



# 7. Towards a more efficient, greener and more inclusive economy

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Box 7 – Beyond-GDP indicators



## 7.1 The COVID-19 crisis has reinforced the need to transform the economy

In 2020, the top priority was to contain the coronavirus pandemic and protect people and businesses from the consequences of the ensuing recession. Exceptional measures were taken in various economic policy spheres to steer the economy through the crisis as safely as possible. Those measures must, by definition, be temporary.

As the recovery picks up steam, they must give way to measures designed to strengthen the foundations of a dynamic, resilient, inclusive and low-carbon economy.

A successful exit from the crisis implies limiting the adverse impact on public finances, the labour market and businesses. In particular, it is necessary to watch over the sustainability of public finances, preventing any increase in structural unemployment and averting insolvency for viable businesses rendered fragile by the economic shock of COVID-19. These points were discussed in previous chapters. Moreover, the Belgian economy still faces certain structural vulnerabilities which already existed before the crisis. In regard to the economic fabric, that means virtually zero productivity growth, due in part to a sluggish business demography, problems hampering the efficient allocation of resources, and the inadequate spread of technology between firms. The economy must also address the challenges of the environmental and digital transitions.

Digital technologies contributed to the economy's resilience during the crisis, as remote working facilities and online sales and distribution channels for goods and services made it possible to maintain some activities despite the constraints of lockdowns and social distancing. These changes in production and consumption methods will persist, permanently

*The COVID-19 crisis and the ecological and digital transitions will require the reallocation of resources*

transforming the structure of the economy. Some sectors will end up permanently weakened by this transformation, while for others it will offer a source of future growth. More generally, the development of new digital and other technologies will continue to alter the structure and functioning of the economy. In addition, there is the need to progress towards still greener production and consumption in order to limit global warming. These transformations imply the need for resources to be readily reallocated within firms, between businesses in the same branch of activity, and between branches of activity.

At the same time as investing in human capital, it will also be essential to invest in infrastructure and intangible assets, R&D and databases in order to achieve the technological and environmental transitions. The ability to make that reallocation in the smoothest possible way with the minimum cost to society will largely determine the success of the process of transforming the Belgian economy into a resilient, inclusive and low-carbon economy.

## 7.2 A more digital economy after COVID-19

### Consumers are becoming increasingly familiar with the new methods of online shopping

The COVID-19 crisis has overturned consumption habits. The mandatory closure of some branches of activity, public health protocols for the easing of lockdowns, travel restrictions and avoidance behaviour by some sections of the population fearing infection have had a significant impact on movement

and visits to the physical outlets of retailers and service providers.

In contrast, online trading, which had already been expanding steadily for some years, has recorded exponential growth, bringing with it benefits for supply, transport and delivery services. For instance, the volume of packages handled by the Belgian postal service, bpost, which had risen by 16 % per year since 2018, recorded quarterly growth of 80 %

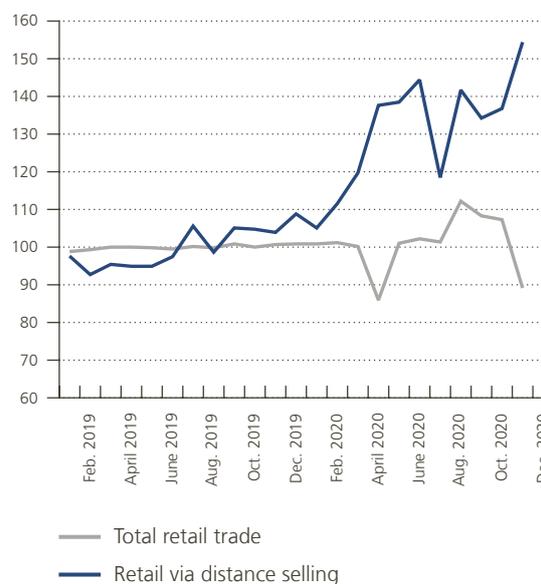
Chart 85

In response to the closure of physical outlets in Belgium, consumers turned to online shopping

**Mobility trends according to the nature of the purchases**  
(percentage deviation compared to the reference period<sup>1</sup>, seven-day moving averages of geographical location data)



**Retail sales<sup>2</sup>**  
(indices 2019=100)



Sources: Eurostat, Google mobility data.

1 Median value calculated over a 5-week period from 3 January to 6 February 2020.

2 Distance selling: retail sales in which purchasers place their orders by post, telephone or the internet.

and 50 % respectively in the second and third quarters of 2020.

The exponential growth of online sales since March 2020 has accelerated a trend already apparent for a number of years. The wide and varied range of goods available at competitive prices may explain the attraction of online distribution for consumers. This new method of making purchases chimes with consumers' preference for more individual, secure and convenient shopping from their own home. In the past ten years, the number of online consumers has risen steadily, and – according to Belgian trade and services representative body Comeos – exceeded 70 % of the Belgian population in the second quarter of 2020. While the 45-54 age group caught up with younger people during that period, the over-55 age group made less frequent use of online shopping opportunities, even though their numbers also increased, as this last age group has more difficulty in using digital payment and consumption tools.

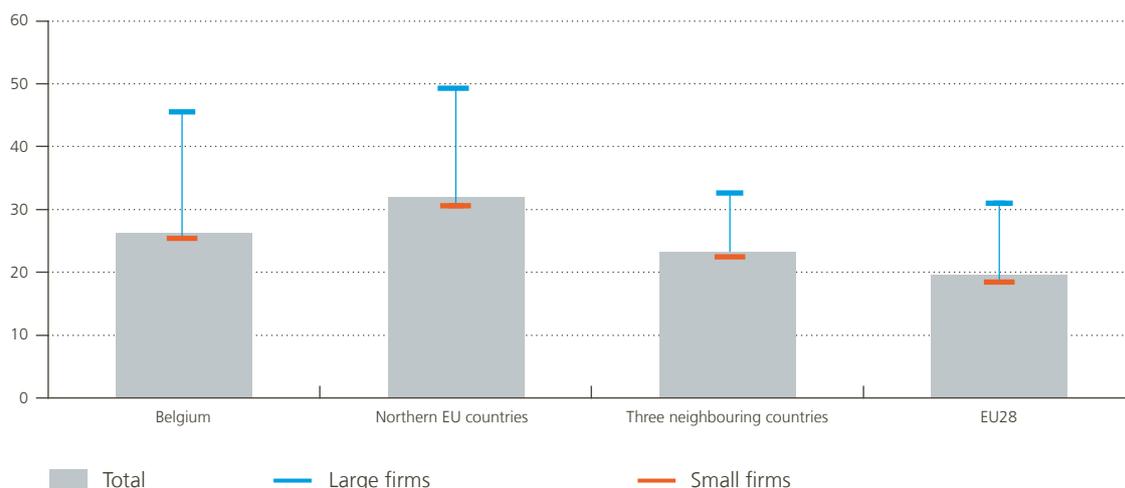
## Businesses also expanded their digital presence

Like consumers, businesses also adapted to the new opportunities of e-commerce. Although the major international platforms have a dominant position, other firms also began making more use of these new selling, communication and production methods. In 2019, just over a quarter of Belgian firms (26 %) already enabled consumers to place orders or reserve their products on their own websites. While firms in the northern EU countries were in a relatively better position (32 %), the Belgian percentage is well above the figure for the EU as a whole (20 %). In 2019, firms based in Belgium were able to generate a larger share of their turnover via e-commerce (33 %), while the figure was only 18 % for the average European business. Similarly, for firms operating in the three neighbouring countries and in the northern EU countries, online sales represented only 17 % and 24 % respectively of their turnover.

Chart 86

### The presence of Belgian firms on digital channels enables items to be ordered and reserved online

(online orders and reservations, in % of firms, 2019<sup>1</sup>)



Source: OECD.

<sup>1</sup> 2018 is the latest available year for Germany, Finland and Sweden.

While digital availability was already widespread in 2019, the pandemic prompted new firms to speed up their plans for online selling. The compulsory closures, health protocols and stronger demand via alternative channels brought home the need to be visible on the internet and to use e-commerce for pursuing their business activities. The crisis also made some of them realise that digital technology enabled them to organise themselves more flexibly, both internally and in relation to customers.

However, e-commerce for consumers only represents part of the income of firms active online. According to FPS Economy, 80 % of the online turnover recorded by Belgian firms in 2019 came from sales between businesses (B2B) or to the government (B2G), with consumers accounting for the balance (B2C). At European level, these ratios were 60 % and 40 % (B2B/G and B2C respectively). While sales to consumers increased in 2020, digital trade between businesses could also have helped to maintain the domestic and international

value chains. However, that trade declined overall in parallel with the general reduction in activity.

### New ways of working became more widespread

In 2020, there was also extensive recourse to remote working where the nature of the job made that feasible. During the lockdowns, working from home was mandatory or strongly recommended wherever possible and became the norm for many workers. Not only did it enable firms to continue pursuing their activities, it also meant that workers could keep their jobs and their income.

### The digitalisation of the Belgian economy contributed to its resilience during the crisis

The mobility data bear witness to a sharp fall in the numbers attending their place of work and using public transport, and show that more people stayed at home. While the use of remote working had previously varied greatly between firms and sectors, the COVID-19 pandemic and social distancing measures

Chart 87

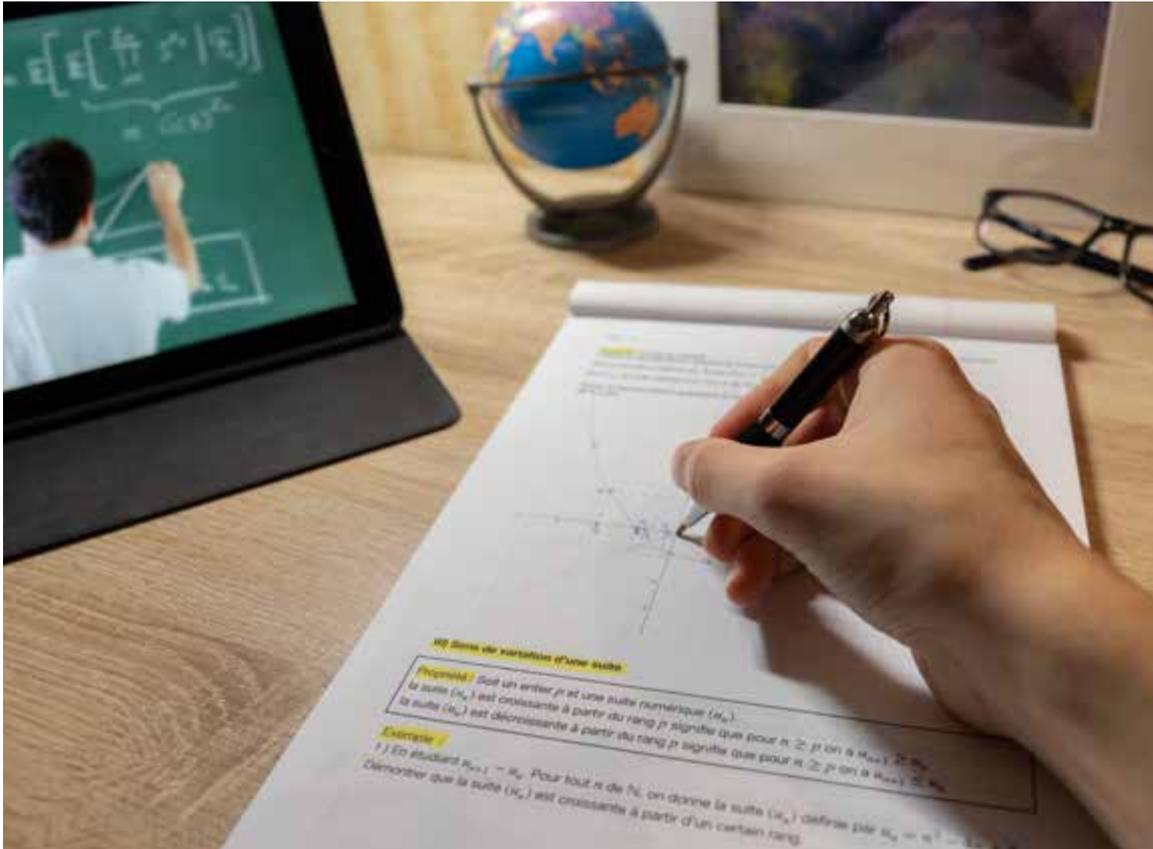
### Geographical location data show fewer journeys to places of work and people spending more time at home

(% deviation compared to the reference period<sup>1</sup>, seven-day moving average of geographical location data)



Source: Google mobility data.

<sup>1</sup> Median value calculated over a 5-week period from 3 January to 6 February 2020.



obliged many firms to introduce it or implement it on a larger scale. According to a study by KU Leuven conducted jointly with RH Acerta and HR Square, remote working expanded extremely rapidly in Belgium: the proportion of workers authorised to work from home jumped by 84 % during the first lockdown compared to the situation prior to COVID-19. Nevertheless, remote working is not available equally to all workers and depends on their job or their branch of activity, as it is difficult to apply in the case of most manual workers and certain contact occupations.

### Education and training also went online

Owing to the spread of the coronavirus, the Communities and Regions had to close the schools and training centres and, when reopening them, they had to introduce attendance restrictions (pupil rotation, limit on the numbers in class). New forms of learning and teaching tools had to be developed

quickly to minimise the disruption to education and ensure its continuity by using the new digital possibilities, such as virtual classes or computer-assisted learning. Despite the welcome government measures to rectify local deficiencies, the take-up varied between educational institutions and according to the equipment available in families, impeding the large-scale uniform application of these tools.

The pandemic disrupted the learning process not only for schoolchildren and students but also for adults, workers and job-seekers undergoing training. In previous years, some alternative tools had already become available, such as online courses accessible to all (MOOC). Some preliminary data seem to indicate that adult online learning has made significant progress. For example, in the Flemish Region, the numbers taking part in the online training offered by the Flemish public employment service (VDAB) during the second half of March 2020 quadrupled compared to the same period in the preceding year.

## A high-quality digital infrastructure made that possible

The fact that the various economic applications of digital technologies were able to mitigate the effects of the crisis was due partly to the availability of a suitable digital infrastructure and well-equipped firms and households.

As far as digital infrastructure is concerned, Belgium was in a relatively good position at the start of the crisis, so that it was able to cope with the increased demands on the internet networks. Telecommunications networks were under extreme pressure in the first lockdown. According to data from the Belgian Institute for Postal Services and Telecommunications (BIPT), between mid-March and the end of May 2020, the daily volume of traffic on fixed internet links averaged around 20% higher than on a normal pre-crisis working day, with peaks of up to 66% above normal. The digital infrastructure coped

*Good quality infrastructures made it possible to cope with the growing use of digital networks*

well with this higher demand, notably thanks to the good connectivity of the very high capacity fixed networks (minimum speed of 30 Mbps) in Belgium compared to the EU28 average. Conversely, in the case of the mobile internet, there were many delays in the allocation and deployment of the 5G network radio frequencies. A coordinated strategy between the Regions concerning the roll-out is still lacking but would be a catalyst for the economy's digital transition.

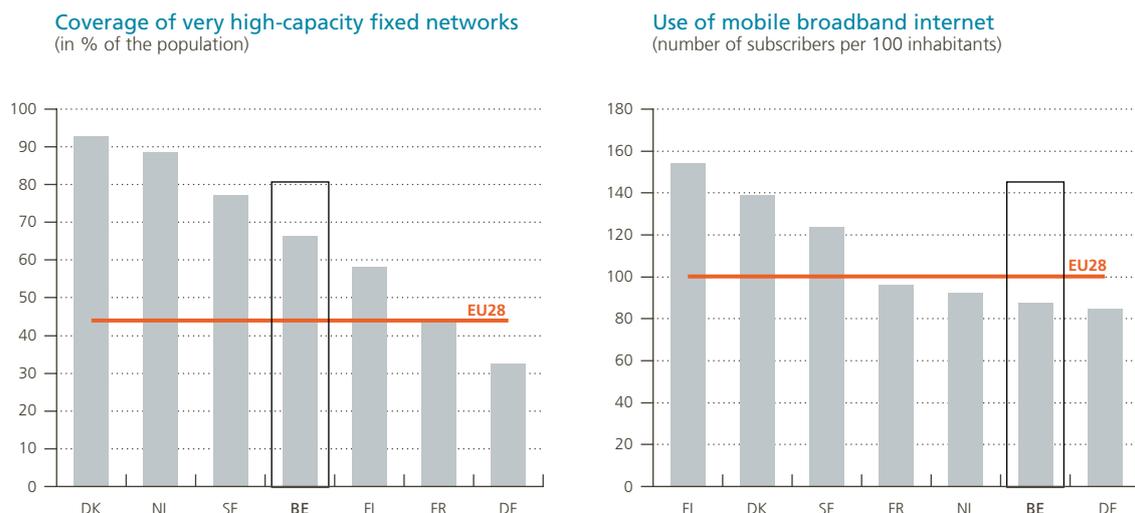
Finally, purchases of office equipment (such as laptops) expanded, reflecting the greater need for remote working and online training facilities. However, it should be noted that both the infrastructure quality and equipment availability are probably not the same for all households and firms.

Faced with remote working and remote learning, the poorest households were in a particularly difficult situation which has doubtless exacerbated the existing digital divide.

### Chart 88

#### The Belgian population has good connectivity in regard to very high-capacity fixed networks but the mobile broadband internet is lagging behind<sup>1</sup>

(June 2019 data)



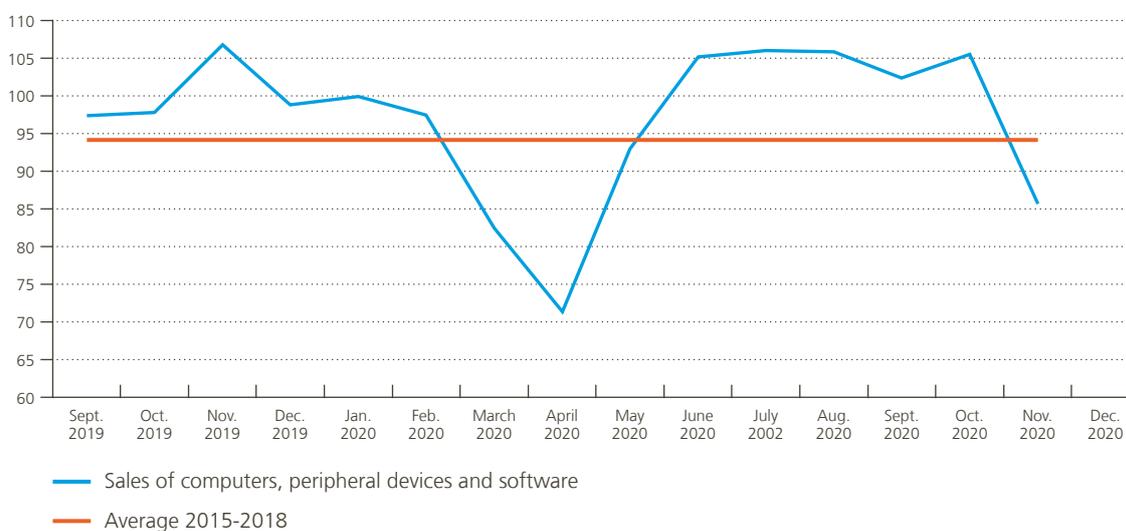
Source: FPS Economy.

<sup>1</sup> The fixed very high-capacity networks are the fibre optic networks (FTTB, FTTH) and cabled networks (DOCSIS 3.1). The mobile broadband internet refers to 3G networks or higher.

Chart 89

### The surge in computer sales reflects the Belgians' growing need for digital equipment

(indices 2019 = 100)



Source: Eurostat.

### The digitalisation of the Belgian economy must continue

Once the pandemic is over, the consumption behaviour and methods of selling, working and learning described above will not continue in digital form to the same high degree as during the crisis. Consumers will want to enjoy going out to spend in public areas again, workers will return to their place of work, and students and pupils will return to their university or school. Thus, the data on shopping trips and the indicators concerning attendance at the place of work fluctuated in line with the various stages of lockdown easing between May and September 2020.

However, the crisis clearly demonstrated the uses of digital development for society, even though not all people and businesses benefited to the same degree. Current efforts to digitalise the economy and boost efficiency must therefore continue in order to maximise the resulting contribution to economic growth and the well-being of the population.

### Encouraging the development of new production methods

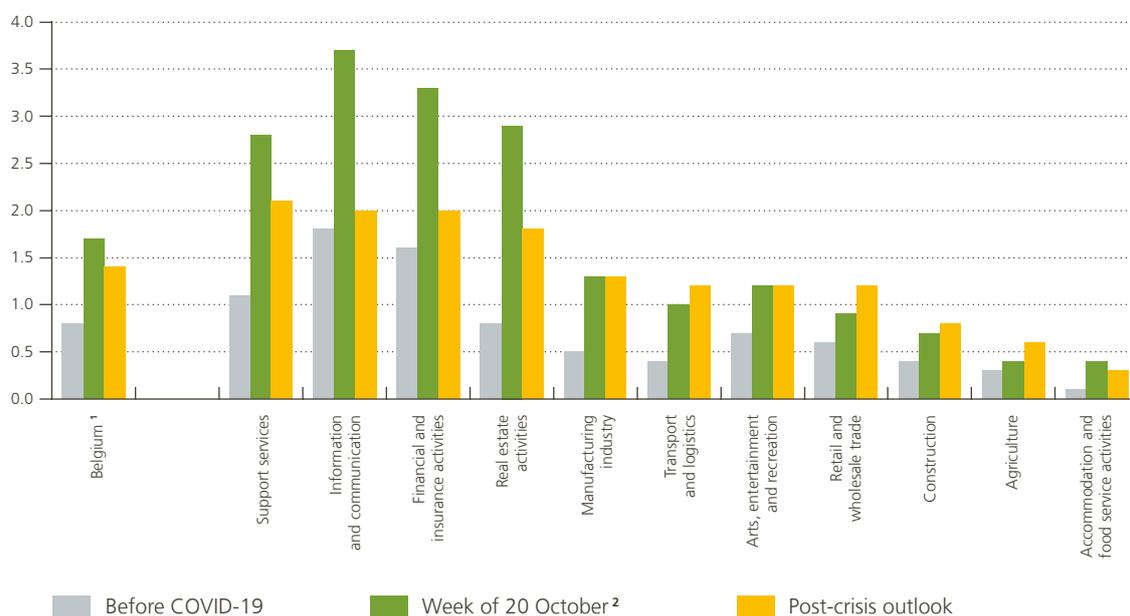
Apart from the contribution made during the COVID-19 crisis, the development of digital technologies continues a trend which has been in progress for many years. For some firms, these technologies bring new opportunities for using innovative production processes and methods of organisation. For others, the result will be the disappearance or radical restructuring of their activities. However, the expectation is that such technologies will become more important and more widespread in the various sectors and firms.

These technologies are highly diverse, and include robotics and automation, artificial intelligence (AI), 3D printing, cloud computing and the analysis of big data. Some of them are already widely used in a number of industrial sectors, including spheres not strictly connected with digital technology, such as biotechnology, the motor vehicle sector and logistics. But they are increasingly being integrated into services, with development of the exploitation of collected data, promotion via targeted advertising to online customers, and pricing tailored to the various customer profiles and segments. For the

Chart 90

Recourse to remote working could persist after the crisis

(number of remote working days per week)



Source: ERMG.

1 Weighted average per number of employees in private sector industries.

2 The average number of remote working days for the week beginning 20 October was calculated on the basis of the responses to the survey question concerning the organisation of labour. It relates to staff currently in work (i.e. excluding those temporarily laid off or absent) and assumes that partial remote working corresponds to two days per week.

financial sector, the introduction of these technologies also has a major impact on the provision of services and the operations of financial institutions (see section E of the Prudential regulation and supervision part).

These technologies offer many advantages. For example, their – sometimes combined – use may create opportunities for optimising not only production processes but also the internal organisation of companies. They also make it possible to offer consumers a wider choice by adding new types of goods and services to the range available. Ways of improving production processes include increased automation and robotisation of some tasks, perhaps combined with AI, making production chains faster, more precise and more consistent. 3D printing can

be used to produce highly personalised products to order, giving rise to new decentralised production methods plus scope for relocating some industrial activities and shortening value chains. The use of big data offers multiple ways of optimising production processes, distribution and data storage. Finally, cloud computing gives firms cheaper access to vast IT resources hosted on an external server.

Belgian firms are among the best performers in the EU in the use of these tools. In regard to the use of robots in industry, Belgium ranks behind Germany, Japan and – especially – South Korea but is on a par with the United States, France and the Netherlands. In 2019, Belgian firms also topped the EU rankings in the use of management software (Enterprise Resource Planning), they ranked second

Chart 91

Digital technologies are increasingly becoming an integral part of production processes in Belgium

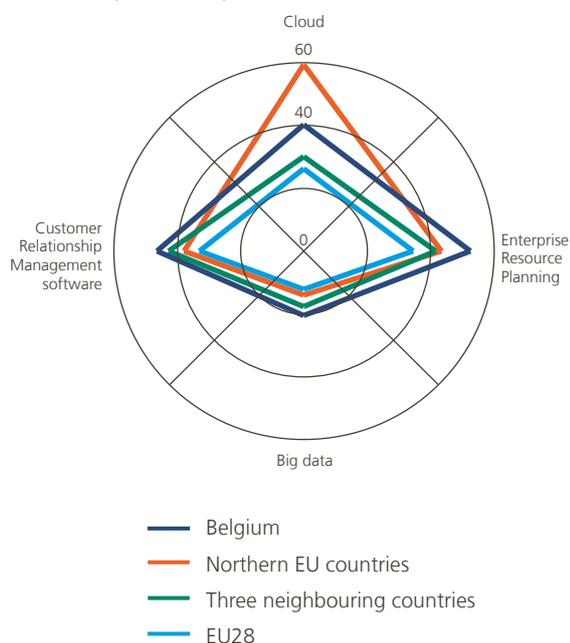
Robot density

(number of robots per 10 000 employees in manufacturing industry)



Firms using the technology mentioned

(in % of firms)



Sources: IFR, OECD.

in regard to Customer Relationship Management software, and third for the use of big data. In cloud computing, Belgium retains a strong position, above the European average and ahead of the neighbouring countries but behind the northern European countries. Generally speaking, the more sophisticated the technologies (such as the exploitation of big data), the lower the adoption rates. In addition, the degree to which the technologies are used also varies between firms, as they are often the preserve of large companies. Moreover, their use is frequently confined to a few of the production phases, losing some of the potential benefits of full implementation.

*Digitalisation must be accompanied by efforts to train the workforce and transform the way that businesses are operated and managed*

More widespread use of digital tools should therefore be capable of generating significant productivity gains. However, those gains will only be achieved if the digitalisation of businesses is accompanied by the training needed for workers to make full use of the tools, and a radical transformation of the ways in which businesses are operated and run. Numerous studies show that firms vary enormously in their ability to take advantage of digital technologies, depending on such factors as the skills of their workforce and the calibre of their management.

## Developing digital skills

Digital technology should continue to play a vital role in the economic recovery. As already mentioned, preparing the human capital for these new needs is crucial here. The public authorities must therefore address the continuing gaps concerning digital skills not only in the education system but also on the labour market. It is true that there have been federal and regional initiatives in recent years. At federal level, the Digital Belgium Skills Fund programme funds projects relating to the acquisition of digital skills. At regional level, the VDAB offers training in digital skills according to the needs of the labour market. In Wallonia, #WallCode Digital Wallonia targets the development of skills in coding, algorithms and robotics. In the Brussels-Capital Region, "Digitalcity.brussels" is a training and employment centre for digital occupations.

Despite these earlier projects and initiatives, the indicators do not yet show any substantial improvement in some respects. In Belgium, the proportion of graduates in information and communication technologies (ICT) and AI-related skills are both below the average for the EU and for the

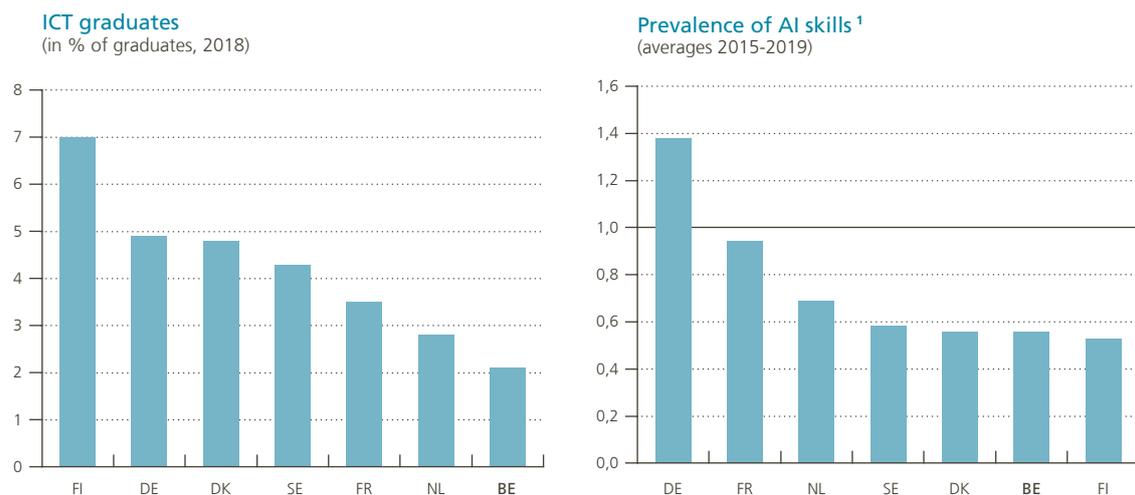
neighbouring countries. The continuation and improvement of the acquisition of digital skills must remain a priority. It is necessary to invest still more in the digital education of the younger generations, and in training people in work to prepare them for the future needs of society. That will provide the Belgian economy with adequate human capital and make it easier for people currently employed in obsolescent sectors or occupations to switch to emerging businesses.

## Adapting the rules for controlled digital development

Since digitalisation will probably continue to play a central role during the recovery, the rules must support the digital transformation of firms and innovative commercial models based on mixed, complementary strategies for online and offline sales. Just as the pandemic erupted, there were only a few major online sales platforms based in Belgium, whereas many others were operating from neighbouring countries. The boom in online shopping produced a surge in demand, with escalating sales via these large, foreign-based platforms.

### Chart 92

#### The efforts to fill in the gaps in digital skills must continue



Sources: Eurostat, OECD.

<sup>1</sup> Presence of AI-related skills in the top 50 most representative skills of LinkedIn profiles (e.g. machine learning, deep learning, natural language processing and image processing). The value indicates the ratio between the rate of dissemination of AI skills in a country and the average for the G20 countries (this benchmark is set at 1).



The Belgian regulations were initially stricter than elsewhere, and that may partly explain why those firms opted to set up their business in neighbouring countries. Although there has been some relaxation of the Belgian labour laws, e.g. in adjustments to the rules on night work, staggered working hours and Sunday working, that came at a late stage. Moreover, labour costs for working these non-standard hours are still higher in Belgium than in the neighbouring countries.

At the same time, a fair legal framework is needed for all players in the new online markets. Digital technologies are inclined to create a dominant position for a few major international players, to the detriment of smaller local operators. The authorities must therefore take care to ensure fair competition conditions enabling domestic firms to find their place and develop by similarly exploiting the potential of digital technology while also ensuring that Belgium is attractive to foreign investors.

### **Promoting confidence in digital technology**

While digital technology has become a vital tool for most economic stakeholders, some sections of the general public and some firms exhibit a degree of resistance to new technologies, possibly owing to a lack of confidence in them, as new cyber risks and the associated digital attacks have proliferated in recent years.

Governments must therefore provide the resources and an appropriate legal framework to guarantee that data can be exchanged and stored in a secure digital environment for citizens and businesses. Online data management also raises questions concerning privacy protection and the guaranteed anonymisation of personal data. At European level, the General Data Protection Regulation (GDPR) is a step forward. Yet, during the pandemic, some

people expressed mistrust concerning the use of the data collected by track & trace apps used to help manage the COVID-19 health crisis, and that slowed the distribution of those apps.

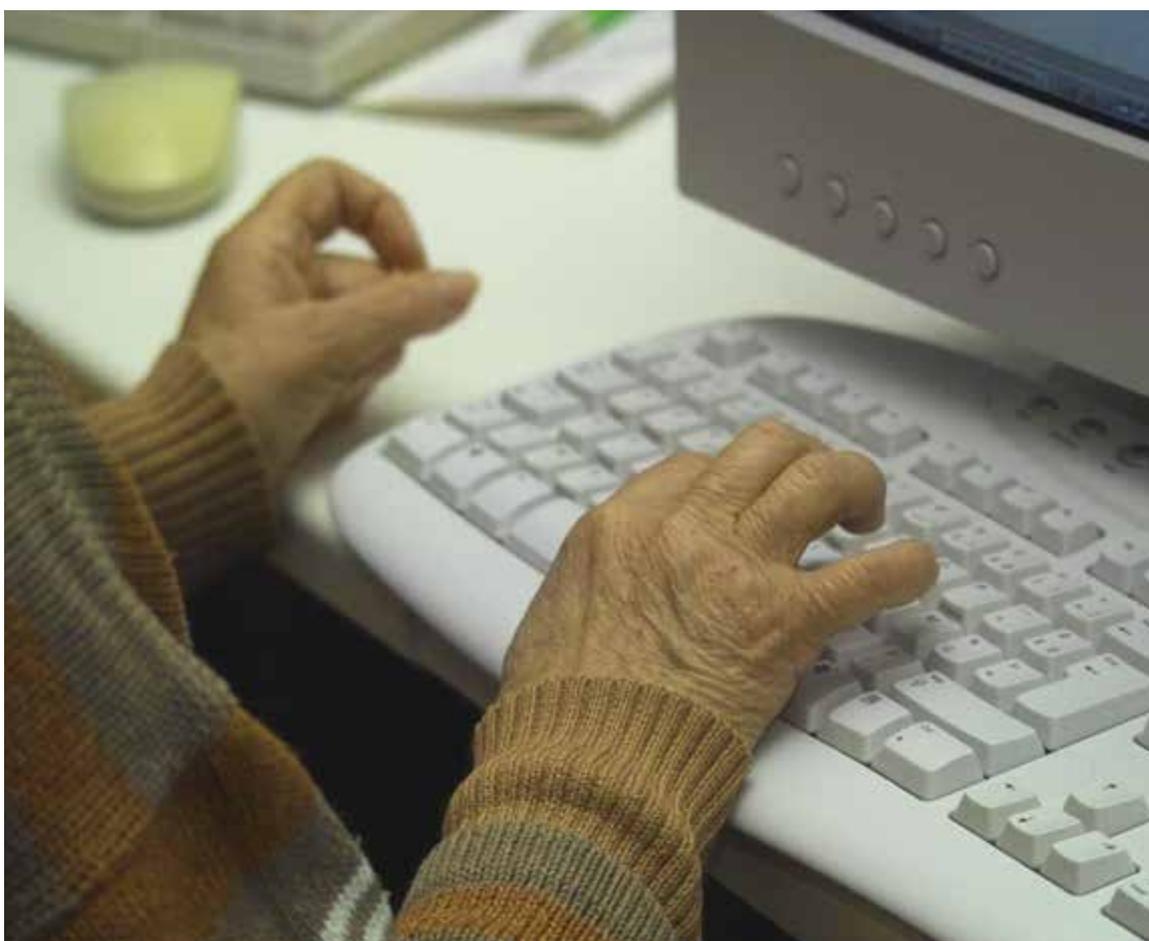
### Reducing the digital divide

As illustrated above and in chapter 6, the crisis highlighted the unequal access to IT tools within the Belgian population.

There is also a latent risk of a digital divide between firms, according to whether or not they exploit the potential of digital technology, as the gap between firms

*The digital divide affects both people and businesses*

operating at the cutting edge of technology and the rest has been growing wider for many years. During the crisis, there have been some practical initiatives aiming both to lessen the digital divide between firms and to promote short chains, such as the establishment of online sales platforms bringing together local goods producers and service providers, in order to increase their visibility. Apart from these local initiatives, recovery plans should encourage firms which are trailing behind in terms of technology to catch up by adopting these new technologies more promptly and by investing in R&D.



## 7.3 Full commitment to the ecological transition of the economy

Alongside the growing digitalisation of the economy, Belgium has for many years been addressing the challenge of the ecological or climate transition. In signing the 2015 Paris Climate Agreement, most countries including Belgium entered into significant commitments on limiting global warming to less than 2°C in relation to pre-industrial levels, by reducing greenhouse gas emissions, and especially the main one: CO<sub>2</sub>.

In 2011, the EU was already committed to permanently cutting greenhouse gas emissions by at least 80 % by 2050, compared to 1990. This long-term strategic vision was strengthened by the newly installed European Commission in its December 2019 European Green Deal and confirmed in the EU's "Next Generation EU" recovery plan. The European institutions want to make Europe the first climate-neutral continent by 2050, and that requires much ambition in the decade ahead. In December 2020, the European Council endorsed the binding target of a net reduction in greenhouse gas emissions in the EU of at least 55 % by 2030, compared to 1990. The federal government likewise embraced the goal of cutting Belgian emissions by 55 % by the year 2030 and becoming carbon neutral by 2050.

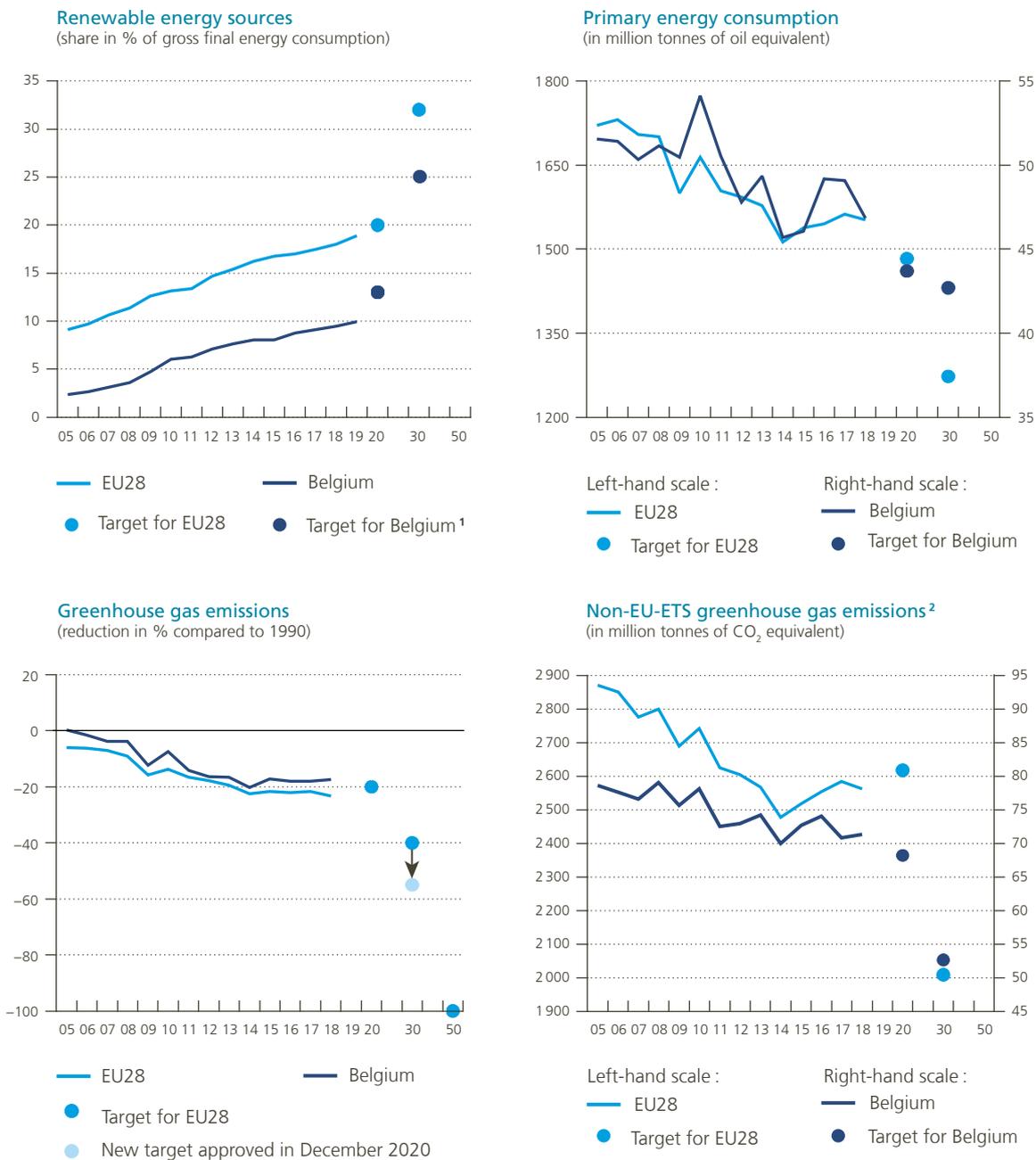
The efforts entailed are not trivial: the new European commitments on their own imply reducing future emissions by around 7.5 % per annum. By way of comparison, over the period from 2008 to 2018, emissions were cut by 1.8 % per annum on average in the EU28, with reductions of 1.1 % in Germany, 1.6 % in France and 1.7 % in Belgium<sup>1</sup>.

Even on the basis of the previous, less ambitious EU28 targets, meeting the Belgian commitments to cut greenhouse gas emissions by 35 % compared to 2005 in sectors not covered by the emissions trading system (EU ETS) still requires a considerable effort in view of the progress made so far. In regard to both the share of renewable energy sources in energy production and improvements in energy efficiency, Belgium falls well short of its targets. As for the share of renewables in final energy consumption, Belgium was asked to reach a figure of 25 % by 2030 in order to do its bit towards the collective European effort, but the projects and measures in the National Energy and Climate Plan 2021-2030 (NECP) will only achieve 17.5 %. As far as energy efficiency under the NECP is concerned, primary energy consumption in Belgium is meant to fall to 42.7 million tonnes of oil equivalent, which is 15 % down on the reference projections for 2030 and far short of the target of a 32.5 % reduction for the EU as a whole.

<sup>1</sup> See Burggraeve K., J. De Mulder and G. de Walque (2020), "Fighting global warming with carbon pricing: how it works, field experiments and elements for the Belgian economy", NBB, *Economic Review*, December.

Chart 93

**Ambitious commitments for Europe and Belgium**



Sources: EC, Eurostat, Belgian authorities (National Energy and Climate Plan).

<sup>1</sup> Target for Belgium defined on the basis of the efforts needed to achieve the EU target shared among the Member States.

<sup>2</sup> "Non-EU ETS" refers to emissions of sectors not covered by the European emissions trading system (EU ETS), namely agriculture, land transport, waste and buildings.

## Greenhouse gas emissions declined in 2020, but that had no lasting impact on the climate

The consequences of the COVID-19 crisis perfectly demonstrate the heavy economic costs of reducing emissions without any ecological transition: it is estimated that, at global level, the cumulative CO<sub>2</sub> emissions over the first eleven months of 2020 were 5.3% lower than in the corresponding period of 2019. In Belgium in 2020, according to the July 2020 economic outlook produced by the Federal Planning Bureau (FPB), greenhouse gas emissions were 13% down against the 2019 figure. That reduction was due to an unprecedented decline in economic activity and it will most likely be very largely or even totally negated when the economy recovers. It is therefore essentially temporary. Although an end to the health crisis may be in sight, the absence of an ecological transition would have some lasting effects, permanently weakening businesses and the population. Considerable efforts are

therefore necessary to break the link between emissions and economic activity and pave the way to a resilient economy in the long term.

In Belgium, according to the FPB, structural changes in energy consumption in favour of less polluting products and renewable energy will lead to a downward trend in emissions by 2025 for activities in general, other than those relating to electricity generation, which will increase owing to the closure of the first two nuclear power stations in 2022 and 2023 and the last ones in 2025. Thus, in 2025, Belgium's total emissions will only be 5% lower than in 2019, which is 23% below the 1990 reference emissions. That will leave only five years to achieve the target of a 55% reduction endorsed by the federal government.

While the COVID-19 crisis has temporarily reduced greenhouse gas emissions, it has also affected the financing capacity of households and firms, curtailing or halting their investment plans. Furthermore, the pandemic has brought greater uncertainty. In practice, that is likely to slow the replacement of equipment, the energy upgrading of buildings and the general deployment of less carbon-intensive technologies. The low prices of fossil fuels also make this type of investment less attractive, and that is prejudicial to the structural transformation of the energy system.

Table 17

### Greenhouse gas emissions in Belgium by sectors generating those emissions

(in million tonnes of CO<sub>2</sub> equivalent<sup>1</sup>)

	2019	2020	2021	2025
Energy	85.5	75.9	80.1	84.8
Of which fuel combustion by:				
Energy sector	23.5	17.9	19.5	26.2
Industry <sup>2</sup>	15.8	14.7	15.7	13.9
Transport	25.5	23.2	24.4	24.8
Industrial processes <sup>3</sup>	21.3	15.6	17.2	17.1
Agriculture	9.9	9.8	9.8	9.5
Waste	1.3	1.2	1.2	1.0
<b>Total</b>	<b>118.1</b>	<b>102.6</b>	<b>108.2</b>	<b>112.3</b>

Source: FPB.

1 The greenhouse gases attributable to human activity and taken into account are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O) and fluorinated gases (hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulphur hexafluoride (SF<sub>6</sub>)). These emissions are expressed in the same CO<sub>2</sub>-equivalent units based on the level of their global warming potential which expresses the warming effect of the greenhouse gases over 100 years compared to the effect of an equivalent quantity of CO<sub>2</sub>.

2 Emissions linked to the combustion of fuel.

3 Emissions linked to non-energy uses.

## It is necessary to break the link between greenhouse gas emissions and economic growth

In 2018, greenhouse gas emissions of households and firms in Belgium came to around 117 million tonnes of CO<sub>2</sub> equivalent. Since 2000, those emissions have been cut by 25%. There was a steady reduction up to 2014, after which emissions stabilised. Three-quarters of the emissions come from business activities. However, it is businesses that have cut their emissions the most since 2000 (-29%). The improvements vary from one activity to another: in industry and market services, emissions were down by more than 30%, compared to barely 10% in agriculture, while in construction emissions increased. Household emissions declined by only 10% over the same period. The reason for this smaller reduction concerns transport, which generated more emissions owing

to the increased number of vehicles and heavier traffic. In terms of emissions per energy source, there has been a fall in emissions from coal combustion, with the switch from solid fuel to gas for electricity production and in industry.

While the initial cuts in greenhouse gas emissions were probably the easiest to achieve, the yet more ambitious commitments and targets for the decades ahead require the adoption of strong measures in many spheres and will entail significant costs. Consumers and firms will need to make new investments and adapt their consumption or production methods to this new situation. The costs will inevitably be spread very unevenly across the population and the economic fabric and will vary according to the way in which the government opts to achieve these goals.

**Table 18**

**Greenhouse gas emissions in Belgium by activity and use**

(million tonnes of CO<sub>2</sub> equivalent unless otherwise stated)

	Greenhouse gas emissions in 2018	Break-down	Change 2000-2018
		(in %)	
<b>Total emissions</b>	117.4	100.0	-25.4
<b>Businesses</b>	90.0	76.7	-29.2
Agriculture	12.6	10.8	-10.2
Industry	54.9	46.8	-33.3
Construction	2.4	2.0	7.3
Market services	16.4	14.0	-33.8
Non-market services	3.7	3.2	1.7
<b>Households</b>	27.3	23.3	-9.7
Heating/cooling	13.1	11.2	-27.7
Transport	11.8	10.1	32.4
Other	2.4	2.0	-25.4

Source: Eurostat.



## The transition needs an appropriate carbon pricing system

The Belgian and European authorities have a wide range of instruments for addressing the climate challenge. From a technological angle, government policy can contribute in various ways, by means of support for R&D and basic research, public investment in infrastructure, and technical requirements. The road to carbon neutrality will involve an extensive array of technologies, but in some cases their development and availability are still highly uncertain. The government must not heighten that uncertainty but, on the contrary, should endeavour to establish a favourable framework for the various investment needed. The roll-out of low-carbon technologies will also depend on the price assigned to carbon.

Economists increasingly agree that government action will be most effective if carbon is priced so that stakeholders take account of the environmental impact of their consumption and investment choices. The resulting adjustment of

*Steering the climate transition via a clear price signal is the most effective approach in economic terms*

relative prices would lay the foundations for more balanced competition between fossil fuels and non-carbon energy. Setting a price per tonne of CO<sub>2</sub> emissions and announcing a credible route towards higher prices over time would give a clear and direct signal to businesses and consumers concerning the need to adapt their behaviour in order to avoid high costs in the future. That would enable them to draw up investment plans in full knowledge of the price to be paid.

The EU emissions trading programme (EU ETS) is one example of indirect pricing. The Commission chose this approach in 2005, since it has no fiscal powers. The distribution of a small number of emission allowances that are tradable on a secondary market translates into a relative scarcity which leads to a market price. The maximum emissions are also to be reduced

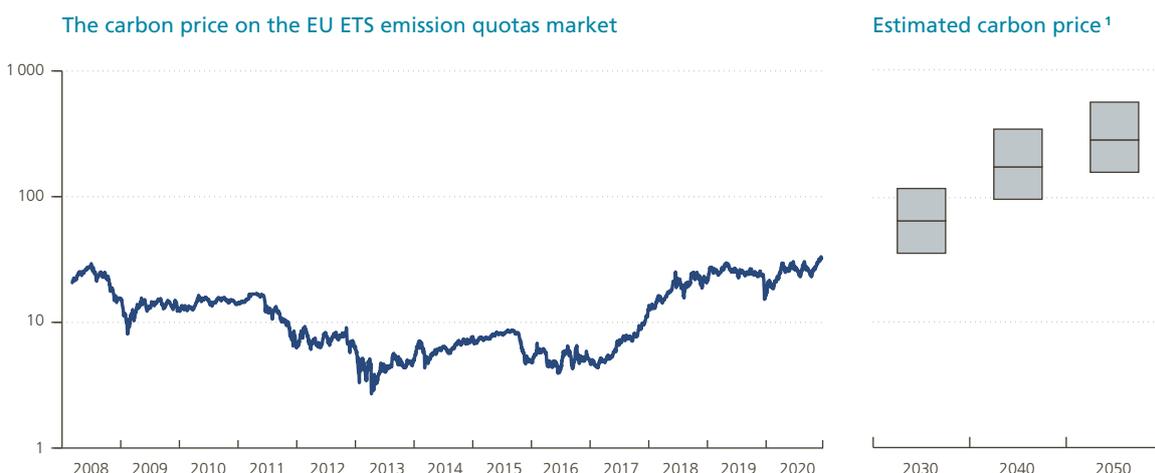
each year from 2013 by 1.74% of the annual average volume of quotas placed on the market between 2008 and 2012.

However, the system only covers the emissions of the most polluting firms and does not involve households or smaller businesses.

### Chart 94

#### The carbon price is volatile and not high enough to bring emissions down

(logarithmic scale, in € per tonne of CO<sub>2</sub>)



Sources: IPCC, Refinitiv.

1 Interquartile intervals of the distribution of real carbon prices compatible with the commitments under the Paris Climate Agreement and based on 374 model simulations obtained from the IPCC database.

Moreover, any cyclical or structural reduction in demand for allowances affects the carbon price – which acts as an adjustment variable – and distorts the relative price mechanism.

In practice, the resulting carbon price has proved highly volatile and, for the time being, is well below the level needed to achieve a substantial reduction in emissions. It can be raised by adjusting the supply of emission quotas as was done with the implementation of the market stability reserve at the beginning of 2019 and by raising the rate of annual reductions in the emissions cap to 2.2% from 2021. But more ambitious climate targets for 2030 and 2050 – e.g. in terms of energy efficiency and renewable energy – also imply reappraisal of the current calibration of this system: as it stands, it will not lead to attainment of the goal of net zero emissions by 2050. On the contrary, if prices are fixed via a carbon pricing system, the uncertainty shifts from prices to volumes, i.e. it is no longer certain when the target level of emissions will be achieved.

Conversely, a direct tax on fossil fuels would be easy to administer and could be applied to emissions more widely, including those from dispersed sources such as transport and heating. The amount of that tax and adjustments to it would be predetermined by the government and would depend not on a market but on medium-term emission targets.

### **Nevertheless, that must be accompanied by appropriate redistribution measures**

Although carbon pricing makes it possible to schedule the efforts and deployment of technologies in an economically efficient way, the principle still attracts criticism since it affects economic activity and living standards. The resulting higher prices of fossil fuels could be detrimental to the purchasing power of households, especially the least well-off, and could damage business competitiveness, especially if the tax is not harmonised at international level. The government must therefore introduce accompanying measures to limit the impact on the most vulnerable agents – whether households or businesses – while avoiding any reduction in the incentive to invest in equipment that consumes less energy or generates lower emissions. A redistribution system funded by

carbon tax revenues would partly safeguard the purchasing power of the poorest households and the competitiveness of vulnerable sectors. Government support for green investment would also facilitate the adoption of alternative solutions to fossil fuels.

Alongside a carbon tax at European or Belgian level, it would be desirable to introduce a fiscal instrument to protect domestic producers against unfair competition from foreign rivals not subject to similar taxation in their own country. To ensure fair competition between domestic and foreign players and avert the relocation of activities to regions less committed to combating global warming, the introduction of carbon pricing at domestic level should be accompanied by a specific tax on imports from countries where that pricing does not apply. This is an argument for introducing a carbon price at European level, as EU member countries cannot individually impose import taxes and in any case such taxes are prohibited on imports of goods and services from other Member States.

### **A regulatory framework offering sufficient incentives is also required**

In addition to carbon pricing, regulatory instruments such as the setting of technical standards, energy efficiency programmes or investment subsidies also form part of the arsenal of measures for addressing the climate challenge. For instance, the EU climate strategy sets binding national targets for greenhouse gas emissions not covered by the EU ETS and for renewable energy sources, and indicative targets for energy efficiency. Since these targets apply to dispersed emission sources, national regulatory mechanisms were deployed.

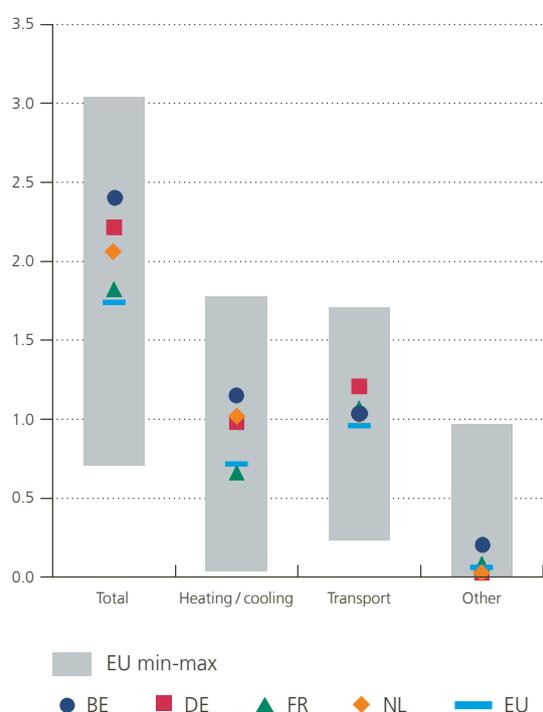
In terms of per capita emissions, Belgian households generate much more pollution than the average for European citizens, particularly via heating and cooling. Per capita emissions from transport in Belgium are close to the European average. Nevertheless, comparison with the best performances in the EU shows that there is still scope to reduce household emissions regardless of the source.

In order to reduce transport-related emissions, the government uses various instruments to encourage changes that make the vehicle stock greener and more energy-efficient, but also to persuade users to

Chart 95

**There is scope to reduce the ecological footprint of individuals**

(emissions in tonnes of CO<sub>2</sub> equivalent per capita)



Source: Eurostat.

change their behaviour. The regional authorities have numerous means of action at their disposal. They develop measures relating to land use planning and improvements to transport infrastructures with a view to promoting a shift in favour of public transport or “soft mobility”. Car sharing and smart mobility apps enabling people to combine all modes of transport, both public and private, are encouraged. The criteria for granting permits for the operation of transport services (taxis and buses) are adjusted to encourage the use of less polluting means of transport, while more generally, taxes on vehicle registration and use are revised and modulated according to the environmental performance of the vehicles. Adjustment of the tax framework is intended to encourage citizens to make more appropriate choices. In that regard, the federal government’s ambition is for all new company vehicles to be carbon neutral by 2026 and for workers not

**The transition must be accompanied by additional measures alongside the carbon tax**

enjoying that benefit to receive a mobility budget to encourage sustainable transport alternatives.

Since 80 % of the domestic stock of buildings was constructed before the definition of the current energy standards, improving the energy efficiency of the existing buildings presents another major challenge, especially as the efforts already made focused on the easiest and most profitable refurbishments. Stepping up renovation of the social housing sector and the stock of buildings in general presents funding problems because of the high cost involved for households and public finances<sup>1</sup>. The cost of upgrading the energy efficiency of the Walloon and Flemish housing stock in line with the standards for 2050 – a housing stock with an A average rating for the Walloon regulations on the energy efficiency of buildings (energy score of 85 kWh/m<sup>2</sup> per annum) and alignment of the Flemish housing stock with the standards of the *Renovatiepact 2050* (energy score of 100 kWh/m<sup>2</sup> per annum) – is estimated at around € 120 billion and € 103-110 billion respectively. For the Brussels-Capital Region, a figure of around € 29 billion has been announced. For the private housing stock, a recent study suggests that the cost of thorough renovation of a typical house, with an average budget of € 60 000, will take between 38 and 64 years to recoup, depending on the movement in carbon and energy prices. This means that between 40 % and 51 % of owners would be unable to finance this type of work or recover the cost on the basis of the aid currently available<sup>2</sup>.

Compared to setting a carbon price, such a normative approach directly influences behaviour, but its overall cost-benefit ratio is difficult to ascertain. If this route is chosen, an assessment of the costs and benefits (in terms of the volume of emissions avoided) should be conducted first in order to rank the measures in order of priority. From an operational point of view, the ease of implementing and monitoring these measures must also be taken into account.

1 The condition of the buildings and the need for improvements also have implications for financial institutions. See Van Tendeloo B. (2020), “Climate-change-related transition risk associated with real estate exposures in the Belgian financial sector”, NBB, *Financial Stability Report*, pp. 141-150.  
 2 See Aelbrecht J. and S. Hamels (2020), “De financiële barrière voor klimaat- en comfortrenovaties”.

The establishment of an encouraging regulatory framework, e.g. in the form of subsidies, also suffers from the problem of giving an appropriate price signal while supporting the desired developments. In that regard, experience of schemes supporting the development of photovoltaic installations shows that this approach may have windfall effects and cause the derailment of public expenditure. Although the imposition of technical standards may facilitate the deployment of some solutions which are already sufficiently mature by targeting specific options, it may also freeze the technological choices and thus impede the emergence of new technologies. More generally, it is crucial to ensure consistency between the instruments used in the form of taxation, regulation and support, in view of the aim of cutting greenhouse gas emissions.

### Adapting the electricity system is vital to the transition

In regard to the energy system, wider electrification of energy use is the preferred option for rendering activities carbon-free so long as electricity can be generated with less impact on the environment. There are various ways of achieving that, such as the use of renewables instead of fossil fuels and the development of storage facilities or demand-side

### *Transformation of the electricity system requires substantial changes in energy production, transport and consumption*

management. However, this transformation of the electricity system implies much more ambition and speed in adapting energy production, transport and consumption patterns. It is also important to ensure security of power supply in order to safeguard the attractiveness of the economy and the comfort and convenience of households.

In Belgium, these changes are to take place during the phasing out of nuclear energy by 2022-2025. That was confirmed in the government agreement, but with the option of reviewing this position if it affects security of supply, to be assessed for the last time at the end of 2021. The decommissioning of around 5.9 GW of nuclear capacity represents a major change in the electricity mix: in 2020, around 40 % of electricity was produced by nuclear energy, so replacing that with alternative sources of supply presents a challenge. It is ambitious to rely solely on the development of renewables by that date, especially as Belgium failed to meet its target of renewable energy accounting for 13 % of gross final consumption in 2020. Current and planned renewable energy projects correspond to 11.7 % of gross final consumption and are therefore insufficient to achieve the target at purely national level. Since the country has a deficit of around 2 000 GWh, respecting that commitment will entail buying surplus power generated from renewable sources from other Member States.



To ensure security of supply in this context, the government is counting on introducing a capacity remuneration mechanism (CRM) to encourage investment in adjustable natural gas power stations. Since market conditions and the profitability situation are not very conducive to the maintenance of existing capacity or investment in new facilities, the CRM makes it possible to pay remuneration for the maintenance of production capacity – as well as for the energy produced – to suppliers selected on the basis of auctions. These power stations will safeguard the transition until the development of sufficient renewables and flexible resources (demand-side management or storage capacity). However, the timescale for implementing the mechanism is tight: the Commission is conducting a detailed investigation into whether the CRM complies with EU rules on state aid, while the first auction is scheduled for 31 October 2021 for delivery in the year 2025. The implementation of this procedure and connection of the power stations must not be left to chance, otherwise the country could face supply problems.

More generally, the challenge for the electricity system is to introduce market mechanisms which can encourage the necessary investment and which correspond to the energy transition goals. The increasing flexibility required for integrating renewables into the electricity network implies that those who provide the storage and demand management solutions must also be able to play an active part in the market. The government must ensure that the markets operate in a way that enables the various stakeholders to secure a fair return on their investment, and that there are no barriers to the advent of new business models and new players.

### **Innovation and government intervention must benefit the transition**

The energy transition is not confined solely to adjustments to the energy mix. It also requires the government to act in the social, economic and technological spheres. According to the World Economic Forum, Belgium is generally better prepared for the energy transition than the average in the EU. However, the country lags behind the three neighbouring countries and the northern countries in the various dimensions identified as permitting an

effective transition. It is at a particular disadvantage owing to the small proportion of jobs in low-carbon industries and a skills level less suited to the needs. Countries with a large stock of human capital can gain the most from the beneficial effects of R&D on low-carbon technologies because, even though some economic activities are already carbon-free, there is still a need for further development in technologies, infrastructure and equipment.

Deployment of innovations in low-emission technologies remains a priority for achieving the climate goals. A framework favourable to innovation is therefore also needed in this sphere. Anticipating developments by investing at an early stage in innovative technologies and equipment and promoting their commercialisation and the development of markets, will create scope for businesses operating in those fields to develop new activities. According to the International Energy Agency, government expenditure in R&D on low-carbon energy fields – expressed as a percentage of GDP – was almost 4.5 times higher in Belgium than the EU28 average over the period 2014-2018; but it was heavily concentrated on nuclear power.

The initiatives must come from both the private sector, for mobilisation of the resources to fund the green transition, and from the government, in regard to the greening of budgets and tax systems, carbon pricing and the abolition of subsidies for fossil fuels. In Belgium, as the responsibilities are shared among various levels of power, a consistent approach and efficient coordination are essential to make best use of the potential synergies in spheres where there are often no administrative boundaries. Similarly, it is important to ensure clear communication on the strategy adopted and to offer a stable framework. That reduces uncertainty and gives investors some guidelines; more generally, it enables all the economic agents to make timely preparations and adjust their behaviour.

The climate transition will inevitably entail adjustments to the economic fabric. Carbon neutrality does actually require indeed radical structural changes for businesses and workers in numerous sectors. Carbon-intensive businesses will face impediments to their development and a fall in demand for their products. Conversely, low-carbon activities will be encouraged. To be acceptable to society, the transition also requires an efficient

Chart 96

### Belgium has some advantages for making a success of the environmental transition

(ranking from 0 to 100, 100 being the top score, 2020)



Source: WEF.

reallocation of workers from sectors or businesses whose technology is unsuited to carbon-free production towards more eco-friendly sectors and businesses. As always in the case of labour reallocation, a labour market that functions smoothly can only facilitate the necessary transition from the jobs affected to these new occupations. It is estimated that, during the transition to a carbon-free economy, government expenditure on renewable energy and energy efficiency matching the amount of the current subsidies for the extraction and processing of fossil fuels would create roughly three times as many direct and indirect jobs. Even if such a multiplier cannot persist in the long term, it should facilitate the reallocation of labour necessary for the transition. In addition, there is a need to identify the skills required by the low-carbon technologies and adapt the available training accordingly, in order to optimise the preparations and support for the retraining of the workers concerned and, more generally, to ensure that a well-trained workforce is available.

*Encourage the efficient reallocation of workers so that they can tackle these radical structural changes*

While it is feasible to achieve a significant reduction in emissions while preserving competitiveness and purchasing power to some extent, uncertainties remain. For one thing, some technologies are still only at a very early development stage and their full potential remains highly questionable. Being riskier, they are also more difficult to finance. Furthermore, their use sometimes depends on the availability of scarce resources and commodities the exploitation of which also has an impact on the environment.

The ecological transition concerns all economic players in multiple spheres (energy, transport, tax, innovation, digital technology, etc.), and requires numerous means of action which sometimes have conflicting effects. Furthermore, in a complex fiscal context it is extremely important for policies to target the aspects where they can have the greatest effect and to be socially equitable so that all citizens recognise the changes as feasible, fair and appropriate.



## 7.4 Creating the conditions for a sustainable economic recovery

Belgium's long-term growth potential had already been eroded over the preceding two decades, with productivity gains declining more than elsewhere. This in itself represented a major structural challenge, even before the eruption of the COVID-19 crisis. The current environmental and digital transitions compound the difficulties caused by that weak potential growth because they exacerbate the technological divide between firms and necessitate significant reallocations of resources.

In addition, the COVID-19 crisis may have further impaired potential growth and caused permanent GDP losses. At the very least, it is also liable to trigger multiple shifts in activities between sectors or between firms in the same branch of activity. During the crisis, for example, some firms temporarily modified their production processes to meet the increased demand for equipment for the health sector. Others, notably restaurants, started providing a take-away service. Similarly, the more frequent recourse to remote working could cause shifts in demand for certain goods and services away from the large urban centres where economic activity was concentrated and towards the areas where the workers live. This reorganisation and changed behaviour will be accompanied by the disappearance or decline of some activities in favour of others, or the emergence of new activities.

During the recovery period now in prospect thanks to the roll-out of the vaccines, the transformation of the organisation and structure of the economic fabric should therefore continue. Yet, the crisis has heightened uncertainty over the scale and speed of the ongoing technological transformations, disrupting the investment plans of businesses and households.

To pave the way to dynamic, sustainable growth it is necessary to fulfil a number of mutually complementary conditions. They concern the smooth reallocation of resources and a sound, innovation structure supported by appropriate regulations. In addition, both public and private investment – particularly in infrastructure – are essential to remove certain impediments to productivity and to lay the foundations for the recovery.

### **Business demography must become more dynamic**

Business demography contributes to the dynamism of an economy and seems to be a key factor in productivity gains and hence in long-term growth. The ease with which businesses can be set up and closed down is a decisive factor in the success of the transformation processes in an economy, e.g. by facilitating the spread of new technologies.

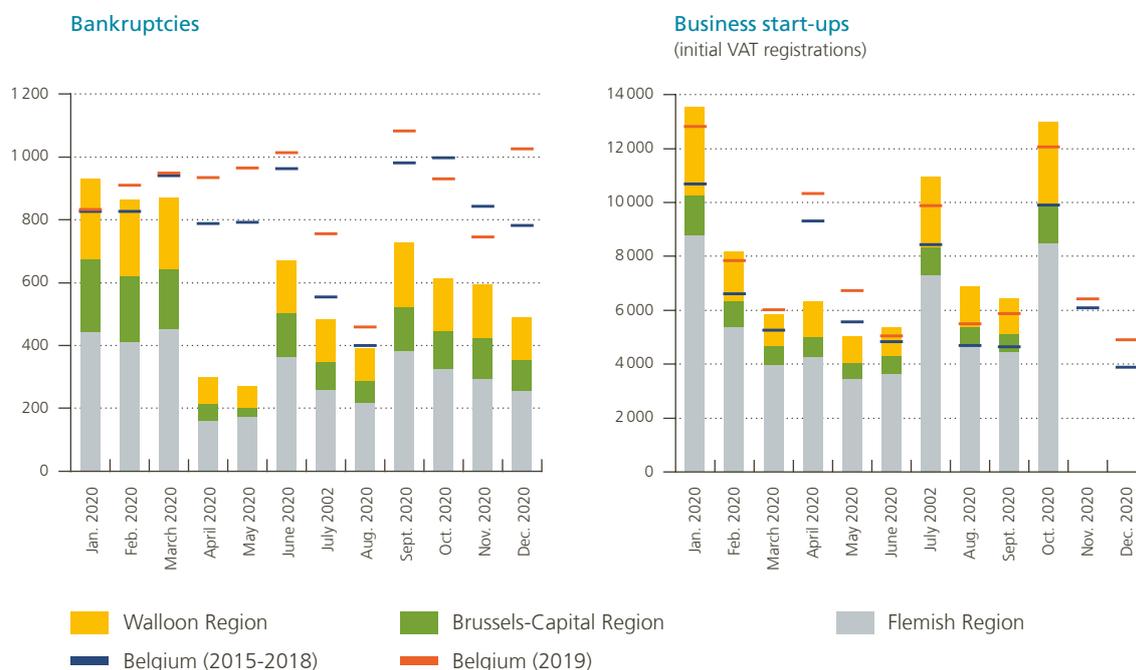
For some years now, the business landscape in Belgium has displayed relative inertia. Compared to the other EU Member States, Belgium had structurally low birth and death rates for businesses. However, over the past five years, there have been encouraging signs of an upward trend in these ratios, suggesting that the economic fabric has started to become more dynamic.

The COVID-19 crisis has affected the business demography and will continue to do so for some time to come. As stated in chapter 5, various support measures for businesses and self-employed workers and the introduction of a moratorium on insolvencies averted a spate of business closures in 2020. In contrast, the rate of new business start-ups remained high, and broadly similar to that in 2019.

Chart 97

**In 2020, the number of bankruptcies was abnormally low while the number of start-ups remained robust**

(absolute figures)



Source: Statbel.

If the first lockdown period is excluded, that rate was actually above the average recorded over the period 2015-2018.

If this more positive new business dynamic is structurally maintained in the years ahead, that will help to revitalise the economic fabric and will make up for the business closures to come. It is reasonable to expect that, as in the case of previous crises, a sequence of business closures will after a time bring profound changes in the structure and organisation of the domestic production network.

It is also necessary to be cautious about the growth potential of the new entities created just before the COVID-19 outbreak or during the crisis. While it is generally the case that young businesses are more likely to close, the closure rate is likely to be even higher for firms which began operating during the past two years. These new entities, generally microbusinesses or small firms, launched their activities under difficult conditions auguring possible

problems in their development, so that speedier refinancing may be needed. Furthermore, these very new businesses did not necessarily qualify for the various forms of government aid, making them yet more vulnerable.

Another point worth noting is that the rise in business start-ups in recent years has been driven by the expansion of one-man businesses. Since 2009, and particularly after 2015, the contribution of this category to business start-ups has increased, reaching almost 60% of the total in 2018, according to the latest annual data published by Graydon. The recent growth in the number of businesses created therefore appears to be due mainly to small individual entities. Changes to the law and the tax rules relating to company statutes, such as the new student-entrepreneur status and the law on the sharing economy introduced in 2017, have enabled more people to launch their business and pursue their primary or secondary occupation on a self-employed basis. These changes partly coincided with

the development of the platform economy (e.g. Uber, Ubereats, Deliveroo). Some of the operators registering for VAT for the first time could therefore reflect the rise of these new, more precarious forms of working relationship.

### **Innovation efforts and the spread of technology must be encouraged**

Other factors will also influence the future growth of businesses. For instance, substantial investment in R&D could well be needed to continue adapting the production processes and the products and services offered in line with these new requirements. While Belgium has for some years been regarded as a highly innovative EU country, just behind some of the northern European countries, the R&D efforts of Belgian firms are concentrated on a few sectors and businesses.

*Belgium is an innovative country but the efforts are concentrated on a few sectors and businesses*

Patents, which are the practical manifestation of innovation efforts, confirm these findings. Belgium is in a strong position as a patent producer since more than 2 000 Belgian patents are filed each year on the European market, and the number has been rising steadily in recent years. Although Belgium has managed to maintain a good position, the specialised fields covered by Belgian patents are confined to a few branches of activity, including the pharmaceuticals sector. That specialisation has doubtless increased with the race to find a vaccine against COVID-19. Despite the greater uncertainty caused by the coronavirus crisis, firms must not mortgage their future growth by scaling down their research efforts. On the contrary, support should be provided for firms' innovation efforts and as many firms as possible should be encouraged to adopt the new technologies. However, the innovative fabric of an economy is not confined to businesses. The Belgian universities' contribution to innovation work and patent production is equally remarkable. In comparison with other European countries, their share in the filing of patents is one of the highest (alongside Ireland), ahead of the three main neighbouring countries. In addition, academics in Belgium are more inclined than those in the latter countries to

enter into partnerships between universities and to collaborate with private companies<sup>1</sup>.

More specifically in the digital sphere, the investment required does not only concern the purchase of digital technologies: substantial intangible investment is also necessary, e.g. in order to improve the digital expertise of the workforce or to acquire the necessary software or databases. More generally, in the course of their digitalisation process, firms will also need to modify their business model and adjust their costs and internal structure.

Although part of the effort in terms of adaptability, flexibility and improving the skills of the workforce is down to the firms, the government will obviously also have to play a very active supporting role.

In particular, specific training efforts will be needed to enhance the ability of workers and job-seekers to use these new technologies.

Without that, there is a danger of encouraging a dichotomy on the labour market and rejection of the necessary technological developments.

### **The regulations must not excessively hinder these transformations**

The regulatory framework can also foster the smooth reallocation of resources, although of course it must not be judged solely in terms of that aim. The primary purpose of regulation is to ensure essential protection for consumers and workers and to fulfil general objectives such as environmental protection or certain basic rights. However, the regulatory framework must not excessively hamper the development of activities that meet new needs. For public authorities, determining which activities to encourage and which to restrain is a delicate exercise. But by establishing rules – e.g. on urban development or the environment – and production standards, the regulations create incentives and lead naturally to the reallocation of resources. In so doing, as already stated, they can facilitate the implementation of some technological solutions enabling certain environmental goals to be achieved.

<sup>1</sup> See Cheliout S. (2020), "Belgium's innovative capacity seen through the lens of patent data", NBB, *Economic Review*, December.



According to the Eurobarometer survey on SMEs' perception of the business environment, conducted just before the pandemic erupted, Belgian firms consider that regulatory barriers and the administrative burden are the primary difficulties that they face. While the same applies to European SMEs, Belgian firms still find these aspects a little more

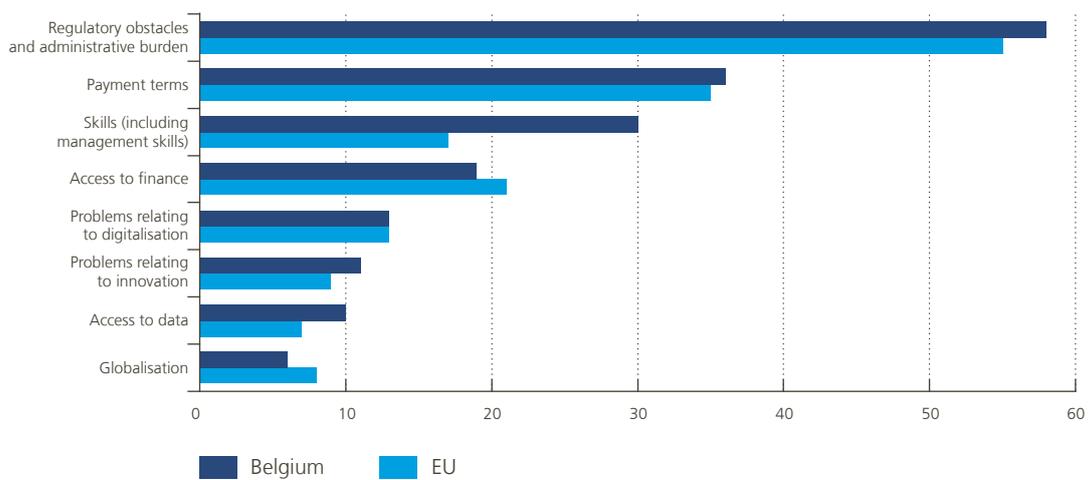
burdensome. These problems are nothing new, but they create rigidities obstructing the reallocation of resources.

In regard to the operation of the markets, particular attention should be paid to both entry barriers and impediments to the cessation or restructuring of

**Chart 98**

**Regulatory obstacles and the administrative burden threaten to impede the resumption of business activities**

(in % of SMEs<sup>1</sup>)



Source: EC – Flash Eurobarometer.

<sup>1</sup> Belgian SMEs were surveyed between 19 February and 4 March 2020.

business activities. Correctly formulated rules governing access to and exit from a market can create an environment favourable to growth via the smoother reallocation of resources.

In Belgium, insolvency regimes were made easier in 2019. The aim was to facilitate liquidation and to reduce the stigma associated with business failures by offering a second chance. At this stage, it is still too soon for a full assessment of the effects of this reform: although insolvency regimes were simplified, the measures to support businesses and the moratorium introduced during the crisis have so far limited its outcome.

As regards entry barriers, access to certain occupations – architecture and real estate activities, and to a lesser extent accountancy – is more strictly regulated than the average in the neighbouring countries. If such differences are not justified by other societal aims, they could lead to economic costs and unnecessary rigidities, not only in those sectors but also further down the chain. In addition, the onerous nature of certain obligations concerning urban development and the environment may hinder entrepreneurial initiatives. For companies, the procedures relating to the purchase of property or the transfer of ownership and the processing of building permits are among the aspects least

favourable to the business environment, because the number of procedures, and the cost and time involved in administrative formalities are relatively greater in Belgium. For example, some obligations could be modified to make it easier for buildings originally intended for certain activities to be converted for other purposes (such as mixed commercial and residential use).

It should be noted that certain regulatory powers now come under the regional authorities, creating a need to encourage consultation between the federated entities in this respect, in order to avoid differences in the rules contributing to the fragmentation of the domestic market.

### The recovery plans must make the economy more resilient, lower carbon and more digitalised

The efforts to boost the dynamism and adaptability of firms described in this chapter can only be fully effective if they are supported by good-quality infrastructure. In Belgium, that need was identified long ago. Even before the coronavirus crisis, greater efforts were already necessary following years of relative under-investment by the government in numerous spheres.

Chart 99

#### Procedures for the purchase of property or transfer of ownership are stricter for firms in Belgium (2019)



Source: World Bank (Doing Business 2020).

The governments at the various levels of power in Belgium recognised these needs, and they made public investment one of the spearheads of their strategies when they took office in 2019 and in 2020. At federal level, that is one aspect of the recovery and investment plan announced in the government agreement. The various Regions have also established their own recovery plans or are preparing to do so. In Flanders, the *Vlaamse veerkracht* (Flemish Resilience) programme is investing €4.3 billion in digital transformation and sustainable development, schools and education, and in research infrastructures and roads (Antwerp ring). In Wallonia, the Get Up Wallonia plan aims at restoring and restructuring activities once the emergency phase of the crisis is over. Investment and public procurement are among the priorities for helping to restructure the Walloon economic fabric. Finally, the Brussels-Capital Region has also drawn up the main outline of a recovery plan which, as well as covering urgent expenditure and investment during the pandemic (€ 120 million), provides for continuation of its strategic investments, particularly in public transport and the upgrading of road infrastructure.

The instruments used by the EU to support the Member States in their recovery efforts following the COVID-19 crisis, particularly the Recovery and Resilience Facility (RRF), were presented in chapter 4. They could be a useful catalyst for determining the priority investments in Belgium and executing them efficiently.

The resources made available under this facility will be relatively limited, as the allocation key grants Belgium subsidies amounting to a maximum of € 5.9 billion (1.2 % of GDP) between 2021 and the end of 2026 at the latest, but these transfers may be supplemented by loans under the RRF of up to 6.8 % of gross national income in 2019, representing aid of up to € 32.8 billion.

The national Recovery and Resilience Plan (RRP), which must first be approved by the EC in order to gain access to this funding, must be defined in an integrated and coherent manner, requiring effective coordination between the various levels of power. This plan will also need to meet a range of criteria: it must give details on all the public investment and structural reforms addressing the challenges identified in the recommendations made by the EU Council

*The design of the national Recovery and Resilience Plan must be integrated and coherent*

under the European Semester and must be in line with the key points of its National Energy & Climate Plan. The RRP will also need to be green and digital, since 37 % and 20 % respectively of the total planned expenditure must be used for the ecological and digital transitions. This constraint on the choice of priorities for Belgian public investment could foster greater efficiency in the projects selected. And efficiency is vital in view of the scope in the budget, which will continue to be limited despite the low interest rates for the government and the temporary, exceptional relaxation of the European fiscal framework. The measures chosen must target the spheres which create sustainable value added and achieve the maximum effect.

The federal government and the federated entities have approved a draft RRP. It forms the basis of the final version to be submitted to the EC by the end of April 2021. It focuses on five strategic aspects (climate, sustainability and innovation; digital transformation; mobility and public works; society and community; productivity). Among the five key themes, public investment is planned in strategic areas meeting the goals of both the Belgian and the European authorities. At federal level, this concerns major projects promoting sustainable development (production and storage of flexible energy from renewable sources, energy upgrades and insulation of buildings, clean technologies), digitalisation (connectivity) and mobility. In this regard, there will be specific support for rail transport and intermodality: sustainable, smart and accessible transport. Finally, the shortcomings highlighted by the health crisis are a priority, and there are plans for investment in health care.

But the recovery cannot be achieved solely by government investment, especially as public finances need to return to a sustainable course. Large-scale private investment is also needed to ensure a robust recovery. The government must therefore take care to send clear signals to investors and minimise the uncertainty. That will open the way for firms to develop their projects. Apart from the likely multiplier effects of public investment on private sector activity, the State can stimulate private investment by inviting the private sector to join in public-private partnerships in numerous spheres, or via investment vehicles and financing instruments suited to the risk profiles of private investment projects.

## Beyond-GDP indicators

By the Law of 14 March 2014 supplementing the Law of 21 December 1994 containing social and miscellaneous provisions, the Parliament instructed the Federal Planning Bureau (FPB) to devise a set of indicators measuring quality of life, human development, social progress and economic sustainability. Since 2016, the FPB and the National Accounts Institute (NAI) have published an annual report on Beyond-GDP Indicators, setting out the analyses and methodological considerations governing the selection of the individual indicators relating to the various themes connected with well-being – of which there were 69 in the February 2021 edition – and the development of composite well-being indicators. These composite indicators concern each of the three dimensions of sustainable development: the well-being of the current generation in Belgium (“Here and now”), that of future generations (“Later”) and the impact of Belgian society on the well-being of the population of other countries (“Elsewhere”). In accordance with the law, a summary of the results is published in the Bank’s Annual Report.

### Composite indicators

So far, composite indicators have been devised for the dimensions “Here and now” and “Later”, and assessed for the period up to 2019, i.e. before the eruption of the health crisis. An estimate of the impact of the 2020 crisis on well-being is also being produced on the basis of the results of first surveys.

#### *The current $W_{HN}$ indicator reached its lowest point in 2019 ...*

The  $W_{HN}$  indicator gauges the average current well-being in Belgium. It displayed a significant downward trend over the period 2005-2019. Following a sharp deterioration in the wake of the global financial crisis, the  $W_{HN}$  continued to fall until 2015. In the ensuing three years the situation improved, but the indicator did not regain the level reached before the financial crisis: instead, it showed a further clear deterioration in 2019. For that year, the health indicator – the principal determinant of well-being in Belgium – was at its lowest. While some of the underlying data have yet to be confirmed, several surveys point to a deterioration in the population’s physical and mental health. Still on the subject of health, the indicator concerning long-term incapacity for work is also at a low point, as is the social support indicator, which had previously been relatively stable. Conversely, the recovery of the socio-economic indicators partly makes up for these trends, with a gradual fall in the number of persons unemployed or suffering severe material deprivation and fewer young people dropping out of education.

Since major inequalities in well-being were identified in the Belgian population, eleven composite indicators were devised in order to measure trends in current well-being according to age, gender and income. These show that the decline in well-being is statistically significant among men (hit harder by the financial crisis than women), the 16-24 and 50-64 age groups, and the middle class (third income quintile). Conversely, the over-64 age group recorded increased well-being between 2005 and 2019.

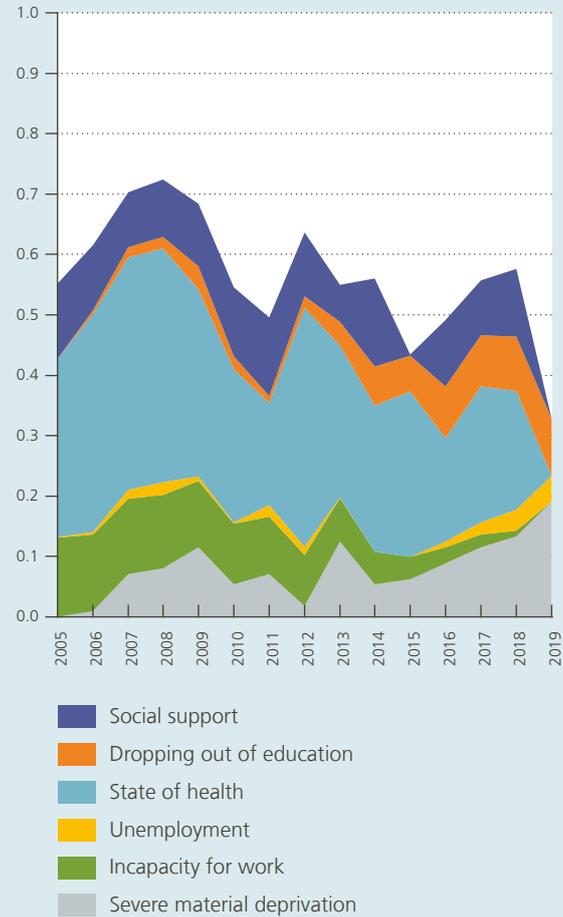
#### *... and a sharp deterioration is becoming apparent for 2020*

Against the backdrop of the COVID-19 crisis, it is even more crucial to try to maintain inclusive, sustainable growth in view of the manifold detrimental effects of the pandemic on the physical and



### Breakdown of the "Here and now" (W<sub>HN</sub>) well-being indicator<sup>1</sup> – 2005-2019

(scale of 0 to 1)



Source: FPB.

<sup>1</sup> An increase in the indicator shows an improvement in well-being. 0 corresponds to a situation in which the six indicators were simultaneously at their minimum level in the 2005-2019 period, whereas 1 corresponds to a situation in which they were all at their maximum level over that same period.

mental health and well-being of individuals, taking account of the impact of the lockdowns and the decline in activity on employment and incomes, and the effect of the social distancing measures on social relationships. All these developments directly affect the main determinants of the composite well-being indicator W<sub>HN</sub>. Some of them were already very low in 2019. According to the FPB's estimate, a marked deterioration in the average well-being of the Belgian population is therefore expected in 2020,



far worse than that following the financial crisis. The  $W_{HN}$  therefore looks set to fall in 2020 to the lowest level ever recorded.

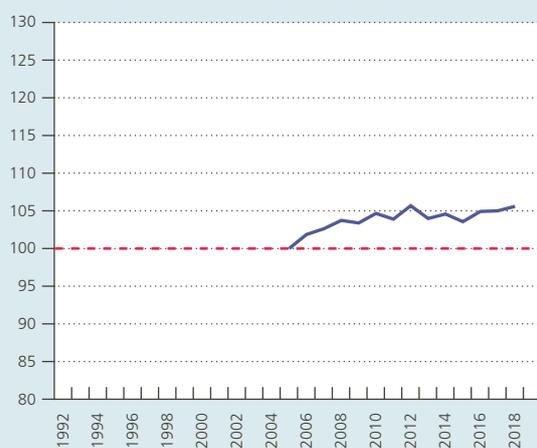
### ***The deterioration of the environmental capital is damaging the well-being of future generations***

A society's sustainable development implies that the lifestyle of the current generation is not at the expense of the ability of future generations to meet their own needs. To gauge this future well-being

### **Indicators measuring the sustainability of well-being**

(100 = baseline year<sup>1</sup>)

**Human capital**



**Social capital**



**Environmental capital**



**Economic capital**



Source: FPB.

1 The indicators have been standardised at 100 for the baseline year coinciding with the first year for which all components of the composite indicator are available.



(“Later” dimension) the FPB uses an approach based on capital stocks, without prejudging how future generations may define the concept of well-being. This approach involves measuring changes in the stocks of resources necessary to create well-being for future generations and considers that a society is developing sustainably if it ensures that future generations can enjoy well-being at least equivalent to the current level. In the conceptual framework used in this report, development is also sustainable if it at least maintains the capital stocks at the same time.

The term “human capital” covers individuals’ health and the qualifications and skills which contribute to employability and improvements in labour incomes. Since 2005, there has been a general increase in human capital, thanks to the growing number of higher education graduates, especially since 2015, while the sufficient literacy indicator has deteriorated since 2012. “Social capital” concerns the quality of relationships between people, at the level of both individuals and the community. The composite indicator of social capital has remained fairly stable. Since 2010, there has been a decline in the individual relationship indicators, whereas in the case of confidence in general and confidence in institutions, the 2018 levels are considerably higher than in 2005. In regard to natural resources (air, water and land) and all living species (biodiversity) that make up the “environmental capital”, the four indicators have been falling for several decades. The “economic capital” indicator, covering all economic assets, has risen significantly since 1995, even though it diminished slightly in the years following the crisis; both the indicator of the physical capital stock and the knowledge indicator contributed to this increase, albeit in very different proportions (the stock of knowledge represents only about 5% of economic capital). On the basis of these composite indicators, and taking account of the worsening environmental capital indicator, the FPB report indicates that Belgium’s current development is not sustainable.

Moreover, current and future well-being are interconnected and the deterioration in the current state of health could be detrimental to healthy life expectancy and hence to human capital, especially as it seems to be particularly pronounced in the case of the working-age population. The deterioration in the literacy of schoolchildren is also worrying here.

### **Individual indicators**

Since the 2019 report, the individual indicators have been based on 17 sustainable development goals (SDGs). The trend in those indicators is discussed with reference to the SDGs and corresponding targets at Belgian, European and global level. In this edition, in order to improve the appraisal of the state of health of the Belgian population, two indicators concerning mental health have been added to the list (alongside the one concerning depression), namely the suicide rate and the psychological stress situation.

### ***Focus on Belgians’ mental health***

Apart from the fact that health is a decisive factor in well-being, mental health is also an integral part of SDG 3 (health and well-being of all people at all ages) and has a cross-impact on other SDGs. The focus on this aspect and the importance of following it up have become particularly prominent in the current context of the health crisis and its repercussions on individuals in terms of their social relationships, relationships at work, their prospects and their confidence in the future.



An initial analysis of the situation prior to the health crisis shows that, after a slight improvement between 1997 and 2004, the number of people suffering from psychological stress or depression has risen particularly sharply since 2008. The rates are systematically higher among young adults, women, and low-income groups. The suicide figures which complete the assessment have fallen overall but remain among the highest in the EU. Men are two and a half times more likely to commit suicide than women.

Another way of assessing the mental health context in Belgium concerns the trend in the numbers receiving invalidity benefits because they are no longer able to work owing to illness or an accident (excluding occupational diseases and industrial accidents). The proportion of long-term benefit claimants grew from 6.5 % in 2005 to 11.1 % in 2019, with mental illness as the cause of long-term incapacity for work for 36 % of claimants in 2019. The OECD estimates the cost of these mental health problems at 4.1 % of European GDP and 5.1 % of Belgian GDP in 2015; it includes the indirect costs due to lower productivity and the lower employment rate of the people concerned (2.3 % of GDP in Belgium) and the direct costs involved in expenditure on replacement incomes charged to social security, and treatment of the health conditions (1.3 % and 1.4 % respectively).

### ***Trend in individual indicators***

Of the 69 beyond-GDP indicators listed, 43 concern the “Here and now” dimension. There is no clear trend in any particular direction:

- education (SDG 4), gender equality (SDG 5), decent work and sustainable growth (SDG 8) and peace and justice (SDG 16) are progressing towards their objectives;
- in contrast, poverty (SDG 1) exhibits an adverse trend;
- health indicators (SDG 3) present a divergent picture: indicators relating to life expectancy and premature death due to chronic illness and fatal road accidents are improving and reflect the fact that people are living longer. Conversely, the indicators obtained from surveys of individuals’ perception of their state of health are deteriorating. The decline since 2008 in the two mental health indicators – depression and psychological stress – also points to this deterioration in the general state of health;
- there are also divergent trends in the indicators relating to inequality (SDG 10) and cities (SDG 11), while no significant trend is apparent in the case of food security (SDG 2), energy (SDG 7) and climate (SDG 13).

Comparison of these indicators with their European equivalents, where possible, or failing that, with those of the three neighbouring countries is predominantly favourable to Belgium: 18 of the 31 indicators concerned show that the situation is better in Belgium.

The “Later” dimension comprises 34 indicators and focuses on Belgians’ ability to maintain or enhance their well-being in the future. The indicators mainly relate to the environmental SDGs concerning food (SDG 2), health (SDG 3), education (SDG 4), water (SDG 6), energy (SDG 7), infrastructure (SDG 9), consumption and production patterns (SDG 12), climate (SDG 13), life below water and on land (SDG 14 and 15) and the resources to implement the “Global sustainable development partnership” (SDG 17). Half of these indicators are progressing towards their objective. Two which are not are healthy life expectancy (SDG 3), which has been relatively stable for ten years, and the one concerning wild bird



populations (SDG 15) – one of the few biological diversity indicators available over a long period – which is moving away from its objective.

Compared to the situation in Europe, 12 of the 23 indicators for the “Later” dimension are more favourable in Belgium, more so in the case of the social and societal indicators than for the environmental indicators.

The five indicators for the “Elsewhere” dimension assess the impact of Belgian society on the ability of other countries to develop and on the well-being of their population. They concern the consumption of natural resources (energy (SDG 7) and commodities (SDG 12)), greenhouse gas emissions (SDG 13) and official development aid (SDG 17). They are all tending in the right direction.

Belgium’s domestic consumption of commodities and government development aid compare favourably with the picture for the EU and the three neighbouring countries.

### ***Breakdown of the indicators***

Of the 69 indicators used, 40 can be divided into sub-groups of the population according to various relevant criteria, namely gender, income, level of education and age. A breakdown according to the three Regions is given for 39 indicators but without any analysis.

The results are as follows:

- For the breakdown by gender (32 indicators), many differences are becoming smaller, although there are still some substantial disparities and some which are increasing. This edition gives a more detailed account of the differences between men and women. For women, the labour market situation has improved, but to the detriment of the work-life balance and with increased long-term incapacity. The health indicators which have an impact on working life are not so good as they are for men, and women are more likely to be confronted with poverty. Although they are less exposed to chronic illness, are involved in fewer road accidents and smoke less, these indicators have hardly changed whereas in the case of men they have improved. In regard to SDG 5 (gender equality), the income gap between men and women – considerably smaller in Belgium than the European average – has narrowed. The proportion of female members of Parliament has risen and is slightly greater than the European figure. Conversely, a growing proportion of women have given up work for family reasons, whereas for men that percentage is very low and has remained stable.
- According to the breakdown by income (17 indicators), the situation is more favourable for the higher income groups, which is hardly surprising.
- The breakdown by level of education (12 indicators) unsurprisingly confirms that conditions are more favourable for persons with a better level of education. Persons with no more than a lower secondary education certificate are at a particular disadvantage. In general, the differences are tending to widen, notably in regard to the risk of poverty and severe material deprivation.
- The breakdown by age (15 indicators) reveals differences of level (health, employment rate, incapacity for work, unemployment, etc.) but without showing any general trend. In regard to the risk of poverty, the situation of the over-64 age group improved up to 2015, before slowly deteriorating to the same level as for the other age groups. The employment rate is rising steadily, particularly for the labour force over the age of 55. Conversely, long-term incapacity for work has increased in both the 25-49 age group and the 50-64 age group.



In accordance with its mission, the FPB constantly updates the list of individual indicators selected, adapting it in line with the progress of knowledge and debates in society. Depending on availability, the database covers the period 1990-2019 and can be consulted at [www.indicators.be](http://www.indicators.be). The FPB will also continue its research on development of a composite indicator for the “Elsewhere” dimension. In addition, it will endeavour to complete the set of indicators, particularly as regards the carbon footprint indicator proposed in 2018 and the trend in biodiversity, while continuing to strive for convergence with the sustainable development indicators. In the research into the effects of the coronavirus crisis, specific attention will focus on mental health and poverty.