

What does it take to “level up” places? Evidence from international experience

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What does it take to “level up” places?

Evidence from international experience

Industrial Strategy Council



Research Paper

Abigail Taylor, Skye Sampson and
Anna Romaniuk

January 2021

About the Industrial Strategy Council

The Industrial Strategy Council (the Council) is an independent non-statutory advisory group established in November 2018. It is tasked with providing impartial and expert evaluation of the government’s progress in delivering the aims of the Industrial Strategy. Its membership is comprised of leading men and women from business, academia and civil society.

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This work was overseen by Council members Emma Bridgewater, Kate Barker, Christine Gaskell and Rotha Johnston. The Industrial Strategy Council would like to thank the research and secretariat team for their contribution to this research paper. The Industrial Strategy Council would also like to extend their thanks to all the international interviewees and experts who contributed to this research paper.

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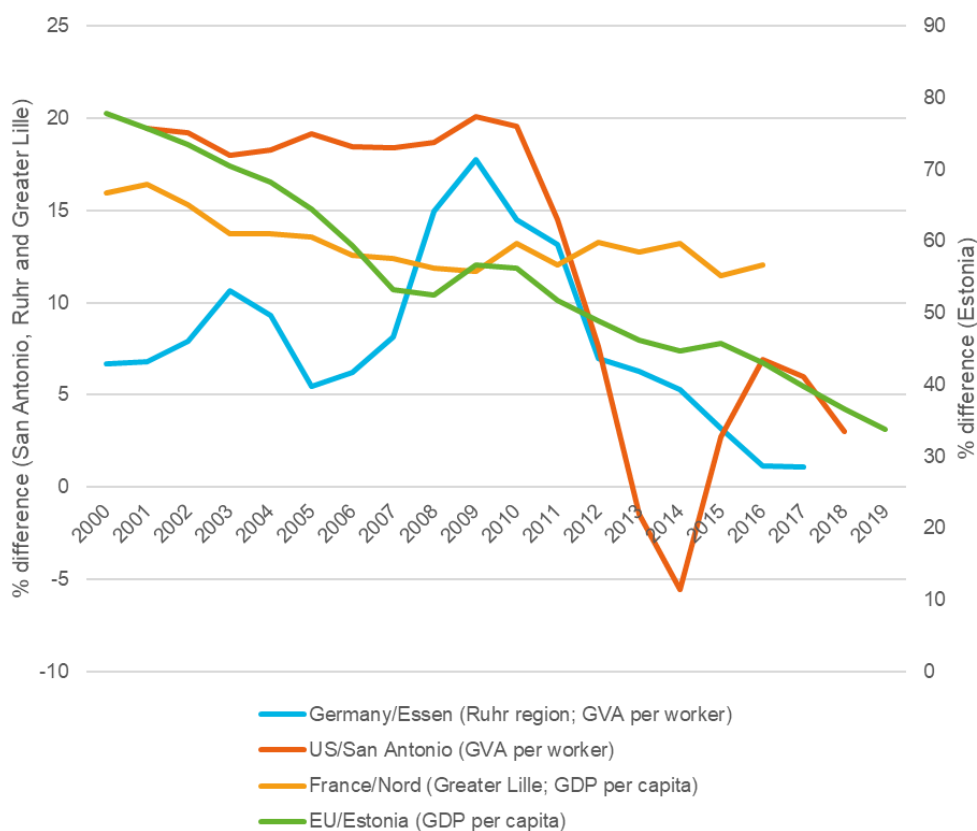
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Executive Summary

This report considers international examples of effective place-based interventions that have led to “levelling up” and explores what can be learnt from how these places have designed and implemented place-based policies. Four international case study areas (Estonia, San Antonio, Greater Lille, and the Ruhr region) were selected based on their success in levelling up local economies and closing the gap with the national economy (Figure 1). The case studies provide a range of experience across different governance contexts. Evidence reviews of the academic literature, policy documents and analysis of economic data formed the basis of this research. Where evidence gaps were identified, we conducted interviews with relevant academic experts and policy officials.

Figure 1: Decrease in GVA/GDP percentage gap between regions and countries in the case study places



Source: OECD and Eurostat databases

The four case studies show that levelling up of “left-behind” and struggling places is possible. A thematic analysis of evidence has identified that “the foundations” in Figure

2 have all had a significant role in driving local economic growth in the case study places. These foundations are cross-cutting themes, identified as factors associated with effective economic growth policies in all case study areas.

Scale and longevity of investments, collaboration, making areas attractive places to live, the role of universities and innovation, digital and transport infrastructure, skills and supporting future sectors are also interconnected. Collaboration is vital to securing long-term investment for key infrastructure projects or skills programmes.

The case studies suggest it is necessary to have all of these elements in place to deliver levelling up, but further exploration is needed to establish which foundations are most important in different contexts. Future work as part of the Council’s Places Project will explore which indicators (e.g. skills, infrastructure and foreign investment) are correlated most strongly with local economic growth, particularly in the UK context. While the framework needs further testing, we encourage policy makers to use it to identify priorities for levelling up.

Implications for levelling up

- **Vision and leadership** – international experience shows that levelling-up of places is possible, but it requires a clear vision, strong local leadership and appropriate powers.
- **Longevity and scale** – the case studies demonstrate that levelling up requires time and cross-party consensus on key policies. Places with a good degree of fiscal independence tend to be more able to deliver long-term projects.
- **People in places** – inter-group inequalities are more challenging to address than inter-regional inequalities. Policy makers should carefully consider potential effects of displacement and gentrification when planning levelling up policies. Engaging with residents can help to mitigate against this risk.
- **No size fits all and no single policy is enough** – this research indicates that there is no single “silver bullet” policy and place-specific strategies are needed to effectively drive local economic growth in different contexts.

In relation to the UK, this research highlights the need for Local Industrial Strategies to be finalised and supported by long-term investment. A clear goal of Local Industrial Strategies should be to drive productivity inclusively to avoid displacement of local residents. This report also emphasises a need for greater empowerment of places including wide-ranging devolution.

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Figure 2: Foundations for levelling up

SCALE AND LONGEVITY OF INVESTMENTS	COLLABORATION	ATTRACTIVE PLACE TO LIVE	UNIVERSITIES AND INNOVATION	TRANSPORT AND DIGITAL INFRASTRUCTURE	SKILLS AND FUTURE SECTORS
<p>Sustained and large-scale public investment that led to an increase in private investment. Economic policy direction has remained constant regardless of local or national election results.</p>	<p>Constructive relationships between central and local government, businesses and residents have allowed identification of needed interventions and effective implementation.</p>	<p>Culture and tourism have played a key role in levelling-up not only through direct revenue, but also by re-shaping the image of places. High living standards and affordability can attract skilled residents.</p>	<p>Collaboration between places and universities can improve policy and drive local economic growth. Universities attract federal and private-sector funding and drive innovation.</p>	<p>Evidence suggests that investing in transport and digital infrastructure can attract new investment and provide new employment opportunities.</p>	<p>Successful places built on their past strengths and focus on continual sectoral adaptation to build for the future. The success of these places was linked to investing in skills and re-training of the existing workforce.</p>
Examples					
<p>Estonia</p> <p>Received approximately €100 billion in business, infrastructure and human capital EU funding (2010-2019). Digital specialisation has been the main sectoral focus for over 20 years.</p>	<p>Greater Lille</p> <p>Strong regional leaders have been particularly important in securing flagship projects for the area such as the Eurostar train station despite the additional costs to the French government.</p>	<p>San Antonio</p> <p>The city has become a major tourist destination with around 30 million visitors each year, and its recreational improvements attracted young professionals.</p>	<p>Ruhr Region</p> <p>The establishment of universities contributed to an increase in SMEs. The region is now the most dense German region in terms of the number of students and professors.</p>	<p>Greater Lille</p> <p>Eurostar supported Lille to position itself as a strategic link between London, Paris, Brussels and Germany, attracting new investment. The underground increased internal connectivity.</p>	<p>Ruhr Region</p> <p>Moved away from unprofitable coal mining and now is home to some of the largest clean energy corporations.</p>

Introduction

Previous publications by the Industrial Strategy Council have sought to assess the success of the Industrial Strategy in achieving its aim of helping local areas across the UK to become more prosperous.¹ Our research to date has shown that differences in productivity across UK regions are large, in absolute terms and by international standards, and are longstanding.² This emphasised a need for levelling up of under-performing regions. Our estimates showed that levelling up of places classified as “falling behind” to the UK average would lead to aggregate UK productivity being around 3% higher. Our report into how local economic growth policies in the UK are developed identified a need for greater certainty over future policy and funding and improved central-local collaboration.³

This report explores what can be learned from selected other countries in how they design and implement place-based policies. Developing and implementing effective place-based policies is crucial to ensuring effective economic and social recovery from the impact of the Covid-19 pandemic.⁴ Improved place-based policies will be required to address challenges related to political and economic uncertainty created by spatially blind policies.⁵

This paper considers four international examples of places that have made significant progress towards levelling up. Whilst there is not an agreed definition of what “levelling up” means, the starting point for this research was progress in economic output relative to a sensible benchmark. In practise, the four case study areas saw some improvements in other socio-economic outcomes.

The paper focused on policies and factors which have underpinned successful levelling up in each case study area. It is designed to enable policymakers in the UK to learn not only from what went well in other regions internationally in relation to levelling up, but also from barriers encountered as they have sought to address regional economic and social inequalities.

The four places examined in the report are (Figure 3 shows key socio-economic information for each place):

¹ Industrial Strategy Council Places Insight Projects available at: <https://industrialstrategyCouncil.org/places-insight-project>

² Industrial Strategy Council (2020a). *UK Regional Productivity Differences: An Evidence Review*. Retrieved from: <https://industrialstrategyCouncil.org/uk-regional-productivity-differences-evidence-review>

³ Industrial Strategy Council (2020b). *Understanding the policy-making processes behind local growth strategies in England*. Retrieved from: <https://industrialstrategyCouncil.org/understanding-policy-making-processes-behind-local-growth-strategies-england>

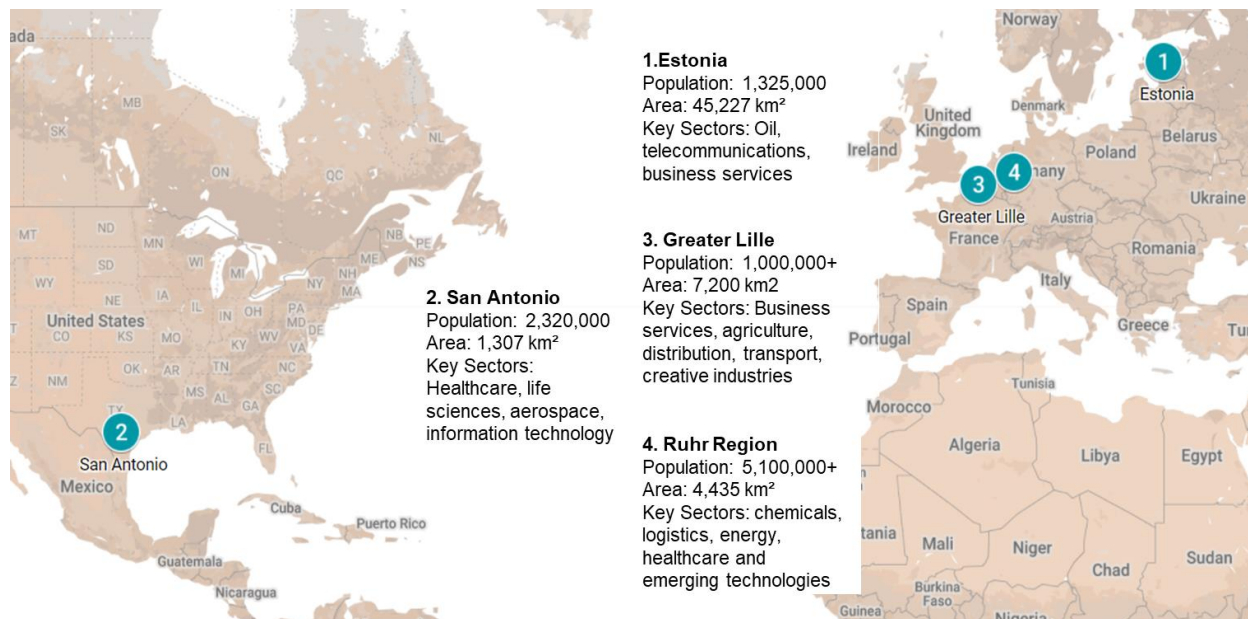
⁴ Beer, A., McKenzie, F., Blažek, J., Sotarauta, M., and Ayres, A. (2020). *Every Place Matters: towards effective place-based policy*. Regional Studies Association

⁵ Rodríguez-Pose, A. (2018). The revenge of the places that don't matter (and what to do about it). *Cambridge Journal of the Regions. Economy and Society*, 11(1), pp.189-209.

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- Estonia (relative to the EU)
- San Antonio, Texas (relative to the US)
- Greater Lille (relative to France)
- Ruhr Region (relative to Germany).

Figure 3: Map of case study areas and key socio-economic information



The case study areas were consciously chosen to represent different forms of governance:

- Estonia is a small and centralised country. This report focuses on **the whole of Estonia** rather than particular regions due to Estonia’s small population. Estonia’s population is almost seven times smaller than the population of Greater London (1.3 million versus 8.9 million).
- **San Antonio is an example of a city within a federal system.** Unlike many other states, Texas allows municipalities including San Antonio to have powers such as levying taxes.
- **Greater Lille** (Métropole Européenne de Lille) is an **intercommunal structure**, composed of a network of big cities and towns with Lille being the largest city. It forms part of the region of Hauts-de-France. Traditionally, France has a **centralised model of governance**.
- The **Ruhr Region** is a **polycentric** region made up of fifty-three cities and four counties (*Landkreise*) (each made up of smaller towns). It is located **in a federal state** (North Rhine-Westphalia).

Research background

Few previous studies have explicitly examined experiences in international regions that have successfully levelled up. Existing studies emphasise several factors that have been important in city growth. Innovation, investment, human capital, economic structure, connectivity, quality of life and the structures of decision-making have been identified as key drivers of competitive performance in urban areas.⁶

Recently, Polèse identified ten factors crucial to whether cities succeed or fail.⁷ These fall into four categories. Institutions - national and state institutions have to be cooperative, conscientious and conducive to the creation of wealth. People – human capital with the right skills and endurance. Centrality - characterised by well-functioning central institutions and connectivity. The final element was pure luck or chance. Polèse also emphasised the importance of nations to the success of cities because successful city economies rely upon a “functioning “national” state”. Beer and colleagues argued that effective local policies have an explicit focus on place specificity.⁸ They also found that engagement with local institutions, “robust, sustainable and transparent” governance, long-term commitment and targeted support for disadvantaged groups are crucial to the long-term success of places.

Methodology

This report involved conducting an **evidence review** of the academic and grey literature into existing evidence on the effective development of place-based interventions. An **inventory of key socio-economic indicators** (population size, geography, key sectors, regional GDP and unemployment) for each case study area was then compiled to examine changes over the last three decades. Finally, a small number of interviews with academic experts and policy officials were conducted for each case study area to fill in evidence gaps.

This study does not compare the four case study places in terms of their success as it is important to recognise that their pre-leveilling-up issues were different and thus policies designed to address them were place-specific.

⁶ Parkinson, M., Champion, T., Simmie, J., Turok, I., Crookston, M., Katz, B., and Park, A., (2006). *State of the English Cities. A Research Study*. Volume 1. Office of the Deputy Prime Minister.

⁷ Polèse, M. (2020). *The Wealth of Poverty and Cities. Why Nations Matter*. New York: Oxford University Press.

⁸ Beer, A., et al. (2020). Op cit.

Estonia

Background

Estonia is the most northerly Baltic state. In the early 20th century, Estonia was one of the most economically developed regions in the Russian Empire. During World War II it was subject to both Soviet and German occupation and became part of the Soviet Union after the war ended. It quickly became vital in the Soviet economic system, focusing mainly on industrial production.⁹ Estonia’s industrial production increased by 60% during its first year as a member of the Soviet Union and workers’ wages increased by a third.¹⁰ Many factories were set up along the coast where oil shale was plentiful, which led to Estonia’s continued reliance on its oil shale sector.¹¹ During this time other parts of Estonia’s economy worsened. Its agriculture was taken over by the state and collectivisation caused agricultural output to fall by half, leading to food shortages.¹² Estonia gained independence in 1991, but over half a century of Soviet rule left it with a fast-decreasing population, lack of sectoral diversification and an unstable currency.¹³

Figure 4: Map of Estonia



Source: CDC (2020)¹⁴

⁹ Davis, R. (2020). *Extreme Economies Survival, Failure, Future – Lessons from the World’s Limits*. Transworld Publishers Ltd

¹⁰ Klesment, M. (2009). The Estonian economy under Soviet rule: A historical overview. *Journal of Baltic Studies*. www.jstor.org/stable/43212878

¹¹ OECD. (2019). *OECD Economic Surveys: Estonia*. Retrieved from: www.oecd.org/economy/estonia-economic-snapshot/

¹² Davis, R. (2020). Op cit.

¹³ Statistics Estonia (n.d.). *Population 1881-2000*. Retrieved from: www.stat.ee/dokumendid/62933

¹⁴ CDC (2020). *Estonia Traveller View*. Retrieved from: <https://wwwnc.cdc.gov/travel/destinations/traveler/none/estonia>

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The significant move from foreign rule to sovereignty created an atmosphere of national unity that facilitated rapid economic growth.¹⁵ Estonia created a well-functioning digital society and developed a technologically-advanced government administration. According to the European Commission’s Digital Economy and Society Index (DESI) 2020, Estonia has ranked first in Europe since 2017 for e-governance and ranked in the top four countries for nearly all digital public services indicators¹⁶.

Estonia also became a recipient of substantial EU funding after joining the EU in 2004. The adoption of the Euro (2011) was followed by a more stable and competitive currency, lower interest rates, lower business costs and an increase in trade.¹⁷ Due to the relatively small population of Estonia (1.3 million), it relies heavily on international trade and connections.¹⁸ Thanks to historic cultural and language similarities, Helsinki (Finland) and Tallinn are highly integrated cities and trade takes place on multiple levels including between individuals, and small and large firms.¹⁹ Good transport connections between these two cities (e.g. high speed ferry) facilitates collaboration. Furthermore, the Euregio cooperation started in 2003 as a non-profit association of several public authorities and was designed to support connectivity between Finland and Estonia’s capital regions. The cross-border collaboration created close relationships between the national governments and institutions of both countries.

Estonia performs well in several measures of well-being, relative to most other countries in the Better Life Index. Estonia ranks above average in jobs and earnings, housing, personal security, education and skills, environmental quality, civic engagement, social connections and work-life balance, but below average in subjective well-being, income and wealth, and health status.²⁰ In 2013, Estonia spent €283 million on arts and culture (equivalent to 1.5% of GDP) and Tallinn alone is

¹⁵ Margetts, H., & Naumann, A. (2017). *Government as a platform: What can Estonia show the world?*. Retrieved from: www.politics.ox.ac.uk/materials/publications/16061/government-as-a-platform.pdf

¹⁶ European Commission. (2020). *The Digital Economy and Society Index (DESI)*. Retrieved from: <https://ec.europa.eu/digital-single-market/en/digital-economy-and-society-index-desi>

¹⁷ European Commission. (2011). *A successful euro changeover in Estonia*. Retrieved from: https://ec.europa.eu/economy_finance/articles/euro/estonia_euro_en.htm;

Porter, M. E., Kettels, C., & Sölvell, Ö. (2016). *Estonia: Transition, EU membership, and the Euro*. Harvard Business School. Retrieved from: <https://pdfs.semanticscholar.org/9e06/742de8066ecd2eb356cd42536d6d789b97f7.pdf>

¹⁸ OECD. (2013). *Regions and Innovations: Collaborating across Borders. OECD Reviews of Regional Innovation*. DOI: <http://dx.doi.org/10.1787/9789264205307-en>

¹⁹ OECD. (2013). Op cit.

²⁰ OECD. (2020a). *Better Life Index*. Retrieved from: www.oecdbetterlifeindex.org/countries/estonia/#:~:text=Estonia%20ranks%20above%20the%20average,wealth%2C%20and%20health%20status.

home to 44 art museums.²¹ It ranks above the UK on the Good Country Index (Estonia – 14, UK – 15).²²

Levelling up

Estonia was chosen as a case study due to the country's rapid economic development. GDP per capita has increased rapidly over the past two decades (Figure 2). In 2000, the EU's GDP per capita was 4.5 times larger than Estonia's. By 2019, it was only 1.5 times larger. However, Estonia's GDP is mainly driven by the capital (Tallinn) and the surrounding regions - large regional disparities in Estonia remain.

The global financial crisis affected Estonia mostly through the significant contraction in export markets and deflation of its domestic housing bubble.²³ Unemployment peaked in 2010 at 16.7% and GDP decreased by 14% between 2008 and 2009 (Figure 5). Estonia recovered quickly, and, by 2013, it had lower levels of unemployment than the EU average. Employment rates have also increased by 0.6 percentage points from 2018 to 2019 alone (74.7% to 75.3%). In 2019, labour market participation stood at 84.7% (the highest in 20 years) and was higher than the US rate (78.2%) and the average rate in the EU (80.3%).²⁴

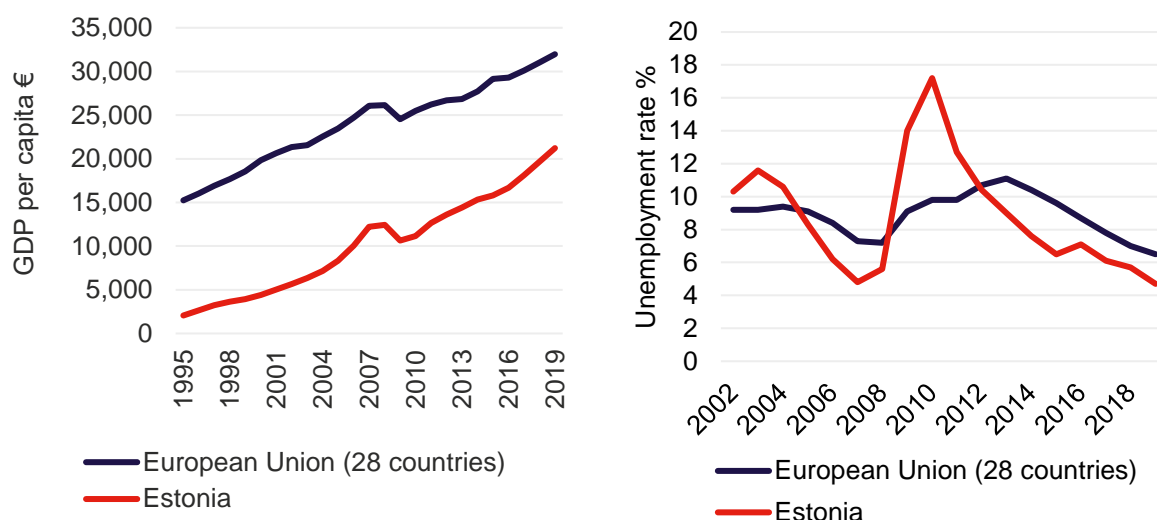
²¹ Lagerspetz, M. & Tali, M. (2014). *Country Profile: Estonia*. Retrieved from: www.culturalpolicies.net/wp-content/uploads/pdf_full/estonia/estonia_092014.pdf
Shurvell, J. (2020). *Forbes: Tallinn, Estonia: A New Cultural Hotspot For Ambitious Contemporary Art*. Retrieved from: www.forbes.com/sites/joanneshurvell/2020/09/08/tallinn-estonia-a-new-cultural-hotspot-for-ambitious-contemporary-art/

²² Good Country Index available at: www.goodcountry.org/index/results

²³ Habicht, T & Evetovits, T. (2015). The impact of the crisis on the health system and health in Estonia. In: Maresso A, Mladovsky P, Thomson S, et al., editors. *Economic crisis, health systems and health in Europe: Country experience*. Copenhagen (Denmark): European Observatory on Health Systems and Policies. *Observatory Studies Series, 41(2)*.

²⁴ OECD. (2020b). *Labour force participation rates: Dataset*. Retrieved from: <https://data.oecd.org/emp/labour-force-participation-rate.htm>

Figure 5: GDP per capita and unemployment rates in Estonia and the EU



Source: Eurostat (GDP) and OECD (Unemployment)²⁵

In response to the 2008 financial crisis, Estonia adopted fiscal retrenchment unlike most European countries that opted for expansionary expenditure policies.²⁶ Fiscal retrenchment was mainly dictated by the ideological position of the governing parties coupled with their desire to join the euro-zone, which required limiting the deficit to 3% of GDP.²⁷ While austerity measures have since been restricted, in 2015 Estonia’s national debt level was the lowest of all OECD countries (13% of GDP).²⁸

Key institutions and economic policies

Estonia’s economic success has been built around Information and Communications Technology (ICT) specialisation, and harnessing the opportunities presented by the early digitalisation of banking services. In 1997, before most countries realised the importance of the internet and ICT, Estonia introduced its first policy designed to support the development of the information society. Building on the early success of digital banking in Estonia, the Principles of Estonian Information Policy established a strategic outline for the basis of creating a digital economy through prioritising

²⁵ Eurostat (2020) *Main GDP aggregates per capita*. Retrieved from: https://ec.europa.eu/eurostat/databrowser/view/namq_10_pc/default/table?lang=en; OECD (2020b) *Unemployment rate*. Retrieved from: <https://data.oecd.org/unemp/unemployment-rate.htm>

²⁶ OECD. (2019). Op cit.; Kattel, R., & Raudla, R. (2011). Why did Estonia choose Fiscal Retrenchment after the 2008 crisis? *Cambridge University Press*. DOI: 10.1017/S0143814X11000067

²⁷ Raudla, R. & Kattel, R. (2011). Why Did Estonia Choose Fiscal Retrenchment after the 2008 Crisis?. *Journal of Public Policy*, 31. 163 - 186. DOI: 10.1017/S0143814X11000067.

²⁸ OECD. (2017a). *Government at a glance: Estonia*. Retrieved from: www.oecd.org/gov/govata glance.htm

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development of: e-services; data security and data exchange; web-based solutions; and service-orientated digital architecture.²⁹

Another vital early initiative was the Tiger Leap programme (1996). This was a country-wide IT infrastructure development initiative. Estonia was able to catch up with the West by updating local IT infrastructure, equipping schools with ICT and internet connections. At the same time, it invested in computer skills classes in schools for both students and teachers. These policies provided the necessary infrastructure and skills that remain the foundations of Estonia’s digital economy today.³⁰

Estonia has also revolutionised its bureaucracy through implementing more efficient digital solutions. The introduction of digital ID cards in 2002 created a pathway for the digitalisation of voting, public healthcare and other public services.³¹ A digital advisor at the e-Estonia Briefing Centre suggested that their analysis showed that each e-ID/digital signature saves an estimated 20 minutes per associated activity. Overall, the time saved contributes to 2% of GDP annually.³² Digitalisation of educational materials (including Higher Education) in 2015 and prioritising high quality early years education contributed to Estonia ranking first in Europe in the OECD Programme for International Student Assessment (PISA).³³ PISA measures 15-year-olds’ ability to use their reading, mathematics and science knowledge and skills to meet real-life challenges.

In order to reflect the growing importance of digitalisation, the e-Estonia Council (previously the Informatics Council) was created in 2014 to discuss, approve, and execute the government’s digital agenda.³⁴ Perhaps, the greatest testament to how seriously the (ICT) sector is treated in Estonia is the membership of the Council. It consists of ministers and ICT business leaders and is led by the Prime Minister.³⁵ The Council has been instrumental in establishing a paperless digital society and the

²⁹ E-Estonia (n.d.) *E-Estonia guide*. Retrieved from: <https://e-estonia.com/wp-content/uploads/eas-eestonia-vihik-a5-180404-view.pdf>

³⁰ Republic of Estonia Ministry of Economic Affairs and Communications (n.d.). *Digital Agenda 2020 for Estonia*. Retrieved from: www.mkm.ee/sites/default/files/digital_agenda_2020_estonia_engf.pdf

³¹ E-Estonia (n.d.). Op cit.; Maaten, E. (2004). *Towards Remote E-Voting: Estonian case*. Retrieved from: www.semanticscholar.org/paper/Towards-Remote-E-Voting%3A-Estonian-case-Maaten/ff4d0a77e7561e62fd0258280c0baa02d8256a03?p2df

³² 20 minutes per activity or an average of 5 days per person per year

³³ e-Estonia. (2020). *Covid-19 is likely to change the future of learning. In Estonia, this is old news*. Retrieved from: www.e-estonia.com/covid-19-is-likely-to-change-the-future-of-learning-in-estonia-this-is-old-news/; Jeffrey, B. (2019). *Pisa rankings: Why Estonian pupils shine in global tests*. Retrieved from: www.bbc.co.uk/news/education-50590581; OECD. (2018). *PISA ranking*. Retrieved from: www.oecd.org/pisa/PISA-results_ENGLISH.png

³⁴ Castaños, V. (2018a). *Case study report: e-Estonia*. Retrieved from: www.e-estonia.com/covid-19-is-likely-to-change-the-future-of-learning-in-estonia-this-is-old-news/

³⁵ Republic of Estonia Government Office (2018). *E-Estonia Council*. Retrieved from: www.riigikantselei.ee/en/supporting-government/e-estonia-council

seniority of its members has meant that policies have been implemented efficiently and at scale.³⁶

Estonia’s most recent vision (Digital Agenda 2020) built on previous policies and addresses emerging issues such as cyber security. This agenda also aimed to expand the basic IT infrastructure. Estonia’s internet penetration rate (the proportion of the population that has access to the Internet) reached 90% in 2019 – higher than in Germany (88%) but lower than in the UK (93%).³⁷ In 2016, Estonia had particularly high mobile broadband penetration with 1.2 subscriptions per inhabitant³⁸, whereas the UK had only 0.8 subscriptions per inhabitant.³⁹

At international level, the Digital Agenda 2020 aimed to share Estonia’s digital infrastructure and e-services with other EU countries through what Estonia has called “e-residency”⁴⁰ which launched in 2014. Estonia’s international e-residents had set up around 3,000 companies in Estonia by the end of 2017 and the number of e-residents is continuing to rise each year with an increase of 7% from last year (66,000 total e-residents). Over 10,000 e-resident companies now exist.⁴¹ The programme is on course to increase GDP by \$30 million by 2021 and the government’s target is to reach up to 10 million e-residents by 2025.⁴²

Factors associated with economic growth

- **The emergence of new young political leadership** was central to the radical policy changes introduced. Mart Laar (Prime Minister of Estonia from 1992 to 1994 and 1999 to 2002) was 32 when he was first elected as Prime Minister. He drove Estonia’s rapid economic development and organised the country’s government. His “ideological free-trade zeal” helped Estonia to move away from the isolationism of the Soviet Union.⁴³ The presence of

³⁶ E-Estonia (n.d.). Op cit.

³⁷ World Bank (2020). *Database: Individuals using the Internet*. Retrieved from: www.data.worldbank.org/indicator/IT.NET.USER.ZS?locations=EE

³⁸ OECD. (2017b). *Highlights from the OECD science, technology and industry scoreboard 2017 – The digital transformation: Estonia*. Retrieved from: www.oecd.org/sti/oecd-science-technology-and-industry-scoreboard-20725345.htm

³⁹ OECD. (2020c). *Mobile broadband subscriptions*. Retrieved from: data.oecd.org/broadband/mobile-broadband-subscriptions.htm

⁴⁰ A government-issued digital identity and status that provides access to Estonia’s transparent digital business environment. E-Residency allows digital entrepreneurs to manage business from anywhere, entirely online. Retrieved from: <https://e-resident.gov.ee/>

⁴¹ E-Estonia (n.d.) Op cit.

⁴² Davis, R. (2020). Op cit.

⁴³ Feldmann, M. & Sally, R. (2002). From the Soviet Union to the European Union: Estonian Trade Policy, 1991-2000. *The World Economy*, 25(1), pp. 79-106.

young and committed politicians was also an important factor in Estonia embracing technology⁴⁴.

- **Good governance and public trust** accelerated the implementation of the first successful digital policies/strategies. 99% of state services are online, 98% of people declare their incomes electronically for tax purposes, which now only takes around 3 minutes and 99% of medical prescriptions are completed online. These figures indicate that Estonian citizens trust the reliability of government services. Experts interviewed for this paper suggest that there is a widespread acceptance of a balance of risk associated with using digital services. Studies indicate that the digitalisation of government services had generated an annual saving of 6,400 working years by 2014, with the trend continuing upward.⁴⁵
- **Digital infrastructure** – Estonia’s small size was a key factor in the success of Estonia’s digital strategies, particularly efforts to cover the whole country with internet access. Having a population of only 1.3 million, of which one third live in the capital city of Tallinn, meant it was easier for Estonia to build a good national digital infrastructure.
- **Skills and future sectors** – Estonia’s ability to transform itself into a serious world-wide digital competitor was underpinned by favourable political preconditions associated with independence and its openness to change.⁴⁶ Its focus on digital skills from early education may play an important role in maintaining their international competitiveness.
- **Scale and longevity of investments** – funding from both public and private sector organisations and large investments in IT infrastructure contributed to the success of digital programmes such as the Tiger Leap initiative⁴⁷. Public-private partnerships such as Look@World initiated large investments of around €300 million in IT.⁴⁸ Public-private partnership funding supported the Tiger Leap programme to be a considerable success and provided Estonia with a strong IT start-up sector. The IT start-up sector now has a €3.6 billion turnover and consists of 4,800 companies which have exported their digital solutions to over 130 countries.⁴⁹

⁴⁴ Kattel, R., & Mergel, I. (2019). *Estonia's digital transformation: Mission mystique and the hiding hand*. Retrieved from: <http://library.oapen.org/bitstream/handle/20.500.12657/23594/9780198843719.pdf?sequence=1#page=158>

⁴⁵ Davis, R. (2020). Op cit.

⁴⁶ Шмарын, А. А. (2015). Op cit.

⁴⁷ Kattel, R. & Mergel, I. (2019). Op cit.

⁴⁸ Ehandi, A. (n.d.). The “Look@World” Project: An Initiative from Estonia’s Private Sector to Boost Internet Use. *Baltic IT&T Review*, 21. Retrieved from: [www.ebaltics.lv/doc_upl/Ehandi\(2\).pdf](http://www.ebaltics.lv/doc_upl/Ehandi(2).pdf)

⁴⁹ E-Estonia. (n.d.) Op cit.

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Due to the COVID-19 pandemic, many countries around the world have struggled with adaptation to home working and schooling. However, due to its early digitalisation of learning, Higher Education institutions were able to quickly switch to online teaching. For example, the University of Tartu managed to change to fully online teaching in just one day. E-health records and e-prescriptions helped nurses and other healthcare assistants to reduce physical contact with patients and focus on high-risk patients.⁵⁰

Estonia’s **digital resilience** was also the result of **wireless internet access** covering nearly all the country which made it much easier to handle the transition into life online⁵¹. In fact, the Estonian government held many of its meetings online even before the pandemic.⁵²

Challenges encountered

While Estonia’s digitalisation story is largely positive, it has encountered some challenges. Estonia’s enterprises, especially those in non-ICT sectors, are **still struggling to digitally transform** and improve their productivity.⁵³ Gaps in business support for SMEs in relation to technology adoption and change management is one of the reasons for this issue⁵⁴. Studies suggest that stepping up the digital transformation of firms could considerably impact productivity. For example, increased adoption of digital tools like cloud computing and back-office software can lift a firm’s annual productivity growth by 1.5 percentage points, while increasing Internet speeds by 10% across the country could boost overall productivity by 2 percentage points.⁵⁵

A long-term exploitation of shale oil led to high levels of sulphur dioxide emissions, which poses a risk to public health. However, monitoring shows that the quality of air in Estonia improved significantly between 1990 and 2012 with emissions of sulphur dioxide down by 85.2%.⁵⁶ The improvement resulted from a restructuring of the economy in the early 1990s, which significantly reduced the amount of electricity consumed by industry. This progress was underpinned by the Estonian Environmental Strategy 2030 (published in 2007), which set out a long-term plan for

⁵⁰ World Economic Forum. (2020). *Estonia built one of the world’s most advanced digital societies. During COVID-19, that became a lifeline*. Retrieved from: www.weforum.org/agenda/2020/07/estonia-advanced-digital-society-here-s-how-that-helped-it-during-covid-19/

⁵¹ Шмагун, А. А. (2015). Op cit.

⁵² World Economic Forum. (2020). Op cit.

⁵³ OECD. (2019). Op cit.

⁵⁴ OECD. (2019). Op cit.; European Commission (2020). Op cit.

⁵⁵ OECD (2019a). *Economic Survey of Estonia*. Retrieved from: www.oecd.org/economy/estonia-economic-snapshot/

⁵⁶ European Environment Agency (2020). *Estonia country briefing – The European environment – state and outlook 2015*. Retrieved from: www.eea.europa.eu/soer/2015/countries/estonia#:~:text=Estonia%20has%20sufficient%20freshwater%20resources,small%20lakes%20is%20mostly%20good.

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reducing the country’s reliance on oil shale and a move to renewable energy.⁵⁷ In 2019, 25% of energy produced in Estonia came from renewable resources.⁵⁸ Estonia is also committed to the European Green Deal and has committed to Net Zero by 2050.

Finally, the gender pay gap (the difference between the average wages of men and women) in Estonia was the largest in Europe in 2007. Estonian women earned on average only 69.7% of male wages.⁵⁹ While some progress has been made since then (on average women earned 29% less than men in 2019), it remains the largest gender pay gap in the EU.⁶⁰

⁵⁷ Estonian Ministry of the Environment (2007). *Estonian Environmental Strategy 2030*. Retrieved from: <https://cristalgrundtvig.files.wordpress.com/2011/09/estonian-environmental-strategy.pdf>

⁵⁸ Biofuels, waste, hydro, wind and solar. *International Energy Agency* (2020). World Energy Balances. Retrieved from: www.iea.org/subscribe-to-data-services/world-energy-balances-and-statistics

⁵⁹ Anspal, S & Rõõm, T. (n.d.) *Gender pay gap in Estonia*. Retrieved from: <https://eige.europa.eu/gender-mainstreaming/resources/estonia/sooline-palgalohe-eestis-empiirilise-analuus>

⁶⁰ European Institute for Gender Equality. (2020). *Gender Equality Index 2019: Estonia*. Retrieved from: <https://eige.europa.eu/publications/gender-equality-index-2019-estonia>

San Antonio (Texas), USA

Background

San Antonio is the second most populated city in the state of Texas and is one of the fastest growing metropolitan areas in the US.⁶¹ The city’s population grew by 1.47% in 2020 and has grown 19% since 2010.⁶² By contrast, over the same period the population grew by 8% in Texas and 3% across the US as a whole.⁶³ 64% of San Antonio’s population is Hispanic or Latino and only 25% is white alone (not Hispanic or Latino).⁶⁴

Figure 6: Map of San Antonio



Source: Federal Reserve Bank of Dallas (2017)⁶⁵

⁶¹ Kreuter, U. P., Harris, H. G., Matlock, M. D., & Lacey, R. E. (2001). Change in ecosystem service values in the San Antonio area, Texas. *Ecological Economics*, 39(3), pp. 333-346.

⁶² World Population Review (2020). *San Antonio, Texas population 2020*. Retrieved from: <https://worldpopulationreview.com/us-cities/san-antonio-tx-population>

⁶³ San Antonio Economic Development Foundation (2020). *Demographics report (2020)*. Retrieved from: www.sanantonioedf.com/reports-data/

⁶⁴ US Census (2020). *San Antonio city, Texas – population estimates July 2019*. Retrieved from: www.census.gov/quickfacts/sanantoniocitytexas

⁶⁵ Federal Reserve Bank of Dallas. (2017). *At the Heart of Texas: Cities’ Industry Clusters Drive Growth. San Antonio-New Braunfels: Home of the Alamo and Cradle of Texas Liberty*. Retrieved from: www.dallasfed.org/research/heart/sanantonio

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The city has a Council-Manager system of municipal governance where the council is made up of elected officials and an appointed City Manager.⁶⁶ Citizens elect both the City Council members (one from each of the 10 districts) and a citywide Mayor.⁶⁷ The City Council acts as the policy-making and legislative body within the City’s government. The mayor does not hold any decision-making powers. Unlike many other states, Texas allows municipalities such as San Antonio to have powers including levying property and sales taxes.⁶⁸ The estimated revenue for 2021/22 from both taxes is \$693 million. The City also receives 14% of all CPS Energy (local gas and electricity provider) revenues, which is estimated to amount to \$352 million in 2021/22.⁶⁹

The city of San Antonio has been classed historically as a low wage, low tax, and low regulation economy.⁷⁰ In the early 1970s, the economic strategy focused on recruiting new (largely non-Hispanic) companies that were outside of San Antonio.⁷¹ Following protests from San Antonio’s Hispanic population who felt disadvantaged compared to White Americans, political change occurred in 1976. This consisted of replacing its elected (at large) city council with a single member council district to create greater representation of Hispanic citizens.⁷²

The current economic strategy to solve low wages focuses on growing the economy from within using targeted sector-based policy.⁷³ The healthcare and bioscience sectors are vital and contribute around \$6.6 billion to the local economy⁷⁴, accounting for 14% of San Antonio’s employment.⁷⁵ The sector relies on the dedicated research institutions that create healthcare innovations along with the link to military health care centres that perform medical training and research.⁷⁶ San Antonio ranks among the top 10 US metropolitan areas in terms of the largest concentrations of federal government and military workers⁷⁷ and its military bases support employment in the security, health and defence sectors. Manufacturing in

⁶⁶ The City Manager is responsible for the administration of City services by exercising effective leadership and management of the City. City personnel report to the City Manager.

⁶⁷ Green, A. et al (2017). Op cit.

⁶⁸ Green, A. et al (2017). Op cit.; Note: Property taxes are levied on both real and personal property according to the property’s value and the tax rate. Source: City of San Antonio - Adopted FY 2021 Budget

⁶⁹ City of San Antonio – Adopted FY 2021 Budget (provided by SA officials). Note: CPS Energy is owned by the City of San Antonio.

⁷⁰ Green, A. et al (2017). Op cit.

⁷¹ Green, A. et al (2017). Op cit.

⁷² Cotrell, C. L., & Stevens, R. M. (1977). The 1975 Voting Rights Act and San Antonio, Texas: Toward a Federal Guarantee of a Republican Form of Local Government. *The State of American Federalism*, 8(1), pp. 79-99.

⁷³ Green, A. et al (2017). Op cit.

⁷⁴ SAEDF (n.d.). *Bioscience and Healthcare industries*. Retrieved from: www.sanantoniodef.com/industries/bioscience/

⁷⁵ Federal Reserve Bank of Dallas (2017). *At the Heart of Texas: Cities’ industry clusters drive growth*. Retrieved from: www.dallasfed.org/research/heart/sanantonio

⁷⁶ BioMedSA (n.d.). *San Antonio Science by Numbers*. Retrieved from: <https://biomedsa.org/#&panel1-1>

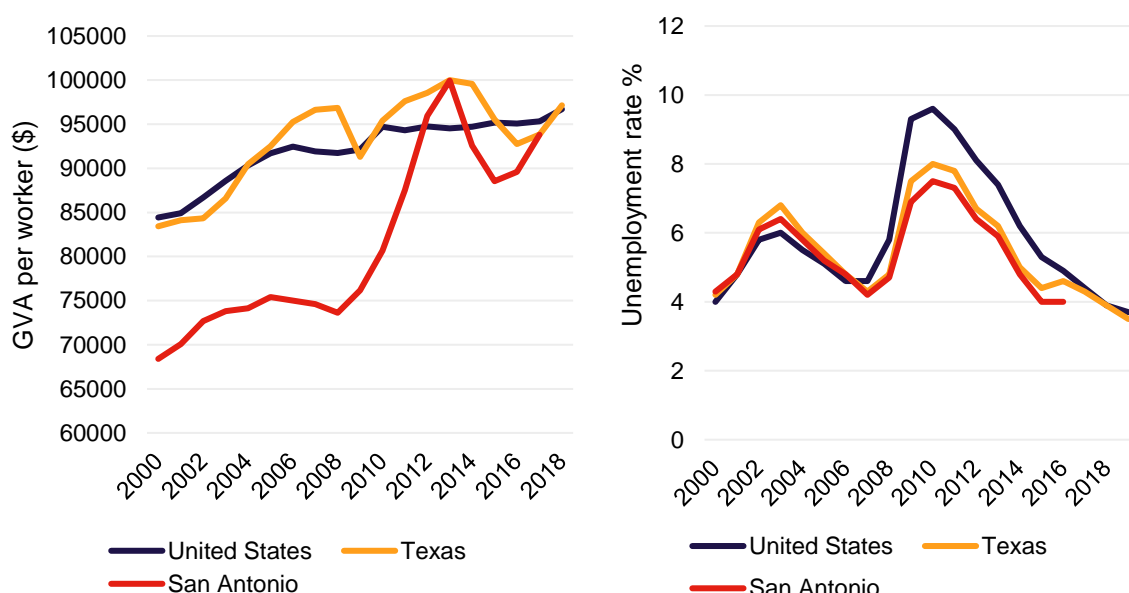
⁷⁷ Federal Reserve Bank of Dallas. (2017). Op cit.

the region is advanced and was worth \$40.5 billion in 2016.⁷⁸ Other important sectors include tourism and education.⁷⁹

Levelling up

The San Antonio metropolitan (metro) area was chosen as a case study due its steady and strong GVA growth, and a considerable fall in unemployment compared to both Texas and the US (Figure 7). San Antonio metro GDP growth has increased consistently over recent years. Between 2009 and 2012, the San Antonio metro area saw an increase of 13.5% in GDP, ranking 19th in all OECD metro regions.⁸⁰ Between 2017 and 2018, GVA per worker in San Antonio increased by 4.7% compared to 3.5% in Texas and 1.4% in the US.⁸¹

Figure 7: San Antonio GVA and unemployment rates



Source: OECD⁸²

⁷⁸ San Antonio Manufacturing Association (2016). *San Antonio’s manufacturing industry: Economic impact studies 2016*. Retrieved from: <https://sama-tx.org/wp-content/uploads/2020/10/sama-economic-impact-2016.pdf>

⁷⁹ Federal Reserve Bank of Dallas. (2017). Op cit.

⁸⁰ Green, A. et al (2017). Op cit.

⁸¹ OECD (2020d) *GDP database*. Retrieved from: <https://data.oecd.org/gdp/gross-domestic-product-gdp.html>

⁸² OECD (2020e). *Regional Gross Value Added per worker*. Retrieved from: <https://stats.oecd.org/index.aspx?queryid=67053>

OECD. (2020f). *Unemployment Rate*. Retrieved from: <https://data.oecd.org/unemp/unemployment-rate.htm>

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Since 2016, there has been a steady decrease in unemployment with the unemployment rate falling from 4% in 2016 to 3.1% in 2019⁸³. In 2019, San Antonio’s unemployment rate was below that of both Texas (3.4%) and the US (3.7%).⁸⁴ In 2019, San Antonio’s labour force grew by 2.5% which is above the average US growth rate of 2.1%.⁸⁵

Key institutions and economic policies

San Antonio’s economic growth strategy stemmed from the SA2020 vision launched in 2010. This was developed in conjunction with local businesses and the public through a widespread consultation that focused on one key question “What do you want SA to look like in 2020?”.⁸⁶ 6,000 consultation responses were received, combined, and a list of priorities was prepared. SA2020 interviewees suggested that preparing the strategy with residents helped them to maintain its longevity despite changes in political leadership. Many of the top 10 priorities focussed on social issues such as public engagement, equality, well-being and community safety. This is an important reminder that the economy is not the only factor that people consider when thinking about “a good place to live”.

SA2020 sets out a path to increasing San Antonio’s competitiveness by expanding on its existing strengths such as medical centres, military bases, universities and research centres.⁸⁷ It has met and exceeded its goals of increasing employment in the target industries by 10%, increasing entrepreneurship by 15% and decreasing unemployment by 50%. The number of STEM jobs has increased from 8.2% to 11%⁸⁸.

SA2020 is supported by the San Antonio Economic Development Foundation (SAEDF). SAEDF contributes to the city’s economic competitiveness by helping industries to expand and move into the San Antonio area.⁸⁹ SAEDF is funded and supported by its partners and government as well as over 160 local businesses.⁹⁰ This private organisation also ensures that the voice of local businesses is a part of policy-making.

Another key policy that contributed to economic growth in San Antonio is QUEST (Quality Employment through Skills Training). It was established in the 1990s to address an acute skills mismatch, which emerged as San Antonio’s economic base

⁸³ SAEDF (2019). *Annual Report 2019*. Retrieved from: www.sanantonioedf.com/reports-data/

⁸⁴ Federal Reserve Bank of Dallas (2019). *San Antonio Economic Indicators (2019)*. Retrieved from: www.dallasfed.org/research/indicators/sa/2019/sa1909.aspx

⁸⁵ Federal Reserve Bank of Dallas (2019). Op cit.

⁸⁶ SA2020 (n.d.). Op cit.

⁸⁷ SA2020 (n.d.). Op cit.

⁸⁸ SA2020 (n.d.) Op cit. (The Data Dashboard).

⁸⁹ Green, A. et al (2017). Op cit.

⁹⁰ SA2020 (n.d.). *SAEDF Community Partners*. Retrieved from: <https://servesa.sa2020.org/npos/view/265>

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began shifting from manufacturing to service- and technology-driven industries. This shift resulted in the loss of 14,000 manufacturing jobs. Whilst over 19,000 new jobs had been created, the local workforce lacked digital skills to perform them.⁹¹ The programme provides upskilling opportunities in manufacturing, healthcare and IT. While QUEST spends around \$4-5 million annually for its programme services, it also provides a return on investment of \$19.32 for every \$1 spent.⁹²

Another example of a strong focus on labour development in San Antonio is SA Works⁹³. In collaboration with local schools and higher education institutions, the organisation runs an industry-led strategic workforce development programme. It coordinates internships, apprenticeships and career events. SA Works aims to prepare individuals for “good jobs” and builds a stronger workforce pipeline through the learning opportunities they offer.

San Antonio also invested \$1.2 billion over 10 years in arts and culture under the Cultural Collaborative (2005).⁹⁴ The plan included increasing creative community resources, providing greater access to arts and strengthening its diverse culture. San Antonio’s creative economy outperformed the nation’s average before, during and after the 2008 recession and notably fared better than larger creative regions such as New York.⁹⁵

Factors associated with economic growth

- **Policy longevity** has been an important factor in the success of policies such as QUEST that has been running in San Antonio for 27 years. **Policy continuity** also facilitated **flexibility**. The QUEST programme has been able to adapt to respond to San Antonio’s changing skills challenges. The focus within QUEST on providing training within a range of different sectors has enabled the programme to change with economic trends, as training programmes can be easily adapted to respond to sectoral demand.
- **Public engagement** played a key role in developing important policies. The Cultural Collaborative Plan was based on a public consultation that showed that 66% of residents were willing to pay higher taxes to support art and

⁹¹ Project QUEST (2020). *History*. Retrieved from: <https://questsa.org/history/>

⁹² For more information, see Project QUEST Impact: Annual reports (2017-2019) Available at: https://questsa.org/quest_impact/

⁹³ SA Works. <http://www.sanantonioworks.org/>

⁹⁴ The Cultural Collaborative. (2005). *A plan for San Antonio’s creative economy*. Retrieved from: www.getcreativesanantonio.com/Portals/3/Files/DCCD-General/TCC%20Adopted%20Plan,%20June%202005.pdf

⁹⁵ Semen, M., & Carroll, M. C. (2017). The Creative Economies of Texas Metropolitan Regions: A Comparative Analysis Before, During, and After the Recession. *Growth and Change*. DOI: 10.1111/grow.12198

culture.⁹⁶ Similarly, as part of the QUEST programme, the authorities conducted discussions with the residents and businesses to design effective programmes. With ongoing engagement Project QUEST was able to flexibly adapt to changing business needs.⁹⁷

- **Skills and future sectors** – San Antonio’s labour policy is tightly targeted to meet the needs and priorities of the local economy. QUEST’s seemingly narrow focus on three key sectors (health, manufacturing and IT) is a reflection of the needs of key businesses, but also opens a pathway to “good jobs” for the local youth.
- **Digital and transport infrastructure** – investment in technology and infrastructure in the Austin/San Antonio corridor has increased economic growth across both cities. In the late twentieth century, the development of infrastructure (such as the Interstate Highway 35) and incorporation of high technology companies (MCC, IBM) in the Austin-San Antonio Corridor was associated with economic growth in San Antonio.⁹⁸
- **Collaboration** – the Austin-San Antonio Corridor also showed the importance of regional cooperation. San Antonio’s Chamber of Commerce, the Mayor and the City Council expanded the southern end of the corridor by providing funds to create schools. While Austin’s government was crucial in attracting big technology companies such as IBM,⁹⁹ universities from both Austin and San Antonio also played a significant role in developing the corridor. Universities supplied federal and private-sector funding and provided innovative ideas on infrastructure and technology.¹⁰⁰
- **Attractive place to live** – San Antonio is a major tourism destination and one of Texas’ top tourist cities.¹⁰¹ Projects such as the San Antonio River Improvement Project (SARIP) were established to restore San Antonio’s Riverwalk ecosystem and increase recreational opportunities along 13 miles of the river. This \$384.1 million investment created a national park that connected all the San Antonio Missions (religions/military structures) and its downtown area, allowing tourists to walk beyond the Riverwalk.¹⁰² The recreational improvement has boosted economic development through

⁹⁶ Nivin, S. et al. (2009). Op cit.

⁹⁷ Radmacher, I. (2001). Op cit.

⁹⁸ Smilor, R. W., Kosmetsky, G., & Gibson, D. V. (1987). *The Austin/San Antonio corridor: The dynamics of a developing technopolis: IC² Institute Working Papers*. Retrieved from: <https://ic2.utexas.edu/pubs/the-austinsan-antonio-corridor-the-dynamics-of-a-developing-technopolis/>

⁹⁹ Smilor, R. W. et al (1987). Op cit.

¹⁰⁰ Smilor, R. W. et al (1987). Op cit.

¹⁰¹ Doganer, S., & Dupont, W. (2015). Op cit.

¹⁰² The San Antonio River Authority. (n.d.) *The San Antonio River Improvements Project*. Retrieved from: www.sariverauthority.org/about/history/san-antonio-river-improvements-project

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increased cultural heritage tourism and the connection of the San Antonio communities.¹⁰³

Challenges encountered

According to the US Census Bureau, among the 25 most populous US Metropolitan Areas, the San Antonio-New Braunfels Metropolitan Area ranks highest for poverty. In 2018, 18.6% of residents in San Antonio lived in poverty compared to 15.5% in Texas and 14.1% in the US, with Hispanics and African Americans disproportionately affected.¹⁰⁴ Economic segregation in San Antonio is deeply entwined with racial segregation, much of which can be traced to historical policies and practices in the 1950s that resulted in an urban core of concentrated poverty and socioeconomic disadvantage¹⁰⁵. The City invested approximately \$454 million to mitigate barriers and challenges to social and economic mobility in San Antonio with the bulk of that funding supporting education and skills development programmes (\$149 million), transportation (\$128 million) and employment (\$73.4 million). It is yet to be seen if this funding will reduce poverty in San Antonio. However, as our interviewees noted, poverty in minority communities is a result of centuries of structural discrimination, therefore change will not happen overnight.

Another challenge facing San Antonio is the heavily reliance on private vehicle use in the Austin-San Antonio Corridor.¹⁰⁶ This has caused significant congestion problems along Interstate 35 and this issue is predicted to increase as the population grows further. A wider variety of transport is needed, such as bus or rail transit, since the worsening congestion poses risks to the environment and quality of life.¹⁰⁷

¹⁰³ Doganer, S., & Dupont, W. (2015). Op cit.

¹⁰⁴ United States Census Bureau. (2019). *American Community Survey: 2019*. Retrieved from: www.census.gov/programs-surveys/acs

¹⁰⁵ City of San Antonio (2019). *Status of Poverty in San Antonio*. Retrieved from: www.sanantonio.gov/Portals/0/Files/HumanServices/FaithBased/2019PovertyReport.pdf; Goldberg, R. A. (1983). Racial Change on the Southern Periphery: The Case of San Antonio, Texas, 1960-1965. *The Journal of Southern History*, 49(3), pp. 349-374.

¹⁰⁶ Salinas, S. J. (2019). *Austin-San Antonio Transport Study: Mobility strategies in the Central Texas Corridor*. Retrieved from: <https://repositories.lib.utexas.edu/bitstream/handle/2152/76198/SALINAS-MASTERSREPORT-2019.pdf?sequence=1>

¹⁰⁷ Salinas, S. J. (2019). Op cit.

Greater Lille, France

Background

The Greater Lille city region includes the inter-communal structure, *Métropole Européenne de Lille (the MEL)*, which is composed of a network of cities. This case study focuses on experiences within the MEL. The largest metropole in the region (with a population of 1.15 million¹⁰⁸) and the fourth largest urban area in France, it has one of the youngest populations among French metropolises.¹⁰⁹ It is located in the Hauts-de-France region with a population of over 6 million.¹¹⁰ Hauts-de-France was established following the merger of the Nord-pas-de-Calais and Picardie regions in 2016.

Figure 8: Map of Greater Lille, Hauts-de-France



Source: Nord France Invest¹¹¹

¹⁰⁸ INSEE. (2020). *Comparateur de territoire. Intercommunalité-Métropole Européenne de Lille (245900410)*. Retrieved from: www.insee.fr/fr/statistiques/1405599?geo=EPCI-245900410

¹⁰⁹ 28% of the population is under 20. Métropole Européenne de Lille. (n.d. a). *Jeunesse*.

¹¹⁰ INSEE. (2017). *Panorama – Hauts-de-France*. Retrieved from: www.insee.fr/fr/statistiques/2018919

¹¹¹ Nord France Invest Twitter. (2016). *Want to do #business with markets in #Europe, but stay close to the #UK? @hautsdefrance is a strategic #location*. Retrieved from: <https://twitter.com/NFInvest/status/800973344208130048>

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The area prospered in the 19th century driven by the textile, mining and coal industries as well as steel works in neighbouring Belgium. Commerce thrived thanks to the canal system and a strong tradition of family firms. Between 1962 and 1990, the economy of Lille Metropolis was devastated as the dominant regional industries collapsed rapidly due to globalisation. In 1960, the region (previously Nord-Pas-de-Calais) accounted for 8.3% of French GDP, by 1995 this had fallen to 5.6%. The fall in industrial jobs (47%) was greater than the national decline (18%).¹¹²

Post-war Lille grew thanks to the reorganisation of government administration in France. As part of efforts to create eight balancing cities to counter the dominance of Paris, it became an important centre in North East France. In the 1960s a new town, Villeneuve d’Ascq, was created in Lille Metropolis, with a view to attracting higher qualified professions in tertiary (service sector) jobs. Policymakers sought to provide a major stimulus to the regional economy through rebranding the city and wider region as an important centre of business, strategically located only 80 minutes from London, Paris and Brussels. The opening of a high-speed national and international train station (including the Eurostar) in 1994 and the construction of a neighbouring major mixed-use commercial/business centre (Euralille) were critical in transforming images of the city and metropole.¹¹³ The project cost 800 million francs (approximately 122 million€). The French State and SNCF (the state-owned railway company) covered half of the costs, the region picked up 2/3 of the remaining bill and the city 1/3.¹¹⁴

Due to its strategic location, Lille Metropolis is a major centre for mail order distribution.¹¹⁵ Other key sectors include business services (22% of jobs excluding agriculture and administration in 2017), retail (13.8% of jobs), services to individuals (13.7%) and industry (12.7%). Across the region, within industry, the largest number of employees are in the agricultural, mineral products and the automotive sectors.¹¹⁶ Multinational firms including Auchan (retail), Bonduelle (food production) and Roquette (crop production) are headquartered in the region.¹¹⁷ However, a strong family business culture remains in the region.

Hauts-de-France has received the second highest value of foreign investment among French regions.¹¹⁸ 5,266 jobs (92% of jobs created) were created or safeguarded thanks to foreign investment in 2018.¹¹⁹

¹¹² Provan (2015). *Lille City Story*. CASE Report 104.

¹¹³ Provan. (2015). Op cit.

¹¹⁴ Kuklowsky, C. & Provan, B. (2011). Op cit.

¹¹⁵ OECD LEED Centre for Local Development (n.d.). *Framework for Information Exchange in Local Development (Field) Country Reports*. Retrieved from: www.oecd.org/cfe/leed/frameworkforinformationexchangeinlocaldevelopmentfield-20062009.htm

¹¹⁶ Chambre de Commerce et d’Industrie Hauts-de-France. (2019a). *Les chiffres clés des Hauts-de-France*. Retrieved from: <https://hautsdefrance.cci.fr/actualites/chiffres-cles-hauts-de-france-2018/>

¹¹⁷ Nord France Invest. (n.d. a). *Direct Access to a Direct Business Environment*. Retrieved from: www.nordfranceinvest.fr/integrer-un-environnement-international/

¹¹⁸ Nord France Invest. (n.d. b) *Panorama des entreprises internationales présentes en Hauts-de-France*. Retrieved from: www.nordfranceinvest.fr/integrer-un-environnement-international/

¹¹⁹ Région Hauts-de-France. (2019). *Investissements étrangers : un record pour l’emploi dans les Hauts-de-France*. Retrieved from: www.hautsdefrance.fr/investissements-etranagers-record/

Levelling up

Lille’s story shows that levelling up can be challenging, prone to political tensions and require decades of work. Analysis suggests economic growth has been more successful than progress in addressing inequalities. As the area’s traditional industries collapsed, Lille experienced large increases in unemployment between 1975 and 1990.¹²⁰ From 1999 to 2006, the number of unemployed people fell by 2,100.¹²¹ Unemployment in the wider Metropolis declined rapidly to 2008 before rising following the 2008 Financial Crisis (Figure 6). However, since 2013, unemployment has fallen faster in Lille European Metropolis than across France.

Substantial progress was made in developing the tertiary sector in Lille. New and innovative industries in emerging sectors, including health and agribusiness, were stimulated and significant levels of international investment were attracted.¹²² Formed on a refurbished industrial site, Euratechnologies is the largest incubator-accelerator in France. It primarily supports ICT firms. Home to over 300 major digital companies and start-ups (including Microsoft, Vinci and Capgemini), the cluster employs over 4,500 people. Over €400 million have been raised by start-ups on the site since 2009.¹²³ Eurasanté is the third ranked health cluster in France. Located within the largest university-hospital campus in Europe, it includes 170 companies employing 3,400 people, 16,800 professionals (medical and administrative staff) working in 8 hospitals and 22,000 students.¹²⁴ Major companies include the French headquarters of the multinational pharmaceutical firm Bayer and the French National Blood Agency.

¹²⁰ Figures are only available which include military personnel. Direccte Nord-Pas-de-Calais. (n.d.) *Trajectoire Socio-Économique de la Zone D’emploi De Lille*. Retrieved from: [http://hauts-de-france.direccte.gouv.fr/IMG/pdf/Les_Syntheses_de_la_Direccte_no_33_-_Zone_d_emploi_de_Lille.pdf](http://hauts-de-france.direccte.gouv.fr/sites/hauts-de-france.direccte.gouv.fr/IMG/pdf/Les_Syntheses_de_la_Direccte_no_33_-_Zone_d_emploi_de_Lille.pdf)

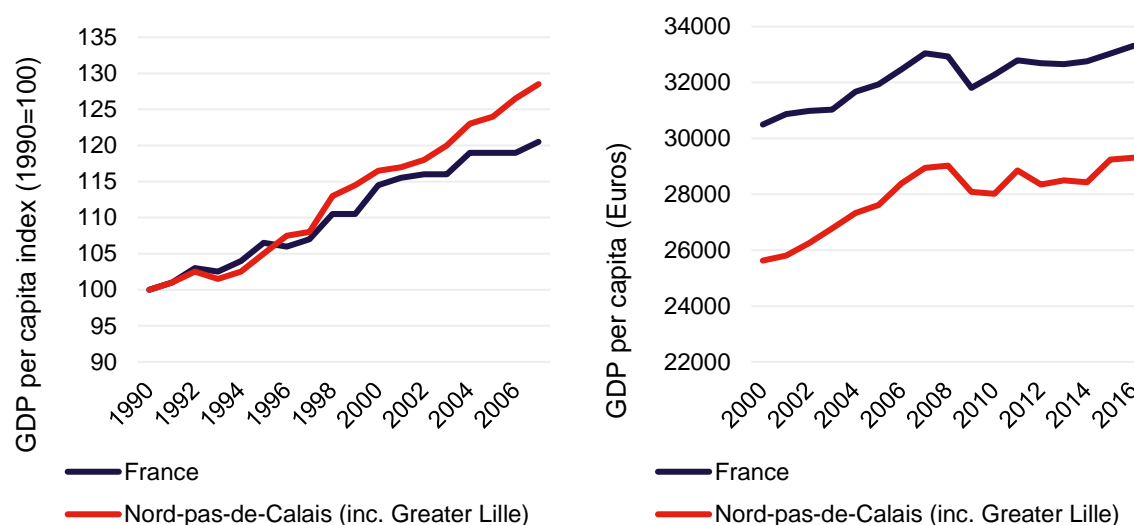
¹²¹ These figures relate to Lille Employment Zone. This is smaller than Lille Metropolis. It excludes key cities in Lille Metropolis e.g. Roubaix and Tourcoing, which suffered very high unemployment after deindustrialisation.

¹²² Kuklowsky and Provan. (2001). Op cit.

¹²³ Euratechnologies. (2020). *EuraTechnologies, where technology meets entrepreneurship*. Retrieved from: <https://en.euratechnologies.com/startups-incubator-accelerator/campus-lille/>

¹²⁴ More information available at Eurasanté: <https://lille.eurasante.com/>

Figure 10: GDP indicators for Nord-pas-de-Calais and France



Source: OECD (2000-2016); Wilco (1990-2006).¹²⁵

Lille was less badly affected by the 2008 Financial Crisis than the wider region thanks to its previous economic restructuring. Jobs in Lille grew over the 2008-2012 period compared to a decline in some neighbouring towns. Job growth was concentrated in ICT, services, finance and insurance and housing.¹²⁶ However, some challenges remain. In 2017, GDP per capita expressed in Purchasing Power Standards (PPS) within Hauts-de-France was €23,700, which only represented 77% of the French national average (€30,600) and 80% of the EU average (€29,500).¹²⁷

Estimated OECD data indicates that Lille Metropole contributes the 5th highest GDP of 41 French metropolitan areas in millions of US\$¹²⁸. However, the MEL has only the 21st highest GDP rate per capita.¹²⁹ This is likely to be explained by the MEL having a high number of large corporations but also a higher concentration of poverty (particularly outside of Lille) than most other French metropolises. The recent development of tertiary activities in Lille has not been enough to address high unemployment, particularly in the North-East of the Metropolis.

¹²⁵ OECD (2020d). Op cit.; WILCO (n.d.). *City report – Lille*. Retrieved from:

www.wilcoproject.eu/wordpress/wp-content/uploads/WILCO_WP3_Reports_Lille_20_ML1.pdf

¹²⁶ Provan. (2015). Op cit. Roubaix and Tourcoing’s economies relied on more traditional activities and firms either did not foresee or were largely unable to respond to changes in demand.

¹²⁷ European Commission (n.d.). *Hauts-de-France*. Retrieved from: <https://ec.europa.eu/growth/tools-databases/regional-innovation-monitor/base-profile/hauts-de-france>

¹²⁸ This relates to constant prices and constant PPS OECD base year 2010.

¹²⁹ OECD. (2016). *Metropolitan eXplorer*. Retrieved from: <https://measuringurban.oecd.org/#>

Key institutions and economic policies

The City of Lille is led by an elected Mayor. The current and former Mayors are high-profile politicians in France. Between 1973 and 2001, Lille was led by Pierre Mauroy, a French socialist politician who served as Prime Minister of France from 1981 to 1984. Since 2001, Martine Aubry, a former Socialist Party minister, has been Mayor. Aubry is also the Vice President of the MEL.

An umbrella body for the metropolitan area, the MEL is one of a small number of metropolises in France with increased devolved powers in regional development. It had a 1.7 billion€ budget in 2017.¹³⁰ Tax revenue accounts for 54% of operating revenue whilst allocations from central government represent only 24%. This gives it a lot of local independence in designing and funding initiatives. The MEL receives various taxes including an urban regional payroll tax paid by employers, (designed to fund transport infrastructure), a refuse collection tax, business and commercial taxes and a tourist tax.¹³¹ There are now 95 municipalities in the MEL with 199 metropolitan councillors, who make up the MEL Council.

In 2008, cooperation between Belgium and the MEL was formalised with the creation of a Eurometropolis, Euro-Metropole Lille-Kortrijk-Tournai. The largest cross-border Metropolis in Europe, it includes 2.2 million people and incorporates 14 institutions in France and Belgium.¹³² It aims to support “efficient and coherent trans-border cooperation” implying a “dismantling” of territorial and linguistic barriers.¹³³ Formal political representation no longer exists but due to strong continuity in the physical territory across the border and common challenges, cross-border needs are considered in economic planning. The MEL is obliged to develop a cross-border development plan.

In 2020, Hauts-de-France published a master plan for regional economic development. Devolved strategic plans have been developed in line with this plan. The SCOT (*Schéma de Cohérence Territoriale*) sets planning policy over a 20-year period for an area wider than the MEL (covering 133 communes). A Local Urban Plan has been developed by the MEL to translate the aims of the SCOT to the metropole.

Over nearly thirty years, the MEL has created five Centres of Excellence to foster expertise in clusters of firms, promoting the development of innovative products and ideas. The Centres focus on the higher tertiary (e.g. financial and legal), health, hi-tech enterprise and research laboratories, image, culture and media, innovative

¹³⁰ Institut Montaigne. (2020). *Lille. Bilan de votre ville & thématique en chiffres clés*. Retrieved from: www.institutmontaigne.org/municipales-2020/lille?comparaison=59

¹³¹ Métropole Européenne de Lille. (2019). *Synthèse des Comptes Administratifs Consolidés 2018*. Retrieved from: www.lillemetropole.fr/votre-metropole/institution/politique-de-la-mel/le-budget-de-la-mel

¹³² Provan. (2015). Op cit.

¹³³ OECD LEED. (n.d.). Op cit.

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textiles and new information and communication technologies sectors.¹³⁴ The policy aims:

- to support regeneration in the run-down areas in which they are situated
- to bring new homes, offices, services to the sites
- to support the relocation of external firms to the area
- to stimulate new local start-up companies, particularly SMEs.

Alongside these Centres of Excellence, a series of competition clusters exist:

- I-Trans focuses on innovative ground transport systems
- NSL specialises in agri-food and health ingredients
- PICOM focuses on distance selling
- EuraMaterials centres on the processing of materials and the development of innovative materials
- TEAM2 supports innovation in the circular economy and recycling.

Since the 1980s, SMEs have been supported by Finorpa, now a public/private partnership made up of regional authorities, regional banks and financial institutions. Originally tasked with supporting the closure and restructuring of coal mines, it supports regional SMEs with seed funding at start-up or restructuring funding for established organisations. The scheme costs €7,000 per job and has supported the creation of around 40,000 jobs through promoting attractiveness, entrepreneurship and competitiveness in the region.¹³⁵ More broadly, policy emphasis is currently being placed on training to enable the development of new activities related to the transformation of the economy (circular economy, sorting and recycling, care) to better respond to demand for jobs.

Factors associated with economic growth

- **Policy longevity and political stability** – Lille benefited from stability and relatively few administrative boundary changes up to 2016. Having an elected Mayor with considerable powers, backed by strong regional government, has been crucial to regional economic growth. Regional recovery was supported by the regional government backing city leaders and using their devolution powers to make decisions, which supported the elected Mayor.¹³⁶

¹³⁴ Kuklowsky, C. and Provan. (2011). Op cit.

¹³⁵ OECD LEED. (n.d.). Op cit.

¹³⁶ Power, A. (2018). Regional politics of an urban age: Can Europe’s former industrial cities create a new industrial economy to combat climate change and social unravelling? *Palgrave Communications*, 4(97), pp.1-15.

- **Strong local leadership and consensus** – has been particularly important in securing flagship projects for the area. The influence and determination of Pierre Mauroy (through his simultaneous mandates as Mayor, President of Lille Metropolitan Community and co-founder of the Eurométropole) was critical in raising Lille’s profile on the national stage and transforming it into an international city. Mauroy was central to the establishment of Lille Europe train station and ensuring the Eurostar was diverted to stop at Lille despite the additional costs incurred.¹³⁷ He was crucial to building local consensus across party lines.¹³⁸
- **Collaboration** – the *Comité Grand Lille* a large network of diverse representatives from financial institutions, local businesses, the Chamber of Commerce, social partners, local civil servants, artists and elected politicians has been important in strengthening relationships between local actors and generating ideas for flagship projects, e.g. Lille’s candidature for the 2004 Olympics and its successful European City of Culture bid. The network’s informal structure has helped to overcome institutional barriers enabling the area to “think globally” and “act locally”.¹³⁹
- **Scale of investments** – (particularly central government) have been instrumental. Lille has benefited from high levels of EU, national and regional funding. Euralille shows the importance of high levels of local public funding. Such funding was critical to the project being sustained through the economic crisis of the 1990s when private sector actors were not prepared to invest.¹⁴⁰
- **Transport infrastructure** – the international train station (including Eurostar) supported Lille to capitalise on its geographical location and to position itself as a strategic link between London, Paris, Brussels and Germany, attracting new investment. The development of the automated underground system in the 1980s was crucial in improving transport across the Metropole.
- **Universities and innovation** (Centres of excellence and competition clusters) – national government set the themes for clusters, regional government implemented this into a regional development plan and the MEL led implementation. The clusters have improved the image of the area locally, regionally and nationally. Nonetheless, business creation rates in the centres of excellence could be higher.¹⁴¹ Interviews suggest the health and ICT clusters have performed more strongly than other clusters.

¹³⁷ Kuklowsky, C. and Provan. (2011). Op cit.

¹³⁸ OECD LEED. (n.d.). Op cit.

¹³⁹ Brachet, M. (1998). Le Comité Grand Lille : nouvelle forme de gouvernance territoriale ou épiphénomène ? *Hommes et Terres du Nord*. L'Eurorégion. pp. 135-142.; OECD LEED (n.d.). Op cit.

¹⁴⁰ Power, A. (2018). Op cit; OECD LEED. (n.d.). Op cit.

¹⁴¹ OECD LEED. (n.d.). Op cit.

- **Attractive place to live** – from 1995 to 2015, the economic development of the MEL was supported by growth in the area’s cultural influence. Events (e.g. 2004 European City of Culture which attracted 9 million participants) were effectively used to transform the image of the area. Capital of Culture “gave Lille the opportunity not only to showcase its cultural life but more generally to present the city and metropolitan area as a modern, vibrant, 21st century city which was open for business and a good place to live”.¹⁴² Cultural events and the associated development of arts venues (such as La Piscine, a former art-deco swimming pool in Roubaix which is now a museum), have been crucial in attracting tourists and making Lille a desirable place to live. Lille is also the 2020 World Design Capital. Planned events have been impacted by Covid-19 but are creating a lasting effect on the image of Lille.

Challenges encountered

The MEL has encountered several challenges in recent years that have stalled its growth. Evidence suggests that the increased complexity of governance arrangements in Lille from the 2000s has hindered decision-making. Research has identified that whilst Mauroy had the power and influence to push through major projects such as Euralille, the complexity of the governance structures now in place means that it takes much longer for agreements on major projects to be agreed let alone implemented.¹⁴³ Whilst Martine Aubry was able to prolong the dynamism associated with the major political figures of the 1990s and 2000s in her first terms, this has started to slow.

Interviewees suggest the establishment of the larger Hauts-de-France region has created issues. The addition of areas with very different economic histories and needs led to tensions between priorities for the Metropole and the region. Amiens, previously the capital of Picardie, has suffered job losses as Lille became the capital of the new region. The headquarters of a number of private sector companies (e.g. banks) have moved from Amiens to Lille. Nonetheless, some interviewees argued the expansion of the region challenged old thinking and has enabled the MEL to develop stronger relationships with regional government as Lille is now considered a stronger asset to the region. The impact of the new structures raises the question of displacement. Interviews conducted indicate that to promote growth across the region, greater informal collaboration (along a similar model to the *Comité Grand Lille*) at a regional level is required.

The frequency of train services from Paris to London and Paris to Brussels, which stop in Lille, has reduced in recent years. Interviewees emphasised how maintaining frequent services to these capital cities is a challenge but crucial for development in the region.

¹⁴² Kuklowsky, C. and Provan. (2011). Op cit. p.49.

¹⁴³ Provan. (2015). Op cit.

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Interviewees indicate continually maintaining collaboration between regional and local actors has become more challenging recently. Economic development can be considered to have been at its' most dynamic when stakeholders have succeeded in working across party lines and when the legitimacy of informal structures (e.g. the *Comité Grand Lille*) has been respected.

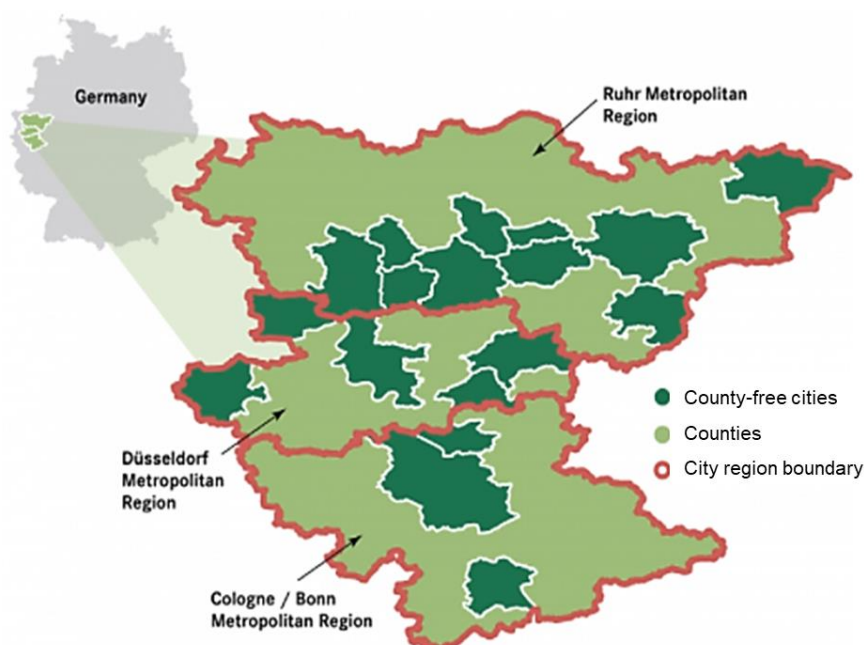
Competing national and regional priorities across the transfrontier Metropole have been identified. Interviewees indicated that, despite political will, the large number of actors (14) involved, and differing competencies on the French and Belgium sides, have hindered progress.

The Ruhr Region

Background

Located in the federal state of North Rhine-Westphalia in Western Germany, the Ruhr region has a population of over 5 million.¹⁴⁴ The region is polycentric and is made up of 53 cities and four counties (*Landkreise*).¹⁴⁵ The 11 largest cities are county free and the remaining 42 are part of four different counties. The largest cities are Dortmund (with just over 600,000 residents), Essen (nearly 600,000 residents), and Duisberg (nearly 500,000 residents).¹⁴⁶ The Ruhr’s population has been in decline since the 1960s, falling by 5% between 2001 and 2018.¹⁴⁷

Figure 11: Map of the Ruhr Region



Source: Adapted from Swinney (2016).¹⁴⁸

¹⁴⁴ OECD. (2020g). *Metropolitan areas. DE038: Ruhr*. Retrieved from: <https://stats.oecd.org/Index.aspx?DataSetCode=CITIES>

¹⁴⁵ Schwarze-Rodrian, M. (2016). ‘Ruhr Region Case Study’ in Carter, D. K. (ed.) *Remaking Post-Industrial Cities. Lessons from North America and Europe*. New York: Routledge.

¹⁴⁶ Landesdatenbank Nordrhein-Westfalen. (2020). *Bevölkerungsstand nach Geschlecht - Gemeinden - Monat (ab 2000)*. Retrieved from: www.landesdatenbank.nrw.de/ldbnrw/online;jsessionid=FBC481AAC50656B8CA9E933111BC242A.I.db2?sequenz=tabelleErgebnis&selectionname=12411-31iz#abreadcrumb

Dortmund.de (2020). *Bevölkerung nach Geschlecht und Altersgruppen am 31.12.* Retrieved from: www.dortmund.de/media/p/statistik/pdf_statistik/bevoelkerung/02_01_Bevoelkerung_Geschlecht_Altersgruppen.pdf

¹⁴⁷ OECD. (2020g). Op cit.

¹⁴⁸ Swinney, P. (2016). *Building the Northern Powerhouse*. Retrieved from: www.centreforcities.org/reader/building-northern-powerhouse-lessons-rhine-ruhr-

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City growth and wealth across the region stemmed from steel making and coal mining. The area suffered from economic decline since the 1970s as structural change occurred in its economy with the move from manufacturing to services, a reduction in demand for German coal, the worldwide steel industry crisis, increased global competition for commodity manufacturing of coal and steel, and conditions which were unfavourable for the emergence of new industries. The last three mines in the region closed in 2018.¹⁴⁹

The region’s economy has been experiencing structural change for sixty years. Despite persistently high unemployment, pockets of deprivation and a still underdeveloped knowledge economy (see more details below), the Ruhr has made progress in transforming and diversifying its economy since the 1980s. No longer dependent on coal or steel, it includes growing service and knowledge-based industries. Service sector employment increased by 77% between 1970 and 2009.¹⁵⁰ The decline in traditional industries has coincided with a clear reduction in air pollution, with a strong focus on cleaning up contaminated land pursued by the state since 1979. Large companies in the region merged and reoriented to better compete in the global economy. A number of German electric energy and distribution companies are headquartered in the region.¹⁵¹

Key strengths of the region’s economy now lie in the chemicals, logistics, energy, healthcare and emerging technologies sectors especially green tech and IT including IT security.¹⁵² Firms went through reorganisation involving focusing on profitable core business activities or emerging markets which appeared promising, as well as outsourcing service functions.¹⁵³ The region moved away from unprofitable coal mining to become home to some of the largest clean energy corporations such as E.ON. Eighteen of the 50 highest-grossing companies and 13 of the 40 largest retail companies in Germany are based in the Ruhr.¹⁵⁴ This includes Aldi, Evonik Industries (chemicals), Haniel (investment holding), Hochtief (construction), Klöckner (steel and metal), and ThyssenKrupp (industrial engineering and steel production).

randstad/introduction/ Note: “county-free cities” are not a part of a county but have the same administrative level.

¹⁴⁹ Schwarze-Rodrian, M. (2016). Op cit.

¹⁵⁰ Keil, A and Wetterau, B. (2012). *Metropolis Ruhr A Regional Study of the New Ruhr*. Retrieved from: www.geographie.uni-wuppertal.de/uploads/media/Metropolis_Ruhr-1_02.pdf

¹⁵¹ Schwarze-Rodrian, M. (2016). Op cit.

¹⁵² Schwarze-Rodrian, M. (2016). Op cit.

¹⁵³ For example, one mining group, RAG, integrated all the small mining companies in the region and one dominating final chemicals firm, Evonik, integrated several medium sized chemical firms inside and outside the region.

¹⁵⁴ NRW Invest. (n.d.). *Home of the world market leaders*. Retrieved from:

www.nrwinvest.com/en/nrw-as-location/this-speaks-well-for-nrw/home-of-the-world-market-leaders/

Levelling up

The Ruhr region has been chosen as a case study due to how its decades-long transition from a mining and steel-based economy to a more diversified economy provides an example of successful active federal and regional government policy, which have supported progress towards a just transition for workers and communities.¹⁵⁵

The economy of the Ruhr region has performed strongly over recent years. GDP per worker rose by 52% between 1991 and 2017 to €67,727.¹⁵⁶ It is important to consider commuter outflow when interpreting GDP per capita data in the Ruhr.¹⁵⁷ The Ruhr is closely linked to the Rhine axis. The net commuter flow is from the Ruhr to the Rhine axis, which offers more jobs but also a higher cost of living. Consequently, GDP per capita would understate the Ruhr’s performance, while GDP per employee (labour productivity) would be a better measure. However, industry structure (capital intensity) must then be considered. Some industries in the Ruhr are highly capital intensive but provide low numbers of jobs. Figure 9 shows GVA per worker was particularly strong in the period between 2000 and 2011. Over this period, GVA per worker was notably higher than in Germany as a whole. Between 2012 and 2016, GVA per worker fell, before rising slightly more recently (Figure 9). The qualification level of the workforce in the Ruhr has increased considerably since the 1980s. For example, the proportion of the workforce without vocational training decreased by 32% between 1980 and 1994 whilst the percentage of the workforce with a university/polytechnic degree increased by 64% over the same period.¹⁵⁸ Disposable income per inhabitant increased by 22.7% between 2004 and 2017.¹⁵⁹ Nonetheless, the Ruhr lags behind the national average in this respect. With an average disposable income in private households of €20,159, Essen ranked 10th among the 15 largest cities in Germany.¹⁶⁰

Unemployment in Essen, one of the major cities in the heart of the Ruhr, peaked at 14.4% in 2005 (Figure 9). Despite the 2008 Financial Crisis, it has continually fallen since reaching a low of 6.1% in 2018. Nonetheless, the national German unemployment rate has fallen more rapidly, declining to 3.5% in 2018.

¹⁵⁵ Australian Unions and Australian Council of Trade Unions. (2016). *Sharing the challenges and opportunities of a clean energy economy: A Just Transition for coal-fired electricity sector workers and communities*. Retrieved from: www.aph.gov.au/DocumentStore.ashx?id=d2b66250-a24c-4e20-9047-2e4cc7b45ee9&subId=459943

¹⁵⁶ RegionalVerbandRuhr. (n.d.). *Wirtschaftsleistung und innovative Branchen im blick*. Retrieved from: <https://www.rvr.ruhr/daten-digitales/regionalstatistik/wirtschaft-und-innovation/>

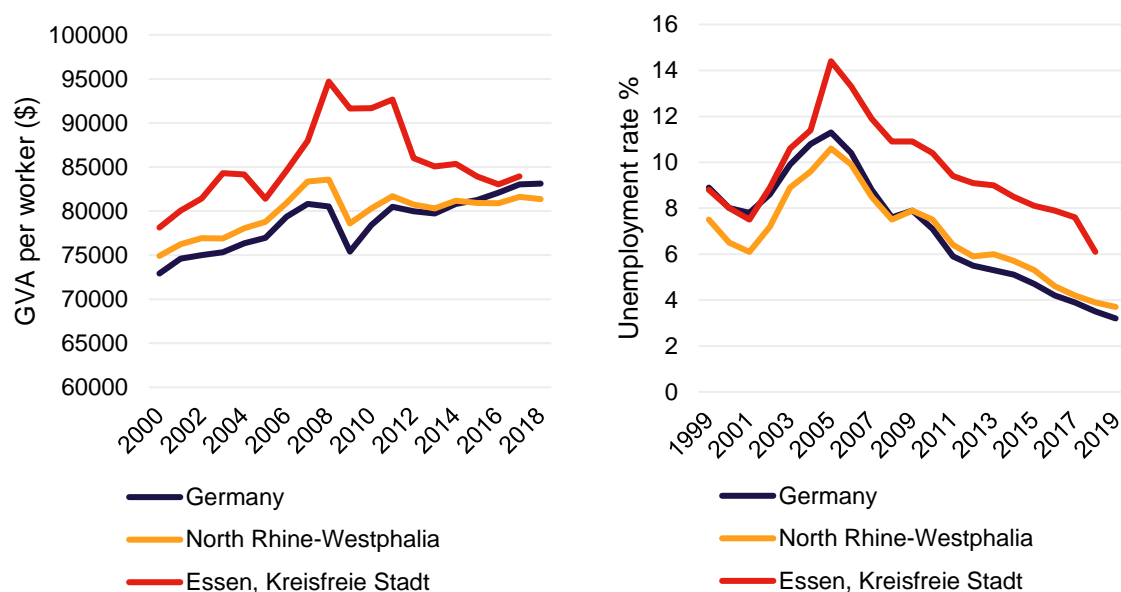
¹⁵⁷ Kiese, M. (2019). *Shadows of the Past: Can Germany's Rustbelt Compete in the Knowledge-based Economy*. Microeconomics of Competitiveness Affiliate Network European Chapter Meeting.

¹⁵⁸ Braczyk, H.-J., Cooke, P. and Heidenreich, M. (1998) quoted in: Bross, U. and Walter, G. U. (2000) *Socio-Economic Analysis of North Rheine-Westphalia*. Fraunhofer Institute System and Innovation Research.

¹⁵⁹ RegionalVerbandRuhr. (n.d.). Op cit.

¹⁶⁰ Seils, E. and Baumann, H. (2019) *Verfügbare Haushaltseinkommen im regionalen Vergleich*. Retrieved from: www.boeckler.de/pdf/wsi_vm_verfuegbare_einkommen.pdf

Figure 9: GVA per worker and unemployment rates in North Rhine-Westphalia, Essen and Germany



Source: OECD.¹⁶¹

Key institutions and economic policies

The governance system in the Ruhr is complex due to the Ruhr Region cutting across different districts. *Siedlungsverband Ruhrkohlenbezirk* an association of cities and counties was established in 1920 to support the urbanisation of the formerly village-like region. It evolved into the country’s first *regional planning authority* and is the predecessor of today’s regional planning association. It was the first regional assembly of cities in Germany and represents a pioneer in town planning. The Assembly exists today in the form of the *Regionalverband Ruhr (RVR) region* – a planning institution financed and politically controlled by cities within the Ruhr region. It is based on rules and regulations for the state of North Rhine-Westphalia but independent of the state government. It operates as a “bottom-up instrument for inter-municipal cooperation” and aims to produce and implement regional strategies and projects.¹⁶²

A Regional Parliament for the Ruhr was directly elected for the first time in 2020. Parliamentarians were previously delegated from the municipal councils. The Parliament aims to initiate “action for regional networking and inter-municipal

¹⁶¹ OECD (2020d). op cit; OECD (2020f) op cit.

¹⁶² Schwarze-Rodrian, M. (2016). Op cit, p.2; Regionalkunde Ruhrgebiet. (n.d.). *Siedlungsverband Ruhrkohlenbezirk (SVR)*. Retrieved from: <http://www.ruhrgebiet-regionalkunde.de/html/glossar/svr.php.html>

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cooperation within the Ruhr area”.¹⁶³ Cities and districts pushed for the establishment of the Parliament to better coordinate the activities of the cities.

Cities have some limited taxation powers, but these are generally insufficient to cover high costs for mandatory spending on social welfare, hence mounting municipal debt in the Ruhr. Taxation power at the municipal level is limited to property and local business taxes (*Grundsteuer, Gewerbesteuer*). Cities have to finance social security in return for taxation powers. Cities have gained powers in recent decades from the region. The region’s powers are quite limited with many powers being held at state or city level. Strategic planning is provided by Cities Region Ruhr 2030 (*Städtereion Ruhr 2030*), a voluntary collaboration of the planning directors of the eleven big cities and four Counties in the Region. Established in 2003, its Steering Committee convenes every 2 months to discuss recent developments in each municipality. Sustainable development practices across the region were previously promoted through Concept Ruhr strategy (*Konzept Ruhr*), where 41 cities in the region cooperated on sustainable development practices through nearly 400 projects.¹⁶⁴

Structural policies in the 1980s and 1990s aimed to develop the ecological and cultural landscape of the Ruhr region and increase entrepreneurial activity. They were important in slowly improving the region’s image.¹⁶⁵ The International Building Exhibition Emscher Park laboratory for innovative management and governance was developed in the late 1980s attracting €2.5 billion of public and private investment.

In 2007, following negotiation with stakeholders in the Ruhr region, the German government decided to end national subsidies for coal and find socially acceptable means of closing down the coal industry by 2018. The RAG Foundation (*RAG-Stiftung*) was established to support an orderly and socially acceptable transition of the coal mining industry. It offered training to employees, help with job search, financed ongoing mine management and funded educational, scientific and cultural projects in the Ruhr and Saar regions. 26,560 people took advantage of the re-training programmes.¹⁶⁶

Prior to the 1960s, post-secondary education was only available in the Ruhr for mining engineers, which posed significant challenges in attracting skilled jobs and businesses.¹⁶⁷ To address this issue, new universities in Duisberg, Essen and Bochum together with public and private research facilities were established in the region since the mid-1960s to support the transition in the regional economy away from heavy industry. They were conceived as investment in the new technology

¹⁶³ Regionalverband Ruhr. (n.d.). *Ruhr Parliament*. Retrieved from: <https://www.rvr.ruhr/en/en/ruhrparlament/>

¹⁶⁴ Schwarze-Rodrian, M. (2016). Op cit.

¹⁶⁵ Oei, P.-Y., Brauers, H. and Herpich, P. (2019). Lessons from Germany’s hard coal mining phase-out: policies and transition from 1950 to 2018. *Climate Policy*. DOI: 10.1080/14693062.2019.1688636

¹⁶⁶ Australian Unions and Australian Council of Trade Unions. (2016). Op cit.

¹⁶⁷ Schwarze-Rodrian, M. (2016). Op cit. In 2019, the employment was 1,780,332 jobs subject to social insurance contributions. www.rvr.ruhr/daten-digitales/regionalstatistik/erwerbstaetige

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economy. Several cities have embraced the Univercity concept, which seeks to develop economic and social links between the universities. The concept was important in supporting the establishment of technology centres and business incubators in the 1980s and the 1990s. Interviews conducted suggested this represented a 180-degree shift in how local and municipal authorities viewed the universities.

Overlapping phases of cluster policies were also introduced in the 1990s and 2000s. The policies have been criticised for lacking cohesion in relation to three aspects: spatial dimension, strategic level and functional level. Spatially, policies have shifted from the local level to the state level. At the strategic level, focus has moved from technology or sector networks to lead markets. At the functional level, cluster policy has changed from an approach based on linking research and the economy to a triple-helix approach¹⁶⁸ which also involved the federal state administration.¹⁶⁹

Decades of coal mining and steel production left the region with significant environmental issues. Environmental clean-up in the Ruhr began in 1979 with a state-driven revolving fund that took over ownership of abandoned and contaminated brownfield sites and developed plans for their future public and private use. By 2011, it had supported the redevelopment of over 6,500 acres of land.¹⁷⁰ Essen was the 2017 European Green Capital in recognition of the creation of blue and green corridors, development of new rail links and its investment in green infrastructure.¹⁷¹

The region has promoted sustainability through Innovation City Ruhr. This involved a regional competition in 2010 to choose a low-income neighbourhood with at least 50,000 inhabitants for an experiment where it would be transformed into a low energy consumption, energy-efficient, low climate impact community by 2020. The city of Bottrop won the competition. The project has been a “success” with CO₂ emissions reduced by 38% in 5 years.¹⁷² Current efforts involve the NRW Climate Expo (a collection of decentralised climate protection projects since 2014). They also include the Climate Metropolis Ruhr 2022 initiative which is designed to demonstrate

¹⁶⁸ The Triple Helix model of the knowledge-based economy relates to relationships between higher education, government and business. For more information see: Etzkowitz H. (2018) *Innovation Governance: From the “Endless Frontier” to the Triple Helix*. In: Meusburger P., Heffernan M., Suarsana L. (eds) *Geographies of the University*. Knowledge and Space, vol 12. Springer, Cham.

¹⁶⁹ Rehfeld, D. and Nordhause-Janz. (2017). ‘Integration—fragmentation—reintegration? Studying cluster evolution, regional path development and cluster policies in the Ruhr Area’ in Fornahl, D. and Hassink, R. *The Life Cycle of Clusters. A Policy Perspective*. Cheltenham: Edward Elgar.

¹⁷⁰ Schwarze-Rodrian, M. (2016). Op cit.

¹⁷¹ European Commission. (n.d.). *Ruhr valley on the right path to greener mobility*. Retrieved from: https://ec.europa.eu/regional_policy/en/projects/germany/ruhr-valley-on-the-right-path-to-greener-mobility

¹⁷² Schwarze-Rodrian, M. (2016). Op cit, p.18.; European Commission. (2019). *Case Study. InnovationCity Ruhr: Model City Bottrop*. Retrieved from: https://ec.europa.eu/energy/topics/oil-gas-and-coal/EU-coal-regions/resources/innovationcity-ruhr-model-city-bottrop_en

the technological and economic potential of green initiatives to the state, pioneering policy to address industrial change and climate protection.¹⁷³

Factors associated with economic growth

- **Cooperation** – strategic cooperation of the cities to respond to challenges encountered. Interviewees stressed the importance of a long-lasting history (over 100 years) and consciousness of interrelated networking. Interviewees indicated that whilst the cities do not agree on everything, they acknowledge they are stronger when working in partnership. Political fragmentation associated with the presence of autonomous cities and counties in the Ruhr was reduced by the presence of dense tripartite cooperative governance (involving leading companies, trade unions and social democratic local governments and administrations).
- **Place-specific policies** – a move from structural policies implemented at the national level to the regional level enabled policy to respond better to the strengths of individual areas and increase public support. Establishing a single institution to represent the region helped to coordinate national funding.¹⁷⁴
- **Scale and longevity of investment** – from the EU, Federal Republic of Germany and North-Rhine Westphalia from the 1960s onwards were key in the Ruhr’s success. €4 billion Euros were invested in the region through the EU Structural Funds between 1989 and 2011. Regional government provided expertise and investment for physical improvements (urban development), social needs (e.g. employment training) and environmental clean-up.¹⁷⁵
- **Universities and innovation** – between 1985 and 2014 the number of students in the region increased by 78% and the number of universities rose to five.¹⁷⁶ The establishment of new universities has improved the attractiveness of the region for individuals and companies and added to the momentum of a highly qualified workforce. The expansion of the universities represents an important location factor.¹⁷⁷
- **Skills** – active labour market policies including specialist support with employment promotion and retraining, were important in supporting the shift from coal to high-productivity sectors and skilled jobs. Between 1996 and 2014, 40,880 workers in the coal mining industry took early retirement, 26,560

¹⁷³ Lobbe. (n.d.). *Climate Protection through recycling*. Retrieved from: www.lobbe.de/en/climate-protection-through-recycling/

¹⁷⁴ Oei et al. (2019). Op cit.

¹⁷⁵ Schwarze-Rodrian, M. (2016). Op cit.

¹⁷⁶ Schwarze-Rodrian, M. (2016). Op cit.

¹⁷⁷ Oei et al. (2019). Op cit.

participated in retraining and obtained new qualifications and 2,210 were redeployed.¹⁷⁸

- **Future sectors** – the Ruhr has successfully seized opportunities for the future without forgetting its collective past. Interviewees emphasised how skilled engineers have moved from the multinational telecommunications/consumer electronics sector (e.g. Nokia and Blackberry) to the automotive sector (e.g. Volkswagen) as factories have closed and new factories opened. The dynamic attitude of young graduates has been crucial to this continual dynamism.
- **Attractive place to live** – The region has successfully adapted its industrial heritage to increase the number of tourists visiting. The Route of Industrial Heritage Ruhr region is a 250-mile tour of former factories, coal mines, mining heaps and heavy industry train track. It now attracts 5 million visitors per year. Affordable, high quality living conditions with high rank cultural venues were also emphasised as a key factor in growth. The Ruhr did not witness the same increase in rents and property prices as other metropolitan regions in Germany over the past decade. Together with quality jobs, this has encouraged skilled graduates to stay in the region. The Ruhr boasts 120 theatres, 100 concert halls, 250 festivals, 100 cultural centres and 200 museums.¹⁷⁹
- **Transport infrastructure** – Investments in the Ruhr region enabled workers in declining industries to travel further for new employment opportunities and facilitated the development of the logistics sector.¹⁸⁰

Challenges encountered

Despite investment in culture and green infrastructure, the region has continued to suffer to some extent from persistent negative image connotations associated with industry. Time taken for land decontamination, re-use, re-integration programmes to have an impact has hindered growth.¹⁸¹ Furthermore, brain drain is still a barrier and absorptive capacity for graduates could be improved further through attracting more knowledge-based firms and improving the entrepreneurial climate.

The cluster policies introduced have not been evaluated. However, evidence suggests that “cluster policies did not contribute to path development in a significant

¹⁷⁸ Prof. Dr. F.-J. Wodopia, Chief Executive, German Coal Association, Coal industry restructuring in Germany presentation, Euracoal seminar on restructuring, p.11. in Rehfeld, D. and Nordhause-Jan. (2017). Op cit.

¹⁷⁹ Keil, A and Wetterau, B. (2012). Op cit.

¹⁸⁰ Oei et al. (2019). Op cit.

¹⁸¹ Schwarze-Rodrian, M. (2016). Op cit.

way, apart from some rare success stories”.¹⁸² Other challenges identified include discordance between economic links and strategies and administrative boundaries, and regional stakeholders and companies initially taking a short-term rather than long-term approach to sector development. Interviews conducted indicate that with the exception of Dortmund, successful clusters appear to have developed more because of external factors (e.g. proximity to a university in Bochum) rather than strategic planning. The population of the Ruhr is expected to continue to decline up to 2030. This however, is not because of people leaving the region, rather, like in various other parts of Germany, it is due to the declining birth rate and ageing population.¹⁸³ This has recently been compensated by international immigration from Southern and especially South-Eastern Europe. A declining population could be a considerable issue but whether and how it is addressed is likely to depend on technological innovation and the extent to which the region attracts workers. Despite the transformations in the economy, the benefits of growth have also been uneven across the region.¹⁸⁴ A 2019 report suggested poverty is an issue in the Ruhr region, with 21.1% of residents in the region being in poverty.¹⁸⁵ Poverty is particularly concentrated in former coalmining areas in the Emscher Valley, which have benefitted less from levelling up in the region than other cities.¹⁸⁶

Interviews suggest a North-South divide exists and that transitioning to the service economy has been particularly challenging in the north of the Ruhr where jobs were traditionally less skilled than in the south of the region. Structural changes in the region started earlier in the south. The divide/inequality between the North and the South stems from policies (e.g. the decision to place the main new universities in the south rather than north of the region) but also people’s skills levels. Where high skilled employment has been created in the North, jobs have often gone to high skilled workers from workers elsewhere in the region as local workers did not have the required skills profile.

Finally, since 2010, cities in the region have been increasingly empowered to create specific development strategies which reflect each city’s individual strengths and needs. This has led to duplication of industries and projects in some cases, hindering the region from maximising its economic potential. Nonetheless, it has enabled some cities to flourish. Dortmund has developed following the construction of a technology

¹⁸² Rehfeld, D. and Nordhause-Janz. (2017). ‘Integration—fragmentation—reintegration? Studying cluster evolution, regional path development and cluster policies in the Ruhr Area’ in Fornahl, D. and Hassink, R. *The Life Cycle of Clusters. A Policy Perspective*. Cheltenham: Edward Elgar.

¹⁸³ Schwarze-Rodrian, M. (2016). Op cit.

¹⁸⁴ Schwarze-Rodrian, M. (2016). Op cit.

¹⁸⁵ DW. (2019). *Germany: Poverty gap widens between rich and poor regions*. Retrieved from: www.dw.com/en/germany-poverty-gap-widens-between-rich-and-poor-regions/a-51637957 Note: A relative measure of poverty is used in Germany. A household is poor if it earns less than 50 or 60% of the median household income.

¹⁸⁶ Schwarze-Rodrian, M. (2016). Op cit.

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centre, specialising in microsystem technologies, which creates synergies between research and innovative firms.¹⁸⁷

¹⁸⁷ Oei, P.-Y., Brauers, H. and Herpich, P. (2019). Lessons from Germany’s hard coal mining phase-out: policies and transition from 1950 to 2018. *Climate Policy*; Bogumil, J., Heinze, R. G., Lehner, F., & Strohmeier (2012). *Viel erreicht - wenig gewonnen: Ein realistischer Blick auf das Ruhrgebiet*. 1. Auflage. Essen: Klartext.

Summary and Conclusions: Lessons for levelling up

The international case studies discussed in this study show that there is no one specific policy that can successfully level-up regions. It also emphasises that levelling up of regions is challenging and requires high levels of collaboration, effort and investment over decades rather than years. Although it is not a small challenge, international examples show that levelling up is possible and this research offers important learning for the UK.

A thematic analysis of evidence suggests that “the foundations” in Figure 2 have had a significant role in driving local economic growth in the case study places. Those foundations are cross-cutting themes, identified as factors associated with effective economic growth policies in all case study areas.

Some foundations can be considered to directly improve productivity, whilst some are enablers. Nonetheless, this research shows that factors that are not easily quantifiable (e.g. collaboration) are as equally important as those that can be easily be measured and used in a cost-to-benefit analysis (e.g. infrastructure investment). They are also interconnected – collaborations secure long-term investments for key infrastructure projects or skills programmes. The foundations illustrate that levelling up in the UK will require a multi-faceted strategy, to which an array of actors is committed and that is backed by substantial long-term funding. There is no simple or single reason for these wide and widening differences in spatial performance. Therefore, there is no silver bullet answer to the levelling up challenge.

Figure 12 shows a more detailed summary of foundations that underlined successful policy design and implementation in each case study place. It also covers local leadership that was found to be particularly important in two case studies but less so in the remaining two, thus it did not make it to the final six foundations.

Compared to the UK, all of the case study places have higher levels of fiscal devolution. While it is important to highlight devolution as a consistent theme (Figure 12), its role in levelling up is unclear from this research. Decentralisation of power in the case studies is historic and was not introduced as a levelling up policy tool. The Council will be exploring the role of governance structures in future work.

However, we also saw in each place that levelling up of regions does not necessarily mean levelling up within regions. Socio-economic inequalities between individual residents in each place were more difficult to address than attracting new businesses and high-skilled workers. This highlights the importance of affordable housing and targeted investment in disadvantaged communities.

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Figure 12: Key factors associated with economic growth in each case study area

	Estonia	San Antonio	Greater Lille	Ruhr region
Scale and longevity of investment	Policy longevity and high levels of investment	Policy longevity and adaptability, high levels of investment	High levels of investment	High levels of investment
Collaboration	International and national collaboration (including private, public and academia)	Regional and state-wide collaboration (including private, public and academia)	International, national and regional collaboration (including private, public and academia)	International, national and regional collaboration (including private, public and academia)
Local leadership	New political leadership after independence		Strong and well-connected Mayors	
Attractive place to live	Investment in arts and culture	Investment in arts and culture	Investment in arts and culture	Investment in arts and culture
Transport/digital infrastructure	International transport infrastructure. Widespread digital infrastructure.	Regional transport infrastructure.	International, city and regional transport infrastructure.	Cities' and regional transport infrastructure.
Universities and innovation¹⁸⁸	Focus on ICT innovation and digitalisation of services (public and private)	Symbiotic relationship between firms, local universities and military	Centres of excellence and competition clusters.	Development of new universities

¹⁸⁸ Note that Higher Education is virtually free in Estonia, France and Germany.

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	Estonia	San Antonio	Greater Lille	Ruhr region
Skills and future sectors)	Sector targeted education and re-skilling policies; digitalisation	Sector targeted education, re-skilling and internship programmes; pharma, high tech and advanced manufacturing	Sector targeted re-skilling programmes; business services and logistics	Development of universities and active labour market policies to support re-skilling; high tech, clean energy
Local funding powers	<i>Not considered as part of this study, but local authorities have the right to establish and levy taxes</i>	Fiscal devolution and locally retained tax revenues	Fiscal devolution and locally retained tax revenues	Fiscal devolution and locally retained tax revenues

Governance structures can either drive economic growth or stifle them. In Greater Lille, new, complex governance structures with overlapping roles and responsibilities have made decision-making more challenging. Creating new governance structures can disrupt relationships and confuse policy direction. When creating new structures, particular care should be taken to ensure the geography of institutional structures corresponds to economic needs. Developing structures that facilitate informal idea development across policy, business, culture, academic and third sector stakeholders can also be important in generating and maintaining dynamism within areas. Facilitating cooperation across stakeholders is crucial as the UK seeks to address future economic change and facilitate recovery from the impact of the Covid-19 pandemic.