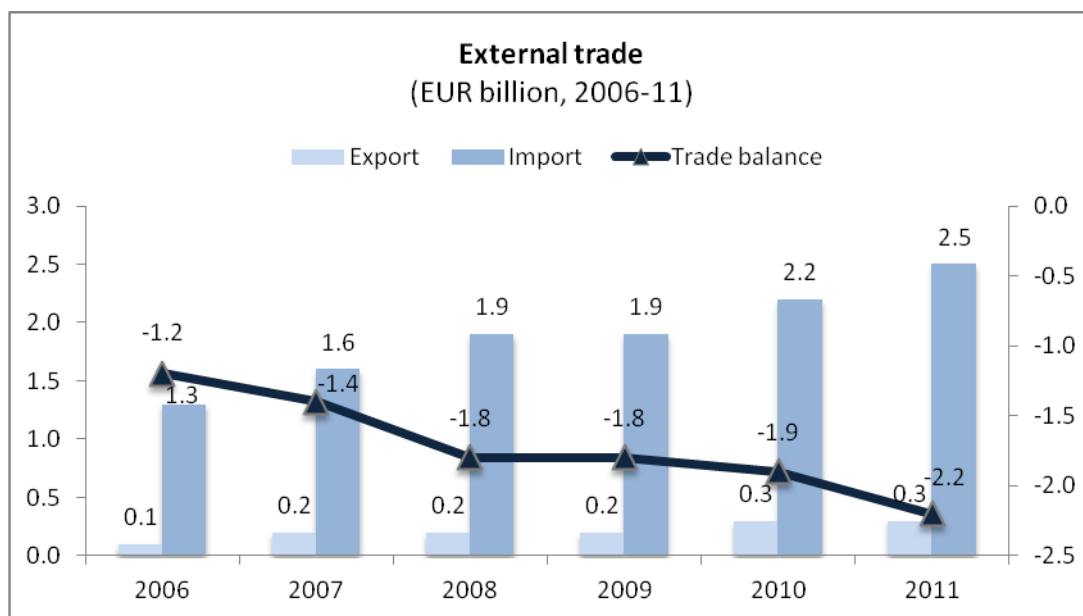
Source: World databank for 2009, but data on Kosovo's youth unemployment rate is taken from the EC, 2011 data on BiH's youth unemployment rate is for 2008; no data available for Montenegro.

1.1.4 International trade: a largely negative trade balance

As enterprises are under increasing pressure from global competition, firms need to innovate and enhance their productivity to adapt to market needs. In order to satisfy the growing internal and external consumer demand, the local private sector will need to respond by introducing more innovative and competitive products.

Kosovo's imports significantly exceed its exports, resulting in a large trade deficit. Kosovo has a negative trade balance of EUR 2.2 billion, which is equivalent to 50% of GDP (see Figure 1.6). In 2011, exports of goods and services amounted to 20% of GDP, while imports accounted for 66% (World Bank, undated). Both exports and imports of goods and services have been rising since 2006 (Statistical Agency of Kosovo, 2011).

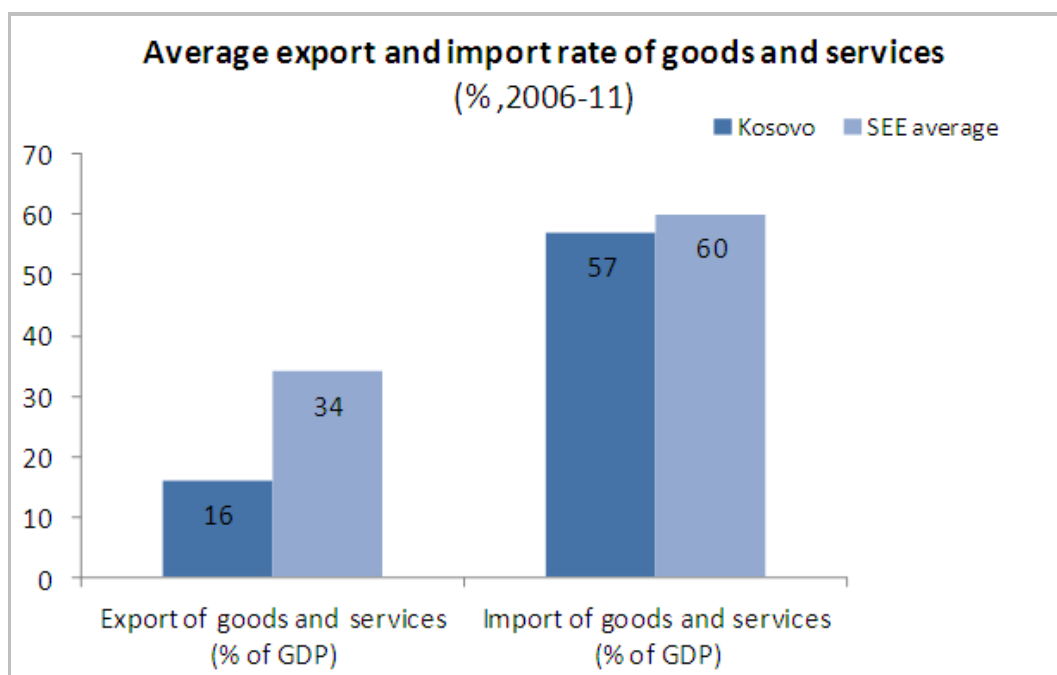
Figure 1.6 Flow of goods in external trade in Kosovo (2006-11)



Source: Statistical Agency of Kosovo

The average level of imports of goods and services to Kosovo as a proportion of GDP is comparable with the other Western Balkan economies. But Kosovo's neighbours on average export twice as much as a proportion of GDP (see Figure 1.7).

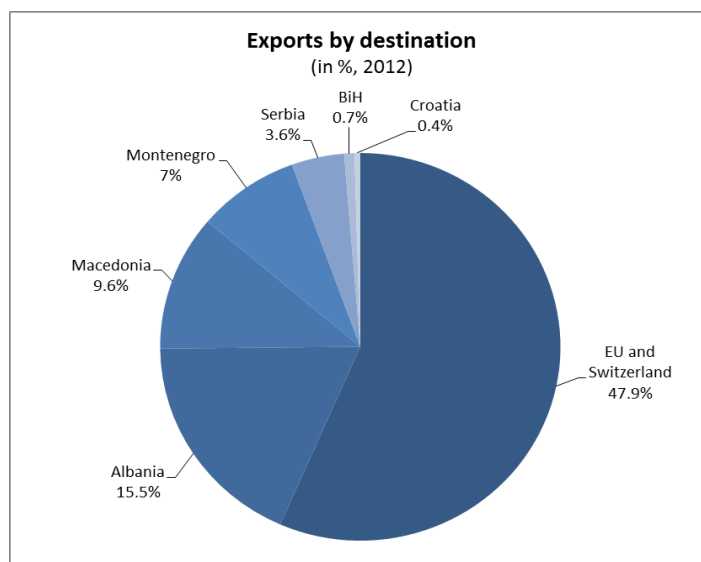
Figure 1.7 Average export and import rate of Kosovo and the SEE region (2006-11)



Source: World Bank (World Development Indicators)

Kosovo's main trading partners are the EU countries and Switzerland. They account for the largest share of imports (almost 42% in 2012) and exports (almost 48% in 2012). Neighbouring economies of the SEE region⁵ represent 41.1% of imports. The main export destinations for Kosovo after the EU and Switzerland are Albania and the Former Yugoslav Republic of Macedonia (see Figure 1.8).

Figure 1.8 Exports by destination (2012)



Source: Statistical Agency of Kosovo

Slightly less than two-thirds of Kosovo's total exports are primary products such as raw materials or goods with a low level of processing and relatively low value added such as base metals. Mineral products represent the second largest category, with over 12% of total exports. Manufactured exports mainly consist of machinery, plastic and leather. Imports are generally of a higher processing stage, either intermediate or consumer goods. In 2011, Kosovo's imports exceeded € 2.1 billion, with an annual increase of almost 15%. Kosovo mainly imports mineral products (e.g., fuel and ceramic products), followed by industrial goods, machinery and equipment, which represent about 11% of total imports. Import of agricultural products (food and beverages, live animals and vegetables) amounts to just over a fifth of all imports but less than 8% of all exports (mainly beverages, spirits and vinegar). The only sector, where Kosovo has a positive trade balance, is the service sector. The export of services represents approximately 10% of GDP, while imports account for approximately 7.5% of GDP. The positive balance mainly reflects increased revenues from the communication and travel services (European Commission, 2012).

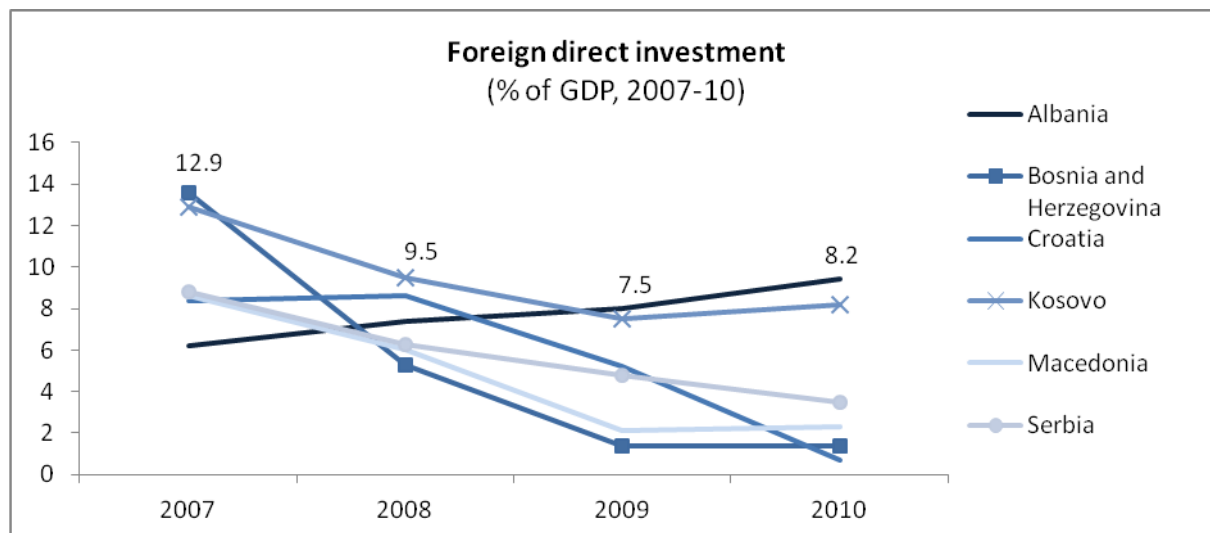
1.1.5 Foreign direct investment

Foreign direct investment (FDI) is crucial for economic growth and development, in particular for a small economy that has not reached world technological standards. Following the onset of the global financial crisis in 2008 and sharp contractions in FDI inflows in most Western Balkan economies, a modest recovery began in 2011 (see Figure 1.9). Kosovo witnessed a rise in FDI of EUR 311 million

⁵ Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Kosovo, the Former Yugoslav Republic of Macedonia, Montenegro, Romania and Serbia.

in 2010, which is equivalent to 5.6% of GDP. This represented a 10% increase on 2009 (see Figure 1.10).

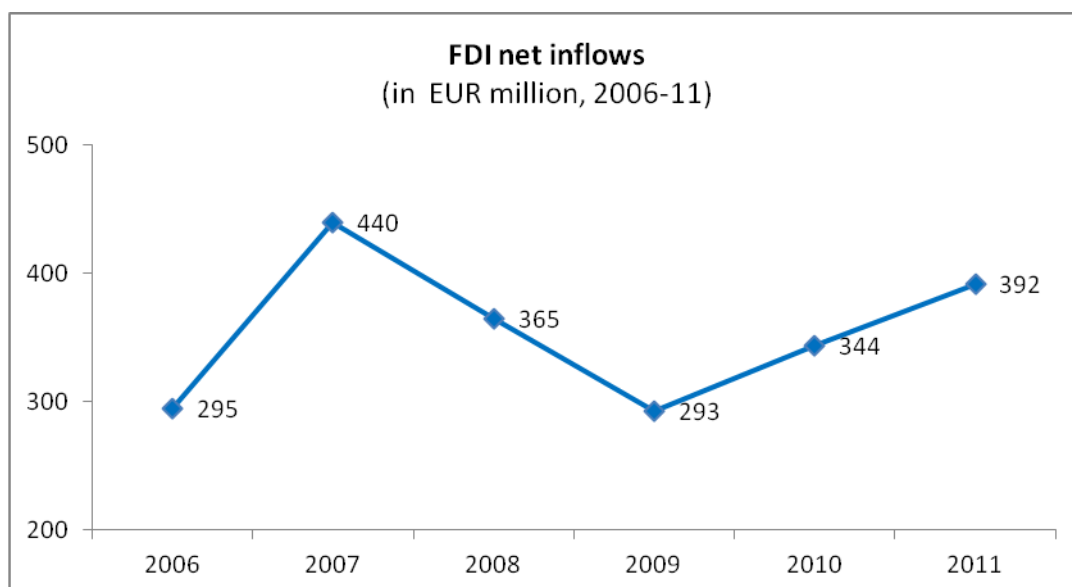
Figure 1.9 FDI in the SEE region (2007-10)



Source: World Bank (World Development Indicators)

Investment in Kosovo has mostly been in the financial services sector, which on average has received 26% of the total FDI during 2007-10. In 2010, one-third of total investment went into real estate and construction, and one-fifth into financial services (European Commission, 2011). The manufacturing sector has recently seen a considerable growth in FDI. During 2010 it received the highest share of FDI at 22.5%, compared to only 6% of the total in 2008, when it was one of the lowest shares. However, this increase of FDI into the manufacturing sector is largely related to privatisation rather than new green-field investments (KPMG, 2011).

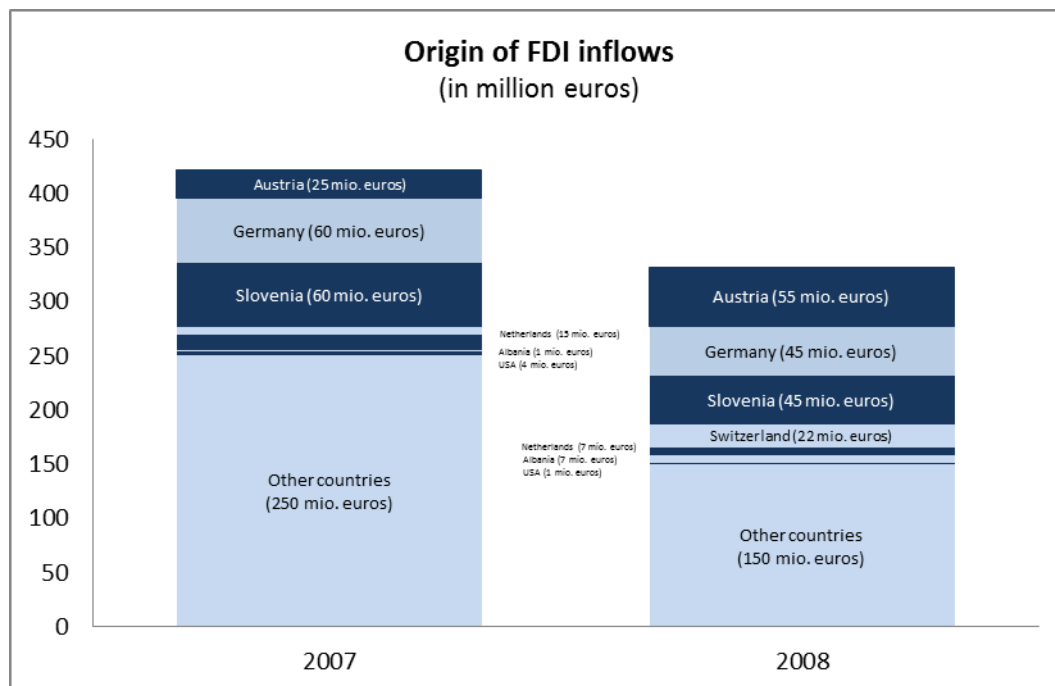
Figure 1.10 Net foreign direct investment (2006-11)



Source: World Bank (World Development Indicators)

The majority of FDI originates from the EU countries of Austria, followed by Germany (19% of total FDI for the period 2007-10) and Slovenia (14% of total FDI for the period 2007-10).

Figure 1.11 FDI inflows (2007-08)



Source: Central Bank of Kosovo

1.2 Framework conditions for innovation

1.2.1 Business climate has improved

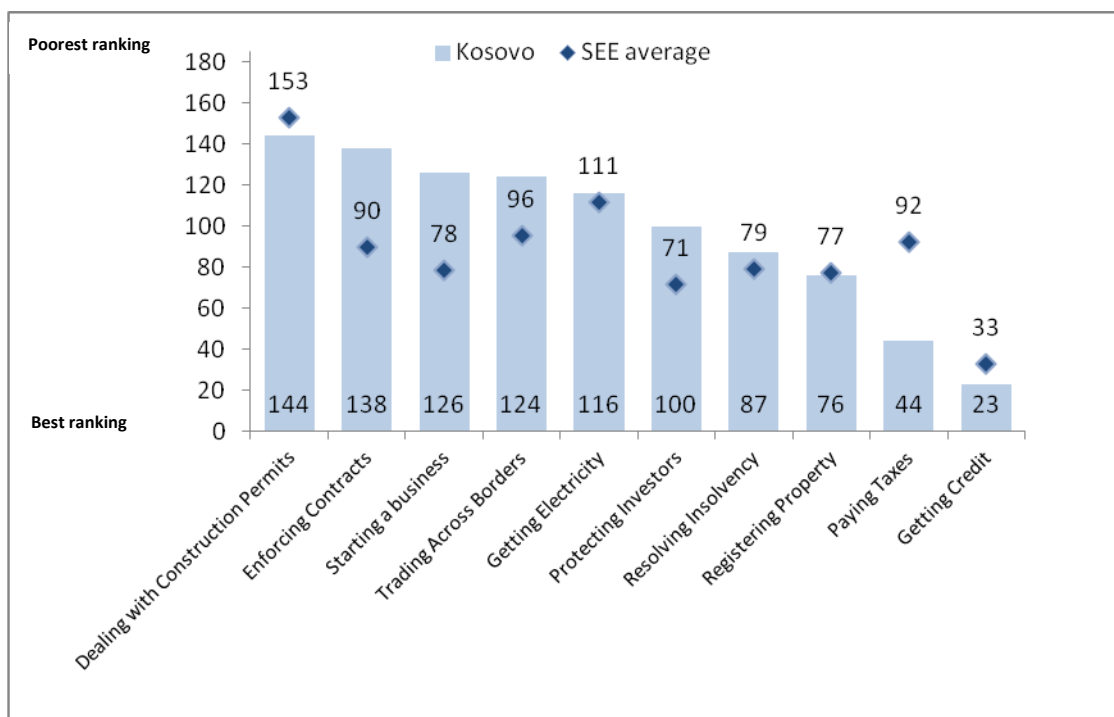
A sound business environment is a prerequisite for strong innovation performance, as this favours foreign investment, which can in turn stimulate innovation through a variety of channels such as R&D investment. More generally, the quality of framework conditions is likely to have an impact on the effectiveness of innovation policies (OECD, 2012b).

The OECD's Investment Reform Index 2010 (IRI 2010) which measures investment framework conditions for South East European economies, has found that Kosovo performs below the regional average in most policy dimensions, particularly in the areas of investment policy and promotion, human capital development and trade policy (OECD, 2010b). The report calls for several policy reforms to improve the investment climate, such as improving vocational education and training to better align with needs of employers. Likewise, IRI 2010 also raises the issue of inaccurate property and land registers.

The government has taken steps to improve the business climate in Kosovo and is reflected in the latest Ease of Doing Business rankings produced by the World Bank. For instance, the economy has started to close the gap with respect to the other SEE economies by improving its ranking in the 2013 report (from 126th to 98th out of 185 economies world-wide). According to the *Doing Business 2013*, the most burdensome business procedure is obtaining a construction permit. It requires 156 days and costs 2 986% of average income, compared to an OECD average of 78.7%. It should be noted,

however, that Kosovo performs better on this indicator than the SEE economies on average. Starting a business is a particularly lengthy and costly procedure, requiring 52 days and 23% of income *per capita*, and is more complicated than the average for the SEE region (World Bank/IFC, 2012).

Figure 1.12 Doing Business rankings Kosovo (2013)



¹SEE includes the EU pre-accession economies in South East Europe

Source: World Bank/IFC Doing Business 2013 report

The *Doing Business Index* 2013 also shows that Kosovo performs above the regional average in some of the indicators. For instance, registering property is particularly inexpensive, costing 0.6% of the property value against 4.5% in OECD countries. Likewise, while there are more yearly tax payments in Kosovo than in OECD countries, the number of hours required to pay taxes and the tax rates are lower in Kosovo. Finally, Kosovo performs best on the Getting Credit indicator, outperforming both Eastern Europe and Central Asia and the OECD average on the strength of the legal rights index (8 in Kosovo against 7 in the OECD) and on the public registry coverage. However, it has no private credit bureau in place.

1.2.2 Investment policy and promotion

While increasing globalisation provides new opportunities, it also requires continuous adaption in order keep up with increasing international competition. FDI can serve as a means of knowledge transfer, embodied in imported technology or goods, and can therefore contribute to a country's innovation performance (OECD, 2012b). The Investment Promotion Agency of Kosovo (IPAK), under the Ministry of Trade and Industry, is responsible for attracting foreign investment in Kosovo. The Investment Strategy 2010-12 aims to strengthen the manufacturing, trading and services sectors by attracting investors mainly from Europe, the Middle East and North Africa (IPAK, 2012).

Formal restrictions to public treatment are limited. Transfers of capital can be made freely and foreign investors may bring in specialist personnel to support their business operations. Today, restrictions are applied to the arms manufacturing sector (OECD, 2010b).

However, the lack of protection of physical property rights in Kosovo is a significant hurdle. Although the law permits foreign ownership and purchase of urban and rural land along with real property, the accuracy of land title registers and cadastral maps continues to be questioned by the private sector and international organisations (OECD, 2010b).

1.2.3 Competition policy

Competition policy is closely related to innovation. High levels of competition in product markets contributes to increased GDP *per capita* by stimulating the reallocation of resources towards more productive activities (OECD 2012c). According to Aghion *et al.* (2005) competition may increase the incremental profits from innovating, and thereby encourage R&D investments. More competition may foster innovation and growth because it may reduce a firm's pre-innovation rents by more than it reduces its post-innovation rents. Firms thus seek to reduce the rents that could be captured by a follower who succeeds in catching up with its rival by innovating.

The Law on Protection of Competition defines the rules and measures for the protection of free and effective competition in the market, and defines the competencies and organisation of the Authority for Protection of Competition, as well as the procedures concerning the implementation of this law.⁶ Kosovo's competition law is now to a large extent compliant with EU standards, but still needs to be aligned further, for example the definition of a dominant market position. The turnover thresholds for the obligation to notify planned mergers ought to be adjusted to a level appropriate to the size of the Kosovo economy (European Commission, 2011).

The Authority for Protection of Competition has made decisions over breaches of competition rules by companies active in the markets for retail motor fuel, fiscal cashiers and insurance; and has imposed fines on certain companies in these sectors. The actual payment of fines is still subject to the outcome of appeals by the companies. The Authority has not adopted any merger decisions and it continues to build up experience. The Authority suffers from a lack of experienced staff and still does not have its own premises (European Commission, 2011).

The Law on State Aid sets out rules and procedures to support economic and social development and implements principles that ensure the functioning of the market economy and protect competition.⁷

1.2.4 Barriers to trade

Higher exports are closely linked to innovation. Exports are fostered by products which are both innovative and more competitive, or by lower priced products. In addition, innovative companies need larger markets if they are to get a return on their R&D investments.

⁶ Law on Protection of Competition (2010/03-L-229), www.assembly-kosova.org/common/docs/ligjet/2010-229-eng.pdf

⁷ Law on State Aid (2011/04-L-024), <http://www.assembly-kosova.org/common/docs/ligjet/Law%20on%20state%20aid.pdf>

Kosovo is gradually integrating into the multilateral trading system. While Kosovo has not yet formally applied to become a World Trade Organization (WTO) member, it has started to prepare the necessary documentation and to implement the institutional and legislative requirements. The EU has granted Kosovo autonomous trade measures and conducted a feasibility study for a Stabilisation and Association Agreement (SAA)⁸ between the European Union and Kosovo (European Commission, 2012). The lack of progress in initiating negotiations for WTO membership and an SAA partially reflects Kosovo's status issues. However, Kosovo's institutional and policy setting is also not yet ready for WTO membership or for implementing a free trade agreement with the EU. Thus, it should strive to continue implementing the necessary reforms that would eventually allow it to fully integrate with the multilateral trading system (OECD, 2010b).

Since 2006, Kosovo has been a member of the Central Europe Free Trade Agreement (CEFTA)⁹ with the intention of enhancing its integration into regional economic structures. Serbia and Bosnia and Herzegovina initially refused to recognise Kosovo's customs stamp or extend reduced tariff privileges for Kosovo products under CEFTA, but both economies restarted trade with Kosovo in 2011. However, impediments still occasionally occur at the border when exporting products to neighbouring economies. The average customs duties applied on capital goods in Kosovo are significantly higher than in the other Western Balkan economies.

Kosovo has made institutional and legislative reforms to counter the emergence of potential technical barriers to trade. The Law on Accreditation established the Directorate for Accreditation within the Ministry of Trade and Industry.¹⁰ The Law on Technical Requirements for Products and Conformity Assessment regulates the manner of prescribing the technical requirements for products and the procedures of conformity assessment.¹¹

Since 2006, Kosovo has set up agencies responsible for sanitary and phytosanitary standards (SPS) but they still have administrative limitations. In the area of trade facilitation, the licensing system is still in an early phase of implementation. (OECD, 2010b, 2012a).

1.2.5 Access to finance

Access to finance is important to enable innovation and the growth of enterprises. In order to innovate, companies need to be able to finance research and invest in new equipment. Nevertheless, businesses, particularly start-ups, micro firms and SMEs, may find it difficult to obtain external financing. They face barriers that include asymmetric information, insufficient collateral and a lack of a credit track record (OECD, 2012d).

⁸ The Stabilization and Association Agreements aim to progressively establish a free-trade area between the EU and the Western Balkans. Where trade is concerned, they focus on liberalising trade in goods, aligning rules with EU practice and protecting intellectual property.

⁹ CEFTA is a single free trade agreement linking all the economies of the Western Balkans and Moldova. It replaces a previous network of more than 30 bilateral free trade agreements, thereby setting uniform rules across the whole South Eastern Europe. CEFTA entered into force for all parties in November 2007.

¹⁰ Law on Accreditation (2008/03-L-069), www.assembly-kosova.org/common/docs/ligjet/2008_03-L-069_en.pdf

¹¹ Law on Technical Requirements for Products and Conformity Assessment (2011/04-L-039), www.assembly-kosova.org/common/docs/ligjet/Law%20on%20technical%20recuir%20for%20products%20and%20conformity%20asses.pdf

Although the banking system in Kosovo has been developing since 1999, entrepreneurs still find it difficult to access sources of external finance. This is due to conservative lending policies by banks and deficiencies in the information available on borrowers' creditworthiness, such as a lack of proper accounting and audited financial statements.

The banking sector in Kosovo is dominated by foreign banks, which account for around 90% of all banking assets. The microfinance sector in Kosovo has been operating since 1999. Most microfinance institutions (MFIs) were established by international humanitarian organisations. There are 14 MFIs in Kosovo, operating mainly in rural areas, regulated by UNMIK Regulation 2008/28 and the Central Bank of Kosovo (CBK).¹² Microfinance provides 18% of individual loans by number, and totals 7% of the value of all loans.

Public support for SMEs is provided through international donors. The United States Agency for International Development (USAID) has developed several programmes to improve SME access to finance, including the Youth Entrepreneurship Programme and the Development Credit Authority (DCA). The DCA provides 50% risk guarantees to agribusiness projects. Funding to start-ups is also provided by international organisations through programmes such as Start-up Pristina (OECD, 2012a).

Bank loans may not be the most appropriate source for companies undertaking new projects with potential uncertain outcomes and longer payback periods. Equity finance can be a more relevant financial source for innovation. This provides an incentive for shareholders to seek for a higher return on equity, hence investing in R&D.

1.2.6 Intellectual property rights

The protection of intellectual property, such as patents and copyrights, is a pre-condition for innovation in an economy. Intellectual property rights are designed to create incentives for R&D investment by granting inventors exclusive rights to their innovations for a fixed period of time (Williams, 2010).

Kosovo's laws on patents,¹³ trademarks¹⁴ and industrial design¹⁵ were amended in July 2011, with the aim of making them compliant with EU legislation. A Trademark Database was established, but is not yet functional. At the same time, the digitisation of data for over 10 000 applications was finalised in May. In 2010, 1 480 decisions on trademarks and 147 on patents were taken. In 2010, the Industrial Property Office received 550 trademark applications, 85 patent applications and 4 applications on industrial designs. The backlog of applications remains very high, with 17 000 trademarks 4 000 designs and 500 patents outstanding. Procedures remain lengthy as the Industrial Property Office is still understaffed and its premises are not adequate.

An Intellectual Property Rights Unit was established within the Kosovo Customs Office and became fully operational in January 2011. Risk profiles on goods that may infringe property rights

¹² UNMIK Regulation 2008/28 Amending UNMIK Regulation No. 1999/13 on the Registration, Licensing, Supervision and Regulation of Micro-Finance Institutions, www.unmikonline.org/regulations/unmikgazette/02english/E2008regs/RE2008_28.pdf

¹³ Law on Patents (2011/04-L-029), www.assembly-kosova.org/common/docs/ligjet/Law%20on%20patents.pdf

¹⁴ Law on Trademarks (2011/04-L-026), www.assembly-kosova.org/common/docs/ligjet/Law%20on%20trademarks.pdf

¹⁵ Law on Industrial Design (2011/04-L-028), www.assembly-kosova.org/common/docs/ligjet/Law%20on%20industrial%20design.pdf

were drafted and awareness activities on intellectual property rights have increased. In general, Kosovo has started efforts to align its legislative framework with European standards, but counterfeiting and piracy remain serious issues in Kosovo. For example, local suppliers of the automotive sector acknowledged that protection of intellectual property rights should be further enhanced in order to encourage investment in research and development, innovation and technology transfers (OECD, 2009). Punitive measures against industrial property rights infringements still need to be clarified.

CHAPTER 2

INSTITUTIONAL FRAMEWORK FOR INNOVATION

This chapter examines the institutional and legal framework for innovation in Kosovo and its role in economic development. Although still at an early stage, the innovation system is gradually maturing, providing the groundwork for knowledge-based economic development. While the role of innovation in economic development has not yet been fully recognised in Kosovo, government and business structures increasingly reflect the importance of innovation as one of the main pillars of economic growth.

The Ministry of Education, Science and Technology (MEST) and the Ministry of Trade and Industry (MTI) are the main institutions responsible for creating a policy framework and environment conducive to innovation, while the Ministry of Economic Development is gradually increasing its role in the innovation system. The network of responsible institutions also includes different government institutions in charge of policy design, implementation and advisory activities. Although significant progress has been made in developing the institutional framework to support innovation, especially in relation to policy advice, such as the establishment of the National Economic Development Council, there is still room for improvement. The primary priority must be improved capacity to overcome the system deficiencies which have been identified: lack of experienced personnel, the lack of implementation and monitoring mechanisms, as well as little available data. The areas of inter-institutional co-operation and policy design also need to be improved, especially in relation to public debate.

The innovation infrastructure in Kosovo generally lacks equipment and human resources for research and development (R&D), following years of neglect of R&D activities in Kosovo's higher education system. Institutions have been created to support technology and innovation, mostly oriented towards providing education and consultancy services to entrepreneurs. However, their performance and the effects of their work remain unknown, due to the absence of performance reviews and audits.

Government funding programmes for R&D in Kosovo are based on the National Research Programme and have been implemented since 2010. A major obstacle for the successful implementation of supporting measures and programmes is the limited R&D budget, which makes efficient implementation and monitoring procedures even more important, thus ensuring the allocation of available resources to projects with the highest development potential.

2.1 Institutional setup

The two main pillars of Kosovo's science, technology and innovation system are the Ministry of Education, Science, and Technology and the Ministry of Trade and Industry (WBC-INCO.NET, 2011a); both are also responsible for different implementation bodies that focus on specific issues. An increasing role is also played by the Ministry of Economic Development.

As it stands, there are no bodies directly responsible for steering innovation policy. The creation of the National Economic Development Council indicates that such a body could play an increasingly important role for the development of innovation policy in Kosovo, but the implementation of an innovation policy is likely to remain under the jurisdiction of specific ministries.

The section below sets out the roles and responsibilities of these key institutions, with a particular focus on their role in innovation.

2.1.1 National Economic Development Council

The **National Economic Development Council (NEDC)** is a forum responsible for the co-ordination of policy development and the implementation of reforms, with the goal of improving the business and investment environment and achieving sustainable economic growth in Kosovo (OECD, 2012). The NEDC is an advisory body for the government in the area of economic development issues. It ensures private-public dialogue between the government and business sector. It includes representatives of eight ministries: Ministry of Economic Development, Ministry of Finance, Ministry of Infrastructure, Ministry of Agriculture, Ministry of Trade and Industry, Ministry of Education, Science and Technology, Ministry of Health, and the Ministry of Spatial Planning. The NEDC also includes representatives of three major cross-sector business associations: the Chamber of Commerce, the Alliance of Businesses and the American Chamber of Commerce.

The NEDC held its first meeting in April 2012 and is currently focused on defining the priorities for Kosovo's economic development. Innovation has yet to be recognised as one of the strategic development goals in Kosovo, but innovation system stakeholders believe that the elaboration of an innovation strategy should significantly contribute to raising awareness of the importance of innovation in the overall economic development process (OECD, 2012).

2.1.2 Ministry of Education, Science and Technology

The **Ministry of Education, Science and Technology (MEST)** is responsible for the formulation of the science, education and technology development strategy in Kosovo and, consequently, the development of the scientific research and higher education system and the promotion of innovation and technological development.

Within the MEST, the **Department for Science and Technology (DST)** is responsible for the creation of infrastructure, the institutional and financial foundation for development of science and research, and the promotion of technological development. The scope of the department's work includes the co-ordination of science, government, and public bodies, and supporting co-operation relationships in Kosovo and abroad. The DST is divided into the Division of Science and the Division of Technology (see Figure 2.1). Although the DST has an important role within the overall science, technology and innovation (STI) system, it currently has only 4 employees instead of the planned 16 (MEST, 2012a). It thus has limited capacity to develop and implement policy. Further efforts should be invested to acquire the necessary experts and ensure the DST has the resources it needs to operate efficiently. Particular focus should be placed on the education of employees in policy design and implementation, especially in implementing funding schemes and the design of transparent evaluation procedures.

MEST is also directly responsible for financing research projects, but it is under severe budgetary constraints. As well as a lack of funding resources, the research project funding only started three years ago, suggesting the ministry still generally lacks experience in efficient funding procedures. In 2011, MEST allocated EUR 200 000 for ten research projects in different fields, only two of which

had any relevance to the business sector.¹⁶ It should be noted, however, that the application process was only open to universities and research institutions rather than individual enterprises. Clearly the research funding process is at an early stage of development and in need of refinement.

Kosovo's R&D budget is low (EUR 1 million), compared to other countries in the region. For example, the R&D budget of the Croatian Ministry of Science, Education and Sports amounted to EUR 163.4 million in 2010 (World Bank). Kosovo's low R&D budget means that programmes should be continuously monitored in order to identify gaps in procedures and minimise the risks of providing financial resources to non-sustainable projects.

Figure 2.1 Institutional departments relevant to innovation in Kosovo

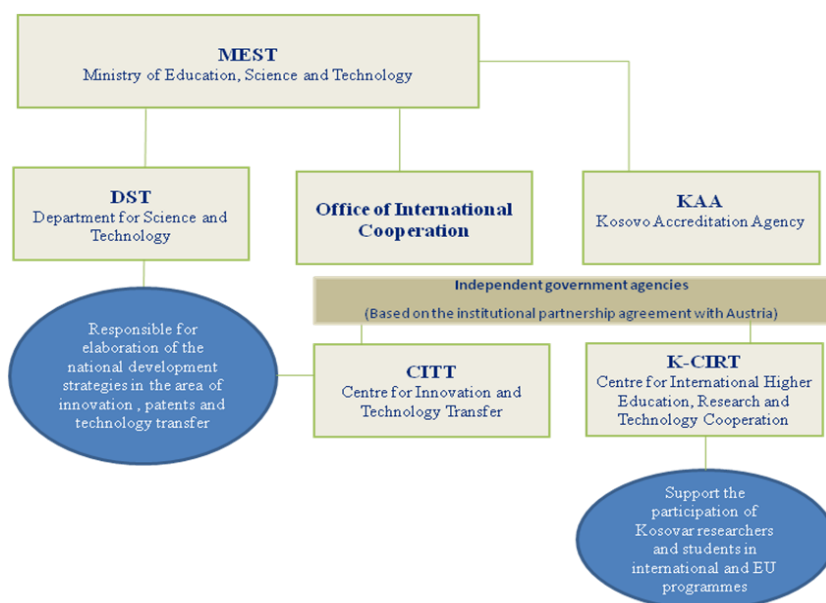


Figure 2.1. (*National Research Programme*, 2010) shows the structure of the departments within the Ministry of Education, Science and Technology as well as independent government agencies that are relevant for innovation policy in Kosovo. Table 2.1 outlines the councils established to promote and develop education, science and technology in Kosovo.

Table 2.1 Councils for education, science and technology in Kosovo

Council	Members
State Council for Teacher Licensing	15 member expert group
State Council for Curricula and Textbooks	Ad hoc expert council
State Central Commission for Matura	Supervisory, advisory and decision-making body
Council for Vocational Education and Training for Kosovo (CVET)	15 representatives from the Government of Kosovo and social partners

¹⁶ Reported by MEST during interviews conducted during the preparation of this report

MEST, together with these accompanying institutions, is gradually developing the framework for science, technology and innovation development in Kosovo. The first strategic approach towards development of research in the economy has been the adoption of National Research Programme (see Section 2.5.1) by the National Research Council, which provides a sound base for future research funding and development. Other significant achievements include the establishment of the Division of Science and Technology within MEST, and elaboration of the Draft Law on Scientific Research, Innovation and Technology, which are expected to contribute to developing an effective and productive research and innovation system.

Designing and implementing an effective innovation system will need further capacity building and human capital development. The creation of a system for monitoring and evaluating funding programmes should help ensure that funds are distributed to the projects with the highest potential. The implementation of funding programmes and other policy measures should be strictly separated from government bodies responsible for policy design, so as to ensure transparency.

2.1.3 Ministry of Trade and Industry

The **Ministry of Trade and Industry (MTI)** aims to promote domestic industry and overall economic growth. It consists of 11 departments, of which the **Industry Department** has the most significant role in Kosovo's science, technology and innovation system. The Industry Department's work includes co-ordinating industrial policy, ownership and privatisation, and the introduction of standards. Its **Industrial Production Development Division** is responsible for facilitating industrial development and assists in the preparation of the domestic development strategy for the industrial sector and provides measures and instruments to facilitate technology transfer and the application of innovation.

Other relevant MTI institutions include the Industrial Property Office, the Investment Promotion Agency of Kosovo and the SME Support Agency of Kosovo.

The **Industrial Property Office (IPO)** is responsible for protection of industrial property, (*i.e.* patents, trademarks, industrial design and geographical indication) in Kosovo.

The **Investment Promotion Agency of Kosovo (IPAK)**, established in 2005, is the primary government institution supporting foreign investment in Kosovo and providing export promotion services. IPAK functions as a one-stop shop for all investors ranging from collection and dissemination of information to assistance during all investment phases (WBC-INCO.NET, 2011a). Its activities include providing information on the general business environment and specific industries, as well as linking potential investors to brownfield and greenfield investment opportunities.

The **SME Support Agency of Kosovo (SMESA)** is an executive agency established in 2006 to promote SME development, including the promotion of entrepreneurship, improvement in the overall productivity and competitiveness of SMEs, developing SMEs in more disadvantaged communities and among under-represented groups, and advocating the interests of the SME sector in general. The overall objectives of SMESA are to implement the SME Development Strategy. It has a government mandate to substantially increase the contribution of SMEs to GDP and GDP growth and to substantially contribute towards reducing unemployment (WBC-INCO.NET, 2011a). SMESA has an extensive role to play in relation to innovation matters, as set out in the SME Strategy, especially two of its strategic goals: promoting and developing an entrepreneurial culture (Strategic Goal 3), and strengthening the domestic and international competitiveness of SMEs (Strategic Goal 4) (see Section 2.6.3 for more details).

These institutions should place particular emphasis in the future on fostering co-operation with other institutions over innovation development, especially with the MEST and its accompanying institutions. In addition they should consider providing assistance to entrepreneurs and researchers regarding intellectual property rights.

2.1.4 Ministry of Economic Development and other ministries

The **Ministry of Economic Development (MED)** implements policies to encourage economic growth, enable local business development, encourage economic co-operation to attract foreign investments, facilitate competitiveness, ensure sustainable development and/or utilisation of energy and mining resources, and to facilitate the development of the telecommunication and information technology.

Other ministries included in the overall STI system in Kosovo include the **Ministry of Finance**, especially in the area of budgeting; the **Ministry for Public Administration**, especially in the area of information and communication technology (ICT) development and the **Ministry of Labour and Social Welfare**, especially in the area of employment and co-operation with MEST in labour market development issues.

2.1.5 Agencies and other related institutions

There are also other organisations which provide special services, foster innovation and have a positive impact on innovative entrepreneurship (WBC-INCO.NET, 2011a).

The **Kosovo Interdisciplinary Knowledge Triangle Centre (KIKT)** is a result of the TEMPUS project¹⁷ implemented during 2010-13. KIKT focuses on the link between higher education and the economy, and aims to support capacity building in research and innovation, as well as curriculum development. Its main goal is to improve capacity building and conditions for the development of professional research capacities, PhD studies, and training programmes for medical and natural sciences at the University of Pristina.

The **Kosovo Centre for International Higher Education, Research and Technology Cooperation (K-CIRT)** was established in 2007 with the aim of encouraging the science and research community to participate in European research, development and innovation programmes and initiatives.

The **Centre for Innovation and Technology Transfer (CITT)** was established in 2008 as an independent government agency under MEST, with the aim of providing support to science-industry relations in Kosovo. According to the Western Balkan report (WBC-INCO.NET, 2011b), the establishment of the CITT filled an institutional gap in the area of technology and innovation centres. However, the CITT has a limited budget, which significantly decreases its ability to implement actual projects.

Regional development agencies (RDAs) were founded in December 2008 as inter-municipal institutions to act as co-ordinators and drivers of development activities in their economic regions. Their main responsibilities include the elaboration of the Regional Economic Development Strategies in co-operation with other partners, and providing support to potential applicants for European Commission-related grants. There are five RDAs in Kosovo, working with 35 municipalities throughout Kosovo (see Annex A, Table A.4).

¹⁷ <http://tempuskosovo.org/>

The **Pristina Regional Enterprise Agency (REA)** was established in 2001 as an initiative of the European Agency for Reconstruction (EAR). The REA employs experienced trainers, advisers and consultants who provide business training services and support to entrepreneurs, SMEs and government institutions.

The **Centre for Entrepreneurship and Executive Development (CEED)** is part of an international network that operates in South East Europe with its founding partners USAID and the Small Enterprise Assistance Fund (SEAF). CEED Kosovo provides young entrepreneurs with “know-how” techniques and networks in order to grow their businesses faster (WBC-INCO.NET, 2011a). It also provides practical training, consultancy, mentorship programmes and networking activities.

Box 2.1 Top Class Programme, Kosovo

The Top Class Programme is designed for young entrepreneurs and managers and consists of three main activities: ten networking learning workshops, local and regional business-to-business (B2B) meetings with different enterprises, and mentorship where beneficiaries/participants have an opportunity to meet one-to-one with experienced entrepreneurs and experts from different fields and sectors. Other programmes include Top Class Plus focused on soft skills, Top Class Finance providing basic financial education to young entrepreneurs, and Managerial Club, fostering networking of businesses. CEED is also active in the implementation of EU-funded projects, such as “Business Support and Learning for Growth”, which aims to foster economic growth and increase job creation in several Kosovo municipalities.

Source: <http://www.ceed-kosovo.org/web/ProgramSites/TopClass/Pages/Program/default.aspx>

The **IPKO Foundation** provides scholarships to university students in Kosovo who are pursuing a field of study with a digital focus. Targeted recipients might include economics students working on the potential of the IT field for economic development, law students focused on intellectual property rights and graphic design students working with digital media.

This network of agencies and institutions providing support to innovation activities has been increasing over the last few years and is expected to play a major role in overall economic development in Kosovo. Further measures should be aimed at ensuring these institutions have sustainable funding and investing in the education of their employees.

2.2 Innovation infrastructure

Besides the basic research infrastructure, which is currently provided mostly within universities and research institutes (see Chapter 3), the development of innovation requires an overall approach combining the support of both businesses and research infrastructures. In Kosovo, the overall innovation infrastructure requires significant improvement and capacity building. A network of different public and private sector institutions is gradually developing to provide basic infrastructure for conducting and promoting science, technology and innovation activities. This network consists of several institutions that can be grouped in three main categories: 1) business support centres and technology / innovation centres, 2) economic zones, and 3) clusters, each of which is detailed below.

2.2.1 Business support centres and technology / innovation centres

Overall, the number of institutions supporting business, technology and innovation has grown over recent years, widening the range of support available to new and existing entrepreneurs throughout Kosovo (see Table 2.2). However, the performance of these centres and their effect on the business environment remains unknown, due to the general absence of performance reviews and

audits. Kosovo needs to develop an evaluation culture, and this should be emphasised as a government priority by the Ministry of Trade and Industry, Ministry of Education, Science and Technology and accompanying institutions and agencies.

Table 2.2 Overview of business support centres in Kosovo

Centre	Principal activities
The Business Advisory Centre (BAC) Mitrovica North	Education and services to companies such as business training programmes, consultancy services, business registration support, micro-credit, logistics support, provision of office space and capacity building.
Business Advisory Centre (BAC) Mitrovica South	Services to entrepreneurs free of charge, including educational training, business registration, consultancy, micro-credit designed for start-up companies and networking services.
Business Advisory Centre (BAC) Zvecan	Consultancy and advisory services, start-up loans and training, aimed at new graduates, entrepreneurs and unemployed persons wishing to start their own business.
Business Support Centre Kosovo (BSCK)	Support to unemployed youth, graduate students and young start-ups in establishing their companies, offering practical training courses, consultancy services and access to micro-loans.
Genesis Technology Centre	Practical training in electronics and manufacturing, applied technology research and technology business incubation. The centre currently operates as a training institute but aims to widen its business activities with business incubation services in the future.
Kosovo Association of Information and Communications Technology (STIKK)	Improving standards and educational opportunities and representing its members vis-à-vis the government. Ensuring the creation of new business opportunities and investments within the ICT sector.
Innovation Centre Kosovo (ICK)	Incubator services, mentoring, consulting and training to entrepreneurs and managers in business planning, accounting, - finance, product/service development, marketing/ sales, human resources, technology development and transfer and matchmaking with local, regional and international businesses.
Innovation Lab Kosovo	Support youth to transform innovative ideas into actionable projects and implement them. The Design Center of the Innovation Lab directly designs and implements technological innovations for Kosovo institutions that work on behalf of children and young people.

2.2.2 Economic zones

In order to provide a policy framework to support the further development of business and economic zones in Kosovo, in 2009 the government introduced the Law on Economic Zones.¹⁸ This law governs the establishment, supervision and development of economic zones, and the rights and obligations of developers, management operators, and users operating within the zones. In accordance

¹⁸ Law on Economic Zones (2009/03/L-129), www.assembly-kosova.org/common/docs/ligjet/2009_03-L-129_en.pdf

with the law, MTI makes decisions on the establishment of economic zones, based on studies prepared by the SME Support Agency and local/regional studies, in accordance with the economic development strategy of the economy. The government declares economic zones based on proposals by MTI.

In 2011, the *Programme for Managing Economic Zones in Kosovo* (Government of Kosovo, 2011a) was introduced. It is based on international best practice and recommends models (public company or private companies) for the establishment of companies managing the economic zones in Kosovo.

Box 2.2 Drenas Business Park

A key economic zone is within the **Drenas Business Park**, a joint project of MTI and Drenas (Glllogoc / Glogovac) Municipal Assembly. Drenas Business Park was established to create a physical environment for SME development in order to better attract foreign direct investment and foster industrial development. Drenas Business Park is operating at almost full capacity and plans are being prepared for its expansion. Currently, there are 33 companies in the Drenas Business Park, chosen from more than 80 applicants.

Besides the business spaces and accompanying infrastructure (gas, electricity, water, telephone, parking spaces, etc.), business park tenants have access to services including legal support for company registration, comprehensive assistance during the start-up phase and support during construction and establishment of the workspace as well as preferential access to local distribution, processed products and raw materials.

While these fairly standard services are likely to positively affect the efficiency of operations of companies located in the business park, they will not necessarily contribute to the realisation of innovative potential or value added. The creation of a business incubator, which could help jump-start innovation activity, is currently an objective of the Drenas Business Park however uncertainty remains over its management and operation. In this context, it should be noted that there are several other business incubator initiatives in Kosovo, including Shtime/Stimlje, Gjilan/Gnjilane and Deçan/ Decani (OECD, 2012).

Several industrial parks and zones operate in Kosovo providing the basic infrastructure necessary for business development. The Industrial Park of Netherland Zinkunue Prizren currently operates in co-operation with a large company from the Netherlands. The Industrial Zone in Shiroke is the largest industrial zone and currently has 30 companies distributed over 50 ha of land. Mitrovica/Kosovska Mitrovica also has a small business park. There are several other projects that are currently being developed but not yet functional, including technology parks in Shtime / Stimlje and Skënderaj / Srbica, as well as Vushtrii Business Park and Lipjan Economic Zone.

Economic zones have the potential to play an important role in fostering innovation and increasing the competitiveness of SMEs in Kosovo. However, getting them established requires a comprehensive strategic approach at a governmental level to foster a supportive environment for entrepreneurship and attract FDI. The Law on Economic Zones and the Programme for Managing Economic Zones in Kosovo represent progress towards that.

Further development should aim at designing subsidies and other policy measures that will offer incentives to entrepreneurs to relocate their businesses to economic zones, as well as encourage the establishment of new companies within the zones. To optimise the advantages offered by economic zones, services provided within the zones should also be expanded and improved based on international best practices, as has been analysed in the Programme for Managing Economic Zones in Kosovo.

2.2.3 Clusters

Clusters can be defined “as a group of firms, related economic actors, and institutions that are located near each other and have reached a sufficient scale to develop specialised expertise, services, resources, suppliers and skills” (EC, 2008, p.9). By encouraging the exchange of knowledge and creating a concentrated pool of skilled labour, clusters serve as important drivers for competitiveness and innovation (EC, 2008).

The Fruit and Vegetable Cluster is currently the only operational cluster in Kosovo. It has resulted, to some extent, in minor innovation in agriculture, which has led to enhanced productivity in the value chain (WBC-INCO.NET, 2011a).

Clusters are considered as an important development factor within government economic programmes (see Section 2.6), and the establishment of new clusters with government support is to be expected in the future.

2.3 Legal framework for scientific research

Kosovo’s framework regulating research activities is based on three main laws as follows:

- The Law on Academy of Science and Arts of Kosovo, adopted in 2004.¹⁹
- The Law on Scientific Research Activity, adopted in 2005.²⁰
- The Law on Higher Education in Kosovo, adopted in 2011.²¹

The Law on Scientific Research Activity defines scientific research activity as a specific public and domestic interest. The law also prescribes that up to 0.7% of the government’s budget should be allocated for the purpose of fulfilling the necessary conditions and providing the means to promote research.

According to this law, research activity can be undertaken by public universities, research institutes and the Kosovo Academy of Science and Arts. Other legal persons can deal with scientific research activity if they fulfil the legal conditions, such as having a long-term research programme, facility and equipment, and having at least five permanently employed researchers, two of whom have a PhD and a recognised status.

Based on these requirements, private organisations (including private universities) are entitled to obtain funding and carry out research work. The Kosovo Council of Science is in charge of assessing whether a private scientific organisation fulfils the standards for organising and developing scientific research, while MEST is responsible for granting the license (after a positive assessment) and registering private scientific organisations in the Register of Scientific-Research Institutes.

¹⁹ The Law on Academy of Science and Arts of Kosovo (2004/19), www.assembly-kosova.org/common/docs/ligjet/2004_19_en.pdf

²⁰ The Law on Scientific Research Activity (2004/42), www.assembly-kosova.org/common/docs/ligjet/2004_42_en.pdf

²¹ The Law on Higher Education in the Republic of Kosovo (2011/04-L-037), www.assembly-kosova.org/common/docs/ligjet/Law%20on%20higher%20education.pdf

The law promotes the advancement and training of new R&D personnel, which is of great importance considering the general lack of scientific research capacities (Schuch, 2008). In addition to government funding, scientific research institutes can access finance from any other source for scientific research activities. The law prescribes the types of projects that can be funded (research, development and infrastructure-related projects), as well as other general criteria for project evaluation.

The new Draft Law on Scientific Research, Innovation and Technology is currently in the process of public consultation. The draft law introduces the definition of innovation and technology transfer into the legislative framework and stipulates the importance of inter-institutional co-operation between scientific research institutes and higher education institutions.

The draft law defines innovation as “new production, new process, new technology or new service with unique characteristics, created with application of personal outcomes as well as with use of scientific-research outcomes of others.” Although the introduction of the concept of innovation in Kosovo’s legislation marks an important step forward in the overall development of innovation, the narrow scope of the present definition overlooks important sources of potential innovative activity. The presented definition is primarily oriented towards the development of products, processes and services, which does not recognise marketing or organisational improvements as innovation activities.

Similarly, the definition of technology transfer in the draft law is also restrictive. It does not recognise the important aspects of converting scientific and technological improvements into marketable goods and services, or provision of know-how or technological knowledge. Such a narrow definition is insufficient to provide the basis for technology development in Kosovo.

The Law on Higher Education in Kosovo establishes a legal framework for regulating, financing, and raising the quality of higher education in compliance with European standards, as well as articulating the role of the government and society in the development of higher education. The law stipulates the objectives of higher education as follows: the development of knowledge through teaching and scientific work and preparing students for professional practice and lifelong learning through the acquisition of higher-level competences.

The law states that all higher education providers are subject to procedures for audit and quality valuation by the Kosovo Accreditation Agency (KAA). The law also provides the general principles of funding for providers of higher education. Licensed and accredited public higher education providers may receive funding from the Ministry, commercial services, donations, or contracts with local, international, public or private bodies for the field of teaching, scientific research or consultancy.

MEST is, among other things, responsible for allocating funds to higher education providers for teaching and research in the public interest, under the general provisions of the law applicable to the financing of public services in Kosovo and ensuring that such funds are spent in accordance with agreed priorities.

It can be concluded that the legal framework related to research and innovation could be improved as it does not adequately recognise the current context of research, development and innovation activities as drivers of economic growth. The new Draft Law on Scientific Research, Innovation and Technology is expected to fill this gap and introduce a legal framework conducive to science, technology and innovation activities. Other draft laws currently in the process of public discussion relating to innovation include a Law on Adult Education and the Law on Vocational Education and Training.

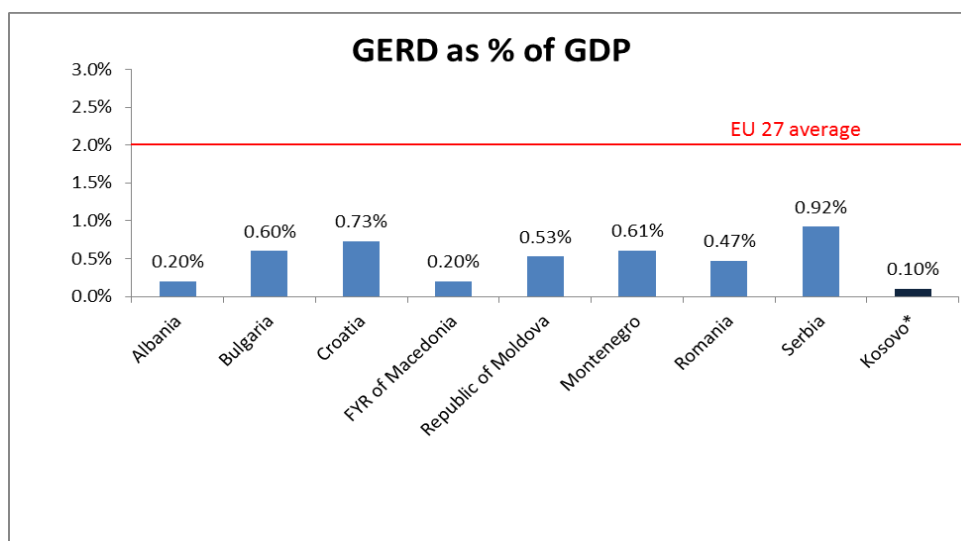
2.4 Current state of STI policy

Science, technology and innovation (STI) policy in Kosovo is in its development phase. Innovation has only recently been recognised as a precondition rather than a consequence of domestic economic development. Even the Ministry of Trade and Industry, which is one of the main players in the STI system, did not consider innovation as an issue until recently (OECD, 2012).

The current situation is characterised by a lack of basic research and technology statistics. As described in the National Research Programme (NRC, 2010), this is due to the isolation of the science and research community during the pre-war period, the material and immaterial destruction during the conflict, and the difficult economic recovery process afterwards.

Although the Law on Scientific Research states that up to 0.7% of the government budget is to be allocated for scientific research activities. The expenditure on R&D in 2011 amounted to approximately 0.1% of GDP (see Figure 2.2), as reported by the MEST during the focus group meeting (OECD, 2012). This is significantly below the European average (1.49% in 2010, as reported by EUROSTAT in 2012), and well below the average of the region and many developing countries (Schuch, 2008). This figure has been confirmed by the analysis incorporated into the National Research Programme (NRC, 2010).

Figure 2.2 Gross expenditure on R&D (GERD) (2010)



Source: Data for Bulgaria, Croatia, Republic of Moldova, Romania and Serbia from UNESCO, referring to data from 2010 (with the exception of Serbia, from 2009), Data Centre, UNESCO Institute for Statistics website, <http://stats.uis.unesco.org/>, accessed on 19 March 2013; data for Albania, the Former Yugoslav Republic of Macedonia, Montenegro and EU 27 from the *Erawatch Analytical Country Reports 2011*, referring to data from 2010 (with the exception of FYR Macedonia, from 2009); estimate for Kosovo provided by government authorities from MEST (2012).

As stated in the NRC (2010), Kosovo's capacity to absorb knowledge and technology is severely limited in size, scope and quality. The main cause of these serious limitations lies in the absence of research and technological development (RTD) funding or other support measures over at least the last two decades. Without sufficient RTD support, the economy and academia in Kosovo has little capacity and are less able to cope with technological progress.

One of the main problems of the overall STI system in Kosovo lies within the higher education system and its lack of orientation towards the development of science and research. The entire higher education system in Kosovo is characterised by a marginalisation of scientific research, which holds true even in the case of the University of Pristina, the largest research-oriented institution in Kosovo (NRC, 2010).

However, the overall system is slowly developing and science, technology and innovation are becoming more and more recognised as economic drivers. The Ministry of Education, Science and Technology, together with the universities and non-university research organisations are aware that research and development activities need to be integrated into the higher education system (as outlined in the Higher Education Strategy (MEST, 2004)) and, beyond that, should gradually gain importance for the economic and social development of Kosovo.

There are two main strategic documents that tackle the science, technology and innovation development in Kosovo – the *National Research Programme* (NRC, 2010) and the *Strategy for the Development of Higher Education in Kosovo (2005-2015)* (MEST, 2004).

2.4.1 The National Research Programme

The **National Research Programme (NRP)** was developed in 2009 by the National Research Council and adopted in 2010. The NRP sets policy objectives and targets with the aim of counterbalancing the recognised deficits of the STI system in Kosovo and supporting the socio-economic development of Kosovo towards a knowledge-based society. It provides a conceptual framework for upgrading Kosovo's scientific capacities.

The NRP defines the following specific science and technology targets:

Objective 1: Development of human capacity for research activities.

Objective 2: Development of research infrastructure.

Objective 3: Internationalisation of scientific research activity.

Objective 4: Strengthening the links between science and society and economy for enhancing economic and social development.

Objective 5: Excellence in research and scientific activity.

Each of the objectives is accompanied by specific policy measures and activities that need to be implemented in order to achieve the objectives. There are 18 policy measures defined with the aim of encouraging the scientific research activities in both public and private sectors (see Annex A, Table A.5).

The National Research Programme has also defined research and development priorities with the goal of channelling scarce financial resources into the areas that seem to have the strongest potential to become main economic development drivers. These priorities have been called “The Five plus One National Research and Development Priorities in Kosovo” (see Section 3.3 for more detail).

2.4.2 The Strategy for the Development of Higher Education 2005-2015

The **Strategy for the Development of Higher Education in Kosovo (2005-2015)** was adopted in 2004. Its aim is to develop an efficient higher education system, providing high-quality education and research. In the first implementation phase (2005-09), the main focus was on completing the legislative documentation, drafting and implementing the development policies, and increasing support funds. The priorities of the second implementation phase (2010-15) were to emphasise the development of the institutional capacities, intellectual capacities and piloting innovations. The strategy defined the main problems of the higher education sector. Problems with research activity included the lack of RTD policies and programmes, incomplete legislation for scientific research, lack of defined priorities, lack of administrative and intellectual capacity, lack of interdisciplinary approaches and standards, the on-going brain drain and the absence of a mechanism for protecting both intellectual property and industrial rights. The strategy identified performance indicators, such as the provision of a legal package and programmes for scientific development, the number of scientific research projects that contribute to the solving of societal problems, the number of publications, the allocation of funds to scientific research and the establishment of an institutional infrastructure for scientific work (MEST, 2004).

Even though the strategy provided a good foundation for higher education development in Kosovo, developments and trends over the last seven years have changed and the strategy today requires a substantial update. This is especially the case in the area of legislation, which has significantly developed within the last seven years, for example with the introduction of the Law on Intellectual Property Rights. However, new measures should be introduced to ensure the sustainable development of higher education in Kosovo.

The strategy planned to address the field of scientific research in the second period (2010-15), although Schuch (2008) suggested that the foundations should have been laid in the first phase. The National Research Programme (NRC, 2010) provided a set of funding programmes to support scientific research development in Kosovo.

In 2011, the Kosovo Education Strategic Plan 2011-2016 (MEST, 2011) was introduced with the aim of updating and complementing the strategy.

2.4.3 Kosovo Education Strategic Plan 2011-2016

Recognising that the higher education strategy has gradually become out of date, the government adopted the **Kosovo Education Strategic Plan 2011-2016** (MEST, 2011) in order to resolve these issues. This recognises education as a key priority for Kosovo and one of the most dynamic sectors of society. The strategic plan emphasises the importance of access to education for all, including the poor and ethnic minority groups, thus supporting equal opportunities for employment and participation in economic activities.

The plan emphasises that if the Kosovo higher education institutions were more strongly oriented towards research, transfer of technology and closer co-operation with businesses, then all sides would benefit. Students would enjoy increased employability and both the economy and education system would be more sustainable. The plan recognises the following key challenges in this area (MEST, 2011).

- **Establishing quality standards in teaching and research.**

Although Kosovo is not a signatory to the Bologna Process, its higher education law and policy identify the need to ensure quality in higher education and to enhance efforts to work towards this. Research priorities have been defined in Kosovo's National Research Programme for 2010-2015.

- **Support the National Research Council in handling the NRP's priority research fields.**

These priorities were identified as a result of the evidence-based interaction between science, citizens and businesses. The strategy includes the creation of a fund for research activities that has been available to researchers since 2010.

- **Provide a modern environment for teaching, learning and research in higher education institutes.**

Measures include: buildings (including making them accessible for students with disabilities), student and guest staff accommodation, laboratories, information communication technology (ICT) and libraries, building a distance learning system; communication network, and a system for student services. Progress has been made in some objectives: a student dormitory has been built in Pristina and another one reconstructed; there has been investment in buildings in some faculties; there has been continuous investment in information technology (IT); there has been investment in a library and some investment in laboratories. Nevertheless, there is a further need for investment to ensure a high-quality teaching and learning environment in the context of significant increased inclusion in higher education.

The strategic plan sets a number of targets to tackle the issue of increasing research capacities and outputs in higher education institutions (MEST, 2011). Specific examples include:

- By 2014 there should be institutional support and promotion in place for scientific research, innovation, technology transfers and entrepreneurship as well as a system for increased internationalisation of higher education and research;
- By 2016 there should be increased space and a modernisation of the environment for studies and scientific research work.

Although these targets might seem optimistic, the approach is well designed and prioritises research and innovation activities in the overall higher education system. The document provides a sound basis for fostering science–industry linkages, but requires additional funding, which could present the main obstacle to its implementation.

2.5 Innovation in the economic programmes of the government

In the last decade, the Kosovo government has adopted a plethora of different development strategies and economic programmes. These include the Government Programme, Action Plan of the Economic Vision, SME Development Strategy for Kosovo, Employment Strategy, Energy Strategy, and Strategy for Development of Higher Education and Government Programme for Prevention of Informal Economy. Several of these documents tackle innovation development in Kosovo.

This section addresses selected development strategies and economic programmes, and the level of recognition of innovation as a driver of economic growth within the development objectives defined by these strategic documents.

2.5.1 The Program of the Government of Kosovo 2011 – 2014

In *The Program of the Government of Kosovo 2011-2014* (Government of Kosovo, 2011b) the government established its strategic objectives for improving the environment for the development of the industry sector and small and medium-sized enterprises. The strategies are designed to provide the medium and long-term framework for the development of these sectors.

The government's programme is based on four main pillars (Government of Kosovo, 2011b):

1. sustainable economic development,
2. good governance and strengthening the rule of law,
3. human capital development,
4. social welfare.

The importance of innovation is emphasised throughout the document. According to the programme, public policies and procedures should co-ordinate support for innovation leaders and players in the new sectors. Special measures to support the SME and private business sectors include the introduction of a development scheme to support the pre-incubation, incubation and post-incubation periods so as to increase competitiveness; SME innovation and transfer of knowledge and technology; and the development of geographical or sector cluster programmes to increase sector capacities.

The programme includes measures to strengthen the research institutes for the purpose of conducting agriculture and rural development analyses, processing and measuring the effects of agricultural policies, and improving total quality management. However it is in the domain of human resource development that research and innovation is given most emphasis, with specific priority given to increasing the quality of education. The development of university education is a strategic objective in this area, primarily increasing the quality of education and performing scientific research in support of the societal and economic development of Kosovo.

Overall, the programme acknowledges innovation as a driver of economic growth and emphasises the importance of fostering innovation in the overall economy. Moreover, it presents a holistic approach to the development of a knowledge-based society through strengthening four carefully selected main pillars.

2.5.2 The Action Plan of the Economic Vision of Kosovo 2011-2014

The *Action Plan of the Economic Vision of Kosovo 2011-2014* (Government of Kosovo, 2011c) defines strategic priorities structured in five sectoral pillars:

- maintaining macro-fiscal sustainability;
- investments, investment environment, and private sector support;
- development of public infrastructure;
- revitalisation of the agricultural sector;

- human capital development.

The area of human capital development includes three main priorities:

- The development and support of an all-inclusive education system that ensures equal access to quality education.
- Establishing the system of vocational education and lifelong education.
- Increasing the employment rate and strengthening professional training based on labour market needs.

Within these priorities there are activities which aim to increase the quality of human capital to provide a higher quality workforce in the labour market. The plan emphasises education and professional development to develop human capital in all sectors. One activity includes the establishment of research institutions in universities to provide services to the private sector. They are the responsibility of MEST, but don't have a defined timeframe or budget.

Research activities play an important role in the development of the agriculture sector. This sector will receive special attention in the medium term, with efforts made to increase productivity, reduce imports of agricultural products, and increase employment in this sector. Most of the measures in this sector aim to directly support agricultural production, while simultaneously introducing policy measures to facilitate the development of this sector.

The action plan's strategic objectives include: increasing the public budget for the agriculture sector to 3% of the overall budget, strengthening advisory services, strengthening institutional capacities, generating specific applied research, improving access to favourable credit schemes, and enhancing and improving infrastructural capacities.

Although innovation is included, its importance to overall economic development should be more emphasised throughout the programme and its planned activities, especially in relation to business and human resources development.

2.5.3 SME Development Strategy 2012-2016

As more than 99% of companies in Kosovo are SMEs, one of the most important development strategies is the *SME Development Strategy 2012-2016*, developed by the Ministry of Trade and Industry (MTI) through the SME Support Agency (SMESA) in 2011 (SMESA, 2011). The mission statement of the SME Strategy is "Improvement of the business environment and entrepreneurship culture with the aim of the creation and rapid growth of sustainable SMEs." The SME Strategy is cross-sectoral and encompasses a number of different government institutions responsible for its implementation.

The strategy identified several key deficiencies in the SME sector, particularly the lack of fast-growing innovative companies, which are the main contributors to job creation in developed western European countries.

The SME Strategy defines seven strategic goals: 1) improving the legislative and regulatory framework, 2) access to finance, 3) entrepreneurial culture, 4) competitiveness of SMEs, 5) public-private consultations, 6) strengthening SME support institutions and 7) minority groups. Although

achievement of all these strategic goals should have a positive impact on innovation development in Kosovo, the most direct reference to innovation activities can be found in goals 3 and 4.

Strategic Goal 3: **Promoting and developing an entrepreneurial culture**, promotes the upgrading of skills in SMEs and all forms of innovation. It consists of three sub-goals: strengthening the entrepreneurial culture, promoting and increasing co-operation between schools and businesses, and stimulating creativity and innovation. It also anticipates the development of training schemes introducing creativity and innovation to SME owners and managers, and potential new entrepreneurs. In a move towards EU candidate status, Kosovo will also begin to implement the EU Entrepreneurship and Innovation Programme (EIP).

Strategic Goal 4: **Strengthening the domestic and international competitiveness of SMEs** relates to several Small Business Act (SBA) principles, namely: I. *Create an environment in which entrepreneurs and family businesses can thrive and entrepreneurship is rewarded*; and VII. *Help SMEs to benefit more from the opportunities offered by the single market*. Strategic Goal 4's sub-goals include:

- Develop the technical, innovative and managerial skills of SMEs in line with the EU Information and Communications Technology Policy Support Programme (ICTPSP).
- Identify and develop priority target sectors for SME support.
- Develop and establish a Business Innovation Centre (BIC).

The establishment of a BIC is expected to contribute to the SME development process by combining public and regional sources of knowledge and innovation into a functional network of competencies. This network could consist of regional knowledge groups such as universities, institutes, business associations and private colleges. Research organisations would be linked with enterprises to further promote innovation in their businesses. This process is expected to enable SMEs to realise their creative development potential, increase competitiveness, and establish co-operation with local and international research and industrial partners.

2.6 Key instruments for innovation

2.6.1 Policy measures

The problem of lack of finance has been recognised in the National Research Programme (NRC, 2010), which introduced 18 different policy measures for scientific research funding (see Annex A, Table A.5.) to be employed in the operational delivery of the NRP.

The implementation of all measures is the responsibility of MEST and, in some cases, the planned National Research Promotion Agency which is expected to be established soon.

In 2010, following the adoption of the National Research Programme by the Kosovo Assembly, MEST moved forward with the implementation arrangements (Rohsmann, 2010). At the end of September 2010, the first round of calls for research funding supporting the implementation of the programme measures was published in the local media.

The funding was made available through five programmes: the Brain Gain Grant (BGG), short-term mobility grants, publication funds, Special Research Grants and research awards.

During interviews with the innovation system stakeholder, MEST reported that it had allocated EUR 200 000 for ten research projects in different fields, two of them with relevance for businesses, but only universities and research institutions could apply, not SMEs (OECD, 2012). Another EUR 56 000 was allocated for 28 mobility schemes (for study visits abroad for science institution), EUR 40 000 for 24 publications and EUR 25 000 for science conferences in Kosovo.

To be eligible for funding, the applications have to be aligned with the National Research Programme's priority fields, which include natural resources, energy and environment, agricultural production and food safety, medical research and communication technologies.

Brain Gain Grant

The objective of the Brain Gain Grant is to attract the best local researchers living abroad and to enable them to pursue professional scientific careers in Kosovo. The applicants can be awarded the grant through regular work at a public university or a public research institution (*i.e.* host organisations), where they have to be actively involved in research, teaching and mentoring. They need to be able to lead the selected project autonomously, even before obtaining a tenured position. The host organisation should guarantee that it will employ the candidate after the end of the support provided by the BGG for at least twice the duration of the original programme. Outstanding researchers may apply if they have at least a doctorate and if they want to return to Kosovo. Candidates must have stayed and worked abroad in a dedicated scientific research environment for at least three years after finishing their PhD. The total amount foreseen for the BGG in 2010 was limited to EUR 250 000. The maximum annual grant is EUR 70 000, but the beneficiaries can be granted an additional EUR 30 000 a year for research equipment or personnel costs for team members. Proposed projects have to last for a minimum period of 12 months and a maximum of 24 months.

Short-term mobility grants

This programme aims to enable scientists to work at universities or reputed research institutions abroad, with the purpose of gaining research experience. It would also enable local scientists to participate in scientific conferences to present their own research results abroad. The maximum amount would normally be EUR 1 500. In case of a two-month stay, the grant can be extended to EUR 3 000 for the entire period.

Publication funds

This programme provides funds for the production costs to support the publication of scientific, non-profit oriented research findings and the translation of relevant international scientific publications into the Albanian or Serbian language. The maximum support for the production of a publication would normally amount to EUR 6 000. In exceptional cases, this amount can be raised up to EUR 10 000. The maximum level of support for the translation of a scientific publication would normally amount to EUR 10 000, and only in duly justified cases can it be extended to a maximum subsidy of EUR 12 000.

Special Research Grant

The objective of the Special Research Grant is the establishment of a research programme based on international standards through the concentration of autonomous research at a single research institution or university location. The projects funded by the Special Research Grant must be unique and with a long-term perspective. They should have an added value compared to small-sized research projects. The grant is aimed at researchers from Kosovo working together on research projects. The

awardees should accomplish the project through regular work at a public university or a public research institution, where they have to be actively involved in research, teaching and mentoring. The total funding available for 2010 was EUR 625 000. The grant for a single project cannot exceed EUR 125 000.

Awards

The NRP established a fund for yearly awards for extraordinary achievements with the aim of promoting scientific excellence, encouraging science careers and recognising the efforts and commitment of those researchers, who are advancing in their area of expertise. The “Kosovan Researcher of the Year” award is given annually to the five most outstanding researchers in Kosovo. Each is provided a prize sum of up to EUR 6 000 to support the continuation of their research career and to enable them to build up or consolidate and lead research groups. The “Best Newcomer Researcher of the Year” award is given to the five best newcomer researchers with prize money of up to EUR 2 000.

2.6.2 International programmes

Aside from the internal budget sources that are being allocated for STI activities, there are several key international programmes aimed at fostering the overall economic development of Kosovo.

The European Union is the largest international donor in Kosovo. Since 2007, assistance has been provided through the Instrument for Pre-Accession Assistance (IPA), the key tool of the European Commission’s pre-accession assistance strategy. Kosovo is currently receiving financial assistance under the two of the four components: Transition Assistance and Institution Building, and Cross-border Co-operation (see Table 2.3).

Table 2.3 IPA funding in Kosovo (2007-13) in EUR

Component	2007	2008	2009	2010	2011	2012	2013
Transition Assistance and Institution Building	68 300 000	184 700 000	106 100 000	66 100 000	66 900 000	65 870 995	70 712 269
Cross-border Co-operation	0	0	0	1 200,000	1 800 000	2 929 148	2 987 731
TOTAL	68 300 000	184 700 000	106 100 000	67 300 000	68 700 000	68, 800 143	73 700 000

Source: EC (2012), “European Commission - Enlargement - Potential Candidates – Kosovo*”, EC website, http://ec.europa.eu/enlargement/potential-candidates/Kosovo*/financial-assistance/index_en.htm, accessed 23 July 2012.

In the areas relevant for innovation, Kosovo has received support for education and employment, competitiveness and innovation through programmes such as the SME, FDI, regional economic development oriented projects, and the TEMPUS and Erasmus Mundus grants.

Between 1999 and 2012, the World Bank (WB) provided around USD 400 million to Kosovo, managed through more than 30 activities, including trust funds. As of March 2012, there were seven active lending operations with commitments totalling USD 76.8 million and four trust funds with total

commitments of USD 8.9 million. These support several sectors, including environmental clean-up and land reclamation, education, public-sector reform, business environment, cadastre, agriculture, social inclusion and financial-sector strengthening. As Kosovo was not a member of the World Bank until June 2009, all Kosovo operations supported by the Bank prior to that were financed through grants from a variety of sources, principally the Bank's net income, the Trust Fund for Kosovo, the Post-Conflict Fund, and the International Development Association (IDA). (World Bank, 2012a)

Institutional Development for Education Project (IDEP) is implemented by the Ministry of Education, Science and Technology (MEST) in Kosovo and financed by the World Bank. The objective of IDEP is to strengthen systems, institutions and management capacities needed for education quality improvements.

The project supports four key elements of the government's pre-university and higher education strategies: strengthening the organisation and financing of the education system in Kosovo, building institutions and management capacity to promote quality improvements, creating conditions to introduce efficient and appropriate designs and reduce multiple shifts in Kosovo's schools, and strengthening the management capacity at system and institutional levels for higher education.

The overall project budget amounts to USD 10 million. The intended implementation period of 2008 to 2012 has been extended to the end of July 2013 (World Bank, 2012b).

The **Business Environment Technical Assistance Project**, financed by the World Bank, operated between 2005 and 2012. The main goal of the programme was to improve the business environment by reducing the uncertainty of key regulatory processes, improving the delivery of related services, strengthening property rights, and increasing the transparency and accountability of the implementing institutions. The project consisted of three components: business service integration, immovable property rights enhancement, and project co-ordination and monitoring. Project goals were largely achieved and a new International Finance Cooperation IFC Advisory Services Investment Climate project is under preparation.

The **Higher KOS – Promoting Institutional Development in Higher Education and Research in Kosovo** programme contributes to the functioning of the higher education and research system in Kosovo using European values, practices and standards. Its purpose is to effectively and sustainably implement the principles of the European Higher Education Area (EHEA) in Kosovo's public higher education institutions, and to sustainably enhance Kosovo's integration into the European Research Area (ERA). The main donor for the project is the Austrian Development Cooperation and it is co-financed by MEST.

Under promoting research, it is expected to result in:

- The establishment of the National Research Fund;
- Research Promotion in Kosovo – a strategic analysis and feasibility study into the establishment of an agency for research promotion based on already existing structures;
- 15 PhD or post-doctorate fellowships through a scholarship fund;
- Support to establish and implement a minimum of ten new collaborative research projects.

Business Development Kosovo is a bilateral project financed by the Norwegian Ministry of Foreign Affairs between 2011 and 2013. The project focuses on the establishment of a business

incubator, business garden, and women's innovation. The overall theme is to raise competence and encourage innovation and entrepreneurship, especially among women and youth.

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) started working in Kosovo in 1999. The current programme focuses on three priority areas: sustainable economic development, education, and public administration, democracy and civil society. GIZ is providing support to the competence centres in Kosovo in several sectors such as cosmetics, services, health, and ICT.

FINCA International provides financial services to the lowest-income entrepreneurs around the world. In Kosovo, FINCA started a microfinance programme with funding and support from USAID. Within this programme, FINCA Kosovo offers four different loan products to support start-ups and entrepreneurs: the solidarity group loan, business loan, home improvement loan, and rural loan (WBC-INCO.NET, 2011a).

The TurnAround Management (TAM) and the Business Advisory Services (BAS) of the **European Bank for Reconstruction and Development (EBRD)** are complementary technical assistance programmes that combine direct assistance at the enterprise level to viable SMEs across a broad range of industry sectors (WBC-INCO.NET, 2011a).

TAM aims to build strong, competent enterprise management and restructuring through the transfer of international best practice to SMEs. The managerial and structural changes within SMEs are achieved through training activities and the provision of international advisers to TAM projects, usually lasting 18 months.

BAS works directly with individual SMEs, providing specific and practical business advice. At the same time, BAS builds local consultancy capacity to serve enterprise needs. Typical BAS projects are short-term with a rapid payback, such as upgrading management/financial IT systems, market research, and introducing quality systems and human resource management techniques. From 2005 to 2010, the BAS Programme in Kosovo undertook 281 consultancy projects and funded nine projects fully (including accredited training courses, workshops, seminars, etc.) in order to improve the operations of SMEs in Kosovo, enabling them to enter new markets, and get access to finance. (WBC-INCO.NET, 2011a)

USAID (United States Agency for International Development) is primarily focused in Kosovo on supporting economic growth, democracy and governance, and special initiatives and cross-cutting programmes addressing issues such as youth or conflict mitigation outside its core thematic objectives. There are no specific USAID projects focusing on supporting innovation in Kosovo. However, as Table 2.4 shows, several programmes are relevant for innovation development (WBC-INCO.NET, 2011a).

In addition, there is the **Supporting Kosovo's Young Leaders (SKYL) Youth Programme**, and the **Young Entrepreneurs Programme**, which started in 2012 and is designed for companies up to 24 months old and entrepreneurs under 35.

Table 2.4 USAID programmes related to innovation development in Kosovo

Programme	Objective
Kosovo Private Enterprise Programme 2008 – 2012	Identify market opportunities for local products, enhance local and regional capacity to promote competitiveness and foster sustainability of the private sector.
Development Credit Authority 2007 – 2013	Through the establishment of a development credit authority, USAID enables better access to credit for farmers and agricultural SMEs by providing a 50% risk guarantee to loans by Raiffeisen Bank Kosovo.
Commercial Finance Fund 2008 – 2014	Improve SMEs' needs for short-term working capital financing by providing various products, ranging from pre-shipment and pre-export working capital finance to revolving credit and leasing.
Centre for Entrepreneurship and Executive Development (CEED) Kosovo 2009 – 2013	Foster the growth of SMEs and the development of an entrepreneurial culture by delivering executive training courses and networking events.

To sum up, there are a significant number of international donor institutions providing support to private sector development in Kosovo. However, most of their programmes are aimed at increasing the institutional and business capacities in Kosovo and supporting human resource development, while only a few are concentrated on strengthening aspects of science, technology and innovation capacities and funding research and innovation activities. This suggests there is scope for the government to mobilise funding in support of a future innovation strategy.

2.7 Conclusions

The government's recognition of innovation as a priority is one of the major strengths of the current institutional framework for innovation. All of the main economic programmes and strategies touch upon the issue of fostering innovation and scientific research activities in Kosovo with varying degrees of intensity. This shows that innovation is starting to be considered as an element of economic growth. A policy framework for developing innovation exists to some extent, albeit in a fragmented and uncoordinated manner, and an innovation strategy is currently being created.

The weaknesses of the institutional framework mainly stem from a lack of the human and financial resources needed to properly design and implement policies. The fact that there is no cohesive innovation policy is also detrimental to activities related to science, technology and innovation in Kosovo. Other weaknesses of the current system include a lack of systematic monitoring or evaluation of current policies and institutions, and a lack of support for linkages between innovation actors.

Opportunities to strengthen the institutional framework lie in the potential co-ordination between key institutions involved in innovation policy. Currently, the government plays an important role in the development of the innovation system. However, there are still serious gaps, including the lack of overall policy development, co-ordination, human, organisational, and financial capacities for policy implementation. Adopting the new Law on Scientific Research, Innovation and Technology will help improve the legislative framework for conducting scientific research. Further development activities should be aimed at increasing capacity building for research and innovation, strengthening awareness and links between science and industry, increasing the importance of research and innovation activities

in companies, and the overall economic development of Kosovo. Universities should use future opportunities to play a more significant role in promoting science-industry linkages and overall economic development (OECD, 2012).

Potential risks that threaten the success of developing an effective institutional framework for innovation include weak implementation of adopted strategies and policies and a lack of people with the skills necessary for optimising EU pre-accession funds. Future programmes also risk having a limited impact due to the lack of a monitoring or evaluation system. These threats mainly arise from the limited financial and human resources that the government has at its disposal.

CHAPTER 3

EDUCATION AND RESEARCH

This chapter examines both the role of human capital in the innovation system of Kosovo, and the capacity of research institutions to provide a stimulating environment for innovative activities. This is first done by an analysis of the educational system in Kosovo in its role to generate a skilled and employable workforce. Using a survey that was specifically carried out for this report, the second part of the chapter examines the capacity of Kosovo's research institutions and university faculties and identifies potential constraints as well as policy needs. Then, the capacity of research institutions and university faculties for innovation is examined, mainly based on a survey that was specifically carried out for this report.

Western Balkan economies, including Kosovo, have followed the EU's lead and recognised the importance of inclusive growth, setting targets to increase the overall employment rate and add more highly educated people to the region's workforce.

Even though education is a priority for the government, teaching and evaluation methods are often outdated, and education outcomes poor. Despite some improvement, the education sector is still affected by a lack of adequate facilities. The number of students enrolled for the first time in higher education almost doubled between 2008 and 2009 leading to a larger number of private institutions many of which have not been accredited. Employers still feel that higher education institutions do not provide students with the right skills, although private institutions are more responsive to businesses' needs. Students rarely have the opportunity to gain a valuable first-hand professional experience e.g. through internships. Kosovo's youthful population and very high youth unemployment rate makes this an urgent issue to tackle as educational attainment is correlated to employment rates and salary levels and appears to close the gender gap. Generally, however, Kosovo still lacks accurate data in areas such as education outcomes and employment rates, which hampers analysis.

The research capacity of universities and research institutes in Kosovo remains weak. The number of university staff dedicated to research is low and the commercialisation of research and application for patents almost non-existent (see section 1.2.6). Higher education institutions lack funds to carry out research, have few links with businesses and lack the skilled personnel needed. The institutions surveyed would like to see more training and seminars to help them access external international funds such as the Seventh Framework Programme (FP7), and an improved network with foreign research institutions.

3.1 Education and human capital

People are at the heart of the innovation process. They generate ideas and knowledge that foster innovation and then apply this knowledge in the workplace and in society at large (OECD, 2011).

As the global economy shifts towards more knowledge-based sectors, skills and human capital development become a central issue for economic development (OECD, 1996). Human capital is a

broad concept, encompassing “the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well-being” (OECD, 2011). Skilled people play a crucial role in innovation; a higher level of human capital spurs innovation through a number of mechanisms, including the generation of new knowledge, adoption and adaptation of existing technologies, and learning and human capital “spillovers” (see Box 3.1). Higher levels of human capital enhance social capital, which stimulates innovation.

Box 3.1 How does human capital spur innovation?

Generating new knowledge

Skilled people generate knowledge that can be used to create and introduce an innovation. For instance, Carlino and Hunt (2009) found that the presence of an educated workforce is the decisive factor in the inventive output of American cities: a 10% increase in the share of the workforce with at least a college degree raises (quality-adjusted) patenting *per capita* by about 10%. In an alternative approach, using “new work” (*i.e.* new statistical occupational categories) as an indicator of innovation, Lin (2009) found that locations with a high share of college graduates have more jobs requiring new combinations of activities or techniques. Such jobs appeared in the labour market along with the application of new technologies and knowledge.

Adopting and adapting existing ideas

For many countries, the bulk of innovation activity might consist of incremental innovations involving modifications and improvements to existing products, processes and systems, which can have great significance on productivity and the quality of goods or services. Higher skill levels raise the capacity of economies to absorb new technology and perform incremental innovation, by enabling people to better understand how things work and how ideas or technologies can be improved or applied to other areas. Importantly, the skills to adopt and adapt are beneficial across the wider workforce and population, not just within R&D teams. More skilled users and consumers of products and services can also contribute to the adaptation of existing offerings by providing the supplier with ideas for improvement.

Enabling innovation through a capacity to learn

Skilled people have a greater ability to learn new skills, to adapt to changing circumstances and to do things differently. In the workplace, educated workers have a better set of tools and a more solid base for further learning, thus enhancing their ability to contribute to innovation.

Complementing other inputs to innovation

By interacting with other inputs to the innovation process, such as capital investment, people with better skills can spur innovation. For instance, Australian research has shown that investment in human capital complements investment in information and communication technologies (ICT), with the uptake and productive use of ICTs significantly influenced by management and employee skills (Gretton *et al.*, 2004). Mohnen and Röller (2001) concluded that measures aimed at removing barriers to innovation may be more effective if they are also explicitly directed at increasing levels of internal human capital.

Generating spillovers

Improved human capital can contribute indirectly to innovation through the “spillovers” generated by skilled people. For instance, not only do skilled workers diffuse their knowledge throughout their workplace and the wider environment, they may also spur faster human capital accumulation by other workers, through their interactions and their explicit or implicit actions as role models. Both of these factors can spur innovation through the spread of ideas and the upgrading of competencies.

Adding to social capital

Higher levels of human capital enhance social capital, which can support innovation in several ways, predominantly through its effect on trust, shared norms and networking, which improve the efficiency and exchange of knowledge. Closer relationships between actors can lead to the exchange of proprietary information and underpin more formal ties (Powell and Grodal, 2005), while social networks may also enable firms to work through problems and get feedback more easily, thereby increasing learning and the discovery of new combinations (Uzzi, 1997).

Source: OECD (2011), *Skills for Innovation and Research*, OECD, Paris.

The EU has recognised the importance of smart, sustainable and inclusive growth resulting in the EU 2020 targets (see Box 3.2). The EU 2020 strategy is based on five EU targets which are currently measured by eight indicators. Three out of the five targets are closely related to innovation issues and human resources namely employment, research and development (R&D), and education.

Box 3.2 South East Europe 2020 Vision

Inspired by the "Europe 2020" strategy - launched by the European Union in 2010 to promote smart, sustainable and inclusive growth in EU member states- the economies of South East Europe endorsed their own "2020 Vision" at the 2011 SEE Ministerial Conference in November 2011.

The SEE 2020 Vision defines a strategy that focuses on stimulating the key long-term drivers of growth for the region: innovation, skills and trade integration.

Pillars of the SEE 2020 Vision:

- Smart growth through the commitment to innovate and compete on value-added rather than labour costs
- Sustainable growth through raising the level of private sector competitiveness, entrepreneurship and a commitment to greener and more energy-efficient development
- Inclusive growth through skills development, employment creation and inclusive labour market participation
- Governance for growth by increasing the capacity of public administrations to strengthen the rule of law and reduce corruption in order to create a business-friendly environment

SEE 2020 Headline targets

In November 2012, SEE economies agreed on a specific set of targets that should be met by 2020, using 2010 as the basis year.

1. Overall strategic goals unifying the five pillars of SEE 2020:
 - Increase regional GDP PPP per capita from 38% to 46% of the EU-27 average
 - Grow the region's total value of trade in goods and services by more than 130%
 - Reduce the region's trade deficit from 14.1 to 11.6 per cent of regional GDP
2. Headline targets to support the integrated growth pillar:
 - Increase intra-regional trade in goods by more than 230%
 - Increase overall FDI inflows to the region by at least 120%
3. Headline targets to support the smart growth pillar:
 - Increase GDP per person employed by 33%
4. Headline targets to support the sustainable growth pillar:
 - Increase the rate of enterprise creation by 20%
 - Increase exports of goods and services per capita from the region by 130%
5. Headline targets to support the inclusive growth pillar:
 - Increase the overall employment rate by 12%
 - Add 300,000 highly educated people to the region's workforce
6. Headline targets to support the governance for growth pillar:
 - Increase government effectiveness by 20% by 2020.

Source : OECD Investment Compact for South East Europe

Inspired by the EU 2020 Strategy and its headline targets, ministers of the Western Balkan economies, including Kosovo, agreed on 9 November 2012 to a set of comparable regional headline targets covering five thematic pillars: integrated growth, smart growth, sustainable growth, inclusive growth and governance for growth, to be met by 2020. The targets underpin a regional South East Europe 2020 (SEE 2020) strategy to raise regional competitiveness and future growth prospects, particularly in the face of the global economic crisis (see Box 3.2).

In 2010, the Ministry of Education, Science and Technology (MEST) produced its comprehensive *Kosovo Education Strategic Plan 2011-2016* (MEST, 2011). Education is one of the largest government programmes, accounting for about 16% of total spending and 4.3% of GDP in 2008 (MEST, 2011; Dillinger, 2010). This is below the 4.8% average for Central and South East Europe as a whole (World Bank, 2009).

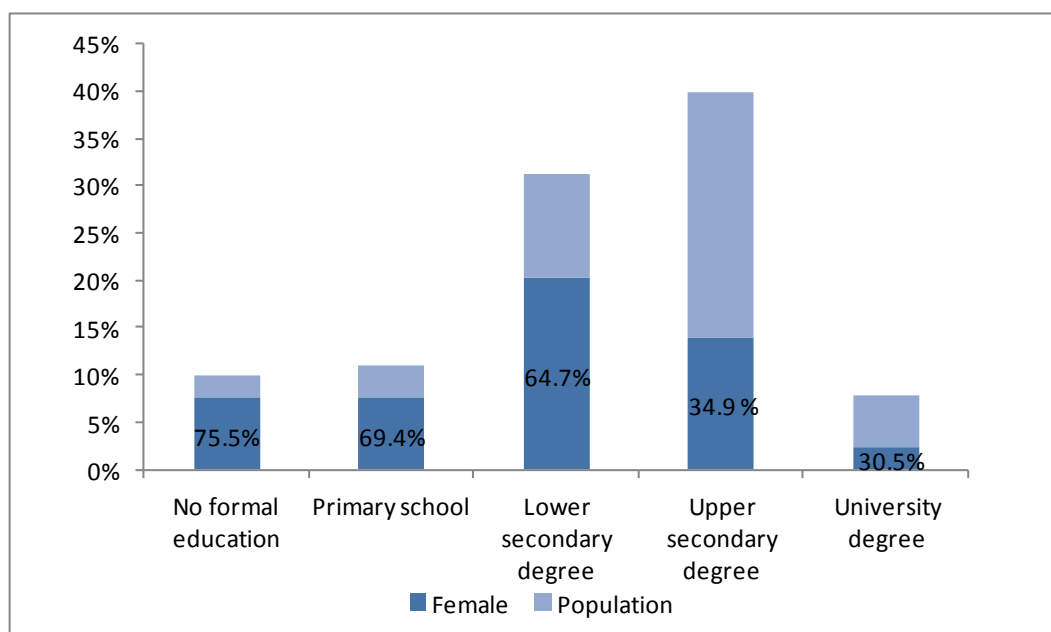
Human resource development is one of the four main priorities listed in the government's *Medium Term Expenditure Framework 2013-2015* (Government of Kosovo, 2012).²² The framework includes policies intended to increase the quality of human capital and adapt educational outcomes better to labour market requirements. Over the medium term (2013-15) the focus will be on policies to improve the quality of education, orientating it more towards the needs of the labour market and the conditions of education development at university level. Furthermore, it aims to develop an entrepreneurship culture through an increasing number of entrepreneurship programmes in primary schools, high schools and higher education institutions, and enhance linkages between the education and private sectors. To improve the orientation towards the needs of the labour market, the government foresees opening new vocational educational training (VET) schools, strengthening training participation, and ensuring the quality of institutions that provide education and vocational training. According to the Vocational Training Strategy 2012-2014, between 2 and 5% of registered jobseekers use training services of local vocational training providers. The main reason is the limited number of employees in vocational training institutions. The *Medium Term Expenditure Framework* targets an increase by 20% of capacity by 2014.

3.1.1 Educational system

The education system in Kosovo consists of nine years of compulsory basic education (primary and lower secondary; age 6-15), which is supplemented by three to four years of non-compulsory upper secondary education. Upper secondary education is divided into general education and vocational schools. In Kosovo, 43% of students entered vocational schools in 2009/2010, this is fairly low when compared to 71% in Croatia and 61% in FYR Macedonia. There is a significant drop in the rate of female participation between lower secondary and upper secondary school. In 2011 40% of the population held an upper secondary degree, of that number just over a third were females. Eight percent of the overall population had a university degree in 2011 compared to an average of 34% in EU-27 countries, 23% in Croatia, and 17% in FYR Macedonia (OECD, 2011). Almost 70% of the university degree holders are male. 10% of the overall population has no formal education of which 75.5% are female.

²² The four priorities are: 1) growth and sustainable economic development, 2) good governance and strengthening the rule of law, 3) human resource development, and 4) social welfare growth for all citizens.

Figure 3.1 Highest education completed by gender in 2010



Source: Kosovo Education Statistics 2010-2011, Statistical Agency of Kosovo.

The education system in Kosovo has improved following considerable investment in school infrastructure, especially for basic education (grades 1-9). Due to the high proportion of school-age children in Kosovo, spending per pupil is likely to be relatively low. Educational results are generally poor: in 2011, about 42% of all secondary school students passed the final exam at the first attempt; the pass rate of vocational school students was only 25%. According to a survey conducted in the framework of the *Kosovo Youth Strategy and Action Plan 2010-2012*, a relatively high number of young people in Kosovo attend courses outside the formal system, mostly language and computer courses (Ministry of Culture, Youth and Sports, 2009). Once outside school, young people and adults have extremely limited access to learning opportunities. Being able to build on already acquired knowledge or add new skills is particularly beneficial for young people who have not entered or have dropped out of secondary school.

Greater attention needs to be paid to quality management and quality assurance in education, particularly in the field of teacher training and the system of teacher accreditation. Curricula and teaching materials need to be revised. Also, the education sector is still affected by the lack of adequate facilities. Kosovo still lacks accurate data on the number of students and the employment rate of graduates.

3.1.2 Tertiary education

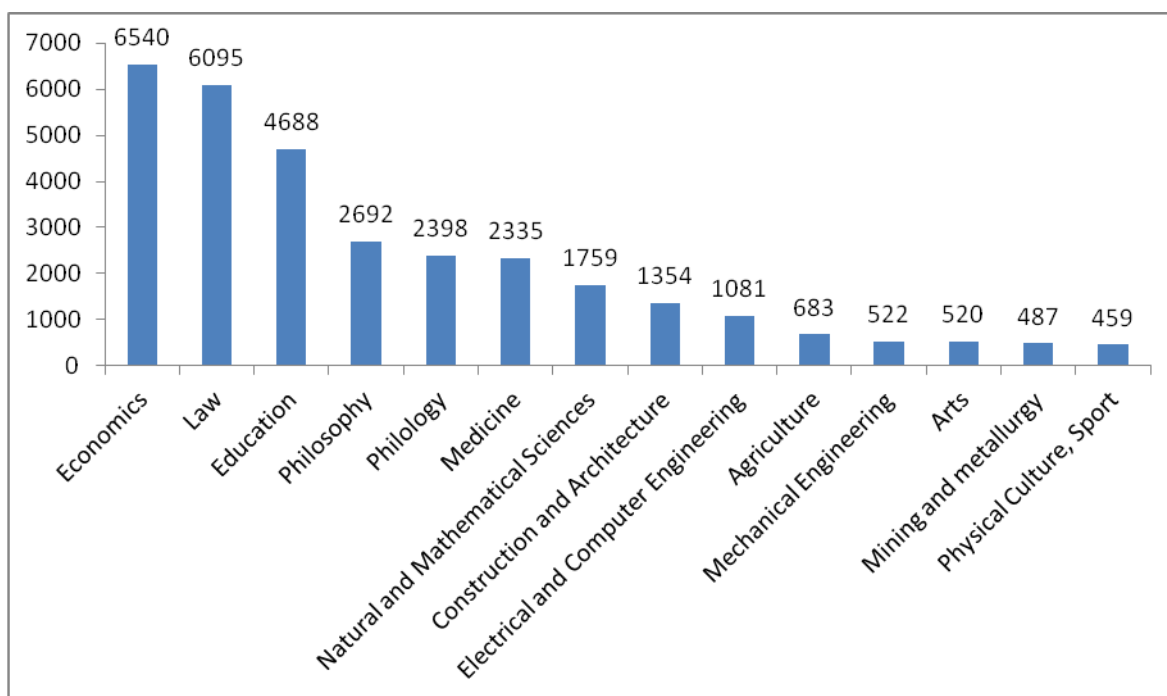
Higher education institutions are seen as important players in innovation systems as they drive social and economic development by increasing the level of knowledge, thus producing a highly qualified workforce and developing technological innovations. The university sector also plays an important role in producing new scientific and technological knowledge to be transformed into economic activities. At the same time, universities train scientists, managers and engineers, thus adding to the knowledge base of an economy (Lundvall, 1992; Freeman 1995; Fagerberg, 2001).

Tertiary education in Kosovo consists of both public and private higher education institutions, including two public universities and over 30 private universities and colleges. The two public universities in Kosovo are the University of Pristina and the University of Prizren. The University of Pristina enrolls more than 15 000 new students every year and has more than 40 000 students (53% of whom are female). By contrast, the University of Prizren, which opened in 2010, has fewer than 2 000 students. The number of private higher education institutions in Kosovo has increased significantly during the past few years. In 2010, the government accredited 18 private universities. This increase was primarily due to the increased number of upper-secondary graduates who wanted to pursue higher education.

Higher education in Kosovo is organised in three cycles, compliant with the three-cycle structure of the Bologna Process. The first cycle leads to an undergraduate degree and can be obtained after three or four years of full-time study. The second cycle leads to a Masters degree or equivalent and lasts one or two years. The third cycle leading to a doctoral degree lasts three years. The Bologna structure has been fully implemented in most study fields.

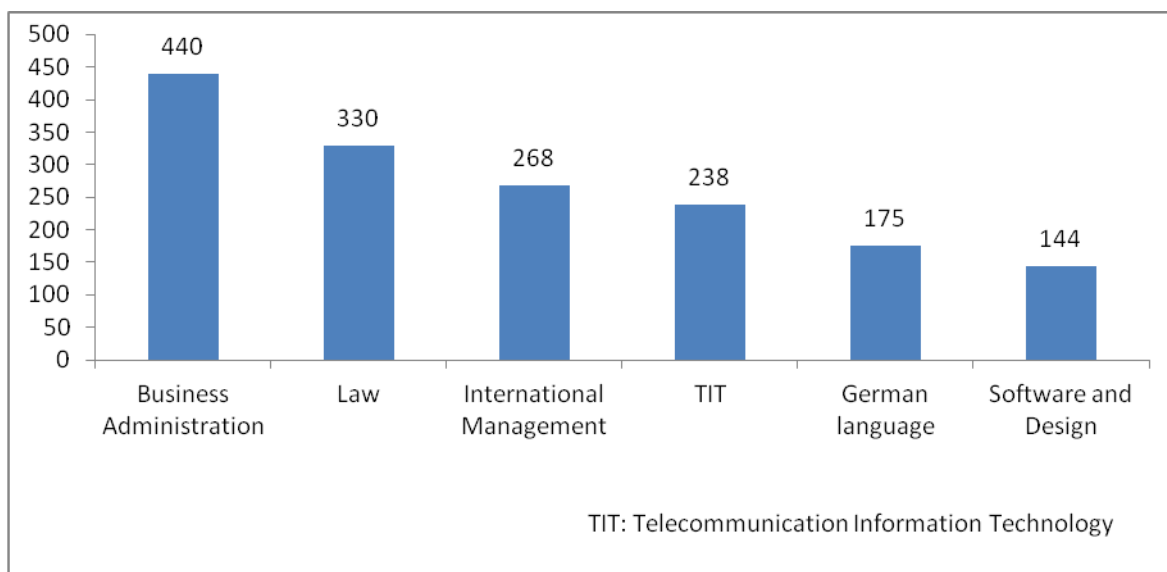
Very few students in Kosovo choose to study natural sciences or engineering. Figures 3.2 and 3.3 show the number of students enrolled at Pristina University and at Prizren University in the academic year 2010/2011, grouped by field of study. In both universities, more students are enrolled in social sciences subjects than in science and technology-related ones. There are no targeted interventions in place that encourage the study of science and technology related fields. At the University of Pristina, 5.6% of the enrolled students are studying natural and mathematical sciences and 3.4% electrical and computer engineering. By contrast, in the Former Yugoslav Republic of Macedonia 11.6% of students are studying sciences and 7.7% fields related to engineering, manufacturing and construction; while the figures are 7.8% (sciences) and 12.2% (engineering, manufacturing and construction) for Croatia (UNESCO, 2012).

Figure 3.2 Number of students enrolled at the University of Pristina in 2010/2011 by field of study



Source: University of Pristina, Central Administration

Figure 3.3 Number of students at the University of Prizren in 2010/2011 by field of study



Source: University of Prizren

Government funding for higher education is fairly modest. Subsidies to higher education were about 1.3% of total government spending in 2010, or about 11% of total spending on education. Benchmarking Kosovo's expenditure against other economies in the Western Balkan region is difficult as there is no standard definition of which components need to be included when calculating the higher education expenditure. Budget funds are provided by the Ministry of Education, Science and Technology through institutional funding, research grants and other smaller supporting programmes. In 2008, subsidies to the University of Pristina totalled EUR 11 million, or about 1% of total government expenditure (MEST, 2011)²³. In 2009, the government increased the budget for subsidies to EUR 12 million and to EUR 15.4 million in 2010, primarily to accommodate salary increases for university staff.²⁴ The Kosovo government is seeking to improve access to higher education so that at least 35% of the students between 18-24 years of age have access by 2015. The number of students enrolled for the first time in higher education doubled from 8 000 in 2008 to 18 000 in 2009. This increase is due to the establishment of a number of private higher education institutions.

Quality assurance

Quality assurance is an important theme in the *Strategy for Higher Education in Kosovo 2005-2015* (MEST, 2004) and the Bologna Process has officially been embedded in the education system. The objective of the Bologna Process is to establish a framework of comparable and compatible qualifications for higher education. Kosovo seeks to formally become part of the Bologna Process, the European Higher Education Area and the European Research Area, and takes part in European and international exchange and other programmes such as Tempus, the Competitiveness and Innovation Framework Programme (CIP), and the EU Seventh Framework Programme (FP7).

²³ Figures exclude income generated by the university from tuitions and administrative fees.

²⁴ As defined in Article 5.3 (c) of the *Law on Higher Education*. In 2009, the government increased salaries for professors, lecturers and non-teaching staff by 30%: the net monthly salary is now EUR 1 000 for university professors, EUR 500-1 000 for other teaching staff (associate professor, teaching adjunct, etc.), and EUR 500 for teaching assistants.

The National Qualification Framework has been formally adopted and implementation has begun. Learning outcomes are defined in government steering documents and implemented through laws and regulations. More than 75% of institutions and programmes are using the European Credit Transfer and Accumulation System (ECTS) for both transfer and accumulation purposes. The allocation of ECTS is based on learning outcomes and student workload.

The Law on Higher Education in Kosovo was adopted in August 2011. This law establishes the legal basis of the functioning, financing and ensuring of quality in higher education in compliance with European standards. It is the first law in Kosovo that incorporates the principles which underpin the Bologna Process.

The Kosovo Accreditation Agency (KAA) acts as the national quality assurance body and has been fully operational since 2008. Higher education went through the process of evaluation and accreditation in a procedure administered by the KAA. The internal and external evaluation of higher education institutions was carried out in compliance with the standards and guidelines of the European Association for Quality Assurance in Higher Education (ENQA).

Challenges

Despite the increased enrolment rate in higher education, Kosovo lags behind other economies in the region in terms of university graduates. 8.2% of the population in Kosovo holds a university degree, which is significantly lower than Croatia (24.5%) and the Former Yugoslav Republic of Macedonia (20.4%) (UNESCO, 2012).

There is a general view among employers that graduates in Kosovo lack applied skills since the education system, especially in the largest public university, has been very theoretical for decades. Without applied skills, their entry to the labour market is hampered. Estimates of the number of students who find employment after graduation are not possible due to the lack of data.

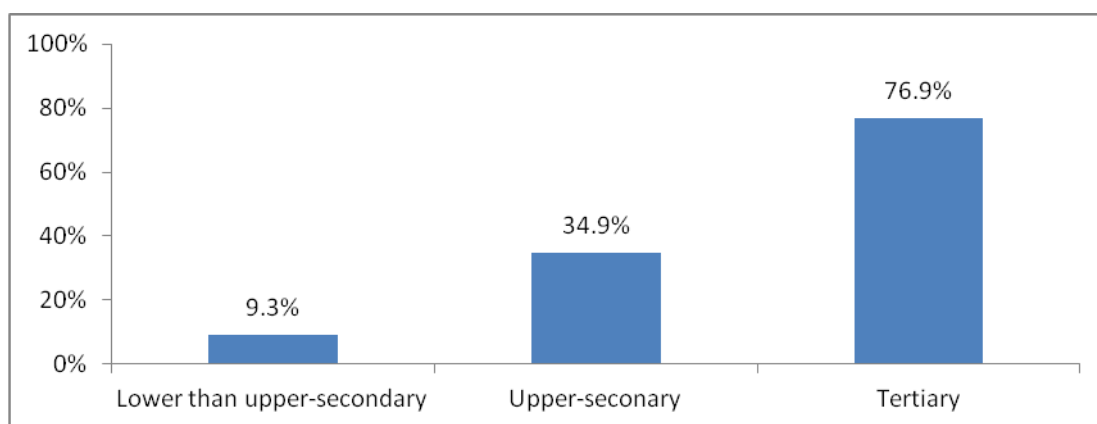
The emphasis in classrooms is on rote learning and memorisation of facts and theories rather than the application of knowledge and critical thinking. Public universities in Kosovo have not adopted modern teaching and evaluation methods and text books are often either missing or not updated. Practical work or internships are not obligatory for students, and even if students have the opportunity to gain some professional experience, internships are often limited to only a few weeks. The absence of applied training and soft skills is still a problem, undermining graduates' ability to find jobs. Private higher education institutions tend to be more responsive to employer demands and have access to relationship-based networks including private companies and universities abroad, which increases the employability of their students.

3.1.3 Transition to the labour market

Kosovo has the youngest population in the Western Balkans and one that is growing faster than any other in Europe. Its young age structure means that more and more young people will enter the labour market every year, putting enormous pressure on the economy to generate more employment opportunities. According to the European Commission (EC), over 70% of Kosovo's population is under the age of 30 while its youth unemployment rate of 73% is the highest in South East Europe (EC, 2011). It is estimated that 25-35 000 young individuals enter the labour market each year (Mukkavilli, 2008). According to the 2009 Labour Force Survey (LFS) estimates, young individuals aged 15-24 make up only 9% of the overall employed, and 73% of the overall unemployed (Statistical Office of Kosovo, 2009).

Labour force participation and employment outcomes are positively related to the level of education attained. The employment rate of those with lower secondary education (grades 6-9) or less is only 9%, a significant difference from those with tertiary education, who have an employment rate of 76% (see Figure 3.4). Those who have attained tertiary qualifications enjoy an employment rate that is approximately 42 percentage points higher than those who have completed no more than upper-secondary education, and 66 percentage points higher than those with only lower-secondary education. Similarly, economically inactive individuals tend not to have completed upper-secondary education: 73% of the economically inactive have not completed upper-secondary education compared to 24% who have at least upper-secondary qualifications (Statistical Office of Kosovo, 2009).

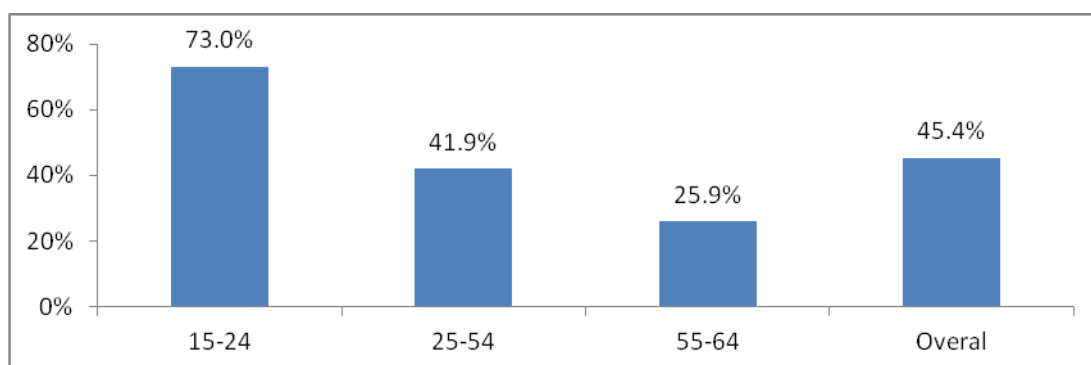
Figure 3.4 Employment rate by level of education



Source: Kosovo Agency of Statistics, 2009.

According to the EU Progress Report 2011 (EC, 2011), the unemployment rate is particularly high among youth (*i.e.* those aged 15–24 years) at 73%, decreasing to 42% for the age group 25–54 years and 26% for the 55–64 age group (see Figure 3.5). However, the Kosovo Agency of Statistics (KAS) notes that the more favourable figure for the 55-64 age group may partly be due to individuals dropping out of the workforce either for early retirement or because they are discouraged. Another reason for the lower unemployment rate among older workers is that this age group is more experienced and therefore more likely to find employment.

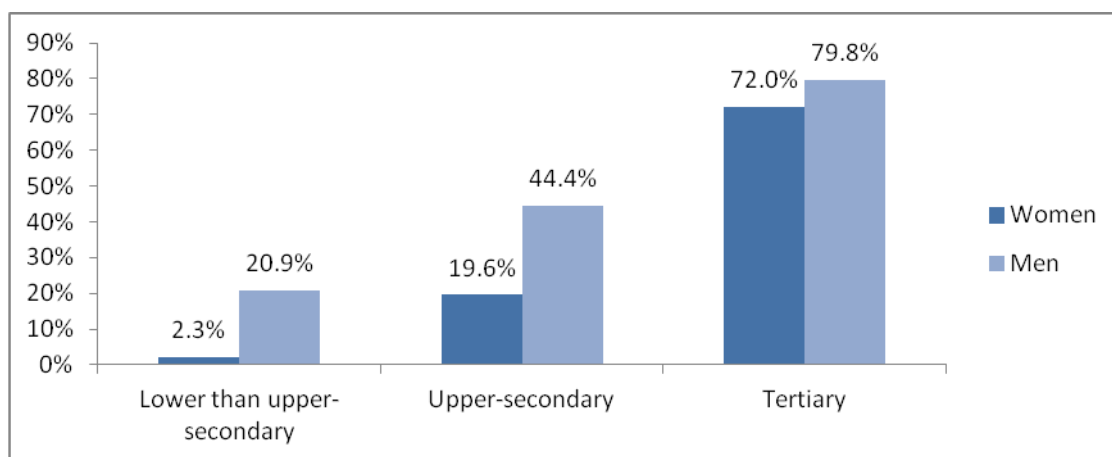
Figure 3.5 Unemployment rate by age group



Source: Statistical Office of Kosovo (2009), Labour Force Survey 2009, Statistical Office of Kosovo, Pristina.

In addition to improving labour market outcomes, tertiary education also reduces the employment gender gap. Figure 3.6 shows how the gender gap of 19–24 percentage points found at lower levels of education decreases to less than 8 percentage points among individuals who have completed higher education. In short, women who have completed higher education can participate and compete more equally with men in the labour market.

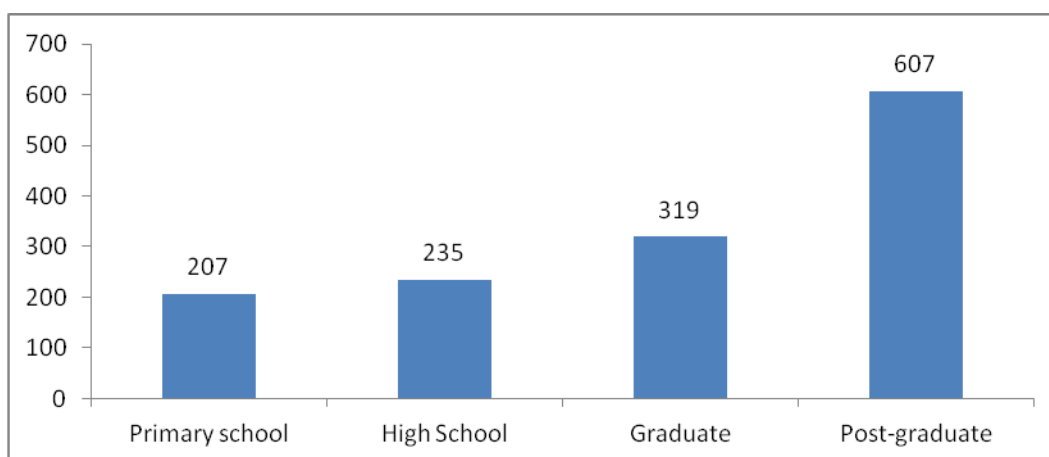
Figure 3.6 Employment rate by gender



Source: Statistical Office of Kosovo (2009), Labour Force Survey 2009, Statistical Office of Kosovo, Pristina.

Wages and salaries are also positively related to the level of academic qualification (see Figure 3.7).

Figure 3.7 Average salary by level of academic qualification (EUR)



Source: Riinvest Enterprise Barriers Survey 2011

Promoting students' internships/traineeships through partnerships between businesses and higher education institutions is likely to strengthen ties between the two sectors and is an effective way of facilitating the transition into the labour market (OECD, 2008). In Kosovo, there are several initiatives promoting internships for students (see Box 3.3).

Box 3.3 Internship programmes in Kosovo

Innovations Lab Kosovo

The Innovations Lab is offering internship opportunities through their Design Centre, with the overall objective of supporting Kosovo's youth and children through innovative technologies. Internships are organised in co-operation with government institutions, academia and non-profit organisations. They last three months.

American University of Kosovo

Bachelor degree students at the American University of Kosovo (AUK) participate in a 400-hour co-operative educational work experience (internship). Internships are offered in various sectors such as banking and finance, training and consulting, service industries, government institutions, NGOs, wholesale, IT, and media and communication.

University of Business and Technology

The University of Business and Technology provides an internship programme to their students. A university supervisor is involved from the application and internship selection period in order to determine the most appropriate opportunity for the student's career goals. Students are also guided by a supervisor throughout the internship period, where the monthly objectives are evaluated.

Sources: <http://kosovoinnovations.org/get-involved/internships>
http://www.aukonline.org/faq_careerS.php
<http://www.ubt-uni.net/?cid=2,70>

Human resources and innovation

For this report, the OECD Investment Compact for South East Europe conducted a business survey sampling 153 businesses in Kosovo. The main purpose of the survey was to understand firms' innovation behaviour, motivations, constraints and policy needs (see Section 4.3 for the full results of the survey). When it came to human resources, 25% of the companies interviewed considered a lack of qualified personnel an important obstacle to introducing innovation, whereas almost 50% reported that a lack of human resources was not relevant or has only limited relevance. The remaining companies found it somewhat important. Interestingly, 50% of the interviewed ICT companies reported that a lack of a qualified workforce is a major obstacle to innovation. Similarly, the analysis of the ICT Industry in Kosovo shows that the gap between demand and supply of sufficiently qualified graduates, especially in the areas of software development and programming, is an important challenge in this sector (European Union, 2011).

In the automotive sector, improving quality levels and upgrading skills emerge as the most compelling challenge that needs to be tackled by automotive component suppliers in Kosovo. Local suppliers observe a significant gap between the skills that employees currently have and those needed to meet business objectives. Major skills gaps exist in areas such as purchasing, manufacturing, engineering and quality assurance and control. Despite a clear competitive advantage in terms of labour costs, this industry presents very concrete limitations due to the skills gap (OECD, 2009).

Overall, the low percentage of companies considering lack of human resources as a major obstacle is not very surprising. Gelb *et al.* (2007) found that the most fundamental constraints (such as macroeconomic stability, electricity, access to finance) appear to be most important at low levels of income. Then, as an economy develops, firms must confront a number of problems caused by weak governance and low administrative and bureaucratic capacity (corruption, level of taxation, quality of administration). As an economy moves up to a higher-income status, labour regulation becomes a

more serious determinant of the business climate, largely because the government has a stronger capacity to implement it.

Companies were asked to identify which measures would support innovation *i.e.* what types of assistance they would find most useful. With regard to human resources for innovation, the measures they prioritised were: 1) skills and training needs analyses to assess the skills needed on the job market in different sectors; and 2) internship programmes for university students and unemployed persons. 73% of companies interviewed considered the skills and training needs analysis to be extremely or very important; 63% considered internship programmes to be extremely or very important. Finally, the companies were asked to select the top three measures that would be most relevant for innovation. Skills and training needs analyses was identified as the second most important measure for innovation (after improve business contact with the diaspora). All findings of the survey are summarised in Section 4.3.

3.2 Research and innovation

There are a very small number of institutions carrying out research in Kosovo. Based on interviews with relevant stakeholders, universities mainly focus on teaching and have a limited capacity for research activities.

In 2005, expenditure on R&D amounted to approximately 0.1% of GDP in Kosovo. This is below the EU 27 average, and even well below the average of the Western Balkans region (see section 2.5 for further details).

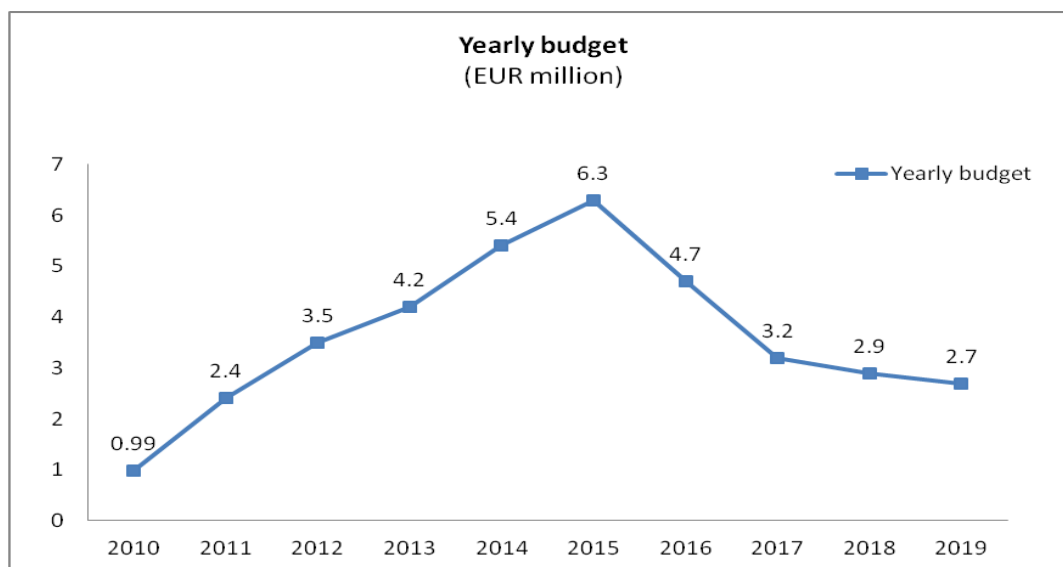
As outlined in Chapter 2, a new National Research Programme was adopted in 2010 in an attempt to address some of the weaknesses in research and development institutions (NRC, 2010). The programme was developed by the National Research Council (NRC) under the supervision of MEST. The council consists of a consortium of university professors and other local experts. The programme sets the priorities for the social and economic development of Kosovo (see Section 2.5.1) and identifies research priorities in the period 2010-2015.

The NRC identified six research priorities for 2010-2015:

1. environment, energy and natural resources
2. agricultural production and food safety
3. medical research
4. development of a knowledge based society
5. linguistic, historic and cultural studies
6. cross-horizontal priority: research in information and communication technologies

Figure 3.8 shows the budget allocations for the implementation of the national research programme for the period 2010-19. The expenditure is expected to peak at 6.3 million EUR in 2015 and gradually decreasing thereafter. It is unclear why the expenditure is projected to decrease. Also, it is not clear if the planned budget was spent up to 2013.

Figure 3.8 Yearly budget appropriations to implement the National Research Programme until 2019



Source: NRC (2010), The National Research Programme of the Republic of Kosovo, Government of Kosovo, Pristina

3.3 Kosovo Research institution survey

The OECD Investment Compact for South East Europe surveyed research institutions and university faculties in Kosovo with the objective of assessing their capacity for innovation and identify potential constraints and policy needs. The survey was conducted in face-to-face interviews based on a questionnaire prepared by the OECD team. The questionnaire contained a mix of open and closed questions. The interviews took place between 21 May and 11 June 2012.

In total, 14 research institutions and university faculties participated in the survey:

- seven public university faculties (in two universities)
- three private higher education institutions
- four independent research institutions.

The survey addressed the following areas: human resources; linkages with businesses; commercialisation of research; and measures supporting innovation.

According to the survey results, the main constraint on research activities is a lack of funds to carry out research (stated by 13 out of 14 institutions). Other major constraints are a lack of linkages with businesses and a lack of adequate skills of personnel (according to 8 out of 14 institutions).

3.3.1 Human resources

The ability to find and retain researchers is a key issue faced by research institutions. . All institutions stated that there is a shortage of scientific researchers in their institution and 12 out of 14 institutions specified that the main reason was a lack of funds to hire more researchers. The second most important reason for the shortage is a lack of sufficiently skilled researchers because of the

unsatisfactory education system. Slightly less important were reasons such as lack of researchers in this field, brain drain and too much competition from the private sector, *i.e.* salaries are not competitive enough.

There is a diverse picture among research institutions when it comes to “brain drain”²⁵ in Kosovo. Half of the interviewed institutions consider it very serious or serious, causing major disruption to the activity of the institutions, whereas for the other half it does not represent a particular issue. Interestingly, 9 out of 14 institutions have tried to promote “brain gain” programmes in Kosovo, mainly through inviting of researchers from the diaspora to present their work in Kosovo and by encouraging and supporting collaboration in research.

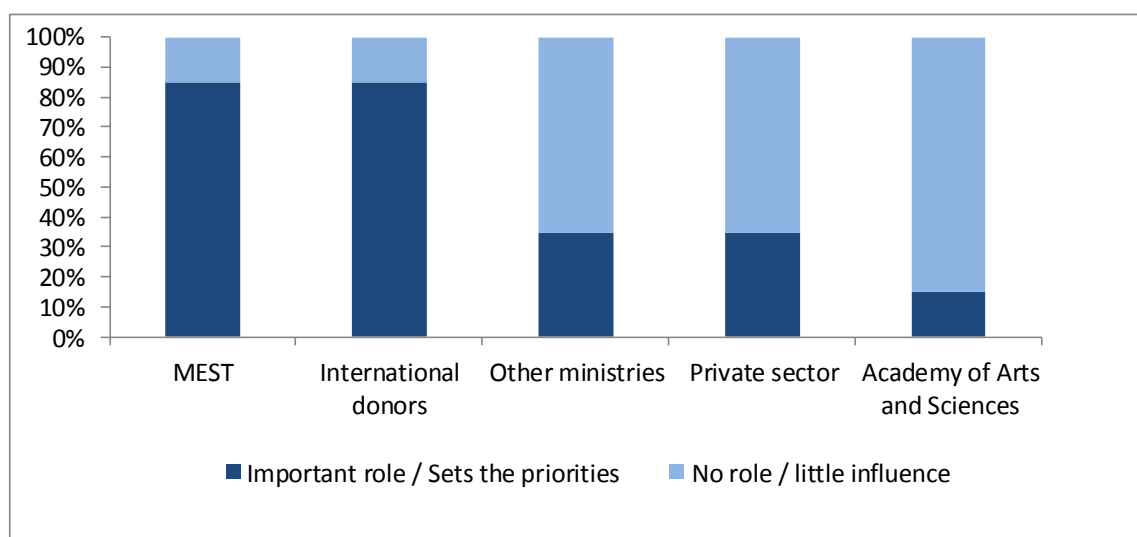
3.3.2 Links with other institutions

In order to ensure better circulation and transfer of knowledge and innovative ideas between the research community and society as a whole, research institutions establish various types of linkages with public and private sector representatives. This part of the questionnaire sought to assess the types of linkages established between the surveyed institution and other bodies such as the private sector, ministries, and other research institutions.

Setting priorities

MEST plays a significant role for research institutions in Kosovo, as it provides directions for research for eight of the surveyed institutions. Twelve out of 14 institutions stated that the international donor community has at least some influence on the identification of research priorities. As for other ministries, the majority of the surveyed institutions mentioned that the Ministry of Economic Development has an important role. Five out of 14 institutions stated that the private sector has some importance for their research directions. The Academy of Arts and Sciences, however, has little or no influence for the identification of research priorities in public research institutions.

Figure 3.9 Role of different institutions on the identification of research priorities



²⁵ “Brain drain” refers to the large-scale emigration of skilled/qualified individuals to a foreign country.

Collaboration

All of the research institutions surveyed stated that they had established some contacts with local private or other public research institutions in the past; in several cases this was within the framework of past or on-going shared projects. When it comes to collaboration with research institutions outside of Kosovo, there is more interaction with research institution in non-EU countries, (excluding Western Balkan economies) than in EU countries. This implies that the use of EU programmes, such as FP7, is not as well established as might be expected. Collaboration between public research institutions and local businesses is more common than with private companies in the EU or the Western Balkans region. Where institutions have collaborated with the private sector in the past, the co-operation involved mainly the provision of training and consultancy services, as well as the use of technical facilities. The reasons for a lack of co-operation with the private sector were mainly the absence of interest from private companies and an absence of government support to co-operate with private companies. The absence of contacts with private companies and specific regulations that might limit co-operation were not considered as major constraints.

3.3.3 Commercialisation of research

In order to innovate, an economy needs to develop mechanisms that translate research outcomes into innovative products, processes, organisations or marketing practices. In this respect, efforts to commercialise research outcomes play a central role in the effectiveness of the innovation system. The questionnaire assessed the commercialisation process and the potential difficulties that institutions encounter. The majority of the institutions surveyed have not tried to commercialise research outcomes at all; only two institutions indicated that they have commercialised studies or reports.

The main barriers limiting the ability of the institutions to commercialise research results are 1) insufficient financial resources for commercialisation, 2) there are no incentives to encourage researchers to commercialise the outcome of their research and 3) lack of co-operation with the private sector. Another important constraint is the lack of an entrepreneurial mind-set in the research community. The lack of necessary skills and know-how to apply research for commercial purposes, and inappropriate laws were not considered as a main barrier to commercialisation.

None of the research institutions interviewed have tried to establish spin-offs (*i.e.* new companies that commercialise technological invention developed from university research), although it is likely that researchers and university students have established private businesses without the knowledge and support of the university. The main issues that limit the ability of researchers to set up spin-offs are 1) insufficient financial resources to set up spin-offs, 2) lack of financial and other incentives to encourage researchers to set up spin-offs, and 3) lack of clarity over who would own the research outcomes. Again, the lack of skills and know-how to create spin-offs and inappropriate laws were not considered the main barriers to setting up spin-offs.

3.3.4 Measures supporting innovation

The survey tried to identify areas of assistance that research institutions considered most useful in order to further develop their potential for innovation. The section was divided into the following areas: 1) support to access various opportunities for financing, 2) improve financing mechanisms, 3) improve skills and competences of researchers, 4) establish linkages with the private sector, 5) improve the performance of researchers, and 6) encourage commercialisation of research and spin-off activity.

The most relevant measures per area are listed in Table 3.1.

Table 3.1 Most relevant measures supporting innovation, as quoted by Kosovo research institutions

Area	Most relevant measures
1. Supporting access to various opportunities for financing	<ul style="list-style-type: none"> (i) Support networking with foreign research institutions. (ii) Enhance more transparent application procedures for research funds. (iii) Provide training and seminars on how to access and use external international funds such as FP7 (application procedures, language etc.). (iv) Provide more information on various research support programmes that are currently offered by the government.
2. Improve financing mechanisms	<ul style="list-style-type: none"> (i) Exert a better selection process for project funding which would ensure that the best projects get financed.
3. Improve skills and competences of researchers	<ul style="list-style-type: none"> (i) Support student exchange programmes to offer the possibility of study abroad. (ii) Provide financial support programmes to Ph.D. students and Post-doctorates e.g. through scholarships or grants. (iii) Offer challenging career opportunities to retain the best graduates. (iv) Attract the best candidates to research careers through scholarships.
4. Establish linkages with the private sector	<ul style="list-style-type: none"> (i) Support internship programmes for students. (ii) Better / more adequate protection of intellectual property rights. (iii) Organisation of conferences, which would allow greater contacts and exchanges of experiences on innovation with the private sector and other representatives from the scientific community.
5. Improve the performance of researchers	<ul style="list-style-type: none"> (i) Support researchers' participation in international conferences. (ii) Link researchers' pay to performance. (iii) Improve the evaluation system of researchers.
6. Encourage commercialisation of research and spin-off activity	<ul style="list-style-type: none"> (i) Support spin-off creation through an entrepreneurial leave of absence, which would keep the option of returning to the research job in case of failure. (ii) Set up a financial facility to fund proof-of-concept research.

Source: OECD survey, June 2012.

In the area of supporting access to financing, all of the listed measures were considered as extremely useful or useful. The most important measure to improve financing mechanisms was a better selection process for project funding. The other two proposed measures (“provide a higher proportion of project-based financing vs. fixed-budget financing” and “implement systematic evaluations of institutional performance and link budget allocations to the performance”) were considered less useful for the development of the innovation potential. In the area of skills and competences of researchers, having a simplified process in the acceptance of PhD candidates and the creation of online platforms to exchange research ideas with local and international researchers were considered among the least useful measures. When it came to establishing linkages with the private

sector, improving the performance of researchers and encouraging commercialisation of research and spin-off activity, all of the listed measures were considered at least somewhat useful.

Finally, the participating institutions were asked to select the three most important measures. The most important measures were considered to be the following: 1) provide training and seminars on how to access and use external international funds such as the Seventh European Framework Programme (e.g. application procedures); 2) provide more information on the research support programmes that are currently offered by the government; 3) better selection process for project funding, which would ensure that the best projects get financed; and 4) attract the best candidates to research careers through scholarships.

3.4 Conclusions

Education is a priority for Kosovo with a number of policy initiatives underway. Some progress has been made implementing the *Education Strategic Plan 2011-2016*, the most comprehensive education-related programme in Kosovo (MEST, 2011). Human resource development is one of four main government priorities in the *Medium Term Expenditure Framework 2013-2015* which includes policies intended to increase the quality of human capital in order to adapt educational outcomes better to labour market requirements (Government of Kosovo, 2012). The National Research Programme has been developed recently. The Bologna Process is a high priority for the government and the National Qualification Framework has been adopted and implementation started.

Enhancing quality assurance mechanisms and increasing awareness of the importance of linkages between science and industry could contribute to the development of a knowledge-based society and economy in Kosovo. There have been a few examples of successful university-business co-operation, and researchers in Kosovo have demonstrated openness to collaboration through regional and international programmes.

There are still several areas that need further attention at all educational levels. The quality of education outcomes and evaluation of teaching methods could be improved. Teaching methods need to be modernised so that students have the opportunity to learn critical and creative thinking. Students of vocational schools and higher education institutions need to have the opportunity to acquire skills and competences that are more aligned with labour market needs.

Research institutions suffer from a lack of research capacity and applied research is under developed. The level of commercialisation of research results is very low, as is co-operation between science and industry in general. This is partly due to a lack of experience in technology transfer and innovation and the lack of any incentives to commercialise research.

Kosovo's large diaspora represents a conduit for channelling know-how and ideas to Kosovo's research community. Other opportunities for the educational system and the performance of research institutions include improved access to international funding, newly established programmes supporting human development and research activities, and the improvement of evaluation. The enrolment rate in higher education has increased significantly but further efforts are needed to ensure the quality of educational outcomes in both public and private institutions. Most of these opportunities are linked to the process of internationalisation of the research and innovation system, which will enable access to new resources and sources of knowledge.

Risks include the possible lack of financial resources (from both public and private sources), a non-strategic approach to R&D, insufficient government support, and the low absorption capacity of the economy. These threats are most likely if the system is not reformed in which case its current

weaknesses would become even more pronounced. Kosovo's demographic structure, with the youngest population in Europe, presents both an opportunity and a threat. If the status quo is maintained, the best and brightest are likely to seek employment abroad, while those who choose to remain risk seeing their skills becoming obsolete due to prolonged inactivity.

CHAPTER 4

INNOVATION IN THE BUSINESS SECTOR

This chapter examines the role of Kosovo's business sector in innovation. Although the business sector still needs to overcome many internal and external obstacles to innovation, some examples of good practice can be found.

The main business associations and business support organisations operating in Kosovo should represent the needs and interests of the business sector, and also provide additional knowledge and leadership in order to facilitate innovation activities in companies. Business associations and business support organisations play an increasing role in innovation, but they lack the capacity to fulfil their potential in the implementation of an innovation policy. This is particularly important in the case of industry associations which would be best placed to address sector-specific issues, including those related to innovation.

Based on a survey of 153 innovative companies, which was designed and implemented as part of this project, this chapter examines the perceived drivers of and barriers to innovation. The survey targeted private companies which had implemented at least one recent innovation, whether that be new to the company, new to the market or new to the world, and whether it be a new product or service, a new process, a new marketing technique or an organisational change.

The surveyed companies report a lot of innovation activity and estimate that such activity has significant financial impact. At the same time, their innovation is predominantly incremental and reactive. It revolves around product/service improvements driven by external competitive pressures and customer requirements. Companies report a high level of innovation co-operation, but mostly with suppliers and customers rather than research organisations. They make limited use of external sources of knowledge, preferring to use sources such as the Internet or trade fairs rather than research or business associations. The share of graduate employees in the surveyed companies was low, with the exception of the ICT sector, and almost half of all companies reported that "brain drain" had adversely affected their operation. Despite this, companies perceived the main barriers to innovation to be financial constraints and the role of government, rather than internal obstacles such as a lack of qualified personnel or adequate information technology.

Companies report very low levels of government support for innovation activities, and their analysis of which policy measures would be beneficial was somewhat inconsistent. However there was consistent support for help with importing R&D equipment, and most felt that networking and building links with the diaspora should be a high priority. Any policy measures should be cost effective and reach a wide number of companies and other organisations and help them share knowledge and develop linkages.

4.1 Business associations and business support organisations

Kosovo has several business associations and business support organisations which facilitate entrepreneurship and business development and promote the interests of the business sector. Some represent a large number of different businesses, whereas others focus on serving a smaller membership, such as larger companies or enterprises operating in specific sectors. All of the leading organisations seek co-operation with international donors, as the fees gathered from members, clients and sponsors are often insufficient to meet their operational needs and implement development projects.

The main services they offer to members or clients/partners include advocacy, networking, training, internationalisation and promotion of entrepreneurship. Their programmes and activities rarely target innovation directly so their support for innovation is mostly indirect, for example through support to members.

4.1.1 Cross-sector associations

Cross-sector associations have members from across the different business sectors. In Kosovo, the main ones are the Kosovo Chamber of Commerce, the American Chamber of Commerce and the Kosovo Business Alliance.

The **Kosovo Chamber of Commerce (KCC)** has 17 000 corporate members, grouped into 40 branch associations. It is Kosovo's leading business association in terms of membership size and influence with policy makers. Established in 1962 by the Assembly of Kosovo, the KCC also serves as the legal representative of the interests of the business community in Kosovo. Membership is nevertheless voluntary. In addition to the central office in Prishtina / Pristina, the KCC also operates through its regional offices in Gjilan / Gnjilane, Ferizaj / Uroševac, Prizren, Gjakove / Đakovica, Peje / Pec and Mitrovice / Kosovska Mitrovica.

The **American Chamber of Commerce (ACC)** was founded in 2004 and started operating in 2006. Its focus is different from the KCC as it has only 115 corporate members. Its membership includes the largest domestic and foreign companies in Kosovo, employing 10 000 people with a combined turnover of EUR 100 million. The ACC can be viewed as the voice of the larger and internationally-oriented business community.

The **Kosovo Business Alliance (KBA)** has an estimated membership of over 10 000 companies that play a prominent role in the business community of Kosovo. They are particularly active in the organisation of job fairs and other employment-focused events, and developing business co-operation with neighbouring countries with a significant Albanian population, such as Kosovo Business Week in Albania and Montenegro.

These three organisations sit on the recently established National Economic Development Council (NEDC), as representatives of the business sector in Kosovo. The NEDC aims to steer policy development and the implementation of reforms through public-private co-ordination and consultation (see Section 2.2.1 for more details).

4.1.2 Industry associations

Some of the larger associations, mentioned above, have internal organisations focusing on specific sectors. The KCC has a particularly long tradition of this with 24 individual industry associations. However, the effectiveness of such branch associations and the quality of support given to their members may vary. An arguably more effective approach to sectoral organisation is for companies to form industry associations from the bottom up, in accordance with their needs and future opportunities. When the interests of members are met by competent and active staff members who both respect the needs of their members and take advantage of external projects and funding opportunities, these associations can achieve significant synergies. A good-practice example of such an approach is the **Kosovo Association of Information and Innovation Technology (STIKK)**.

STIKK has 63 corporate members, representing 90% of ICT companies in Kosovo, and plays an important role in the development of the ICT sector. Membership is also open to universities (four academic institutions are associate members of STIKK) and individuals. STIKK has recently opened the Innovation Center Kosovo in Prishtina / Pristina. The centre offers training opportunities to start-ups and SMEs, as well as pre-incubation space and incubation facilities (13 units).

Given that many innovation-related issues are sector-specific, industry associations may be the key to the facilitation of innovative activities in Kosovo. While some sectors, such as ICT, are well-served by effective and sustainable industry associations, in many other sectors industry associations may formally exist, but are unable to provide much impetus to encourage the business development and innovation activities of their members. This relative underdevelopment may be a significant obstacle to the successful implementation of innovation policy. Consequently, any innovation policy development and implementation should involve capacity building for existing industry associations or support to create new ones.

4.1.3 Business support organisations

The third type of business sector actor involves other business support organisations: non-profit intermediaries that actively support start-ups or existing companies through a combination of research, training, advocacy and other activities. Their staff is often also involved in teaching at higher education institutions, which gives them the opportunity to act as a link between the business and academic communities. Such intermediaries combine private initiative with a public purpose. They may be organised as think tanks, NGOs or (private) research institutes. Examples of such organisations include the Business Support Centre Kosovo and the Riinvest Institute.

Business Support Centre Kosovo (BSCK) is an intermediary involved in research, training, advocacy and other activities promoting entrepreneurship in Kosovo. It focuses on supporting start-ups. Its activities include running a business plan competition; providing training, consultancy and financial support to start-ups; supporting SMEs who wish to internationalise; and conducting business surveys.

Riinvest Institute is a private non-profit research institute which aims to promote the modern economic development of Kosovo through entrepreneurship. The Riinvest Institute undertakes research in the areas of ownership transformation, taxation policy, SME finance, commercial law framework and local economic development, as well as carrying out market research for private companies.

Business support organisations can provide evidence for and contribute to the development and evaluation of innovation policy. In some cases, they can implement and/or support specific innovation policy measures (such as training, business plan competitions or triple helix partnerships).

4.2 Kosovo Business Survey Results

The survey aims to identify innovation activities and drivers as well as the barriers that limit the ability of companies to innovate. The survey also asks respondents to identify potential policy measures to encourage more innovation in local companies. The results from the survey will be used to orient the innovation strategy for the period 2013-20. The methodology of this survey and the characteristics of the participating companies are described in detail in Annex B.

4.2.1 Innovation activity

Businesses were asked to describe their innovation activities in recent years, the degree of innovation and its impact on their turnover and profit. These companies also outlined the external financial support they have received to introduce innovation, the financial resources they have devoted to R&D and to innovation activities.

Types of innovation

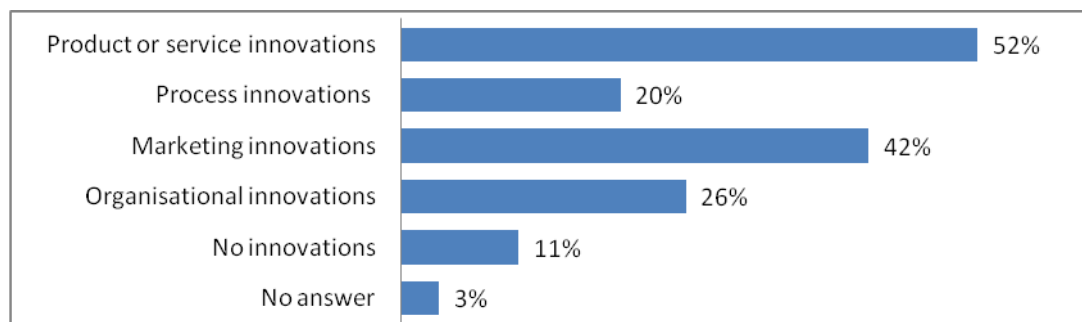
For the purposes of this survey, innovation is defined as something that is new to the company, new to the market or new to the world. Innovation might include:

- **substantive product or service innovation** – new or improved product/service with new features and functionalities;
- **process innovation** – different production process for existing products;
- **marketing innovation** – an existing product or service, marketed differently (different distribution channel, different pricing, market positioning, advertising, etc.);
- **organisational innovation** – different logistics, storage or procurement.

As shown in Figure 4.1, during the period 2009-11, the most common innovation activities participating companies introduced were substantive product or service innovations (52%). The second most common form was marketing innovations, which were introduced by 42% of targeted companies, followed by organisational innovations (26%) and process innovations (20%). The emphasis on product/service innovations is consistent with what the surveyed companies perceive as the main innovation drivers, which include customer needs and preferences and competitive pressures (see Section 4.3.4).

Companies will generally devote scarce resources to the types of innovation that are most likely to bring tangible benefits in a relatively shorter period of time. The focus group participants also emphasised that larger companies tend to have more knowledge and be more aware of the innovation process and have better access to resources. Since smaller companies need immediate income and innovating is risky and costly, they are often discouraged to innovate.

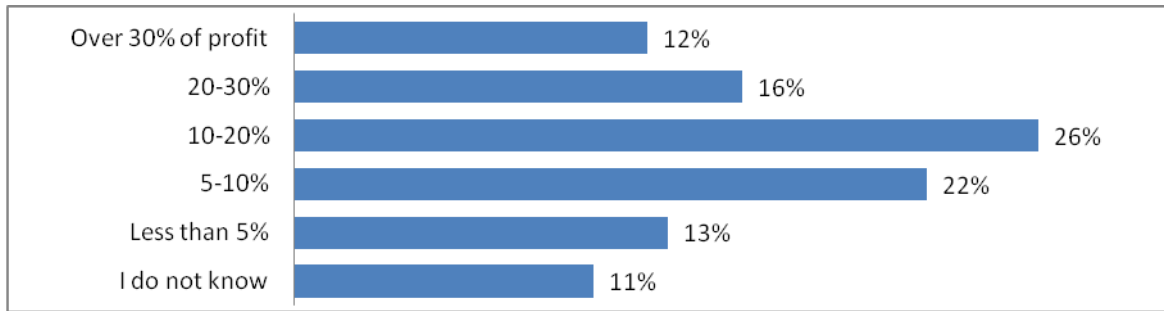
Figure 4.1 Types of innovation



Innovation is perceived as having a positive impact on turnover and profit

When asked how they would estimate the impact of introduced innovations on a company's profit, the majority of respondents indicated that they could see a concrete effect (see figure 4.2). Over half of the respondents indicated that the estimated impact of innovations resulted in at least a 10% increase in profits. These findings need to be treated with caution, since estimating effects of innovations on profits is usually less reliable than estimating these effects on turnover. Profit is a more complex category which includes more parameters, some of which are dependent upon the accounting policies of a company.

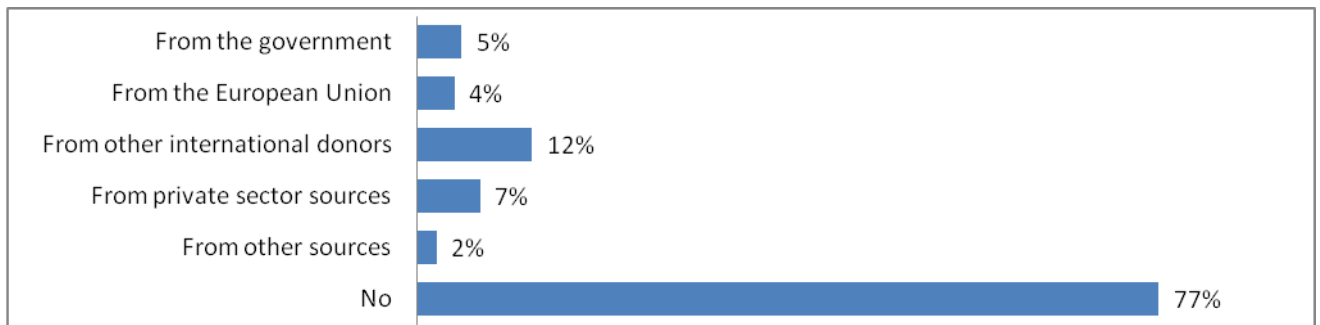
Figure 4.2 Estimated impact on profit



Very few companies receive external funding for innovation

Of the companies that introduced an innovation, a vast majority did not receive any kind of external financial support for their innovation activities. Service sector companies were least likely (86%) to receive any financial assistance for innovation activities. Of the companies that did receive external funding, most of them received it from international donor agencies (12%) followed by private sector sources (7%). Very few companies received external funding from the government (4.6%) or EU funds (3.9%) (see Figure 4.3).

Figure 4.3 External sources of financial support for innovation



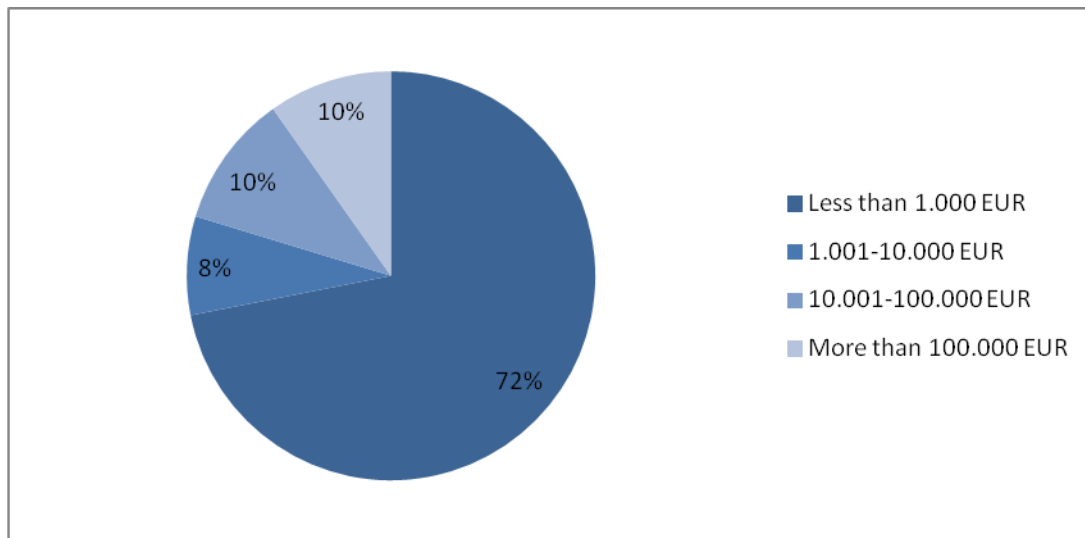
Very little resources devoted to research and development

Of the companies that perceive themselves to be innovative, 62% did not devote any financial resources to R&D during the period 2009-11. This is particularly the case with medium-sized companies, 67% of which did not devote any financial resources to R&D. Manufacturing has the highest share of companies investing in R&D. R&D seems much more frequent in a traditional sector such as agriculture and forestry than in a more technologically advanced sector such as ICT. This result could be explained by the nature of the ICT sector in Kosovo, as it is likely to be dominated by software retailers, rather than software developers.

- Acquisition of external knowledge

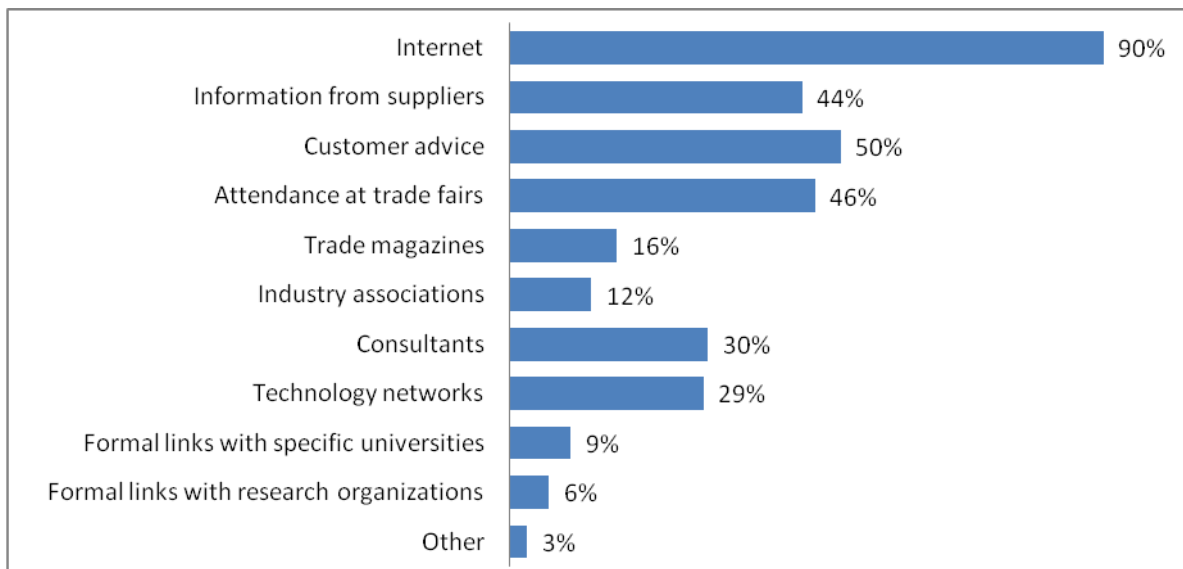
When it comes to buying external knowledge, 72% of companies invest less than EUR 1 000 in these activities, while only 20% of companies invest more than EUR 10 000 (see Figure 4.4).

Figure 4.4 Annual expenditures for acquisition of external knowledge



The four most important sources of information about technological and non-technological innovation opportunities are: the Internet, customer advice, attendance at fairs, and information from suppliers (see Figure 4.5). Given their financial constraints, companies tend to make use of sources of information that are free, or combined with other sales-oriented activities such as fairs. Industry associations, trade magazines and research institutions all seem to be marginal; companies' linkages within the innovation system and their ability to tap into more complex sources of knowledge are underdeveloped.

Figure 4.5 How innovation opportunities are identified



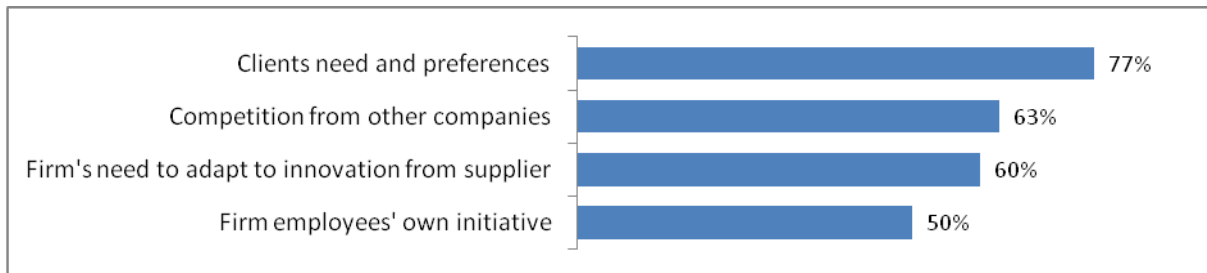
4.2.2 Innovation drivers and barriers

Companies participating in the survey were asked to consider what stimulated them to innovate (i.e., what “drove” them to innovation), the type of innovation they wanted to pursue, and what might prevent them from innovating (i.e., main barriers for innovation).

Main drivers to innovation

When it came to the main motivation for innovation, most of the participants emphasised customers' needs and preferences (77%), competition from other companies (63%) and the need to adapt to innovation from suppliers (60%). However, around 50% of the participants stated their own employees' initiatives as a driver for innovation (see Figure 4.6).

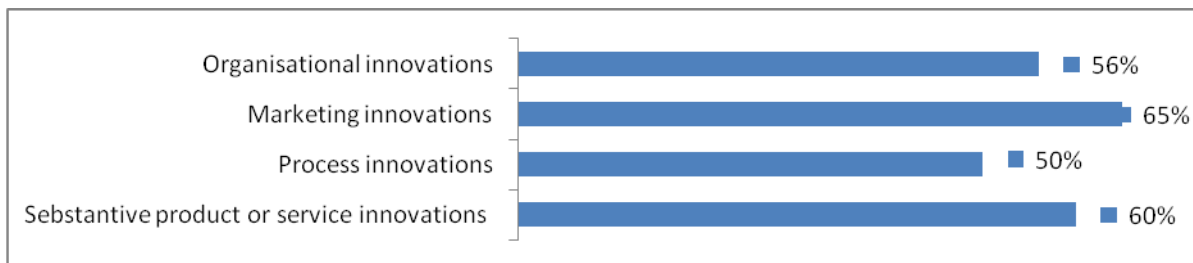
Figure 4.6 Motivating factors for innovating



Preferred types of innovation

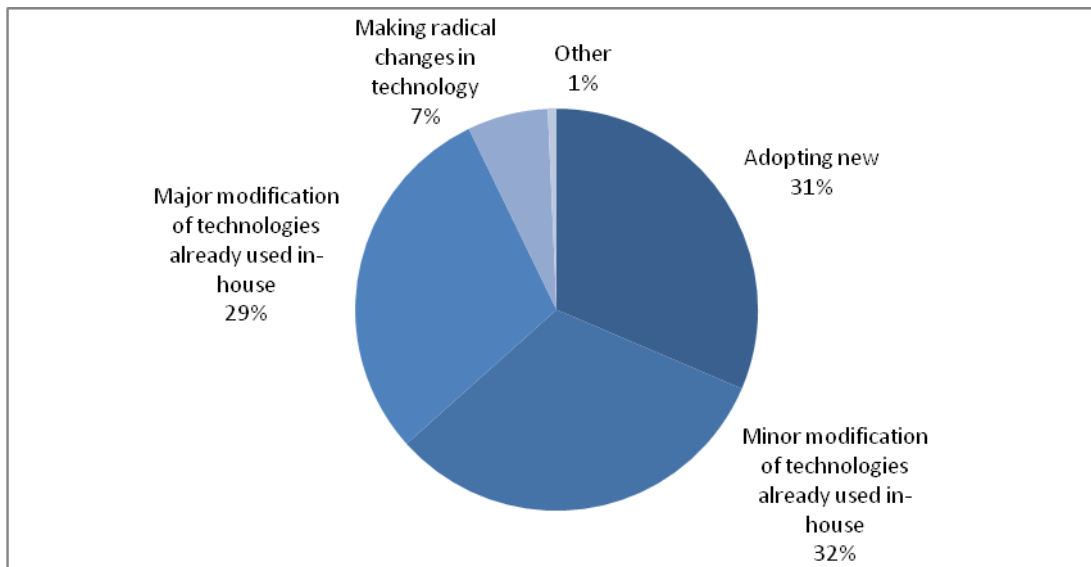
Most of the participants felt that marketing innovations would be very or extremely useful to their company (65%), while 60% also singled out substantive product and service innovations (see Figure 4.7). All types of innovation were more frequently desired than actually implemented, but the difference is particularly prominent in the case of process innovation, followed by organisational innovation and marketing innovation.

Figure 4.7 Most useful types of innovation



If they could receive external assistance for innovating activities, almost every third company (32%) would choose assistance in making minor modifications to technologies already used in-house, while a somewhat smaller share of companies (29%) would rather perform major modification of technologies already used in-house (Figure 4.8). Adopting new “turnkey/off-the-shelf” technologies is the best choice when using external assistance for 31% of survey participants, while only 7% are ready to use the available assistance for making radical changes in technology.

Figure 4.8 Chosen areas for external assistance

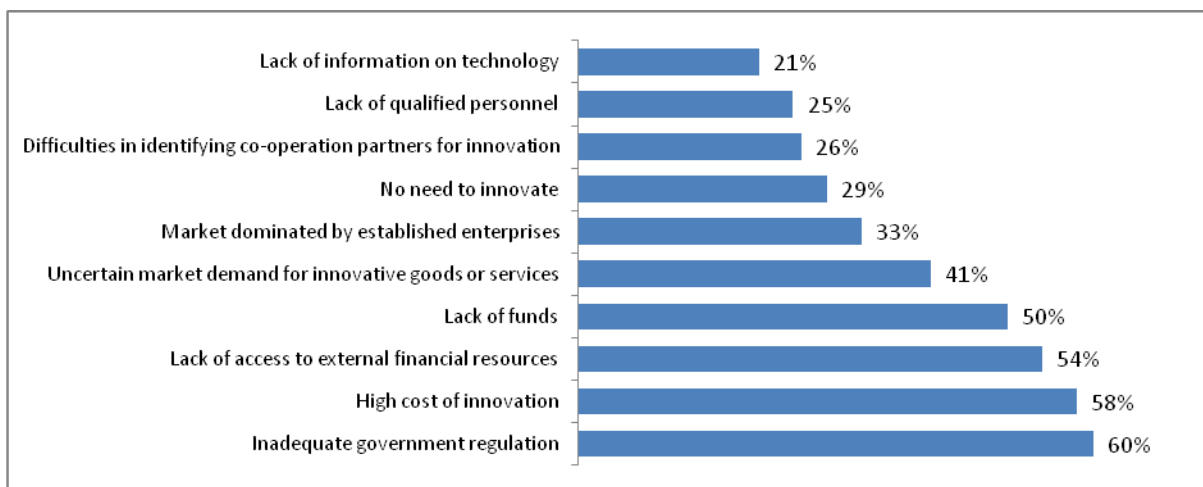


Main barriers to innovation

According to the survey, the top four barriers to innovation are perceived to be: 1) inadequate government regulation, 2) high costs of innovation 3), lack of external finance and 4) lack of internal finance (see Figure 4.9). By contrast, focus group participants emphasised access to finance, fiscal policy, weak institutional framework (including corruption) and education. The high cost of innovation, which is also perceived as an obstacle by 58% might also be linked to the lack of resources required to cover these costs.

Non-financial internal barriers, such as lack of qualified personnel and lack of adequate information on technology were not particularly highly ranked, being cited by only 25% and 21% of companies respectively. Finding co-operation partners was also not considered a barrier by many (26%). It is interesting to note that 29% of participants found the lack of need to innovate to be a key constraint although only 5% of participants considered their company to be not at all innovative.

Figure 4.9 Main barriers to innovation

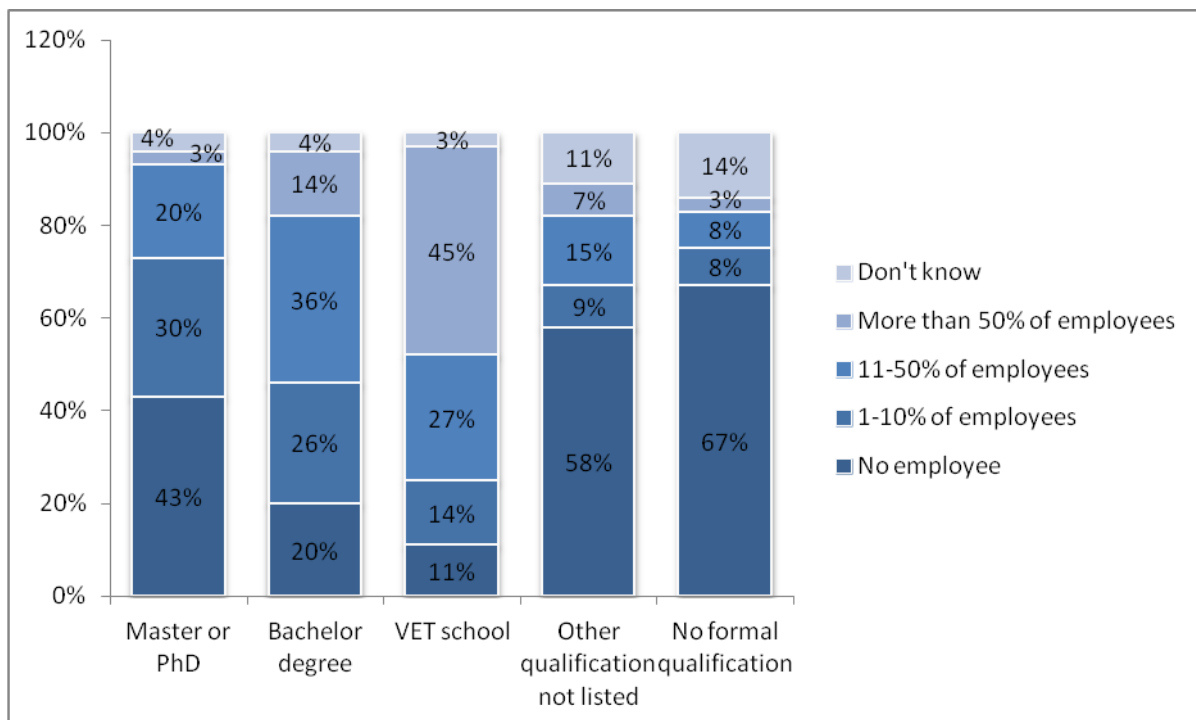


4.2.3 Human resources for innovation

Human resources are key component in the innovation process. Companies participating in the survey indicated that the level of education and degree of internationalisation of their employees were important enabling factors. Companies also were also asked to describe how in-house trainings and the “brain drain” affected their sector.

Educated and creative people are one of the most important prerequisites for innovation development. Despite positive signs in sectors such as ICT, the share of graduate employees in Kosovo is low. This suggests that human resource development will need to be one of the long-term priorities in any innovation strategy. Only 14% of the companies surveyed have more than 50% of employees with at least a bachelor degree, while 46% of companies have less than 10%. Large companies were most likely to have no graduate employees (24%), followed by small companies (20%), while only 17% of medium-sized companies had no graduate employees (see Figure 4.10). Half of the companies in the ICT sector have more than 50% of graduate employees, compared to 20% of service-sector companies, 8% of agriculture and forestry companies and 3% of manufacturing companies.

Figure 4.10 Estimated employee education level



About 57% of companies employed people with previous experience in major foreign or multinational firms. Out of these companies, 48% perceived that these employees bring significant benefits to the company as a result of their “large company” experience.

Training of employees is important for company development

Regarding professional training, 58% of companies provide in-house training to their employees and 12% provide their personnel with formal (off-the-job) training. One-third of survey participants (34%) stated that their company does not provide any training to its employees. This situation was reported in 41% of small companies, 22% of medium and 18% of large companies. When it comes to regional distribution, 48% of companies from the south of the economy do not provide any training to their employees, as opposed to 29% of companies in the Pristina region and 32% in the north.

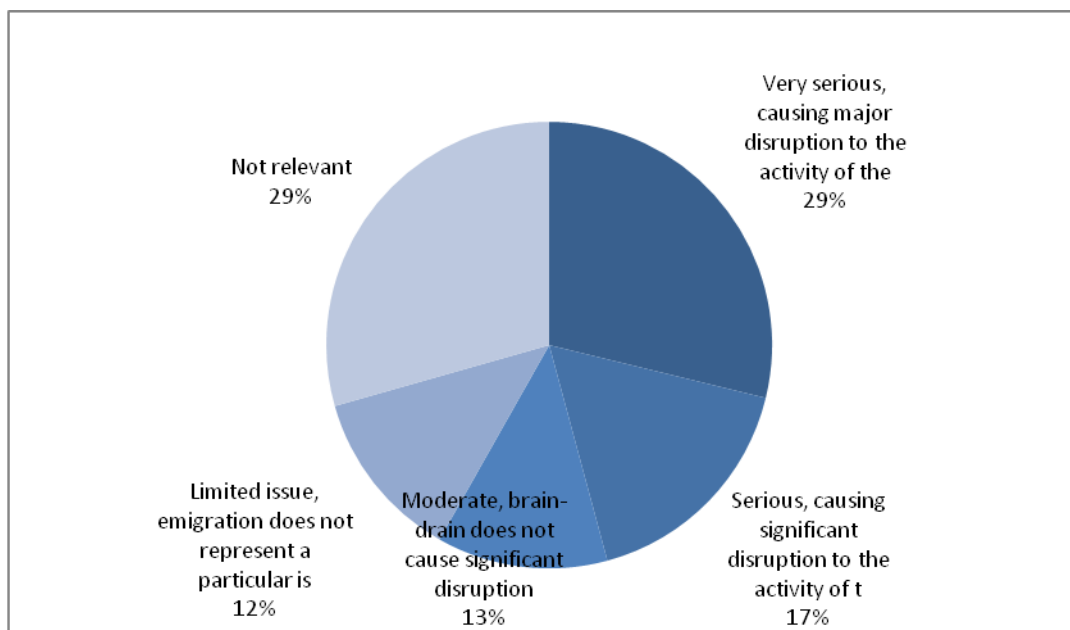
Of the surveyed companies that provide some form of training to their employees, most (80%) provide technical/scientific training, 28% provide management-related training, while 18% provide marketing training.

The share of employees that participate in formal training in any particular year varies. In most companies (45%), between 11% and 50% of employees participate in formal training, while in 36% of companies more than a half of all employees receive training. Based on the survey results, it can be concluded that the management of the participating companies devote significant attention to their employees' education. However, it should be noted that this is not a representative sample of the Kosovo business sector, and that the sample focuses on innovative small, medium and large companies.

Businesses in Kosovo experience both Brain Drain and Brain Gain

Almost half of the survey participants (46%) find the “brain drain” to be a very serious or serious issue, causing disruptions to the activity of the company (see Figure 4.11). The outflow of young and educated people is a major cause for concern which needs to be addressed through appropriate policy measures, some of which can also be implemented within the scope of innovation policy, such as networking with the scientific and business diaspora.

Figure 4.11 Impact of the brain drain



The problematic effects of the brain drain must be counterbalanced by the fact that 34% of the participants consider that their company gained significant benefits from “brain gain”, whereby people return after gaining education and/or experience abroad, contributing to the activity and development of their company. Another 32% consider that their companies partly benefit from “brain gain”, while 34% of participants do not consider it to be an issue of concern.

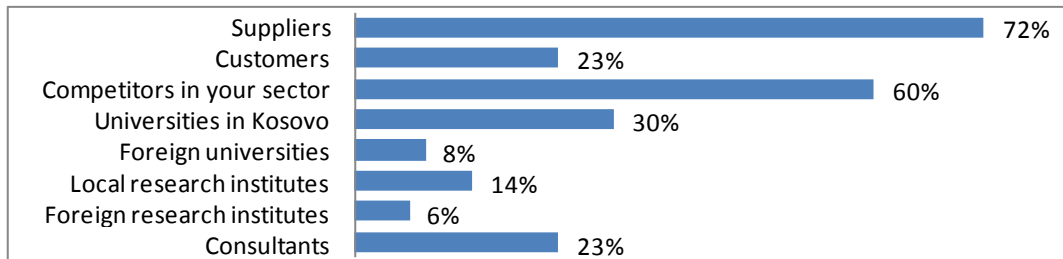
4.3.4 External co-operation

This sub-section mirrors the current and aspired level of external co-operation with companies, domestic universities and research institutions, as well as professional consultants.

Out of the surveyed companies, 72% co-operate with others in relation to innovation. The share is somewhat higher in Pristina than in the north, while the south lags behind, with only 52% of the companies co-operating with others.

Companies mostly co-operate with their suppliers, competitors or other companies within the sector, domestic universities and research institutions and consultants (see Figure 4.12). This reported level of co-operation is high, but it does not appear to result in actual concrete innovation outputs as evidenced by the minor role most of these types of organisations are reported to play in the identification of innovation opportunities.

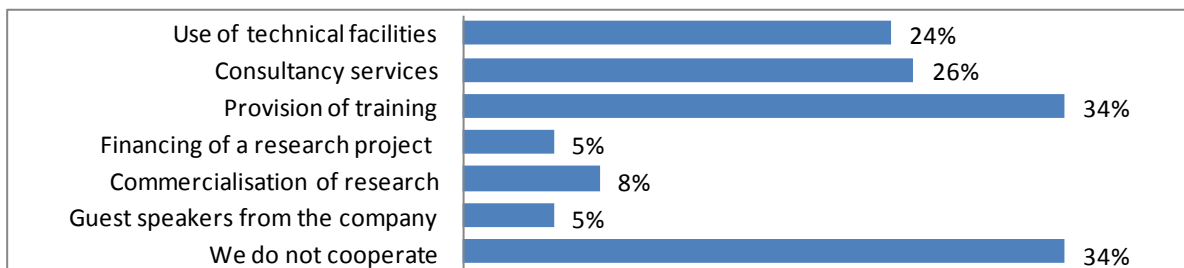
Figure 4.12 Collaboration partners



Just under a third of companies co-operate with domestic universities and 14% with local research institutes and organisations, while only 8% co-operate with foreign universities and 6% with foreign research institutes and organisations.

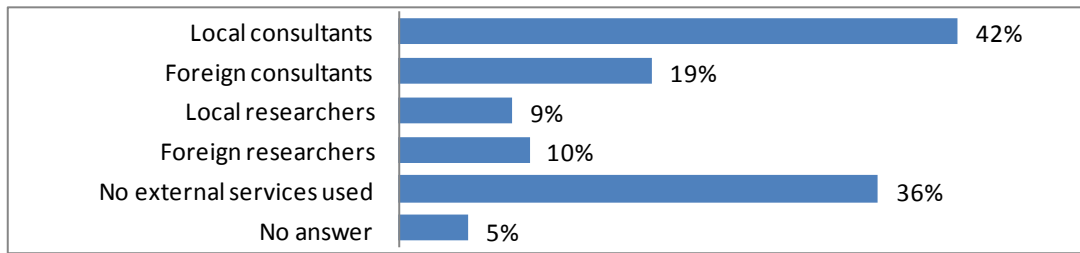
In most cases, co-operation with universities is based on provision of training, consultancy services and use of technical facilities as shown in Figure 4.13. The share of companies co-operating with universities to commercialise research activities is low and over a third of companies do not cooperate with universities at all. Innovation policy should thus facilitate activities that will increase the scope and effects of science-industry co-operation.

Figure 1. Figure 4.13 Nature of the links with domestic universities



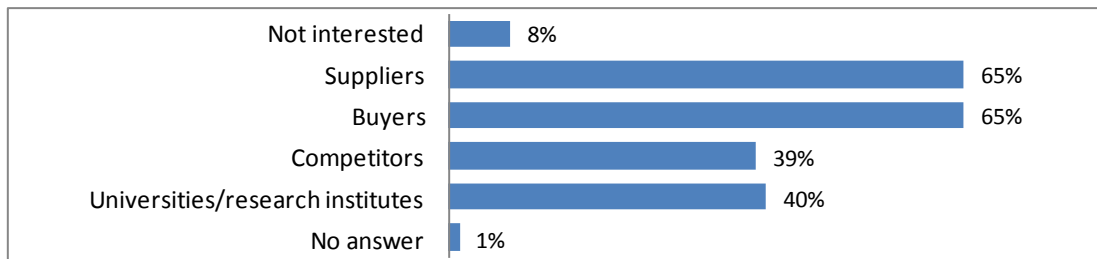
When it comes to intellectual services, private domestic consultants were the most common source, while 36% of the companies did not rely on any form of external know-how (see Figure 4.14). Companies co-operate more with foreign researchers than domestic researchers from the public sector. Medium-sized companies mostly use intellectual services from foreign researchers. Companies from the agriculture and forestry sector are most likely to co-operate with foreign researchers, while they did not use intellectual services from domestic researchers at all.

Figure 4.14 Main sources of intellectual services



Companies in Kosovo are mostly interested in future co-operation with suppliers and buyers, while 40% of companies consider co-operation with universities and research institutes as being desirable. Just 8% of companies are not interested in any form of collaboration with others (see Figure 4.15).

Figure 4.15 Institutions that companies would like to collaborate with



When it comes to networking, 69% of the surveyed companies belong to formal domestic networks of companies such as Chambers of Commerce, business associations and others (see section 4.2 above), while only 10% belong to formal international networks of companies. Around 5% of companies belong to informal networks as well. Most of the companies that are part of some kind of formal network consider them to be useful (56%) or very useful (21%) in providing support to innovation. However, the functionality of some of the formal networks and associations was questioned during the fact-finding mission discussions.

Almost half of the participating companies (45%) participate in public tenders by national authorities. In 39% of cases, the tender submission required a degree of innovation. This is likely to have been some form of incremental innovation, which enabled the companies to satisfy the technical requirements of the tender and/or be more efficient and thus able to offer more competitive prices.

4.3.5 Potential actions

Many companies were unaware of programmes and measures on offer to help them innovate. Of the surveyed companies only 9% have benefited from public support for innovation.

This survey sought input from companies on the most relevant policy measures (see Box 4.1).

Box 4.1 Measures supporting innovation

For the purpose of this survey, measures supporting innovation were grouped into four main types and evaluated by the participants:

Measure 1: raise awareness of SMEs on the benefits of innovation.

- Information and brokerage events to educate on the benefits of innovation, exchange good practice in innovation management – 60% evaluated this as useful or very useful.
- Competition and awards; e.g. business plan competitions for start-ups for public recognition of innovative ideas – 54% evaluated this as useful or very useful.

Measure 2: encourage private investment in R&D and innovation.

- SME / innovation voucher to support individual SMEs in accessing external services that help increase innovative capabilities – 59% evaluated this as useful or very useful.
- R&D tax credits to subsidies tax credit on R&D expenditure – 56% evaluated this as useful or very useful.
- Support for imports of R&D equipment through tax deductions/exemptions on imports of equipment – 71% evaluated this as useful or very useful.
- Credit guarantees and subsidised loans e.g. credit guarantee schemes can help innovative companies' access credit from commercial banks – 69% evaluated this as useful or very useful.

Measure 3: strengthen human resources for innovation.

- Skills and training needs analysis to assess needed skills on the job market in different sectors on a regular basis – 73% evaluated this as useful or very useful.
- Internship programmes for university students and unemployed persons – 63% evaluated this as useful or very useful.

Measure 4: strengthen linkages with the diaspora.

- Scientific network (internet-based) to link the domestic research community with the scientific diaspora – 62% evaluated this as useful or very useful.
- Diaspora (scientist) short-term stays in the home country – 56% evaluated this as useful or very useful.
- Business contact with the diaspora – 63% evaluated this as useful or very useful.

All of the listed measures were evaluated as useful or very useful by more than half of the survey participants. The least useful (54%) was considered to be the competition and awards measure.

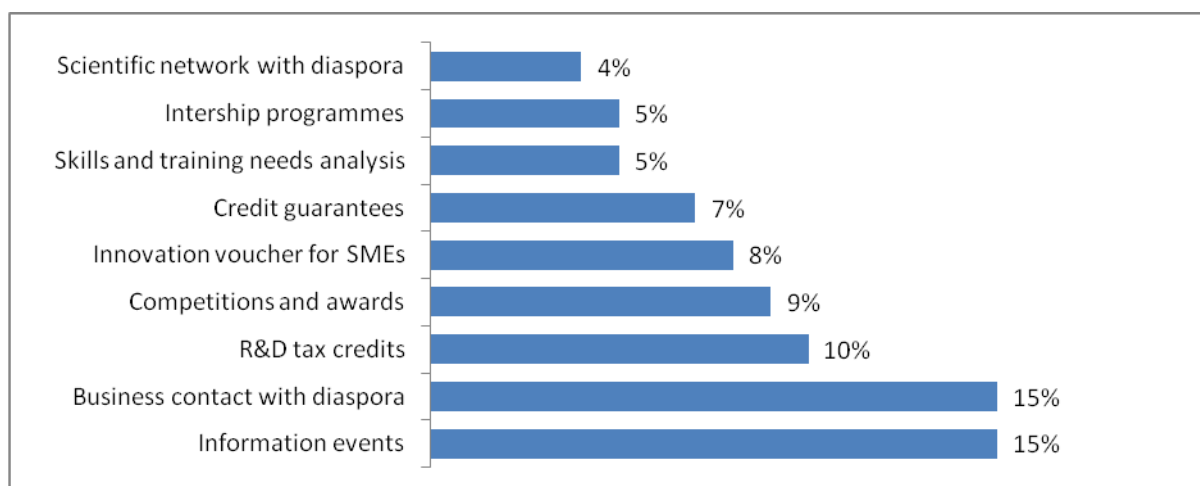
When evaluated by the share of participants the top three measures (ranked by usefulness) were:

- Skills and training needs analysis to assess needed skills on the job market in different sectors on a regular basis (73%)
- Support for imports of R&D equipment through tax deductions/exemptions on imports of equipment (71%)
- Credit guarantees and subsidised loans e.g. credit guarantee schemes can help innovative companies' access credit from commercial banks with 69%.

When evaluating the individual measures by priority (see Figure 4.16), the top three were as follows:

- Support for imports of R&D equipment through tax deductions/exemptions on imports of equipment
- Information and brokerage events to educate on the benefits of innovation, exchange of good practices in innovation management
- Business contact with the diaspora

Figure 4.16 Most relevant measures for private sector innovation



It is interesting to note that the skills and training needs analysis measure was ranked as the first priority by only 5% of the participants, while 73% of participants evaluated the measure as useful or very useful when they weren't asked to prioritise. Given the low level of innovation support and the perception of the government as an obstacle to innovation, it seems that the companies were not selective in their suggestions related to policy measures. Prioritisation of policy measures is an integral part of innovation strategy development and will be refined at a later stage of the project.

4.4 Conclusions

The private sector has some strengths, including the existence of some innovative firms and business support agencies as well as some pilot co-operations between the industry and academia. However, the extent and level is limited. Private sector weaknesses include products which cannot compete in external markets, lack of awareness of the potential benefits of innovation, and low levels of investment in R&D and innovation. Business associations and business support organisations play an important role in the innovation system in Kosovo, but the implementation of an effective innovation policy will require them to improve their capacity to support innovation. One of the key issues is the need for stronger industry-specific associations that are better equipped to bring together companies from one sector and address areas relevant to that sector, including those related to innovation.

The diaspora provides major opportunities for the private sector, such as establishing business networks and making use of the associated knowledge transfer. Kosovo firms can benefit from its geographic location by building stronger ties with European businesses and gaining better access to the EU market. On the other hand, Kosovo risks losing skilled labour as people move to a more favourable environment abroad. In addition, Kosovo firms may face a strong competition for the products and services on the domestic market (given its limited size) and barriers when entering new markets.

The survey results indicate that the surveyed companies consider themselves to be innovative, report a lot of innovation activities, estimate that such activities have significant financial impacts, and even report a high level of innovation co-operation. Their reported annual expenditure on innovation is high. Although co-operation is quite common, they don't seem to tap into external sources of knowledge sufficiently, which would also help them build linkages within the innovation system. At the same time, their innovation is actually predominantly reactive; it tends to be driven by external competitive pressures and customer requirements. Consequently, innovation is predominantly incremental, and revolves around product/service improvements.

Companies mostly fail to perceive their internal deficiencies and obstacles to innovation and see financial constraints and the government as the key obstacles to innovation. Their investment in human resources is a potential strength, which should enable future development of innovation in companies, but this potential is finely balanced. On the one hand it could be jeopardised by the brain drain while on the other it could be enhanced by contacts with the diaspora and “brain gain” from people returning from abroad. Other human resource development issues requiring further attention include the development of VET and the tertiary education system, better links between education and the business sector, and improved curricula and teaching methods.

The companies surveyed have some difficulties in setting priorities for policy measures, which reflects the underdevelopment of innovation policy in Kosovo and their limited experience such support. However, they support tax incentives for the import of new technologies, networking and information sharing, and deepening contacts with the diaspora. Further discussion with relevant stakeholders from business, academia and government would be needed, but the needs and priorities identified here provide some initial suggestions for potential policy measures.

RECOMMENDATIONS AND NEXT STEPS

The innovation system in Kosovo faces a number of significant challenges. Its performance is hampered by a combination of different factors, ranging from policy coordination to a lack of resources dedicated to supporting innovation. Based on the findings of this background report, an innovation strategy for Kosovo could be underpinned by four strategic pillars:

Improving inter-ministerial co-ordination, design and implementation of innovation policies

Kosovo's institutional setup and innovation infrastructure suffers from four weaknesses. These are: 1) lack of implementation and monitoring mechanisms 2) lack of data needed for both policy design and evaluation, 3) lack of experienced personnel, and 4) insufficient financial resources for measures supporting innovation.

Measures and actions to support innovation involve a number of policy domains, such as research policy, education policy and business support. For this reason, institutions need to work horizontally. In the short term, the government needs to create mechanisms ensuring efficient inter-institutional co-operation, ensuring the involvement and contribution of all relevant institutions. The ministry of education, science and technology and the ministry of trade and industry should play leading roles in fostering inter-institutional co-operation with respect to innovation policy development. One suggestion would be to have innovation appear as a regular discussion point on the agenda of cabinet level meetings of ministers, in particular those meetings where the ministry of education and science, ministry of trade and industry, and the ministry of economic development are present. This could be done by integrating innovation as a fixed component to the agenda of the *National Economic Development Council (NEDC)*.

In order for policies and measures to respond to the actual needs of the stakeholders in the innovation system, the government needs to ensure transparency in the formulation of policy and allow all interested parties an opportunity to contribute to the process. Public consultation mechanisms can be introduced in several ways, including the establishment of innovation councils or committees to facilitate public input.

Building stronger, more commercially relevant research institutions

The innovation capacity of research institutions in Kosovo is weak. Little money is spent on R&D and the number of researchers is also low. The incentive structures for academics to perform relevant R&D should be reviewed. A framework should be developed that supports researchers undertaking consultancy in private companies, while encouraging the entrepreneurial activities of students and faculty.

Research institutions and the private sector are disconnected from each other. Despite a few examples of successful collaboration, the potential commercial viability of research is limited. Simply increasing resources without addressing the issue of poor industry-science collaboration would have limited impact. One option would be to examine how 'triple helix'-like partnerships between SMEs, researchers and governments could be encouraged in Kosovo. 'Triple helix' partnerships involve co-operation between academia, business and local government in innovation projects. These projects support the notion that value creation in innovation is accelerated when the actions of these three stakeholders are coordinated.

The survey of research institutions implies that the connection between local research institutions and the international research community needs to be improved. Creating networks is an important step in order to support knowledge exchange and thus foster innovative activities. PhD students and/or university professors should have greater opportunities for international mobility, while research institutions should be encouraged to participate in international projects. The role of researchers in the diaspora could also be formalised through sabbatical leaves being spent in Kosovo research institutions.

Enhancing the business sector's propensity to innovate

In order to raise their competitiveness, Kosovo firms need to effectively engage in innovation activities. The private sector in Kosovo needs to become aware of the benefits of innovation and of existing support measures. This is particularly important in the case of SMEs, which may have fewer opportunities to access resources. Smaller companies perceive innovation as a risky and costly prospect, and are often discouraged from innovating or pursuing actions which will only realise benefits several years on. Companies which are innovating should be promoted, and mechanisms should be developed to help them increase their presence in business networks both inside and outside of Kosovo. As noted in the previous section, the diaspora could play an important role here as well. Measures could be developed to bring members of the diaspora community, especially those individuals who are business and research leaders, to Kosovo to act as mentors or advisors for innovation projects. This would assist Kosovo businesses to absorb knowledge and ideas from abroad.

Measures supporting R&D and innovation activities in enterprises are scarce. The *National Research Programme* contains measures supporting R&D activities in Kosovo, but they are very limited when it comes to participation of the business sector. Supporting measures should be designed based on international good practice, but still tailored to Kosovo's context. Measures might include industry extension services, vouchers, grants (such as support for R&D, or for IPR protection, feasibility tests or commercialisation of research results), credit guarantee schemes, limited tax incentives, and education reform. An additional action could involve the Industrial Property Office supporting SMEs to access off-the-shelf technologies through patent searches.

Aligning human resources and skills development with labour market needs

With a young population and high youth unemployment, human capital development should be a priority for policy makers. According to the BEEPS survey, 76% of companies surveyed in Kosovo found the skills and education of available workers to be a major problem for doing business. The education sector faces dilapidated facilities and is characterised by poor outcomes. Students of VET schools and higher education institutions need to have the opportunity to acquire the skills and competences the labour market needs. The private sector needs to be engaged in education policy development to raise the likelihood that outputs from the education system are better prepared for the needs of the labour market.

Opportunities for post-secondary and continuing education and training are few, partly as a result of a failure to promote adult learning. A framework needs to be established that facilitates the development of lifelong learning. The framework should provide opportunities and incentives for adults to enhance their skills and raise their employability. The Investment Promotion and the Small and Medium-sized Enterprise (SME) Agencies have set up an online catalogue of education institutions in Kosovo to enhance the co-operation and transfer of expertise and technology to SMEs. Such initiatives need to be further supported.

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ANNEX 1

Table A.1 SWOT analysis for the innovation system in Kosovo

Strengths	Weaknesses
<ul style="list-style-type: none"> ● Macroeconomic stability has been maintained. ● Progress in improving the business environment (Doing Business Report 2013). ● Existence of some innovative firms and business support organizations. ● Government recognition of the importance of developing an innovation system, first steps have been undertaken in this direction. ● Government development of a National Research Programme. ● National Qualification Framework adoption and implementation in research institutions and universities. ● High priority given by research institutions and universities to the Bologna Process. ● Research institutions and universities' openness to collaborate through EU funded programmes. ● Education is the largest Government programme. 	<ul style="list-style-type: none"> ● Low absorptive capacities of firms. ● Low technological level in the local industry. ● Low productivity and high unemployment. ● Products/services often not competitive for export. ● Lack of access to finance for risky projects/insufficient knowledge about sources of financing. ● Lack of linkages between innovation actors (private sector, research institutions, universities and government). ● No effective IPR protection, very limited culture of patenting and commercialisation. ● Uncoordinated policy design and poor implementation of policies (lack of administrative capacity and financial resources). ● Insufficient or lack of data relevant to innovation policy. ● Low investments in R&D and innovation. ● Limited research capacity (more time devoted to teaching than research by university professors). ● Lack of infrastructure and equipment in schools and higher education institutions.
Opportunities	Threats
<ul style="list-style-type: none"> ● Young population. ● Brain gain – knowledge transfer and business contact with the diaspora community. ● Compact economy can be an advantage in terms of focus and organizational efficiency. ● Increasing support and facilitating linkages between innovation actors. ● Strengthening coordination between key institutions involved in innovation policy. ● Facilitating neighbouring countries collaboration and strengthening the economy's capacities to optimise the use of limited resources. ● Strengthening existing networks of businesses. ● Developing stronger co-operation between local business and EU partners. ● Accessibility to additional EU funding. ● Potential access to EU markets: access to a large market without borders. 	<ul style="list-style-type: none"> ● Brain drain – loss of skilled labour to more favourable environments abroad. ● Failure to upgrade the economy in a rapidly changing global economic environment. ● Strong competition when entering new markets. ● Limited domestic market for innovative products. ● Foreign investment in low value-added activities. ● Prolonged recession with a detrimental impact of investments in R&D. ● Lack of high-quality projects because of dispersed funding and unclear criteria to evaluate the innovation potential of research projects. ● Limited effectiveness of future programmes due to a lack of a monitoring and evaluation system. ● Weak implementation of adopted strategies and policies. ● Lack of harmonisation with EU standards. ● Lack of people with the skills necessary for the optimal use of EU-pre accession funds.

Table A.2 Regional Development Agencies in Kosovo

RDA South	RDA Centre	RDA North	RDA East	RDA West
6 municipalities	8 municipalities	4 municipalities	11 municipalities	6 municipalities
Dragash / Dragaš, Malishevë / Malisevo, Mamushë / Mamuşe, Prizren, Rahovec / Orahovac, and Suharekë / Suva Reka.	Glogoc / Glogovac, Fushë Kosovë / Kosovo Polje, Obiliq / Obilic, Graçanicë / Gracanica, Podujevë / Podujevo, Prishtina / Pristina, Shtime / Stimlje and Lipjan / Lipjan.	Mitrovicë / Mitrovica, Skënderaj / Srbica, Vushtrri / Vucitrn and Zubin Potok.	Novobërdë / Novo Brdo, Kamenicë / Kamenica, Ferizaj / Urosevac, Gjilan / Gnjilane, Kaçanik / Kacanik, Shtërpcë / Strpce, Viti / Vitina, Han i Elezit / Đeneral Janković, Klokot / Klokot, Ranillug / Ranilug and Partesh / Parteš.	Istog / Istok, Deçan / Decani, Junik, Klinë / Klina, Pejë / Pec and Gjakova / Djakovica.

Table A.3 Policy measures for scientific research funding in Kosovo

No.	Measure	Budget
1	Doctoral programmes to educate young scientists in outstanding institutional settings (e.g. within international joint programmes leading to double degrees or dedicated Centres of Excellence at the universities).	Annual budget of EUR 500 000
2	Individual post-doc researcher's grants for the promotion of scientific careers in priority fields both at home and abroad.	Annual budget of EUR 250 000
3	Individual PhD researcher's grants for the promotion of scientific careers in priority fields both at home and abroad.	Annual budget of EUR 280 000
4	Short-term mobility grants to further strengthen the co-operation between home and host institutions for the collaborative advancement of sciences.	Annual budget of EUR 30 000
5	The competitive funding of domestic research-infrastructure networks and domestic central laboratories in priority research areas.	Total budget of EUR 1 250 000
6	The funding of stand-alone projects equipment procurement projects based on scientific development plans and competitive tendering procedures.	Total budget of EUR 1 000 000
7	The procurement or development and implementation of a research and technological development (RTD) information system which also serves the requirement of economy-wide S&T statistics.	Annual budget of EUR 100 000 in 2011 and EUR 50 000 of annual budget in each following year of implementation.
8	Procuring the access of Kosovo researchers to relevant electronic libraries such as Thomson Web of Knowledge and SCOPUS.	Total budget of EUR 200 000

Table A.3 Policy measures for scientific research funding in Kosovo (cont.)

No.	Measure	Budget
9	Establishment of a fund to support scientific publications and science communications (e.g. for stand-alone publications like monographs; translation of stand-alone publications; to tackle the international dimension priority should be given to publishing in international journals).	Annual budget of EUR 50 000
10	Provision of competitive grants for joint projects with a foreign partner institution funded under bilateral intergovernmental RTD programmes signed between Kosovo and other countries, or other unilateral, bilateral and multi-lateral schemes.	Annual budget of EUR 150 000
11	Competitive distribution of project preparation grants to apply in international consortium for European funding under COST and especially the European Framework Programme for RTD.	Annual budget of EUR 50 000
12	Establishment of a brain-gain fund to attract foreign researchers and especially local researchers working abroad.	Annual budget of EUR 250 000
13	Implementation of a competitive applied RTD programme to mitigate the science-economy bottlenecks.	Total budget of EUR 500 000
14	Establishment of an innovation programme oriented towards the technological, organisational and social innovation needs of the private sector (business, NGOs). The implementation is based on competitive funding of individual cooperative projects (actively involving partners from business, society and academia) to generate concrete new economic, societal or cultural applications.	
15	The competitive funding of five domestic Centres of Excellence in priority research areas (especially in enabling technologies) based upon sound individual RTD programmes, transparent, realistic and enabling outreach activities, advanced educational tasks and international inclusiveness.	Total budget of EUR 1 250 000
16	Establishment of a competitive fund for basic research open towards all scientific disciplines and launching of the basic research funding programme open for all scientific disciplines.	Total budget of EUR 1 000 000
17	Implementation of individual yearly awards for the most outstanding Kosovo researcher and newcomer researcher.	The planned budget amounts to EUR 30.000 for the five most outstanding Kosovo researchers annually and EUR 10.000 for the best five newcomer researchers annually.
18	Development and implementation of a comprehensive quality assurance and evaluation process focusing on scientific research activities, subsuming also precautions for programme, policy and institution evaluations (including the benchmarking of scientific research organizations and policy-delivery institutions).	The planned annual budget amounts to EUR 70.000 and is eventually going to be supported by the Kosovo-Austria KAIP project.

Source: National Research Council (2010), *The National Research Programme of the Republic of Kosovo*, Government of Kosovo, Pristina.

ANNEX 2

Kosovo Business Survey: Methodology and Company Profiles

The Kosovo Company Survey is a business survey designed by the OECD Investment Compact and carried out by Ipsos Strategic Puls. The target group was innovative private businesses (not state-owned) that had implemented at least one innovation between 2009 and 2011.

The main purpose of the survey is to understand firms' innovation behaviour, motivations, constraints and policy needs. The survey aims to identify innovation activities and drivers and assess the policy barriers that may limit the ability of companies to innovate. Based on these barriers, the survey would help identify potential policy measures to encourage more innovation. The results from the survey were designed to provide the guidance for the creation of an innovation strategy for the period 2013-20.

Methodology

The survey targeted innovative private companies in Kosovo. Although innovation surveys such as the Community Innovation Survey usually deal with the representative samples of the total population of companies, in order to obtain representative results that can be generalised and compared internationally, this project focused on the analysis of a specific sub-set of innovative companies, rather than all firm types. Current data are sparse but it is reasonable to assume that the level of innovation activity in Kosovo is relatively low. Consequently, for this project it is important to look particularly at innovative companies in order to analyse what works in the context of Kosovo: what are the characteristics of innovative companies and what innovation activities do they engage in, which obstacles they face, with which organisations do they co-operate, and which policy measures could be effective in order to make them more innovative.

The focus was on representatives of the top management or other appropriate persons able to provide relevant information. Strata allocation was proportional to the companies' distribution (in terms of size, type of activity and region where the company is located). The survey was conducted through semi-structured, face-to-face interviews based on a questionnaire prepared by the OECD team. The interviews took place between 21 May and 11 June 2012.

A focus group discussion was also held in Prishtina / Pristina on 4 July 2012. The focus group gathered the representatives of key stakeholders from the business sector, government sector, academia and intermediary institutions. The survey results were presented and discussed. The topics covered included the survey findings, innovation drivers and barriers, human resources for innovation, external co-operation, and potential measures supporting innovation. Selected insights from this session have also been included here.

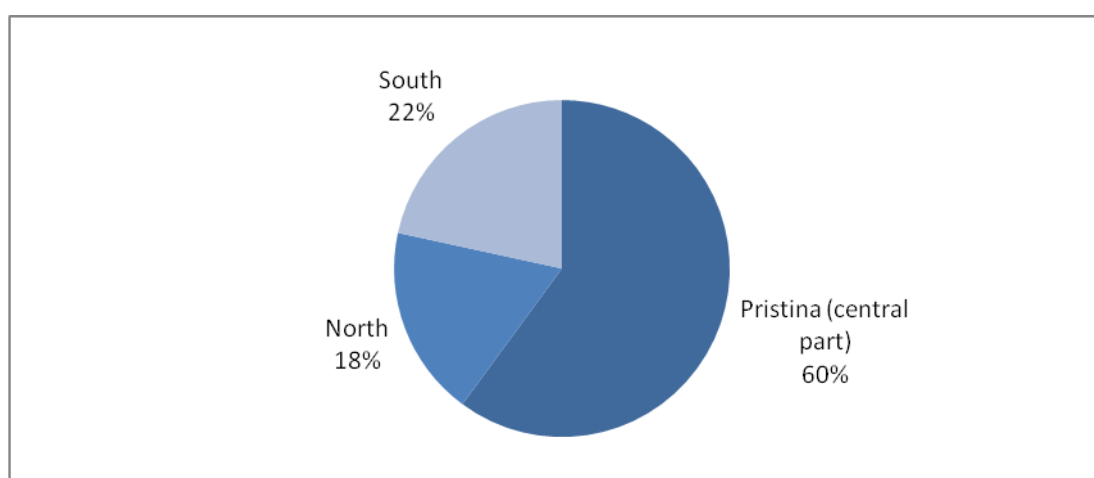
General information on participating companies

A total of 153 innovative companies participated in the survey. For the purpose of this survey, the companies were defined by number of employees: small companies with 10 to 49 employees, medium enterprises with 50 to 149 employees, and large companies with 150 employees or more. Micro

companies with up to 9 employees were not surveyed. Although it would have been useful to obtain insight into the practices of innovative start-ups (which are predominantly micro enterprises), it was concluded that other research methods, such as focus groups or interviews, are more appropriate for that purpose. Out of 153 participating companies, 65% were small companies, 24% were medium-sized and 11% were large.

Most of the participating companies are located in Pristina, *i.e.* the central part of Kosovo, indicating a strong centralisation of business activities in general and innovation activities in particular in the region around the capital (see Figure B.1). Most of the participating companies (84%) are owned by a domestic investor, 7% are mixed domestic private and state-owned, 5% are foreign owned and 4% are mixed domestic-foreign owned.

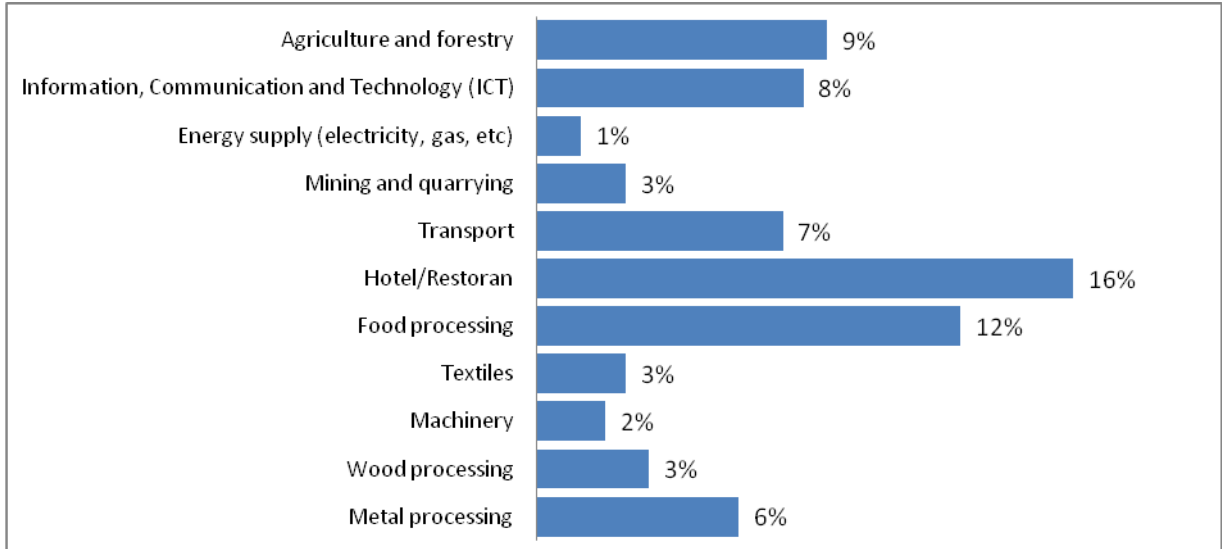
Figure B.1 Regional distribution of surveyed companies



Sector

The largest sector was manufacturing, with 44% of the surveyed companies, followed by the service sector (42%), ICT (8%), and agriculture and forestry (8%). This distribution might suggest that innovation largely occurs in manufacturing (but its productivity and competitiveness may nevertheless be an issue), whereas service innovation is mostly related to sectors with low productivity. This seems to be confirmed by a more detailed breakdown of the sectors. Looking in more detail, and bearing in mind the possibility of multiple answers, 16% of companies were in the hotel/restaurant sector, 12% in food processing, 8% in agriculture and forestry, 8% in ICT, 7% in transport, and 6% in metal processing (see Figure B.2). However the high number of respondents from hotels and restaurants may simply indicate better availability to respond to the survey. It could also be argued that the sampling frame influenced these results, as micro companies were excluded from the survey.

Figure B.2 Detailed sector breakdown

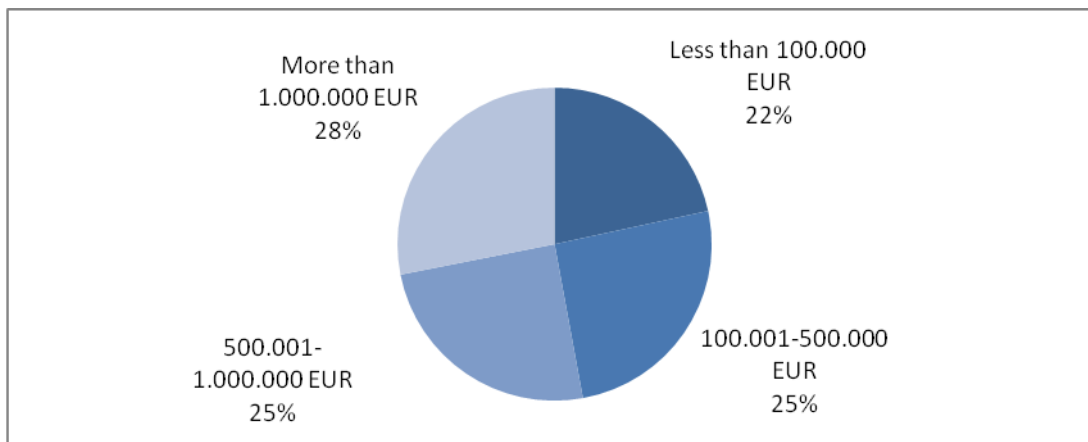


Size and turnover

Breaking the surveyed companies down by annual turnover in 2011, 28% had a turnover of over EUR 1 million, 25% had a turnover of between EUR 100 001 and EUR 500 000 and another 25% had a turnover of between EUR 500 001 to EUR 1 million, while the remaining 22% had a turnover of less than EUR 100 000 (see Figure B.3). When these results are compared to 2009 there is no clear trend, although they have seen some growth in revenues, since 26% then were in the lowest turnover group in 2009 while just 23% were in the highest turnover group.

The share of small companies that earn over EUR 1 million grew from 13% to 17%, which indicates the existence of a population of high-growth SMEs. A more detailed analysis could reveal the extent to which these trends indicate a real business growth and how much are down to the effect of a post-recession “bounce”.

Figure B.3 Turnover in 2011



Looking at company size, 65% of large companies achieved a turnover of over EUR 1 million, compared to 42% of medium-sized enterprises and 17% of small companies. Of the small companies, 30% had a turnover between EUR 100 001 and 500 000, while 29% had a turnover of up to EUR 100 000. The distribution of turnover seems logical in the case of small and medium-sized companies, with fewer small companies in the higher turnover groups, whereas there were fewer medium-sized companies in the lower turnover groups. When it comes to large companies, while most of them earned more than EUR 1 million there is also a significant share (36%) in the lower turnover groups, suggesting low productivity and low competitiveness.

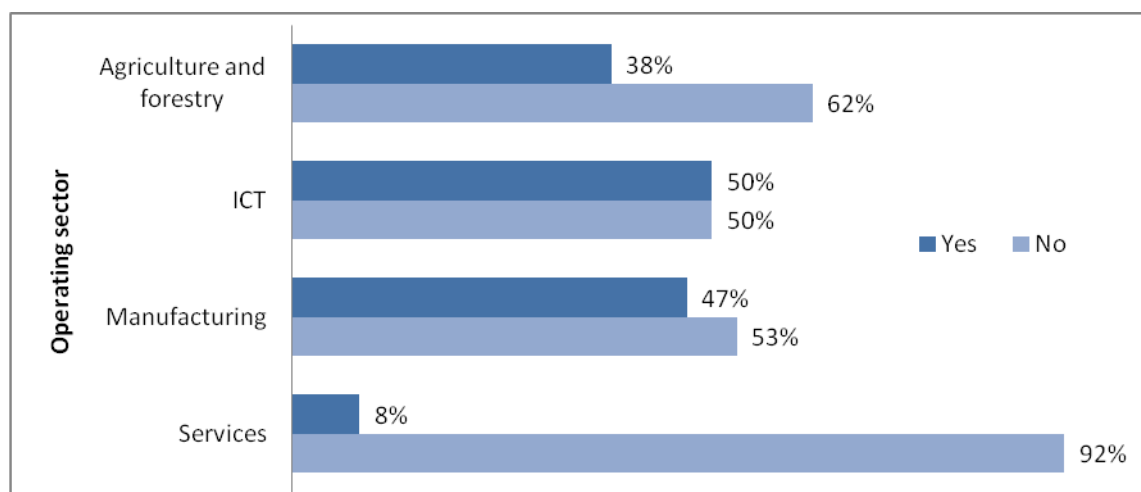
Position in the value chain

The large majority (86%) of the surveyed companies sell finished products, while 11% sell raw materials and 5% sell intermediate goods. Such a low share of companies selling intermediate goods indicates the isolation of the economy in Kosovo from international industrial networks and value chains. Inclusion in international value chains often enables companies to produce high value-added components of complex products and build up their export performance. Given the low competitiveness of the economy in Kosovo overall, these findings may also indicate that the final products which companies are producing are of a relatively low value added nature.

Exports

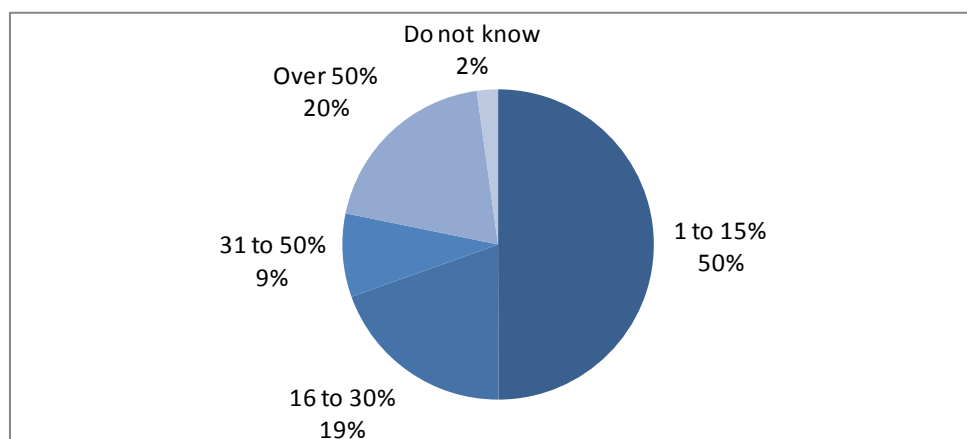
Less than one-third (30%) of the surveyed companies export their products and services. As shown in Figure 4.4, the companies operating in the ICT sector were most likely to be exporters (50%), followed by companies in manufacturing (47%). The high level of ICT exporters is particularly encouraging as it indicates international competitiveness in a sector with a significant growth potential. On the other hand, the exporters in agriculture and forestry (38%) are likely to be exporting raw materials, although 62% of companies in that sector claimed that they produce finished products. Services are mostly non-tradable, so it is unsurprising that only 8% of service providers are also exporters.

Figure B.4 Exporters by sector



The great majority of the exporting companies (89%) export their products to other Western Balkan economies,²⁶ while 48% export to the EU; only 4% of companies export their products to any other countries. Half of the exporters achieved between 1 to 15% of their total sales from export; only 20% can be considered major exporters with over 50% of total sales coming from exports (see Figure B.5). According to the data sample, innovative companies are slightly more likely to export. Of the 107 companies that do not export at all, 15% reported that they did not innovate or did not know whether they innovated, against 11% of those that did.

Figure B.5 Exports as a percentage of total sales



Competition

When asked how they would rate the level of competition in their main market, 31% of participants evaluated the competition as very high, and 31% as high, 29% as limited, while only 9% of participants evaluated the level of competition as low.

The perception of competition levels differs between sectors. For example, 75% of participants from the ICT sector consider the competition level as high or very high, compared to 64% in services, 59% in manufacturing and 53% in agriculture and forestry. None of the participants from the ICT sector evaluated the level of competition as low, compared to 14% in manufacturing, 8% in agriculture and forestry and 6% in services. It is noteworthy that 38% of participants from the agriculture and forestry sector consider the competition to be limited, while another 38% evaluated the competition level as very high. Overall, the perception is that competition levels are high, but there is no indication of whether such competition is predominantly based on price, quality of goods or services, innovation or some other parameter; this would require a more detailed analysis at the level of particular sectors.

According to the survey, the level of competition in the companies' markets appears to have little influence on innovation. Indeed, 86% of the companies that consider the competition in their main market to be low introduced at least one type of innovation between 2009 and 2011 compared to 91% in markets with limited competition, 83% in markets with high competition and 85% in markets with very high competition.

²⁶ Albania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Montenegro and Serbia.

Out of 153 surveyed companies, 66% apply some form of standards, such as ISO standards, in their business. Agriculture and forestry companies were most likely to apply standards (77%), followed by 70% of manufacturing companies. Large companies were more likely (82%) to apply standards and small companies were the least likely (61%).

Key contact:

Mr Alan Paic
Head of Programme
OECD Investment Compact for
South East Europe
alan.paic@oecd.org

www.investmentcompact.org