22nd Annual Global CEO Survey

Luxembourg findings

Tackling growth in an uncertain environment

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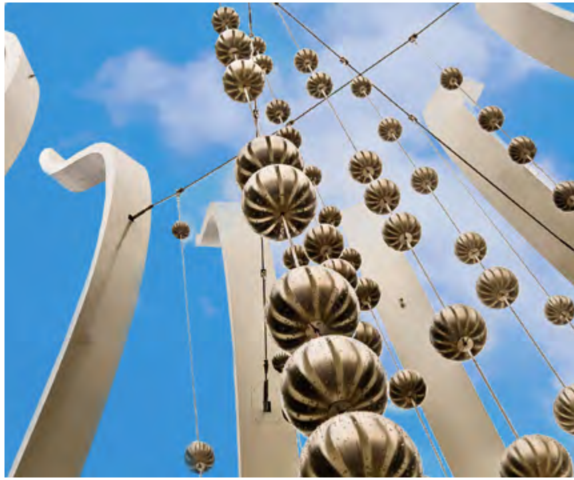


Luxembourg’s business leaders are mindful of challenges ahead.

Looking ahead to 2019, CEOs in Luxembourg are confident about their organisation's revenue growth prospects over the short and medium term. They are also largely optimistic about local economic growth prospects. Despite this, many are cautious when considering the global state of the economy and are even pessimistic about Europe. Luxembourg's business leaders remain mindful of the challenges that will be put in front of them by the increasingly complex world in which we live.

Over-regulation, availability of key skills, the speed of technological change, geopolitical uncertainty and cyber threats are just some of the primary issues which Luxembourg's CEOs consider. This year in particular, trade conflicts and protectionism have been at the forefront of their minds[1].

A number of the concerns that global and Luxembourg CEOs identified fall directly or indirectly within the remit of government responsibility. Business leaders are sending a clear message: governments must better reframe the globalisation agenda, and create a more stable international environment.

In order to deal with these external uncertainties, many Luxembourg CEOs are looking within, in the search for organic revenue growth. Unfortunately, in trying to unlock their internal growth potential, they are confronted with two key shortcomings - a striking information gap, in terms of client data and brand exposure, as well as a shortage of the right talent, especially digital talent.

Closing those gaps requires business leaders to act now by implementing innovative and future focused measures to successfully tackle the challenges to growth in today's uncertain business environment.

[1] 2019 was the first year CEOs were asked about 'policy uncertainty' and 'trade conflicts'.

1 Growth

Our headline from the 2018 survey was 'the anxious optimist in the corner office', reflecting the fact that CEOs were confident about the economy but anxious about their own prospects. This year, however, there has been a sharp rise in the number of CEOs indicating a belief that global economic growth will decline in 2019, which was coupled with a similar shortfall in optimism towards their own businesses.

Given this information, we asked Luxembourg's CEOs how confident they are about the global economy's growth prospects.

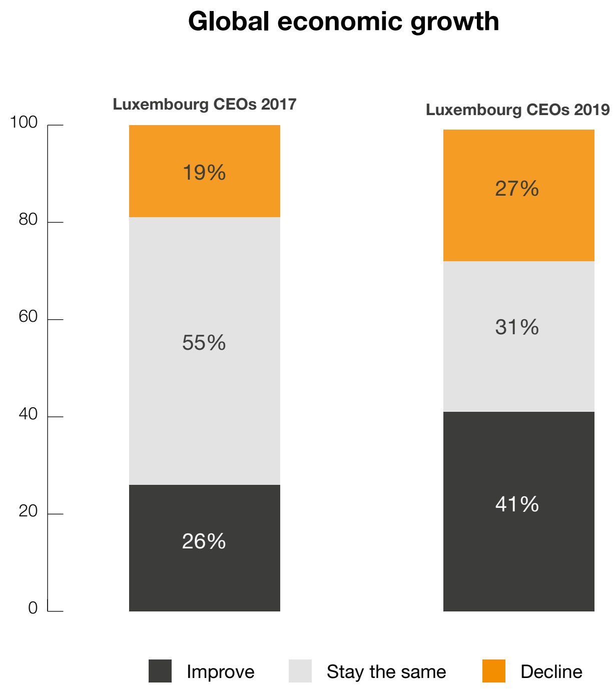
Although the majority of Luxembourg's CEOs still foresee growth, a significant portion, 27%, believe growth will decline in the next 12 months. This pessimism mirrors the global results, where the number of business leaders predicting economic decline is the highest it has been in 7 years.

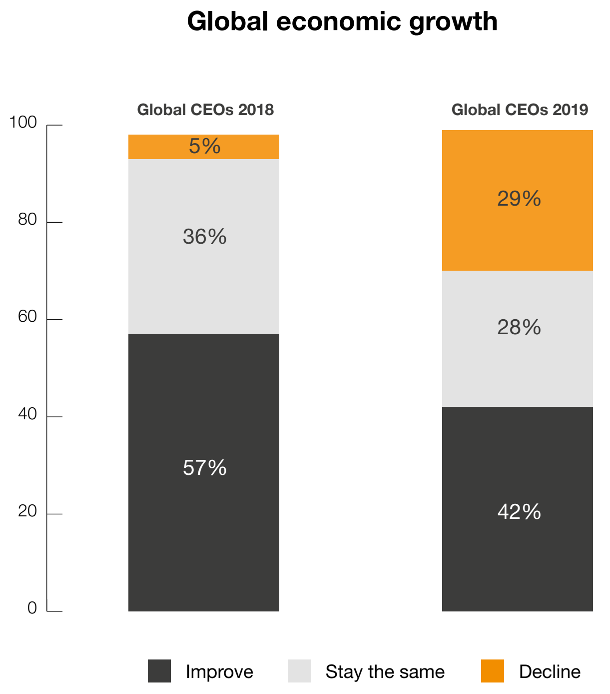
EXHIBIT 1

Although the majority of Luxembourg's CEOs still foresee growth, their views are more polarised than in 2017

QUESTION

Do you believe global economic growth will improve, stay the same, or decline over the next 12 months?





Another trend to note is the polarisation of views globally and in Luxembourg, with more CEOs indicating that they foresee either an improvement or a decline rather than the more neutral response of previous years.

Base: All respondents (Luxembourg, 2017=49, 2019=59; Global, 2018=1293, 2019=1378). Don't know responses not shown
Source: PwC, 22nd Annual Global CEO Survey

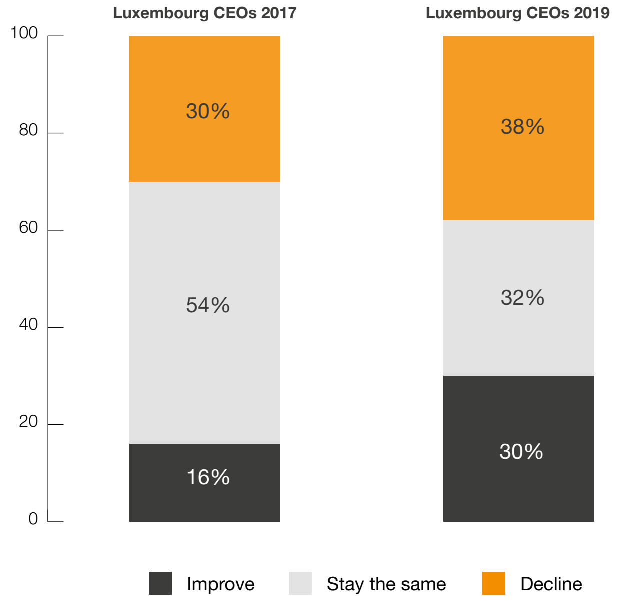
EXHIBIT 2

Luxembourg's CEOs are increasingly pessimistic about economic growth in Europe, but far more optimistic about local growth prospects

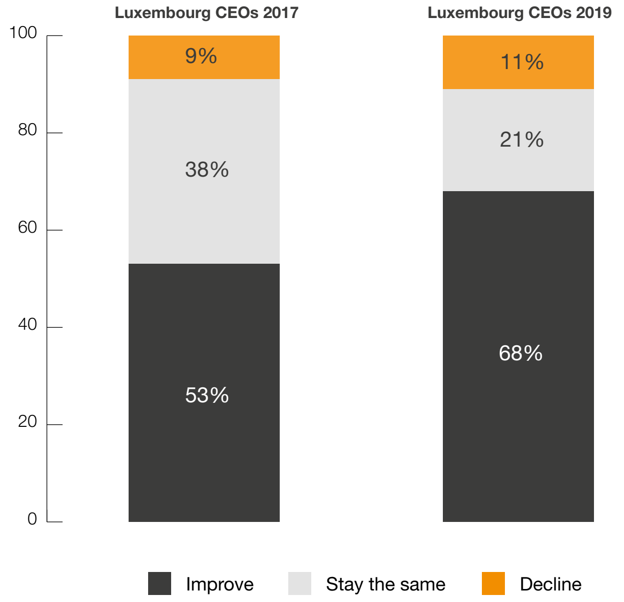
QUESTION

Do you believe economic growth will improve, stay the same, or decline over the next 12 months in Europe and in Luxembourg?

Economic growth in Europe



Economic growth in Luxembourg



Base: All respondents (Luxembourg, 2017=49, 2019=59)
Source: PwC, 22nd Annual Global CEO Survey

At a European level, Luxembourg's CEOs are pessimistic, with 38% of respondents believing that economic growth in Europe will decline over the next 12 months. Brexit's imminent arrival, as well as increasing Euroscepticism, are clearly impacting on confidence.

Additionally, uncertainty surrounding the European Parliament elections is likely playing a role. While the future of the European project may be supported by the election of pro-EU parliamentarians, an increased representation of populist politicians, as well as those of a more extreme leaning, may compound the polarising views that have begun to dominate the global political landscape, which could create challenges in the long run.

On the other hand, Luxembourg's business leaders are largely optimistic about local growth prospects. For example, 68% of respondents indicated that they believe the national economy will improve in 2019, up from 53% in 2017.

This optimism matches the European Commission's Autumn 2018 Forecast, which estimated a 3.0% GDP growth for Luxembourg in 2019 after slowing down to 1.5% in 2017[2].

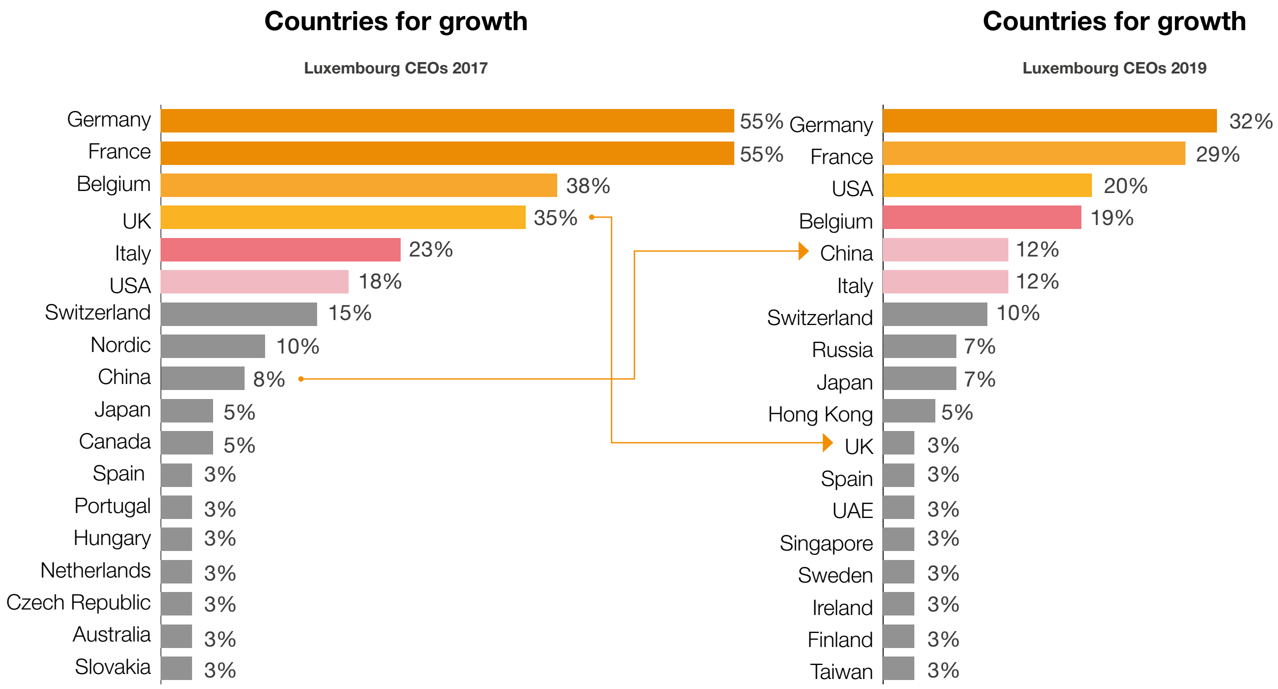
[2] European Commission, Autumn 2018 Economic Forecast – Luxembourg.

EXHIBIT 3

There is slowing enthusiasm from Luxembourg's CEOs towards the expansion of their business abroad

QUESTION

Which three territories, excluding the territory in which you are based, do you consider most important for your organisation's overall growth prospects over the next 12 months?



Base: All respondents (Luxembourg, 2017=49; 2019=59). Don't know responses not shown
Source: PwC, 22nd Annual Global CEO Survey

There is slowing enthusiasm from CEOs towards the expansion of their business abroad, especially towards the UK. The traditional destination countries of Germany, France, Belgium and the UK are losing ground among Luxembourg's CEOs while no new destination seems to emerge.

Despite this, Germany and France are still top choices and the US rounds off the top three, overtaking Belgium as Luxembourg's CEOs search for opportunities outside Europe.

Notably, China has risen in the ranks and now shares the 5th position with Italy. The Luxembourg government's attempts to attract Chinese players has clearly born fruit as more establish themselves in the Grand Duchy and business ties are strengthened.

Unsurprisingly, the UK has plunged to the bottom of the rankings as a result of Brexit uncertainty. The top five countries are well aligned with Luxembourg's top three trading countries in 2017 (Germany, France and Belgium), according to STATEC[3]. Interestingly, the Netherlands and the UK complete the top five export destinations of Luxembourg, according to this same source. Despite this, neither of them are on the radar of Luxembourg's chief executives.

Meanwhile, the highest selected non-EU Member States by Luxembourg's CEOs also match the most popular non-EU Member State exports destinations from Luxembourg: the US, Switzerland and China.

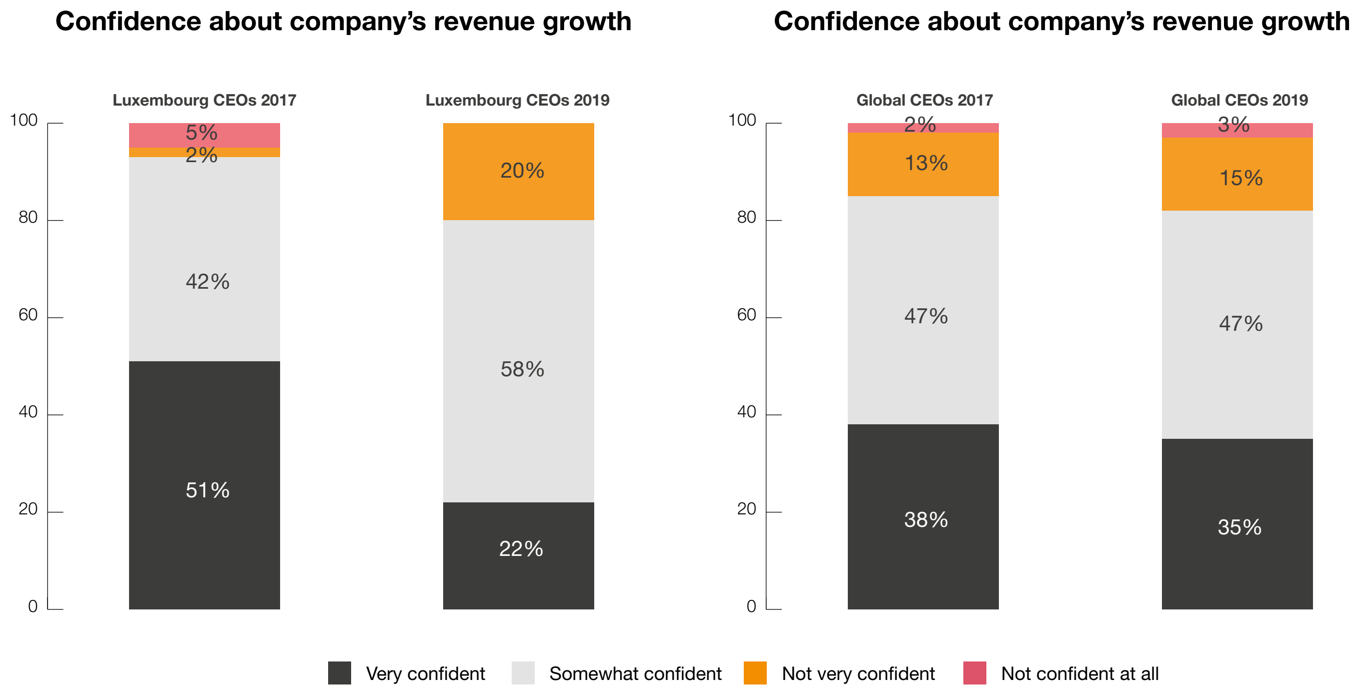
[3] STATEC, Exports – Country of destination by ranking in 2017

EXHIBIT 4

Luxembourg's CEOs are broadly confident about their organisation's revenue prospects. However, there was a large drop in 'very confident' responses

QUESTION

How confident are you about your organisation's prospects for revenue growth over the next 12 months?



In line with their growth expectations for the local economy, Luxembourg's business leaders are broadly confident about their own organisation's short-term revenue prospects. However, there was a large drop in respondents who were 'very confident' (22%) in comparison to 2017 (51%). Given that nearly three quarters of Luxembourg's CEOs anticipate economic growth in Luxembourg, this suggests that they are more cautious when assessing the prospects of their own organisations than they are when expressing their views on the Luxembourgish economy.

Over the medium term (3 years), Luxembourg CEOs are more confident of revenue growth, just like their global peers. This could suggest that CEOs are optimistic that possible economic problems will be short-lived. Additionally, Luxembourg's CEOs seem confident about the Grand Duchy's ability to weather a storm well.

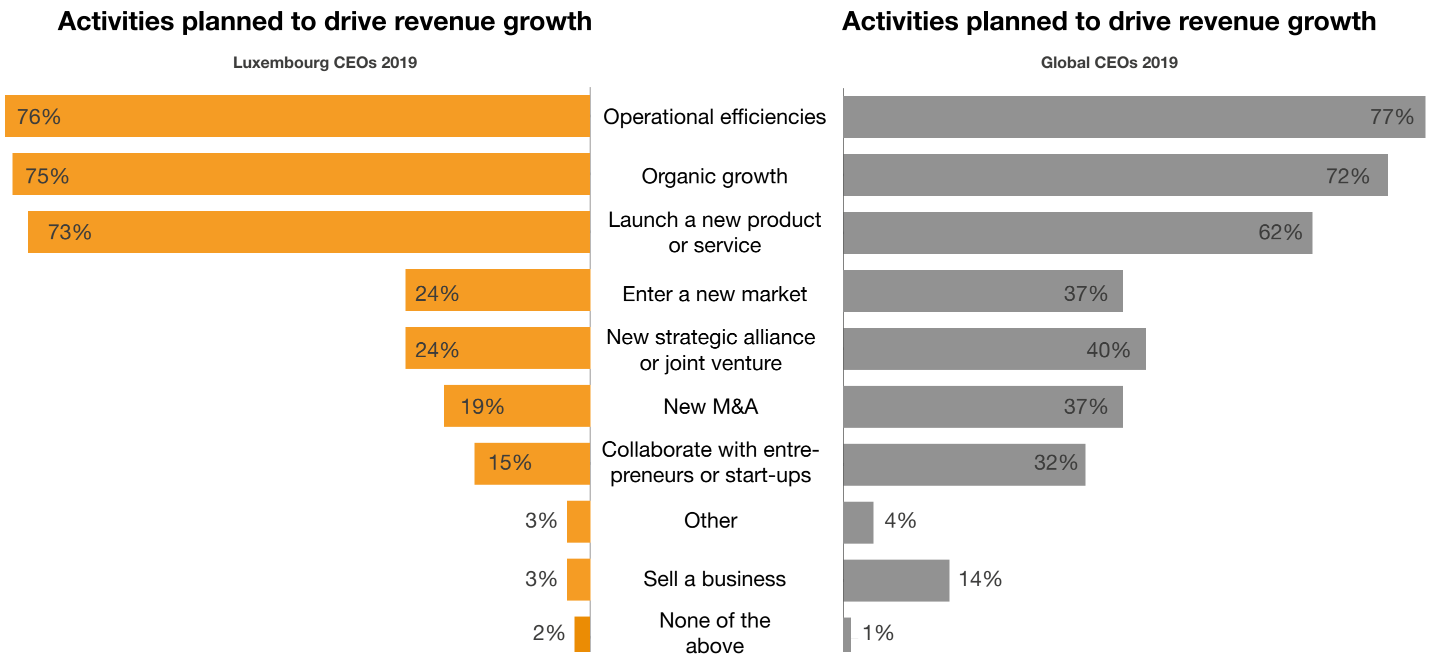
Base: All respondents (Luxembourg, 2017=49, 2019=59; Global, 2017=1379, 2019=1378). Don't know responses not shown
Source: PwC, 22nd Annual Global CEO Survey

EXHIBIT 5

Luxembourg's CEOs are looking inside-out for revenue growth

QUESTION

Which of the following activities, if any, are you planning in the next 12 months in order to drive revenue growth?



In light of the overall confidence shown by CEOs, we asked them which activities they plan to undertake in order to drive this growth. The responses show that 'operational efficiencies', 'organic growth', and the 'launch of a new product or service' were the top three options selected by both Luxembourg and global CEOs.

Looking in-house for growth suggests that CEOs are confident in their ability to navigate home market challenges, leveraging on Luxembourg's political and financial stability, and plan growth from the inside out. However, as market observers have highlighted, growing trade tension and geopolitical uncertainty are likely to weigh on CEO's internal growth plans as well.

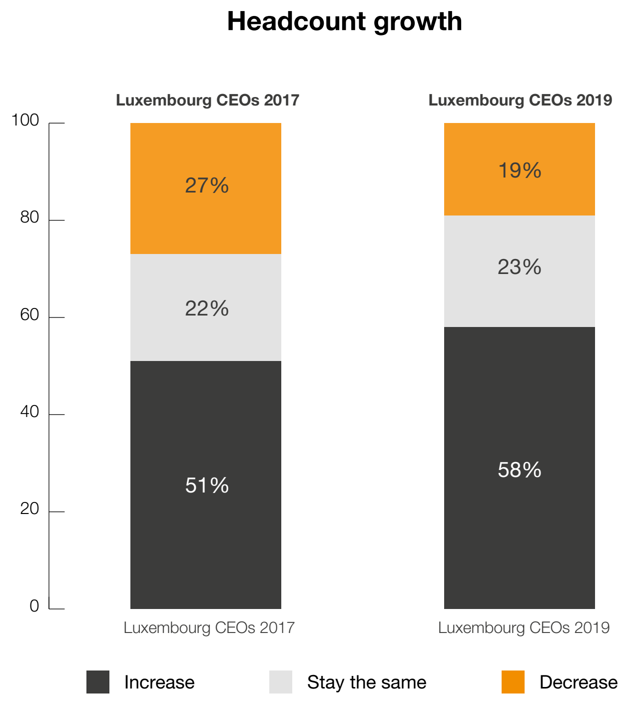
Base: All respondents (Luxembourg, 59; Global, 1378)
Source: PwC, 22nd Annual Global CEO Survey

EXHIBIT 6

A majority of Luxembourg's CEOs expect to employ more people in the next 12 months

QUESTION

Do you expect headcount at your organisation to increase, decrease or stay the same over the next 12 months?



Base: All respondents (Luxembourg, 2017=49; 2019=59)
Source: PwC, 22nd Annual Global CEO Survey

Both globally and in Luxembourg, well over half of CEOs expect to employ more people over the next 12 months. Meanwhile, if compared to 2017, there are fewer CEOs in Luxembourg who expect a decrease in headcount and more CEOs who foresee an increase.

This is not surprising given their confidence in the Luxembourgish economy and their mostly positive expectations for revenue growth within their own organisations in the short and medium term.

2 Threats & Opportunities

In an ever-changing world that is becoming increasingly more volatile, uncertain and complex, we asked CEOs about what concerns them most.

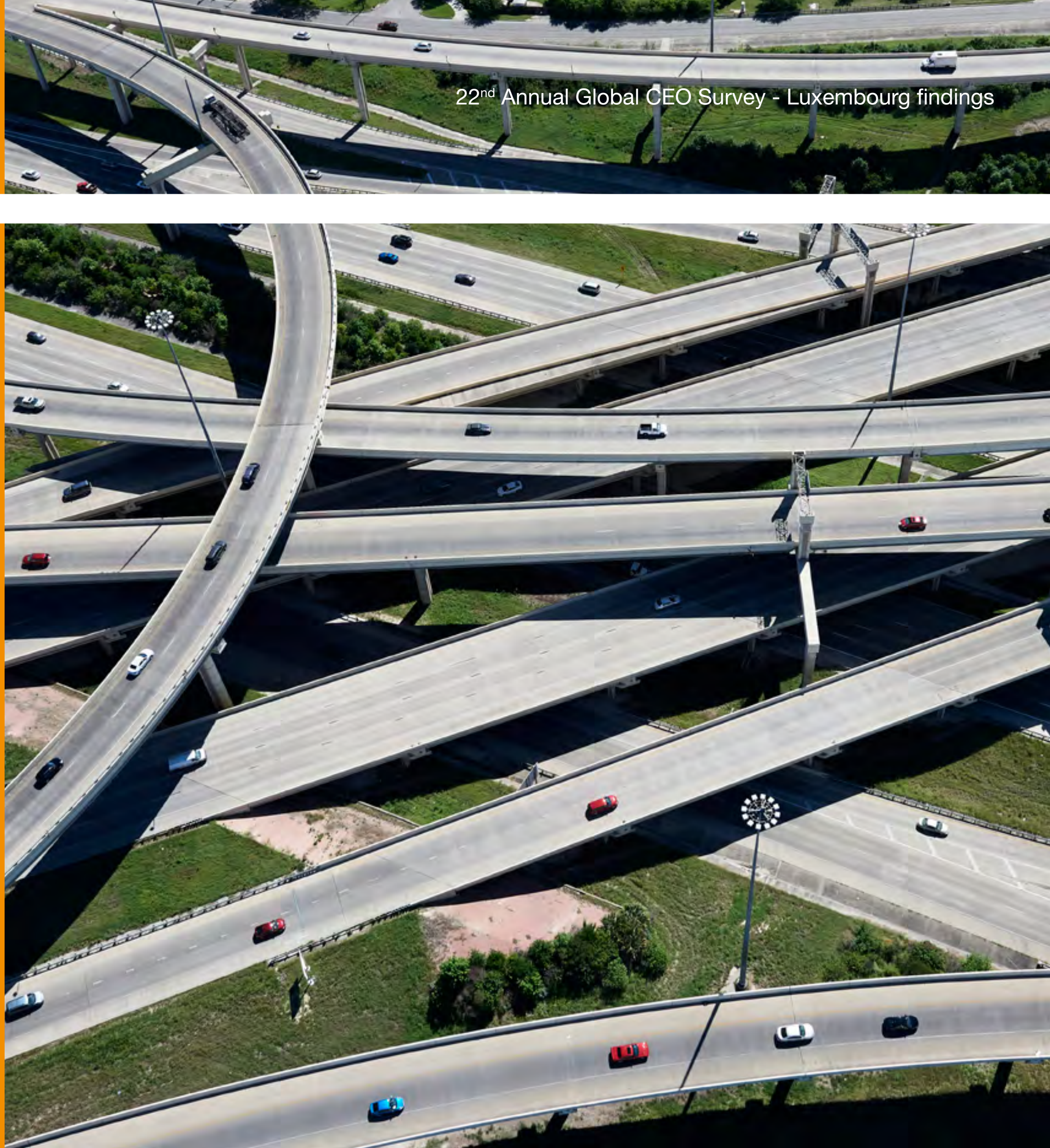
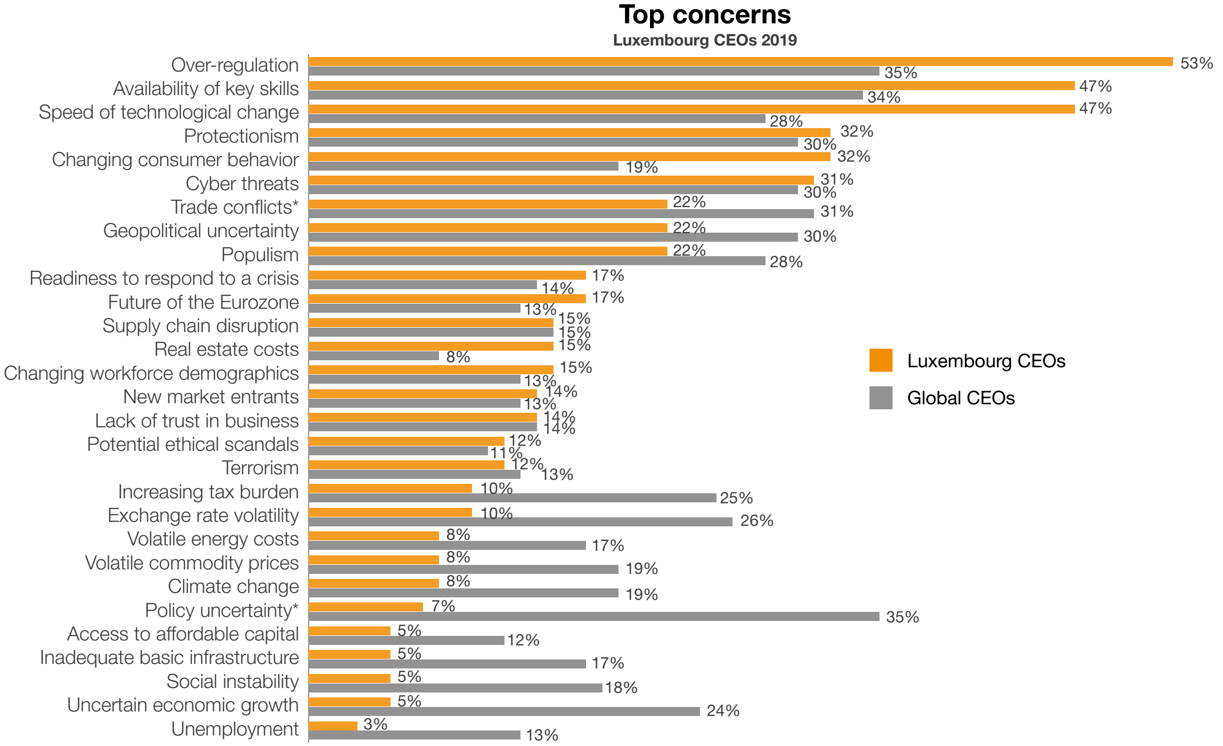


EXHIBIT 7

Luxembourg CEOs top concerns are related to the ease of doing business

QUESTION

How concerned are you about the following economic, policy, social, environmental and business threats to your organisation's growth prospects? *(showing only 'extremely concerned')*



*Note: 2019 was the first year CEOs were asked about 'policy uncertainty' and 'trade conflicts'
Base: All respondents (Luxembourg, 59; Global 1378)
Source: PwC, 22nd Annual Global CEO Survey

Luxembourg's chief executives are particularly worried about 'over-regulation', with 53% signalling that they are extremely concerned about it compared to 35% of global CEOs. This could be due to the high proportion of CEOs in Luxembourg who operate in the financial industry.

Meanwhile, 'availability of key skills' and 'speed of technological change' were each selected by nearly half of Luxembourg's business leaders, ranking them as the second-biggest concerns. These selections make sense given the rapid advancement of technology and the heavy reliance on highly-skilled workers in Luxembourg. The financial sector, which directly accounts for about 25% of Luxembourg's GDP, has long been a laggard when it comes to adopting to technological change. This has begun to change in recent years, but as generational shifts occur and businesses' digitalisation increases, it is clear that CEOs are feeling the pressure. As evidenced by recent public announcements of large Industry 4.0[4] investments, the industry is also adopting new technologies to improve productivity and develop new digital services.

[4] Industry 4.0 refers to the application of exponential technologies such as artificial intelligence, big data, virtual reality, machine learning – among others – to prepare businesses for the digital age.

‘Protectionism’, chosen by 32% of Luxembourg’s CEOs, is a concern shared by their peers around the globe. Although to a lesser extent, ‘populism’, ‘geopolitical uncertainty’ and ‘trade conflicts’ are similar topics that also worry Luxembourg’s CEOs. Amidst the wave of populist and protectionist sentiment sweeping across continents, these findings do not come as a surprise.

Interestingly, while over a third of global CEOs cited ‘policy uncertainty’ as another concern, just 7% of Luxembourg CEOs shared the same view. There was a similar trend for ‘social instability’ and ‘uncertain economic growth’, where global concern strongly outweighed the concern of Luxembourg’s chief executives. Luxembourg’s long tradition of political and economic stability is clearly reassuring to its CEOs in this regard.

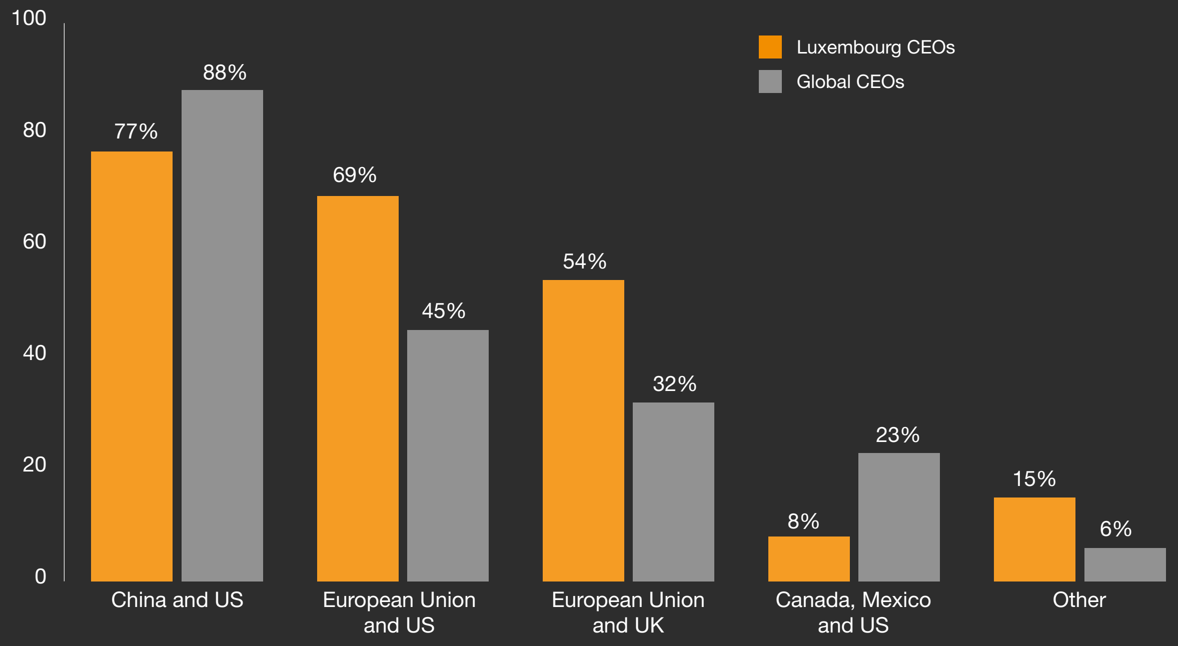
Among CEOs who expressed worry over trade conflicts, an overwhelming majority both in Luxembourg and around the globe consider the US-China trade conflict to be particularly concerning given the potential global consequences. This is followed by the trade conflict between the European Union and the US. In addition, over half of Luxembourg’s business leaders expressed their anxiety about a potential trade conflict between the EU and UK, with a hard Brexit remaining a strong possibility.

EXHIBIT 8

An overwhelming majority both in Luxembourg and around the globe consider the US-China trade conflict to be particularly concerning

QUESTION

What specific 'trade conflicts' are you concerned about?



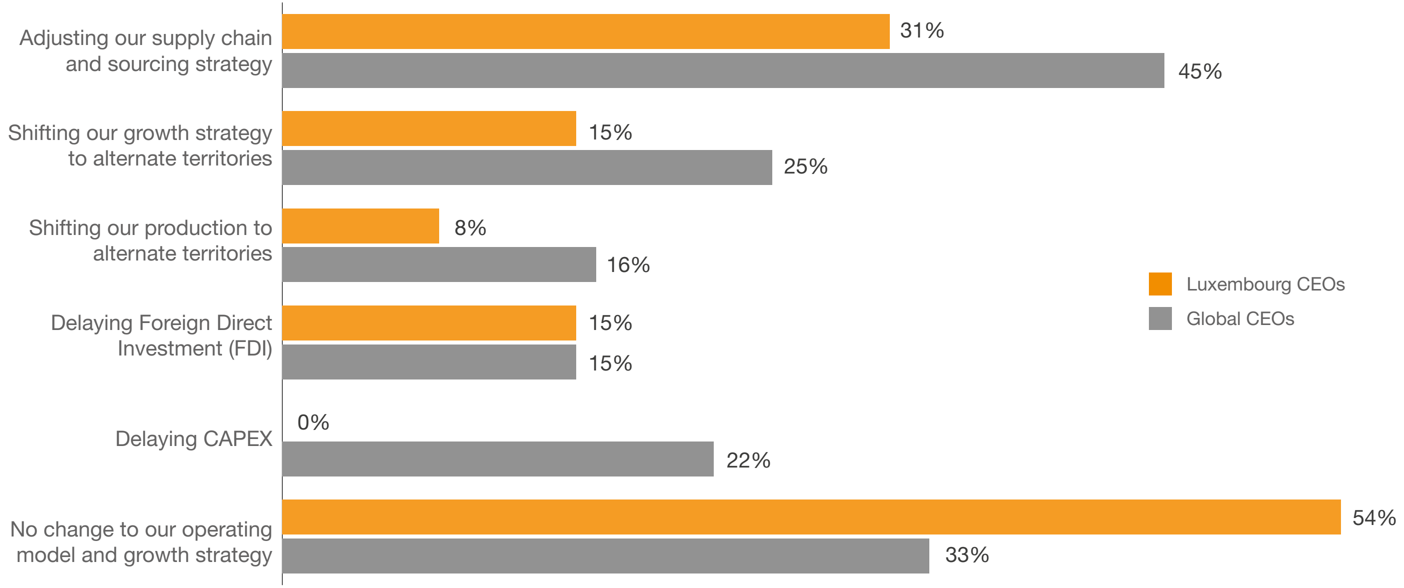
Base: Asked to those who selected 'extremely concerned' for 'trade conflicts' (Luxembourg, 13; Global, 426)
Source: PwC, 22nd Annual Global CEO Survey

EXHIBIT 9

While at a global level 45% of CEOs are adjusting their supply and sourcing strategy, 54% of Luxembourg CEOs plan to make no changes

QUESTION

How are trade conflicts affecting your operating model and growth strategy?

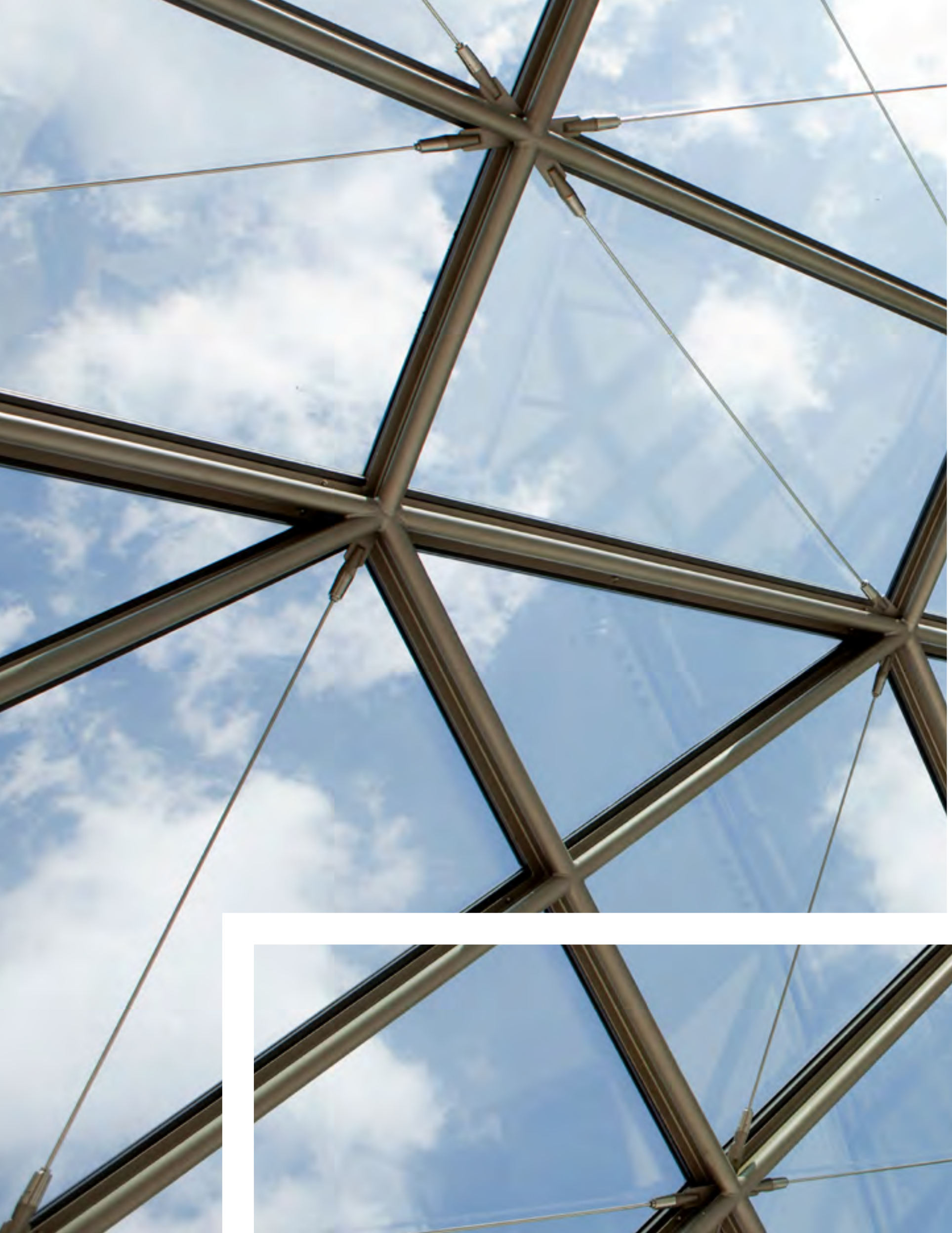


In light of these concerns, we wanted to find out what CEOs planned to do in order to offset the potential negative impact on their businesses.

At a global level, 45% of CEOs are adjusting their supply and sourcing strategy while a quarter are looking to alternative territories for growth.

Meanwhile, in contrast to the global trend, a staggering 54% of Luxembourg's CEOs plan to make no changes to their operating model and growth strategy. Clearly, while CEOs are concerned about trade conflicts, this desire to retain the status quo could reflect the fact that many companies in Luxembourg are parts of a group, where changes could be made elsewhere in order to combat trade concerns. In addition to this, the country's exposure to the financial sector could be dampening CEO's concerns about trade conflicts.

Base: Asked to those who selected 'extremely concerned' for 'trade conflicts' (Luxembourg, 13; Global, 426)
Source: PwC, 22nd Annual Global CEO Survey



3 Data, Artificial Intelligence, and the skills gap

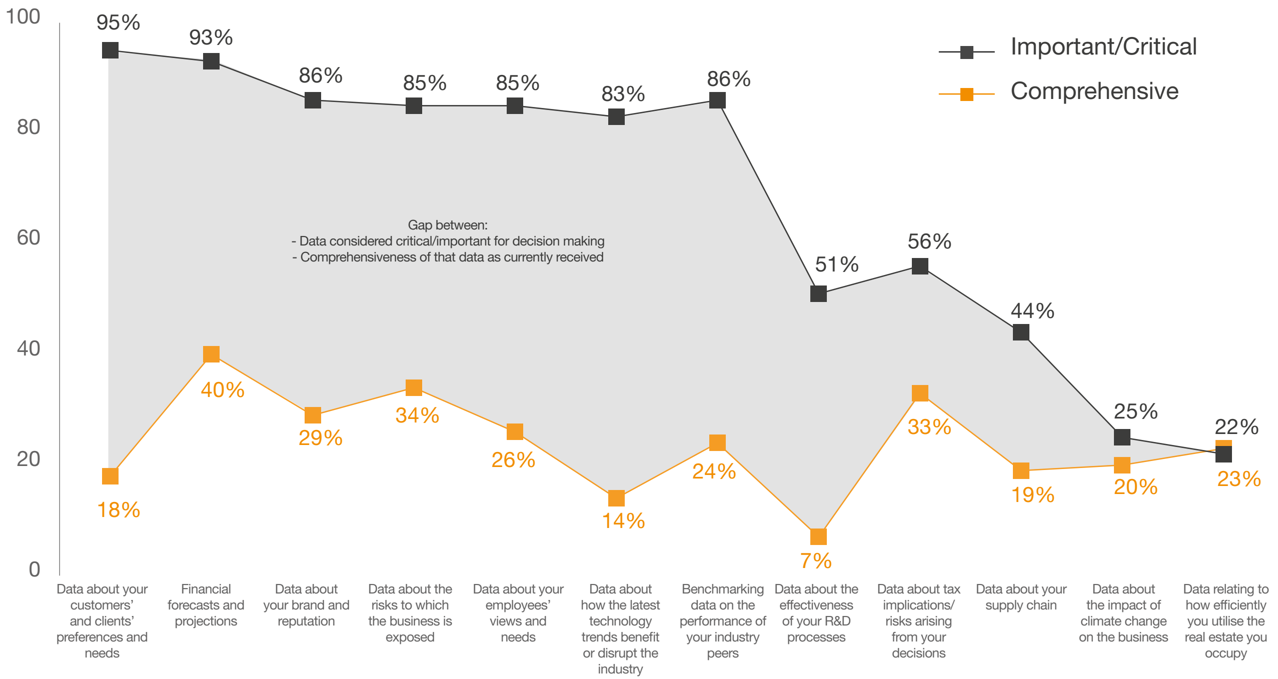
Facing an economy characterised by an escalation of trade conflicts and growing uncertainty, CEOs are looking internally to drive growth. However, some questions remain. Do they have the resources required to do this? How comprehensive is the data that CEOs receive in order to make decisions? Are they relying on new technologies? We asked Luxembourg's CEOs for their thoughts.

EXHIBIT 10

The more relevant the areas to make decisions are, the wider the information gap faced by Luxembourg CEOs

QUESTION

Thinking about the data that you personally use to make decisions about the long-term success and durability of your business, how important is...? *(showing only 'important' or 'critical')*
How adequate is the data that you receive? *(showing only 'comprehensive')*



Base: All respondents (Luxembourg, 59)
Source: PwC, 22nd Annual Global CEO Survey

In areas that Luxembourg's business leaders deem 'important' or 'critical' to make decisions about the long-term success and durability of their business, there is a large information gap. Interestingly, the more relevant topics are, the wider the gap.

When thinking about their business in the long run, Luxembourg's CEOs consider data about customers' preferences and needs as most important. This is followed by financial forecasts, data about brand and reputation, business risks and employees' views and needs. However, taking an average from of all these cases mentioned, just 29% of respondents view the data available to them as adequate.

It is worth noting that the information gap widens most for two topics that are vital for the long-term sustainability of any business: data about customer needs and data about the latest technology trends benefitting or disrupting the industry. This highlights how despite the progress made in data and AI, there is still a significant gap in the information available on internal matters such as employee needs, brand, and even financial forecasting.

We wanted to know what was at the root of this alarming reality, so we asked Luxembourg's CEOs to list the primary reasons why the data is not adequate.

EXHIBIT 11

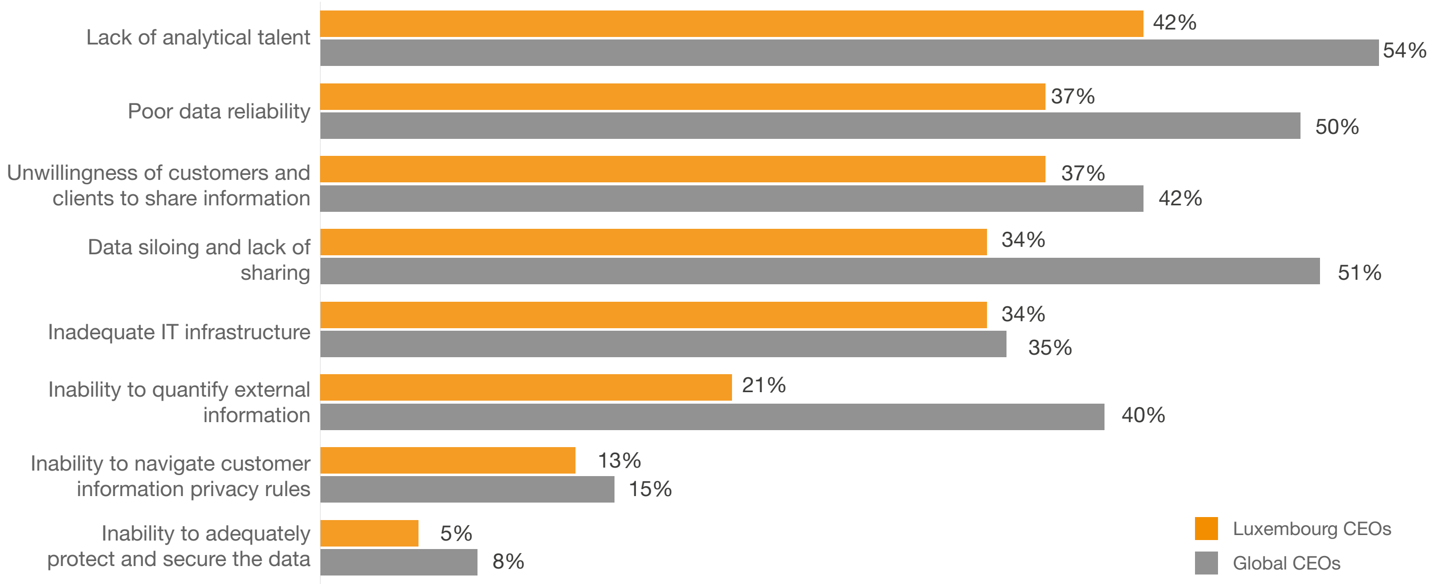
Internal shortcomings such as a lack of analytical talent are the primary reasons why the data received is not adequate

QUESTION

What are the primary reasons that the data you receive is not adequate or that you do not receive the information?

More than 40% of Luxembourg's CEOs attributed the information gap to a lack of analytical talent. Meanwhile, close to 40% considered that both poor data reliability and the unwillingness of customers to share information are playing a role. Data siloing and an inadequate IT infrastructure complete the top five reasons mentioned.

Interestingly, all but one of those five reasons relate to internal shortcomings within the organisation, with the one exception being the unwillingness of customers to share information. This is positive as CEOs are well placed to tackle issues within their internal environment, which also provides strong evidence as to why Luxembourg's CEOs are looking to focus on growth from the inside out.



Base: Asked to those that answered 'not adequate' and/or 'do not receive this information' (Luxembourg, 38; Global, 935)
Source: PwC, 22nd Annual Global CEO Survey

Talent: the other gap

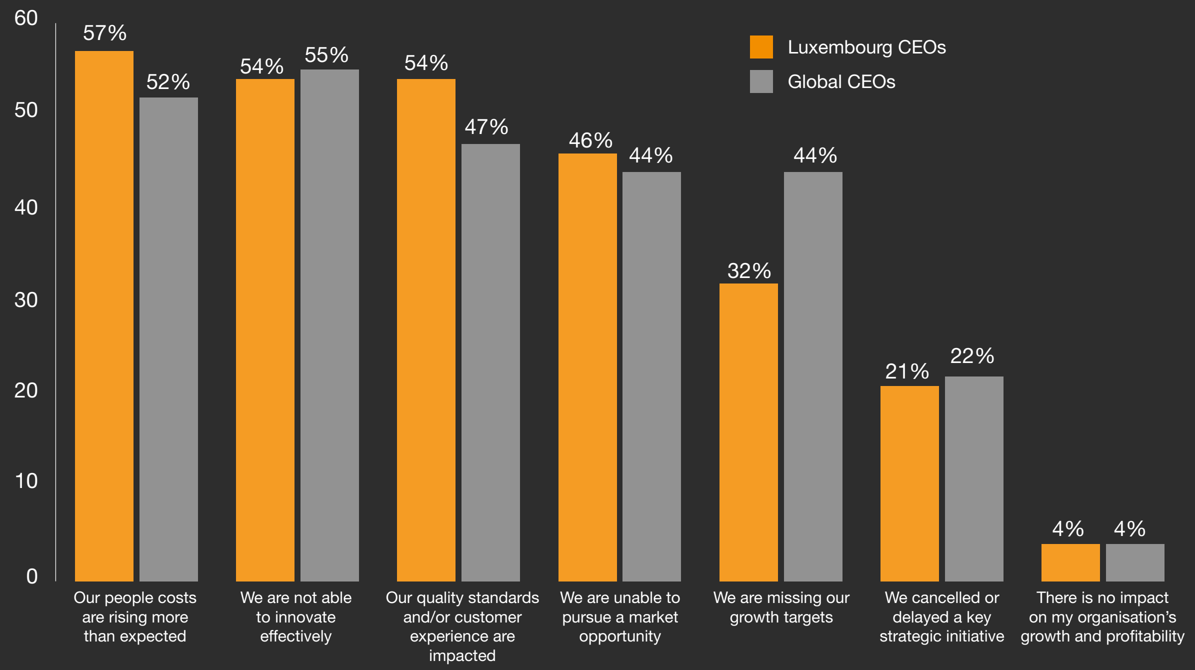
Confronted with a need for higher skills, we asked CEOs about the impact this may have on their organisation’s growth prospects.

EXHIBIT 12

The talent gap is increasing people costs, affecting the ability to innovate and impacting customer experience

QUESTION

What impact is 'availability of key skills' having on your organisation's growth prospects?



57% of Luxembourg's CEOs stated that people costs are rising more than expected. They also report an impact on the organisation's capacity to innovate effectively (54%) and in the quality standards and/or the customer experience (54%) they can provide. In addition to this, nearly half of respondents referred to missed market opportunities due to a lack of availability in key resources.

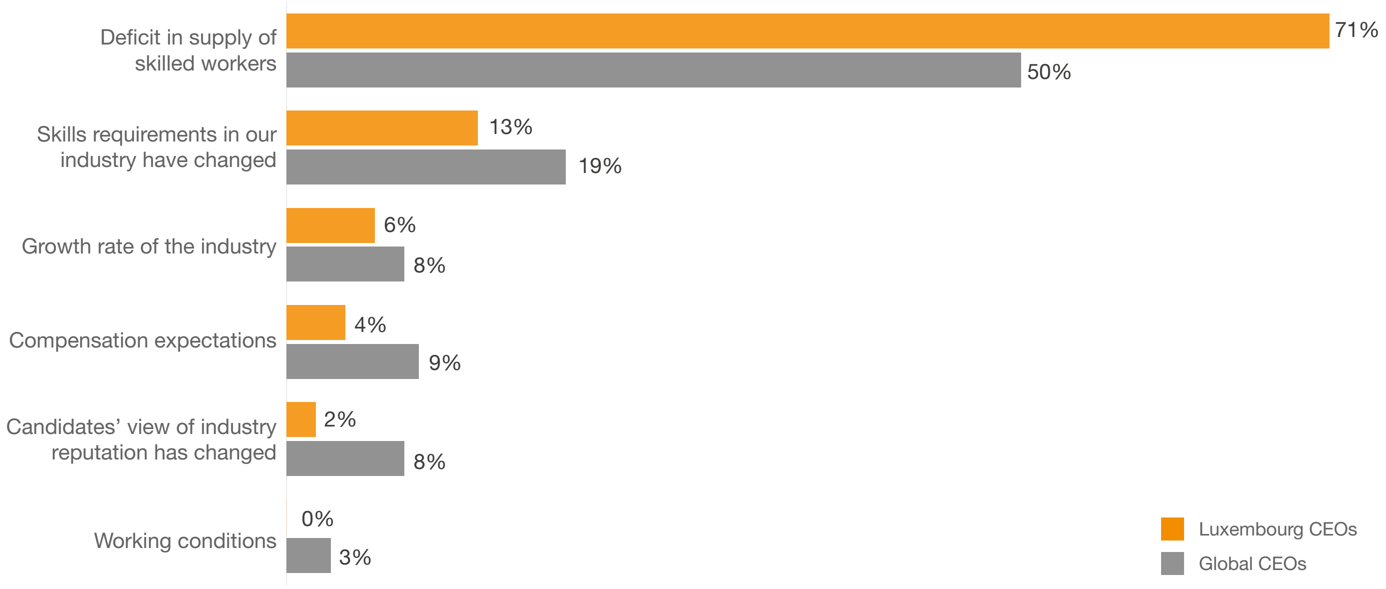
Base: Asked to those who selected 'extremely concerned' for 'availability of key skills' (Luxembourg, 28; Global, 473)
Source: PwC, 22nd Annual Global CEO Survey

EXHIBIT 13

Luxembourg CEOs are struggling to recruit the correct people. Yet again, the talent gap is mainly responsible

QUESTION

Which of the following is the primary reason why it has become more difficult to hire workers?



Unfortunately, Luxembourg's CEOs cannot simply hire more skilled workers. In fact, an overwhelming majority of them indicated that they are struggling to recruit the correct people. Yet again, the talent gap is mainly responsible.

Over 80% of Luxembourg's CEOs indicated that either a deficit in supply of skilled workers or a change in the skills requirements in their industry makes hiring workers more difficult. However, this sentiment is not specific to Luxembourg.

At a global level, CEOs also highlighted the difficulties faced at the time of hiring workers, with just under 70% also referring to a deficit in skilled workers and changing skills requirements as the causes of this.

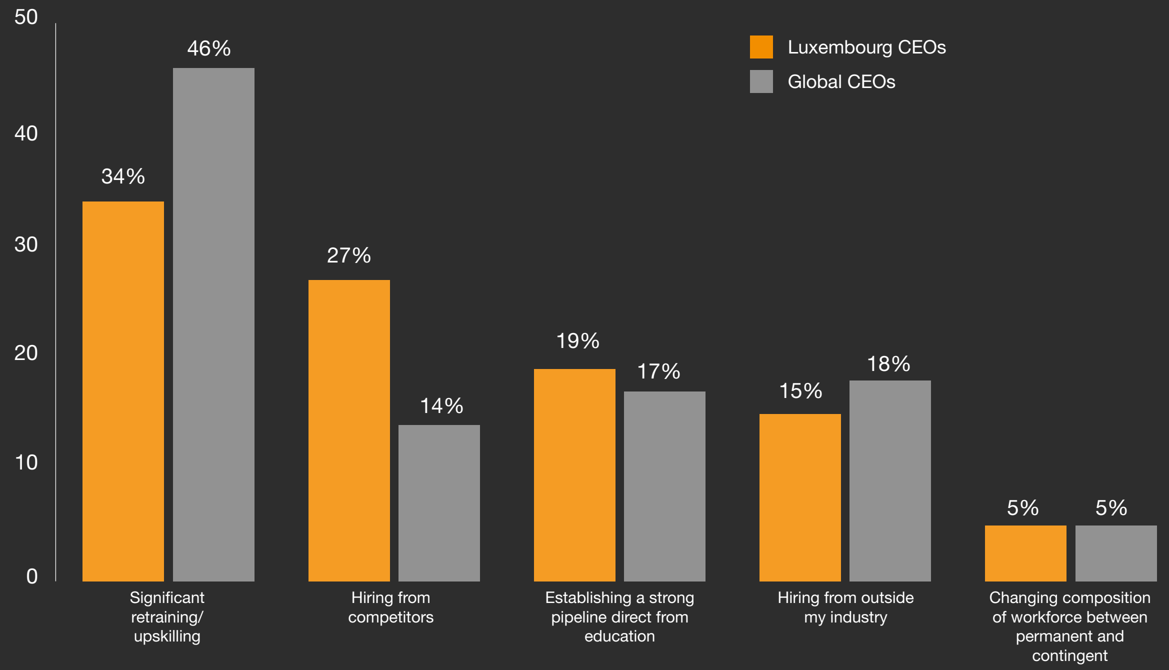
Base: All respondents (Luxembourg, 48; Global, 852). Don't know answers not shown
Source: PwC, 22nd Annual Global CEO Survey

EXHIBIT 14

Significant retraining/upskilling and hiring from competitors among the efforts to close the highly skilled workers gap

QUESTION

Which of these is the most important to close a potential skills gap in your organisation?



Base: All respondents (Luxembourg, 59; Global, 1378)
Source: PwC, 22nd Annual Global CEO Survey

Given the disparity between the supply and demand for highly skilled workers, we asked Luxembourg's CEOs how they planned to cope.

Similar to global CEOs, Luxembourg's CEOs see upskilling as the major solution to fix the talent gap. Hiring from competitors is quite a common practice in Luxembourg, but creates a rise in salary costs. Establishing a strong pipeline from education or hiring outside of the industry are only considered important by one fifth of CEOs.

INSIGHT:

Luxembourg Digital Skills Bridge

In close collaboration with PwC Luxembourg, the Government of Luxembourg launched the ‘Digital Skills Bridge’ initiative in May 2018. Its overall aim is to provide technical and financial assistance in order to upskill employees in companies which are facing major technological disruption.

As a pilot multi-stakeholder programme, it represents a major innovative public policy initiative in qualifying and certifying lifelong learning. It is a concrete mitigation to social risk and a growth accelerator for the participating companies. Its pilot phase, in 2018, was boosted by an almost EUR 12 million investment by the Luxembourg Government.

In November 2018 the initiative was listed in the FT’s Europe’s 100 digital champions within the ‘technology training’ category.

How it works?

After a strategic workforce planning exercise (in which the company plans its future workforce in the light of digital disruption), an assessment of employees’ skills and interests is carried out. Based on this, skills development plans are built to bridge the skills gap to tomorrow’s jobs. Selected employees engage in an intensive training programme to directly integrate into a new or transformed position. Each employee gets the personal support of an individual advisor throughout the upskilling process.

Which are the advantages for the employee?

- A complete evaluation of employee’s skills, motivations and interests;
- Development of new professional skills;
- New employment opportunities (internal mobility or externally);
- Personalised guidance throughout the process.

Which are the advantages for the participating company?

- Anticipate the impact that disruptive technologies will have on workforce planning, putting the employees at the heart of the transformation process;
- Gain competitiveness;
- Access to the advice and guidance of technical experts;
- A newly qualified workforce equipped to face the challenges derived from digitalisation;
- A boosted reputation both externally (social innovation) and internally (positive impact on internal working climate).

AI: Luxembourg's picture

Nearly 60% of Luxembourg's CEOs see Artificial Intelligence (AI) as a phenomenon which will have a larger impact on the world than the internet revolution. The question is whether or not this impact will be positive or negative. According to Luxembourg's business leaders, the potential impact remains a mystery, with 49% believing that AI will benefit society and 47% unsure.

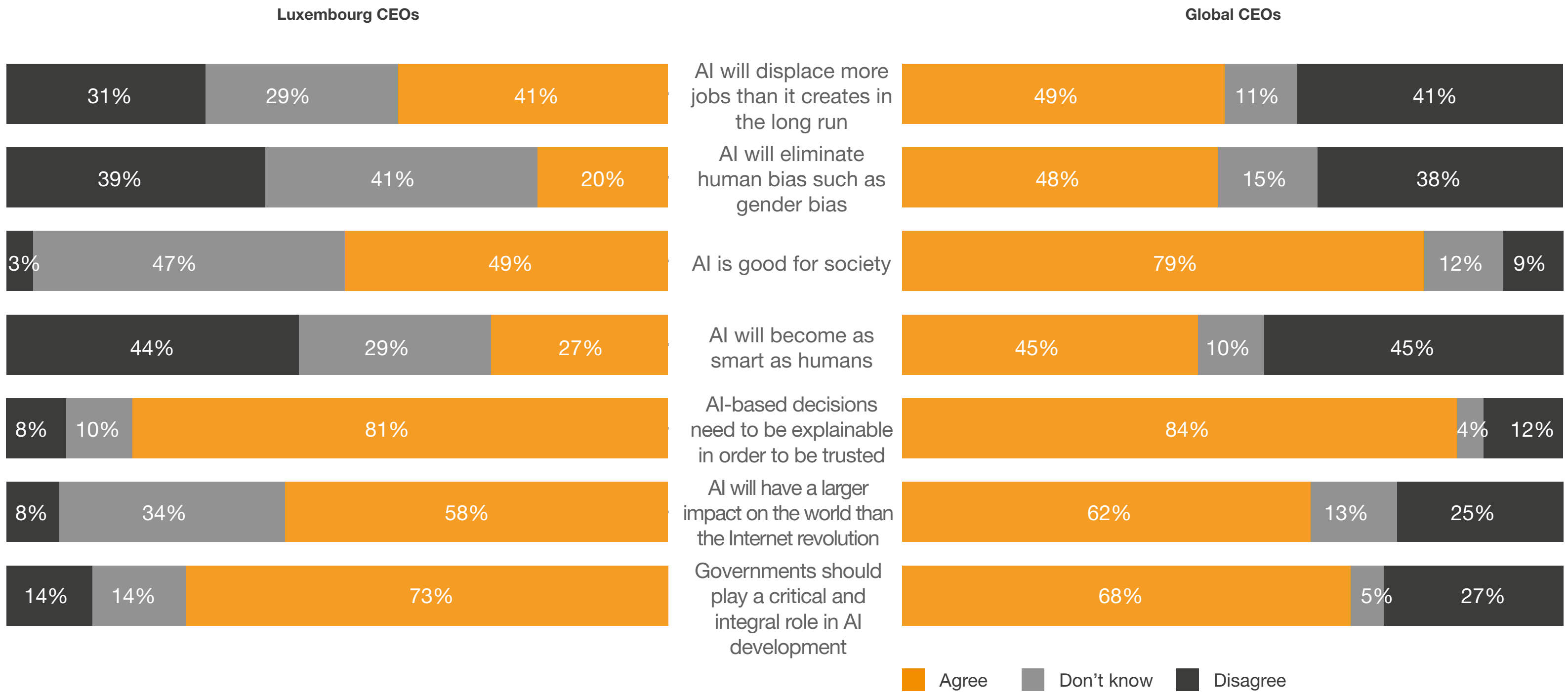
There was no uncertainty however when they were asked about whether governments should play a critical and integral role in AI development, with a resounding 73% of respondents supporting that idea. A primary reason for this could be the need for stability and management when AI begins to change the structure of the job market. For example, over 40% of Luxembourg's CEOs believe that AI will displace more jobs than it creates in the long run, a shift which would require changes in government policy.

EXHIBIT 15

A majority of Luxembourg's CEOs believe AI will have a larger impact than the internet revolution. Whether it will be positive or negative is a matter of debate

QUESTION

How strongly do you agree or disagree with the following statements about artificial intelligence (AI)?



A vast majority of Luxembourg's CEOs (81%) believe that AI-based decisions need to be explained in order to be trusted. In other words, they believe that human judgement will remain important despite the rise of AI.

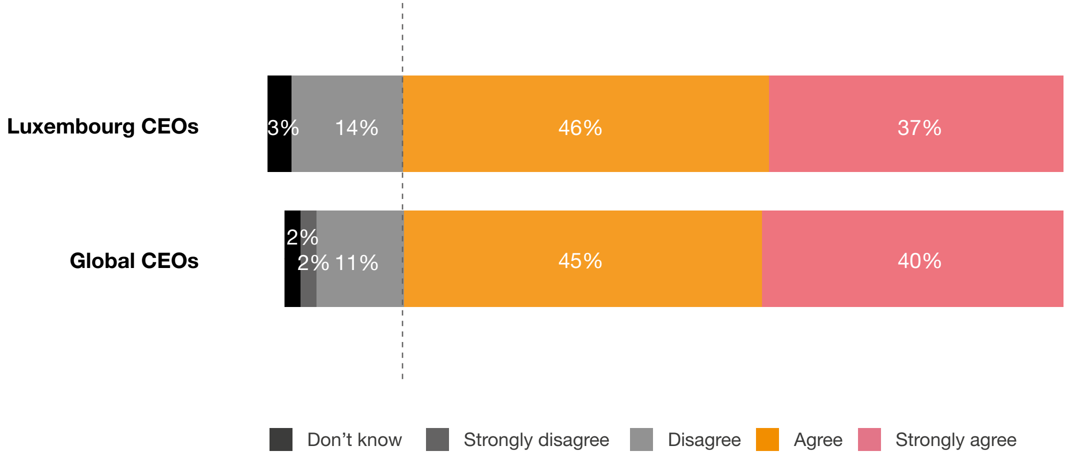
Base: All respondents (Luxembourg, 59; Global, 1378)
Source: PwC, 22nd Annual Global CEO Survey

EXHIBIT 16

Over 80 % of Luxembourg's CEOs believe that AI will significantly change the way they do business

QUESTION

To what extent do you agree or disagree that Artificial Intelligence (AI) will significantly change the way you do business in the next 5 years?



On the other hand, over 80% of Luxembourg's CEOs believe that AI will significantly change the way they do business in the coming five years. This opinion is also largely shared by CEOs worldwide.

Despite the recognition of this potential disruption, most organisations seem to be poorly prepared for the changes involved. In fact, 27% of Luxembourg's CEOs have no plans to pursue any AI initiative at the moment and only 36% plan to introduce them within the next 3 years. While 27% of respondents indicated that they have already introduced some AI-related initiatives, these were just for limited uses.

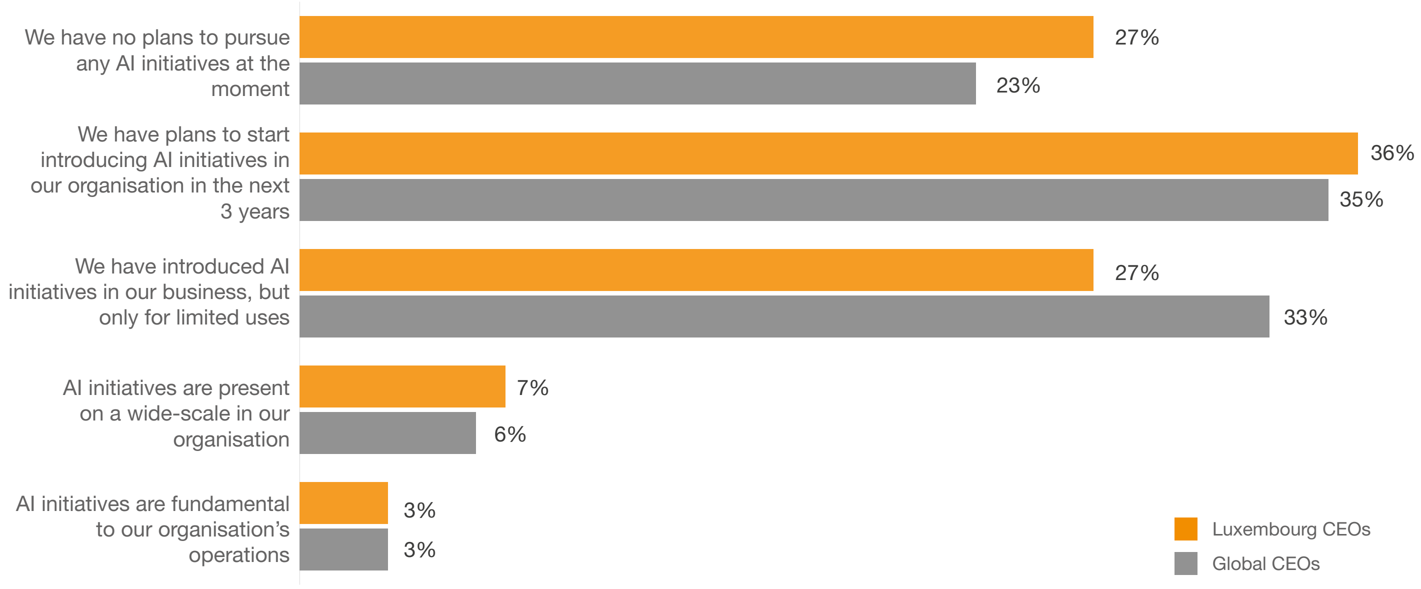
Base: All respondents (Luxembourg, 59; Global, 1378)
Source: PwC, 22nd Annual Global CEO Survey

EXHIBIT 17

Despite the recognition of this potential disruption, most organisations seem to be poorly prepared for the changes involved

QUESTION

Please select the statement that best applies to your organisation

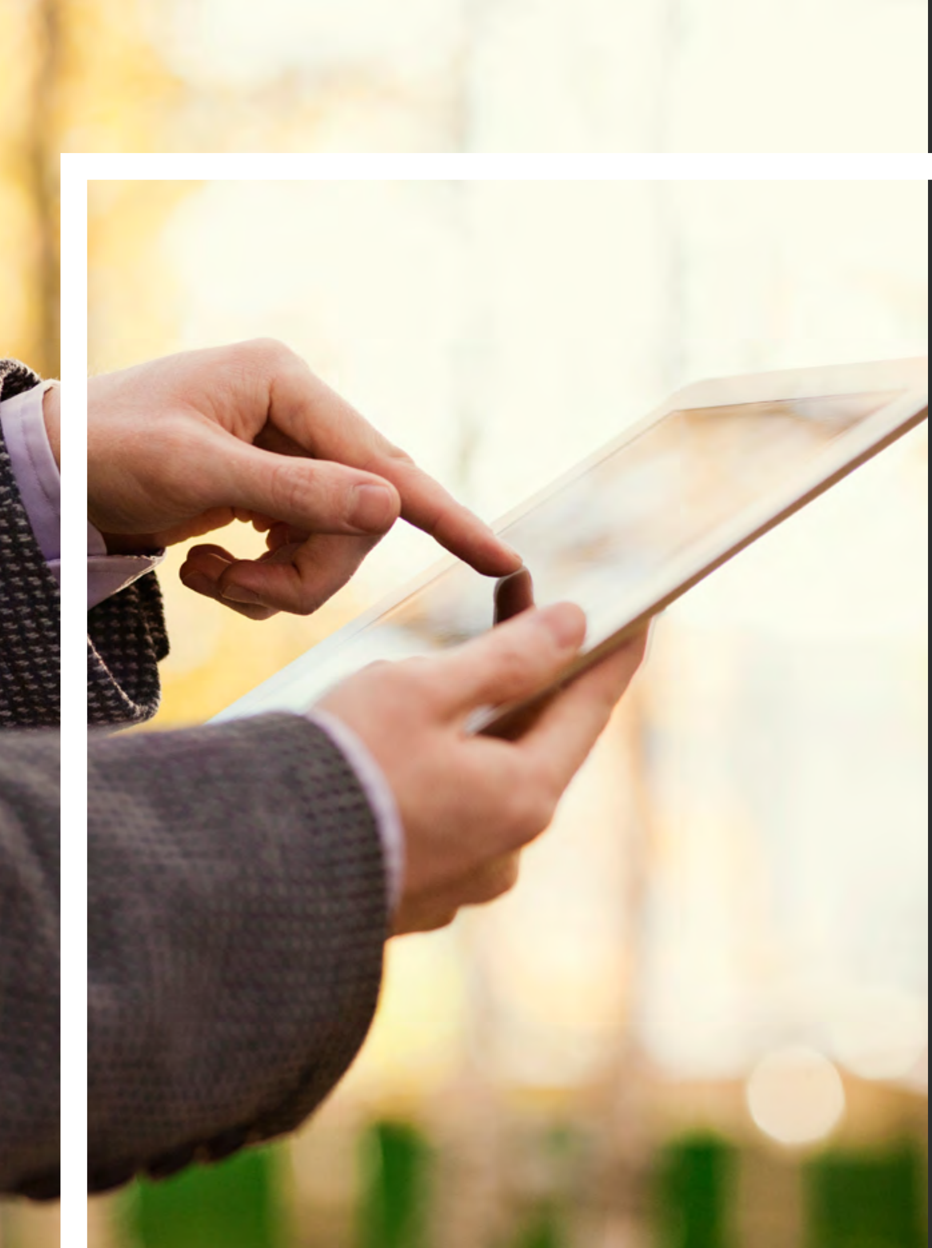


Overall, Luxembourg's CEOs are lagging behind the global average when it comes to the implementation of AI. Additionally, Luxembourg's business leaders are less likely to have plans to pursue AI initiatives.

This could be due to the large skill gap previously mentioned. A lack of data scientists and AI developers, who are more likely to move to locations with a large demand for said skills, will be a significant contributor. However, this is not the only factor.

A change in business culture both from the business and clients will need to take place before AI will be truly accepted.

Base: All respondents (Luxembourg, 59; Global, 1378)
Source: PwC, 22nd Annual Global CEO Survey



INSIGHT:

Digital Luxembourg

Born as a comprehensive and integrated approach to both harness the opportunities and face the challenges brought by digitalisation, 'Digital Luxembourg' is laying the foundation of a smart nation.

Launched in 2014, this government-backed programme deploys a number of nationwide initiatives which cover five key areas - 'government', 'skills', 'policy', 'infrastructure' and 'ecosystem' - to strengthen and guide Luxembourg's digital transformation.

Prioritising people to make them thrive in the modern landscape, various initiatives such as 'fit4digital', 'women in tech', 'digital inclusion' and 'go digital' - among others - aim at urgently tackling the digital skills shortage in order to bridge the gap between the skills of today and the job market of tomorrow. Given its open, collaborative and inclusive approach, these initiatives target young people, ICT specialists, professionals, companies and citizens alike. This is done with the eventual goal of establishing a tech-savvy workforce that becomes the country's strongest foundation.

The integrated approach also aims to take good care of the digital ecosystem by supporting entrepreneurs and start-ups in their journeys towards innovation. That is why the 'digital tech fund', 'fit4start' and the 'Luxembourg House of Financial Technology (LHoFT)' – among others – have been put in place.

On the other hand, initiatives targeting an appropriate regulatory framework, efficient and modernised public services and a connected infrastructure have been put in motion to leave no stone unturned in Luxembourg's path towards digital transformation.

4 A message from John Parkhouse, PwC Luxembourg CEO

John Parkhouse,
PwC Luxembourg CEO

Thank you for taking the time to explore the 2019 version of our Luxembourg CEO survey. Our goal was to provide you with an insight into what our business leaders think about the current economic outlook in Luxembourg, and how they are planning for the future. We hope that you found our research both interesting and useful.

I would like to start off by saying that, much like myself, my counterparts throughout Luxembourg are confident about the country's future. This is with good reason. GDP growth in the Grand Duchy has remained strong and is expected to outpace most of continental Europe in the coming years. At the same time, unemployment levels have continued to drop and the Government of Luxembourg has introduced a number of measures to upskill and digitise talent.

This does not, however, mean that CEOs in the country plan to operate in isolation. The strong ties that have been forged with our neighbours (Germany, France and Belgium) remain crucial for companies. Additionally, many have built relationships with the countries outside of Europe, with the US and China being strong contenders. China has long been a strong trade partner with Luxembourg, and the Grand Duchy has been hard at work to convince Chinese players to set up in Luxembourg. This has clearly paid off with growing business ties between our two nations.

Overall, however, Luxembourg CEO's confidence about the global and European economy has dropped. Echoing PwC's global chairman Bob Moritz, "the prevailing sentiment this year is one of caution in the face of increasing uncertainty". This caution stems from factors outside of our control. Rising geopolitical tensions, trade disputes and a wave of populism across the world are all cause for concern.

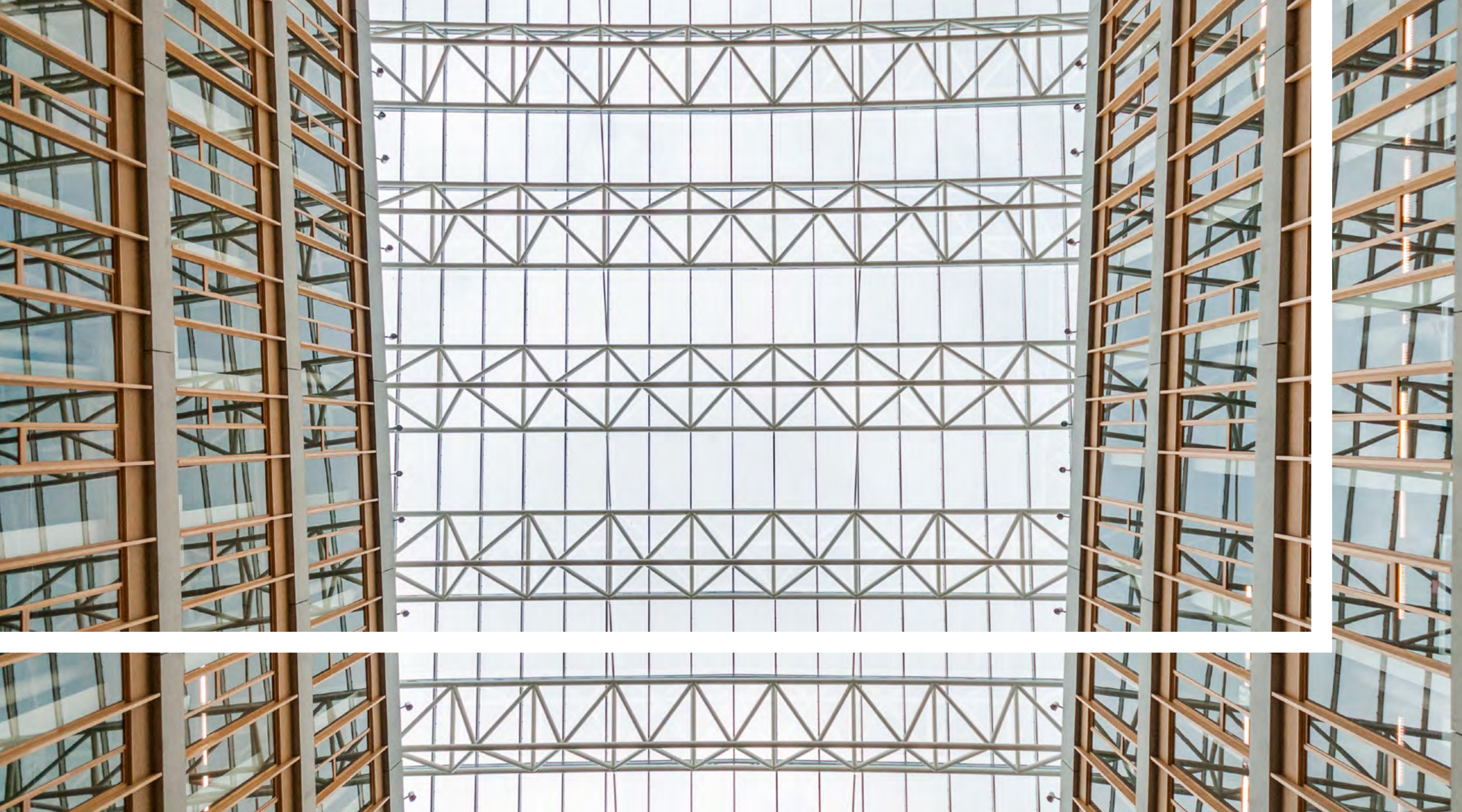
While CEOs turn their eye to their own organisation in search for growth from inside out, they are also contending the holes in their capabilities that they need to address. Most notably, Luxembourg's CEOs are dealing with significant gaps in the data they deem as critical versus the quality and adequacy of data they receive. At the same time, they are dealing with widening talent gaps that will make future operations more difficult.

However, these issues should not prevent CEOs from acknowledging the role that their company plays in society at large. **Together, we need to look beyond the financial benefits we provide our shareholders, ourselves, or the groups in which we operate.** In our latest annual report, PwC Luxembourg not only included financial reporting, but sustainability reporting as well. To support the UN Global Compact and the Global Reporting Initiative, setting the right goals and being accountable is critical, and I would encourage businesses across Luxembourg to incorporate this reporting – the good, the bad, and the ugly – as soon as possible.

Across all aspects of our business, all our lines of service, we see that technology is one of the, if not the largest, challenges facing businesses. We, as CEOs, have the responsibility to drive innovation in our business and society. **We must use technology responsibly, to better meet the needs of our people and the communities in which we operate.** Developing and using technology in this manner could provide relief to some of the systematic problems our society is facing.

Finally, **companies must lead the charge in dealing with the talent of the future.** This can include multiple aspects, from upskilling and partnering with leading education institutions to offering new mobility solutions for employees looking to work away from the office. By adapting to a future workforce, companies in Luxembourg can play a vital role in enticing the younger generation to Luxembourg, injecting new blood into the economy and ensuring that they are getting the skills they need directly out of university. However, while it is crucial to hire new employees, upskilling current ones is a valuable tool, both to ensure that valuable knowledge is exchanged and to ensure employees do not feel they become obsolete.

Overall, while the results of the survey might paint a more pessimistic picture in terms of CEO's views on the global economy than previous years, we should remember that many see opportunities among the challenges. Adversity often brings out the best in a company and many will use this time to act and test themselves. As Albert Einstein once said, "in the middle of difficulty, lies opportunity."



Endnotes

Not all figures add to 100%, as a result of rounding percentages and exclusion of 'neither/nor' and 'don't know' responses.

Research Methodology

Our survey was conducted from a sample of 59 respondents, whom we considered the most representative for Luxembourg. Participants included CEOs from various industries, such as asset management, automotive, banking, healthcare and pharma life sciences, ICT, insurance, manufacturing, transportation and logistics, and wholesale and retail trade.

Responses from CEOs were collected from September until early November 2018. Following the collection of data, we performed an analysis in order to determine patterns and trends in Luxembourg.

This is the second time the Luxembourg CEO survey has been carried out. The previous one was conducted in 2017 from a sample of 49 CEOs as well as 11 sector leaders representing the voice of the main industries of the country.

CEOs' and companies' profile

Out of the 59 respondents, female CEOs accounted for 12%, while 87% were male. Over half of them have been in the job for 1-5 years. The organisations they led were 85% privately owned and 15% publicly listed. Furthermore, 75% of CEOs indicated that their organisation does not have any form of government ownership or backing.

More than half of these companies had revenue figures below USD 100 million during the last fiscal year, while 27% were in the USD 101-999 million range and 8% had revenue figures above USD 1 billion. As for the company size, 69% of the companies had less than 500 employees, 7% had between 500 and 999, 20% had between 1,000 and 5,000 and only 2% employed more than 5,000 people.

Of those which were privately owned, 36% were family run, 28% other private type, 14% owner managed, 12% partnerships and 10% private equity backed.

Contacts

John Parkhouse
CEO & Senior Partner
PwC Luxembourg
+352 49 48 48 2133
john.parkhouse@lu.pwc.com

François Mousel
Partner, Clients and
Markets Leader
PwC Luxembourg
+352 49 48 48 2182
francois.mousel@lu.pwc.com

Laurent Probst
Partner, Digital Transformation
and Public Sector
PwC Luxembourg
+352 49 48 48 2199
laurent.probst@lu.pwc.com

Thierry Kremser
Technology Partner
PwC Luxembourg
+352 49 48 48 2269
thierry.kremser@lu.pwc.com

pwc.lu/ceosurvey

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