3.6 Estonia

Note: Early data for "% of broadband lines with speed ≥ 30 Mbps" refer to 2011.
3.6.1 Introduction and performance

Estonia has a highly developed e-government and an SME-friendly business environment. Given that it has made progress in promoting entrepreneurship and providing support to fast-growing innovative firms, it has the potential to become a ‘start-up hub’. Estonia is one of the countries that are catching up fast, yet it still has relatively lower income levels and a predominant specialisation in labour-intensive industries. Shares of capital-intensive products and research-intensive exports are expanding, while the share of labour-intensive exports is in decline. Using ‘smart specialization’, Estonia has identified the growth areas that could boost its competitiveness at global level.

Manufacturing continues to play a prominent role in the economy and high value-added sectors are increasing their share of total manufacturing output. Manufacturing production has regained all the ground lost during the crisis, exceeding its previous cyclical peak by 2.6 % in April 2011. Estonia has a small and open economy – exports (90 % of GDP) account for around 0.3 % of EU exports of goods and services. 18 % of total exports are to Sweden, 15 % to Finland, 12 % to Russia and 11 % to Latvia. Estonia specialises in capital-intensive and technology-driven industrial sectors such as electronics and machinery (14.56 %) and wood products (20.96 %). The highest productivity in Estonia is in the ICT sector – 2.5 times higher than other sectors. Knowledge-intensive exports as a percentage of GDP increased from 24.4 % in 2007 to 34.41 % in 2012, and the share of high-tech exports of total exports almost doubled from 7.8 % in 2007 to 14.1 % in 2012. The domestic value-added content of exports is higher in Estonia than in similar-sized economies in the EU, but below the EU average.

3.6.2 Access to finance and investment

Estonia has improved SMEs’ access to finance, and has made the first steps towards moving from a financing model based on grants to one relying on financial instruments. Banks are willing to provide loans, except in cases where projects are considered too risky. Access to public financial support is readily available, including to the loan financing, guarantees and credit lines provided by KredEx, and EU funds can be used for credit enhancement. The Baltic Innovation Fund, a Baltic initiative based on fund-to-fund investments, is encouraging cross-border investment, which is much needed given Estonia's geographical limitation. It already has three active funds that, with their multiplier effect, are ensuring better coverage of private equity and riskier projects, including start-ups, for which access to finance is more difficult. Moreover, the activities of the Finance Estonia Cluster and the Estonian Private Equity and Venture Capital Association contribute to the development of capital markets in Estonia. While these measures are expected to be effective, their results in terms of companies' investments will only become evident in the medium to long term.
3.6.3 Innovation and skills

Estonia has identified the knowledge-intensive sectors that could push the country up the value chain and has taken steps to become competitive at global level (according to the smart specialisation strategy). These sectors include: information and communications technology (via its use in industry); cyber security and software development; health technologies and services (including biotechnology and e-health and enhancement of materials); knowledge-based construction; the food industry; and the chemical industry (more efficient use of oil shale).

However, effective implementation of both the RDI Strategy Knowledge-based Estonia 2014-2020 and the Estonian Entrepreneurship Growth Strategy is critical for boosting these sectors and thus triggering economic growth. The implementation plan for the Entrepreneurship Growth Strategy was adopted in March 2014, but cooperation between ministries has not been smooth and business stakeholders have not been systematically invited to take part in these deliberations.

In spite of some progress in recent years, Estonia is still below the EU average in innovation performance. The number of companies engaged in development and innovation activities is still relatively low: according to the Innovation Union Scoreboard 2014, Estonia is well below the EU average in terms of SMES with marketing and/or organisational innovations, SMES innovating in-house and non-R&D innovation expenditures. Cooperation between business and academia is improving, but at a slow rate. Fragmented R&D measures, including the SPINNO programme, have been less effective in encouraging companies to use the research facilities of universities; some companies have cited the associated administrative burden as the main deterrent. The IP protection legal framework and the university financing system do not encourage enough universities to create spin-offs and increase the number of contracts with companies. The innovation vouchers programme is one successful measure that has increased the number of contracts between research providers and companies; but these contracts are small and represent only the first step towards fully-fledged R&D activities.

In spite of some progress, Estonia still faces significant challenges in terms of skills in the following areas: the supply of STEM graduates, retraining people in low-productive sectors, and enhancing the supply of skills in some emerging sectors. According to business stakeholders, (1) in the ICT sector, the number of jobs is predicted to reach 34 000, which is double the number of current positions in the sector. Among the most recent measures, a coordinated system (OSKA) has been created for improving the quality and supply of the labour force, as well as collecting and forecasting data on companies’ skills needs. This measure is ambitious but its effectiveness remains to be seen. An apprenticeship scheme has been offering 5000 placements per year, and the annual number of apprentices will be tripled by 2020. However, companies’ interest in taking on apprentices is still low. The new financing model of universities provides financial incentives for attracting more students into the STEM areas of study, a measure that seems appropriate and which could prove effective. Similarly, the scholarships planned at tertiary level for the fields of study supporting the smart specialization growth areas could produce good results. Some progress has been made in the ICT sector with the first graduates of the IT Academy joining the labour market. The IT Academy involves the participation of the government, the Tallinn University of Technology and the University of Tartu, as well as some private foundations. It is active in providing additional funding to selected curricula, as well as scholarships, including compensations for some forms of tuition.

Estonia has continued to make progress in promoting entrepreneurship. Entrepreneurship education is available in all education levels and is popular, and science and IT popularisation is done in connection with entrepreneurship. Some private initiatives such as Garage 48 and Startupwiseguys have been running successful accelerator programs and the University of Tartu has opened a Centre for Entrepreneurship and Innovation that aims to support entrepreneurship education in all schools. If these measures continue to be systematically introduced and well supported, they have the potential of increasing the number of successful entrepreneurs and turning Estonia into a ‘start-up hub’.

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3.6.4 Energy, raw materials and sustainability

Energy and resource intensity in Estonia remains among the highest in the EU. This is particularly true in the transport sector, where the share of renewable energy in transport is still far below the 2020 target of 10%. The average age of the car fleet in Estonia is almost double the EU average, new passenger cars are among the most energy-intensive in the EU, and fuel excise duties are below the EU average. Various alternatives have been considered for containing the increase in non-ETS greenhouse gas emissions. The government is currently considering the issue of VAT deductibility for corporate passenger cars is. The EU funds for 2014-2020 remain critical for improving the energy efficiency of residential and industrial buildings, but alternative funding should be considered. Despite a credible waste management policy aimed at avoiding landfilling, including through increasing the landfill tax, considerable measures are still needed in this area.

Estonia still has insufficient cross-border connections with the rest of the EU, which limits the diversity of supply and thus puts pressure on energy prices. Despite of the integration of the Estonian electricity market with Finland and the other Nordic countries via Estlink2, which became operational in early 2014, the interconnector with the Baltic countries is regularly congested. In terms of natural gas, progress has been made towards diversifying supply and thus ending Estonia’s isolation from the EU market, by signing the Memoranda of Understanding for both a liquefied gas terminal and the Baltic Connector – a supply pipeline linking Finland and Estonia.

3.6.5 Access to markets, infrastructure and services

Estonia has made progress in terms of improving the effectiveness of its transport infrastructure, but public transport networks and intermodal connections, including logistics, need to be further developed. The interconnection of coach transport and passenger rail, in particular in rural areas, remains underdeveloped and thus problematic. To address this problem, Estonia intends to create Regional Transport Centres for coach transport that will improve the interconnection of rural areas. EU structural funding for 2014-2020 remains critical in this respect, and alternative funding should be considered.

There has been a recent rise in the usage of urban public transport, and new passenger trains (both electric and diesel) have led to an increase in passenger train usage. In terms of a modal shift from road to electrified rail in freight and passenger transport, Rail Baltic is a crucial project under the TEN-T policy that will connect the Baltic States to the trans-European rail network. The three Baltic States are in the process of setting up a joint venture, which will enable a common application for the Connected Europe Facility.

Given Estonia’s location, most international passenger transport to and from the rest of Europe depends on air connectivity, hence the importance of improving the safety and mitigating the environmental impacts of Tallinn airport. Estonia is planning to extend the runway at Tallinn airport. This will enable the integration of CAT II navigation systems, thus allowing heavier aircrafts (cargo planes or airplanes with more than 250 passengers) to land in Tallinn in poor weather conditions.

3.6.6 Public administration and business environment

The business environment and in particular e-government are well developed in Estonia, and progress has been made in providing support to fast-growing innovative firms. E-services have helped citizens and companies save time and have made dealing with the government more accessible: the most time saved is in establishing a company, and submitting VAT or income and social tax returns to the Tax and Customs Board. E-services are ICT solutions that could easily be exported to other countries. The most notable e-services are i-voting, the ID card functionality and the X-road.

The most appropriate and effective measures offered by Enterprise Estonia to support entrepreneurship include measures supporting internationalization and offering entrepreneurs export advice, cooperation opportunities and training for entrepreneurs, as well as start-up support (from the conceptualization of ideas to finding appropriate financing on capital markets). In terms of sectors supported, the best results were achieved by computer, electronics and optical instruments producers, as well as
accommodation, furniture manufacturing and services; companies in these sectors have significantly increased their export revenues. Some existing clusters have had less success in encouraging cooperation between companies for marketing and export purposes. The Enterprise Development Programme is an initiative that seems ambitious and has the potential of being highly effective: it is designed to provide tailor-made support, based on diagnosed needs, thus homing in on the right development projects that can make companies grow fast. In terms of support for fast-growing innovative firms, the Estonian Entrepreneurship Growth Strategy 2014-2020 focuses, among others, on key clients (companies with high return on export sales or above average value added) and growth clients (with an export intensity of at least 25% in the second year of operation), totalling approximately 3,700 companies. In spite of this support, the number of SMEs accessing e-commerce and foreign markets is not rising fast enough, possibly due to awareness-raising campaigns that put too much emphasis on risk.

In general, public administration is functioning well in Estonia. However, due to limited fiscal capacity, local public administrations are not always in a position to provide quality services to companies and citizens. This poses the risk of creating a two-speed Estonia, where the centre progresses by specializing in highly competitive sectors, but the peripheral areas lag behind in economic development. Mergers and cooperation between municipalities remain voluntary and incentives to provide common services are weak or non-existent. In terms of supporting enterprises, the county development centres, partly financed by Enterprise Estonia, have small teams of counsellors that offer advice on the possibilities for financing and training. Even though these advisory services include access to start-up grants, some county development centres lack ambition and sometimes fail to address the real needs of enterprises in rural areas. In order to motivate the development centres, Enterprise Estonia is planning to use the results of the biannual evaluations to influence the financing decisions for these centers. Among the positive examples, six industrial parks are being established in the Ida-Viru county, with accompanying investment agreements and loan guarantees. Moreover, a regional plan for Southern Estonia, involving the creation of jobs and enterprise support, is currently being drafted. In general, companies outside the capital consider the support offered by the government as rather inflexible and argue that one of the main hurdles for doing business in rural areas is a lack of infrastructure, especially transport. Measures providing incentives for local governments to attract enterprises to these

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**Figure 3.6.2: Overall profile of public administration - Estonia**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irregular payments and bribes</td>
<td>0.8</td>
</tr>
<tr>
<td>E-government services: regular business operations</td>
<td>0.6</td>
</tr>
<tr>
<td>Cost of starting a company</td>
<td>0.2</td>
</tr>
<tr>
<td>Average payment duration from public authorities</td>
<td>0</td>
</tr>
<tr>
<td>Time needed to resolve insolvency</td>
<td>0.8</td>
</tr>
<tr>
<td>Cost of enforcing a contact</td>
<td>0.4</td>
</tr>
<tr>
<td>Time to export</td>
<td>0.2</td>
</tr>
<tr>
<td>Time to prepare and pay taxes</td>
<td>0.6</td>
</tr>
</tbody>
</table>

*Note:* Values have been scaled so that the best observation (Member State) gets 1 and the worst gets 0.

*Source:* World Bank Doing business; Intrum Justitia; OECD; World Economic Forum; European Commission
regions could further boost economic development and contribute to a more balanced regional development in Estonia.

3.6.7 Conclusions

Estonia has made some progress in identifying the knowledge-intensive sectors that could push the country up on the value chain and has taken steps to become competitive at global level. The current mix of measures represents the first step towards promoting a resource-efficient economy. Estonia should continue its efforts to improve its innovation performance, in particular cooperation between business and academia, and thus increase the number of companies engaged in development and innovation activities. In order to systematically address its challenges in terms of skills, Estonia should increase the supply of STEM graduates, re-train the workforce in low-productive sectors, and enhance the supply of skills in emerging sectors such as ICT. Lastly, the capacity of the Estonian local governments should be improved in order to enable them to provide quality public services to companies and citizens.