European Investment Bank

Luxembourg

Overview

EIB INVESTMENT SURVEY

2022

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European
Investment Bank

EIB Investment Survey Country Overview 2022: Luxembourg

About the EIB Investment Survey (EIBIS)
The EIB Group Survey on Investment, which has been administered since 2016, is a unique, annual survey of some 13 000 firms. It covers firms in all European Union Member States and also includes a sample of firms in the United States.

The survey collects data on firm characteristics and performance, past investment activities and future plans, sources of finance, financing issues and other challenges that businesses face, such as climate change and digital transformation. The EIBIS, which uses a stratified sampling methodology, is representative across all 27 EU Members States and the United States, as well as across four classes of firm size (micro to large) and four main economic sectors (manufacturing, construction, services and infrastructure). The survey is designed to build a panel of observations, supporting the analysis of time-series data. Observations can also be linked back to data on firm balance sheets and profit and loss statements. The EIBIS was developed by the EIB Economics Department. It is managed by the department with the support of Ipsos MORI.

About this publication
These reports provide an overview of data collected for the 27 EU Member States and the United States. They are intended to provide a snapshot of the data. For the purpose of these publications, data are weighted by value-added to better reflect the contribution of different firms to economic output. Contact: eibis@eib.org.

Download the findings of the EIB Investment Survey for each EU country or explore the data portal at www.eib.org/eibis.

About the Economics Department of the EIB
The mission of the EIB Economics Department is to provide economic analyses and studies to support the Bank in its operations and in the definition of its positioning, strategy and policy. The department and its team of 40 economists is headed by Debora Revoltella, director of economics.

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EIBIS 2022 – Luxembourg Overview

KEY RESULTS

Investment Dynamics and Focus
EIBIS 2022 shows that on average, at the time of interviews (April-July 2022), Luxembourg's firms were exiting from COVID-19 in a relatively good shape and with a generally positive outlook. With 86% of firms investing in 2021 and on balance, more firms expecting to increase rather than decrease investment (net balance of 19%), the investment activity and plans of Luxembourg's firms are little changed from EIBIS 2021 and reflect the current picture across the EU.

Investment Needs and Priorities
Firms did not signal major investment gaps in Luxembourg as 76% believe they invested the right amount over the past three years. Fewer than two in ten (15%) think they invested too little, which is similar to EIBIS 2021 (11%) and the current EU average (14%). Luxembourg's firms intend to prioritise investment in capacity replacement (40%) over capacity expansion (31%) or new product/service development (19%).

Covid-19 Impact
The pandemic was a major shock for many of Luxembourg's firms. Nevertheless, 33% expected 2022 sales to recover to 2019 levels. While a further 30% increased their sales through 2020-2021 and almost half of Luxembourgish firms (49%) expected their 2022 sales to be higher than those achieved in 2019, and only one in five (21%) thought they would be lower. This reflects the general EU outlook (57% and 16% respectively).

The proportion of Luxembourg's firms that received financial support in response to COVID-19 is higher than the EU average (79% versus 60%). The proportion that continues to receive support is also higher (19% versus 10%).

Firms' Transformation, Innovation and Digitalisation
Possibly reflecting the strong support received, 57% of Luxembourg's firms have taken at least one action in response to COVID-19. The most frequently taken action or investment is to become more digital (45%).

Reflecting the EU average (69%), almost seven in ten Luxembourgish firms (68%) use at least one advanced digital technology, but fewer are utilizing multiple technologies (25% versus 42%). The share of Luxembourgish firms investing in innovation (36%) reflects the EU average (34%).

International Trade
Large majority of Luxembourgish firms face disruptions linked to international trade (91%). Reduced access to raw materials, services or other inputs (84%), and disruption to global logistics (82%) are the main trade-related obstacles, while almost half have found trade restrictions, customs or tariffs an obstacle (46%). Nearly two-thirds of its firms (64%) are taking action to mitigate the impact of international trade disruptions and are equally as likely to be focussing on trading partners (39%) as domestic suppliers or markets (38%).

Drivers and Constraints
Luxembourg's firms are less optimistic about investment conditions than in EIBIS 2021. Their view of the economic climate is far more pessimistic than a year ago (-46% versus +8%) and more firms expect availability of external finance to get worse rather than better (-11%). Availability of skilled labour (86%), energy costs (81%) and future uncertainty (79%) are considered the biggest long-term barriers to investment. The energy costs figure is 18 points higher than EIBIS 2021.

EIBIS 2022 – Luxembourg Overview

Investment Finance
Luxembourg has a lower share proportion of financially constrained firms (2.4%) than the EU average (6.2%). A third (35%) of Luxembourgish firms investing in the last financial year utilised external finance - lower than EIBIS 2021 (49%) and the EU average (45%). The biggest proportion of Luxembourgish firms' investment finance continues to come from internal sources while the share from external sources is lower than EIBIS 2021 (25% versus 33%). Luxembourg's firms have been supported by banks to a lesser extent than those across the EU (65% versus 82%) and far fewer have received grants (6% versus 21%).

Climate Change and Energy Efficiency
The proportion of Luxembourgish firms facing climate-related losses (50%) is similar to both EIBIS 2021 (46%) and the EU average (57%). Three in ten Luxembourgish firms (30%) have developed or invested in measures to build resilience to the physical risks caused by climate change. This is similar to the EU average (33%).

In a reversal of the EIBIS 2021 results, almost twice as many Luxembourgish firms now regard the transition to stricter climate standards and regulations a risk than an opportunity (41% versus 22%). Nine in ten Luxembourgish firms (89%) are taking actions to reduce Greenhouse Gas (GHG) emissions but fewer than a third (29%) set and monitor targets for their own discharges.

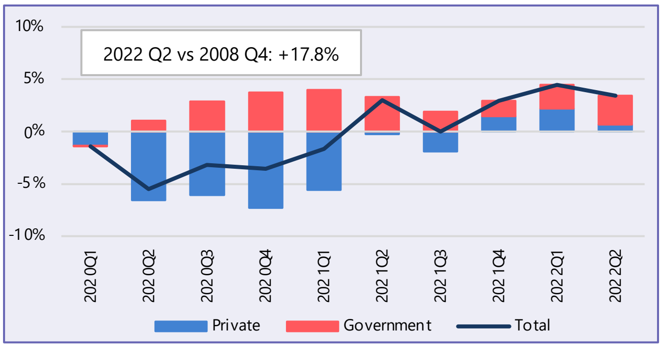
Luxembourgish firms are much less likely than those across the EU to have invested in tackling the impacts of weather events and reducing carbon emissions (22% versus 53%). Encouragingly, a similar proportion to the EU average has plans to invest in the next three years (47% versus 51%). The share of Luxembourgish firms that invested in measures to improve energy efficiency in 2021 (35%) is similar to EIBIS 2021 (36%) and the EU average (40%).

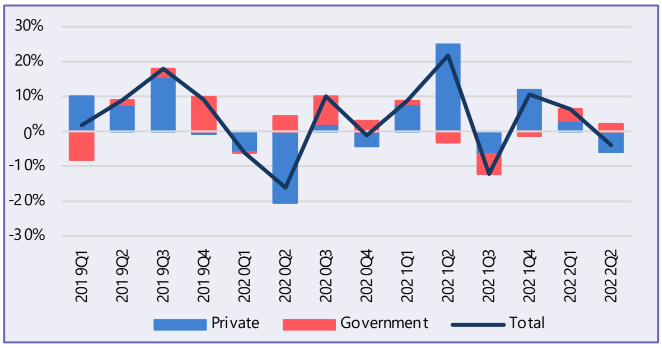
Firm Management, Gender Balance and Employment
The proportion of its firms striving for gender balance (33%) is lower than EIBIS 2021 (49%) and far below the EU average (58%).

Investment dynamics and focus

INVESTMENT DYNAMICS BY INSTITUTIONAL SECTOR

- Following the fall in Q2 2020 to a level of -5.5% relative to Q4 2019, aggregate investment began to recover in Q3 2020, with its pre-pandemic level having been more than recouped in Q2 2021.
- In spite of the fall in private and government investments in Q3 2021, aggregate investment rebounded back to a level above the pre-pandemic one in the following quarter, having resumed its upward trajectory coming into 2022.
- In Q2 2022, however, aggregate investment fell as a result of a contraction in private sector investment, albeit having remained at a level 3.4% higher relative to Q4 2019.

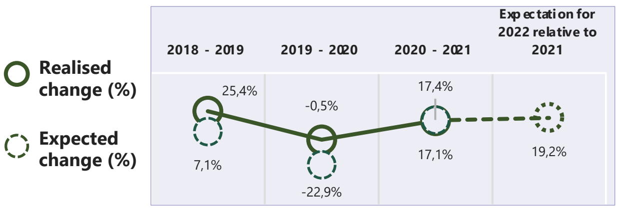




The LHS chart shows the evolution of total gross fixed capital formation (GFCF) by institutional sector, in real terms and non seasonally nor calendar adjusted. The nominal GFCF source data was transformed into four-quarter sums and deflated using the implicit deflator for total GFCF (2015=100 euro). The four-quarter sum of total GFCF in 2019Q4 is normalised to 0.
The RHS chart shows the y-o-y % change in total real GFCF by institutional sector. The implicit deflator for total GFCF (2015=100 euro) was used for deflating the nominal GFCF source data.
Source: Eurostat, authors' own calculations.

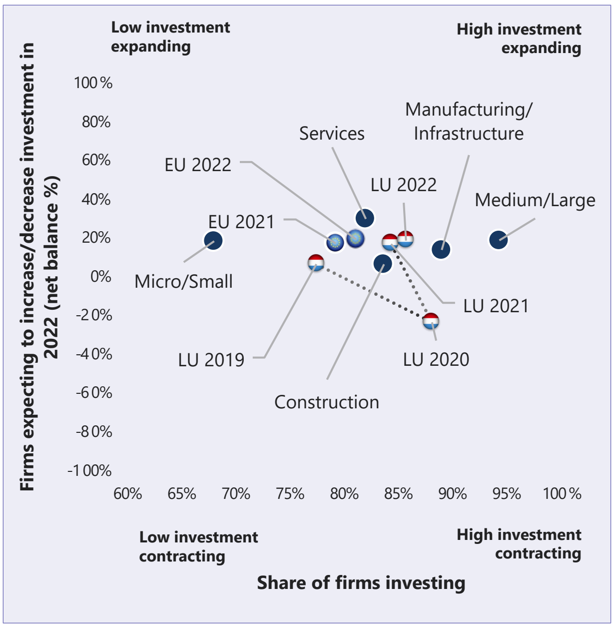
INVESTMENT CYCLE AND EVOLUTION OF INVESTMENT EXPECTATIONS

- Over eight in ten of Luxembourg's firms (86%) invested in their business in 2021, while more firms expect to increase rather than decrease investment (net balance of 19%). Both figures are consistent with EIBIS 2021 (84% and 17% respectively) and the current EU averages (81% and 20% respectively).
- Investment patterns are similar for all sectors, but expectations are less positive in construction (net balance of 7%) than among services firms (net balance of 30%).



'Realised change' is the share of firms who invested more minus those who invested less; 'Expected change' is the share of firms who expect(ed) to invest more minus those who expect(ed) to invest less.

Base for expected and realised change: All firms



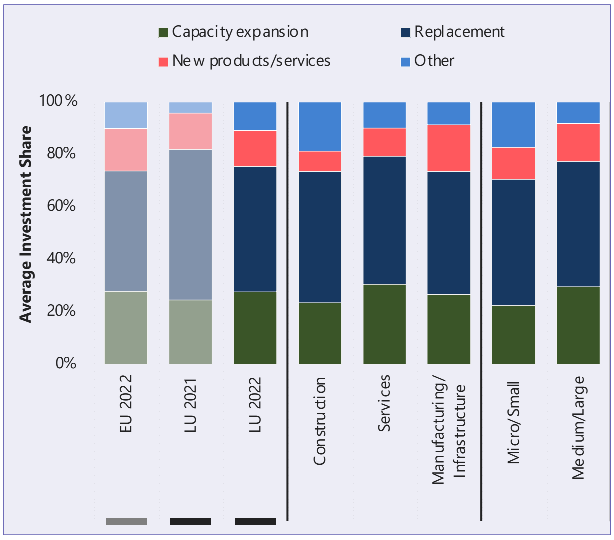
Share of firms investing shows the percentage of firms with investment per employee greater than EUR 500.

Base for share of firms investing: All firms (excluding don't know/refused responses)

Investment dynamics and focus

PURPOSE OF INVESTMENT IN LAST FINANCIAL YEAR (% of firms' investment)

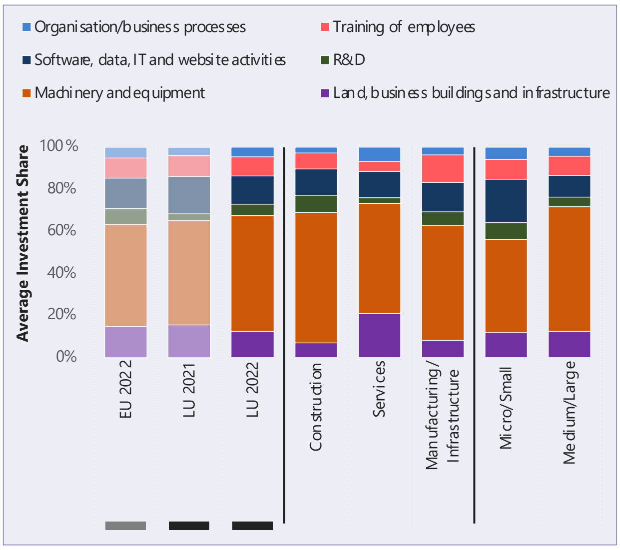
- Luxembourg's firms continue to invest more heavily in capacity replacement (48%) than capacity expansion (27%) or developing new products/ services (14%).
- The distribution of Luxembourgish firms' investment is very similar to the EU average.
- There is little variation by sector although manufacturing/infrastructure firms are directing relatively more investment towards new product/service development (18%) than services (11%) or construction firms (8%).
- Luxembourg's micro/small and medium/large firms have broadly similar investment priorities.



Q. What proportion of total investment was for (a) replacing capacity (including existing buildings, machinery, equipment, IT) (b) expanding capacity for existing products/services (c) developing or introducing new products, processes, services?

Base: All firms who have invested in the last financial year (excluding don't know/ refused responses)

INVESTMENT AREAS



- As in EIBIS 2021, approximately half of Luxembourg's firms' investment (55%) was directed towards machinery and equipment.
- A third (33%) of Luxembourgish firms' investment was in intangible assets (R&D, software, training and business processes). This is similar to EIBIS 2021 (35%) and the EU average (37%).
- Manufacturing/infrastructure firms (37%) are directing a larger proportion of their investment towards intangibles than those in other sectors where it accounts for 27% - 31%.
- Compared to medium/large firms, a larger share of micro/small firm's investment is in intangibles (44% versus 28%). Conversely, Luxembourg's medium/large firms (59%) are directing a larger share of their investment towards machinery and equipment than micro/small firms (44%).

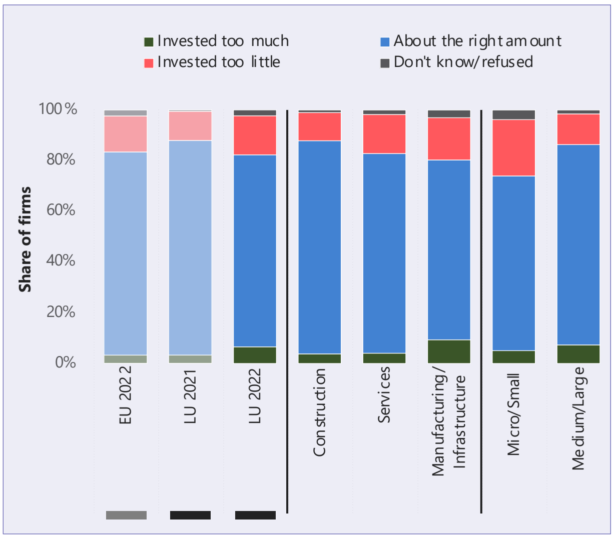
Q. In the last financial year, how much did your business invest in each of the following with the intention of maintaining or increasing your company's future earnings?

Base: All firms who have invested in the last financial year (excluding don't know/refused responses)

Investment needs and priorities

PERCEIVED INVESTMENT GAP

- Three-quarters of Luxembourgish firms (76%) believe they invested the right amount over the past three years. The proportion saying they did not invest enough (15%) is similar to EIBIS 2021 (11%) and the current EU average (14%).
- At least 71% of firms in every sector believe they made the correct level of investment. The highest figure is seen among construction firms (84%).
- The proportion of micro/small firms saying they invested too little over the past three years is almost double that of medium/large firms (22% versus 12%).

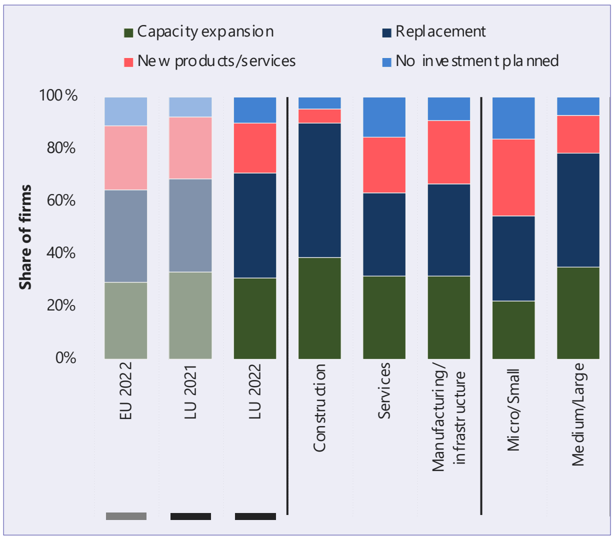


Q. Looking back at your investment over the last 3 years, was it too much, too little, or about the right amount?

Base: All firms (excluding 'Company didn't exist three years ago' responses)

FUTURE INVESTMENT PRIORITIES

- Over the next three years, Luxembourgish firms intend to prioritise investment in capacity replacement (40%) over capacity expansion (31%) or new product/service development (19%). One in ten firms (10%) have no investment planned. All figures are in line with EIBIS 2021 and the EU average.
- Compared to construction firms (5%), more services (18%) and manufacturing/ infrastructure businesses (24%) expect to prioritise investment in new products and services. Firms in construction (51%) expect to prioritise capacity replacement over the next three years.
- The investment priorities of micro/small and medium/large firms are very different. For example, smaller firms (29%) are twice as likely as larger ones (14%) to prioritise development new products and services.

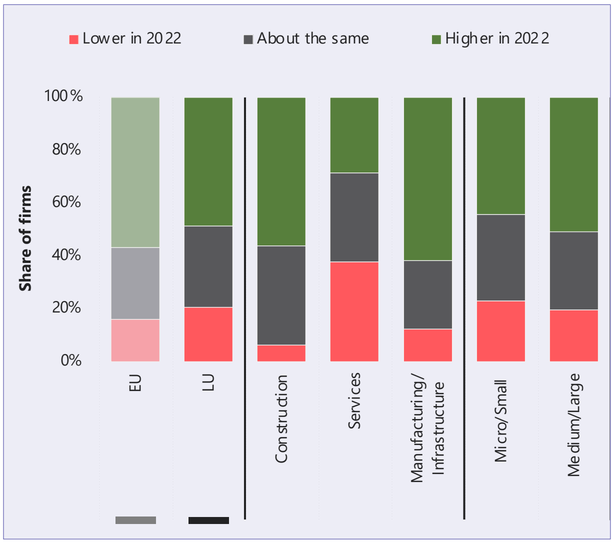


Q. Looking ahead to the next three years, which is your investment priority (a) replacing capacity (including existing buildings, machinery, equipment, IT) (b) expanding capacity for existing products/services (c) developing or introducing new products, processes, services?

Base: All firms (excluding don't know/refused responses)

Impact of COVID-19

IMPACT OF COVID-19 ON SALES OR TURNOVER BY END OF 2022 COMPARED TO 2019



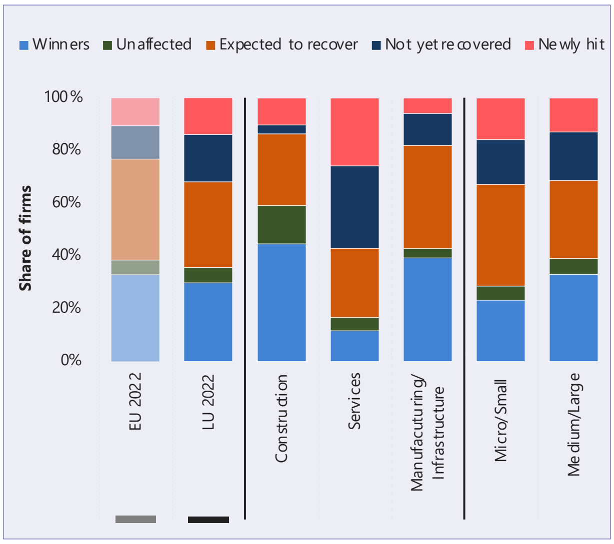
- Almost half of Luxembourgish firms (49%) expected their 2022 sales to be higher than those achieved in 2019. One in five (21%) thought they would be lower. This reflects the general EU outlook (57% and 16% respectively).
- The majority of manufacturing/infrastructure (62%), and construction firms (56%) expected their 2022 sales to be higher than in 2019. In contrast more services sector firms expected sales to be lower (38%) rather than higher than in 2019 (28%).
- Micro/small and medium/large firms had similar expectations.

Q. Compared to 2019, do you expect your sales or turnover in 2022 to be higher, lower or about the same?

Base: All firms (excluding don't know/refused responses)

IMPACT ON FIRMS' SALES OR TURNOVER AND EXPECTED RECOVERY

- Half of Luxembourg's firms were negatively impacted by COVID-19 in terms of sales. Nevertheless, 33% expected sales to recover to 2019 levels in 2022, following the 2020 and/or 2021 fall.
- A further 30% are COVID-19 'winners' whose sales or turnover increased over 2020-2021 and who expected, at the time of the interviews, sales in 2022 would be above the pre-pandemic level.
- The sales outlook varies by sector with far fewer 'winners' in services (12%) than in other sectors. Almost a third of service firms said their sales had yet to recover in 2022 (31%), while a quarter are 'newly hit' (26%), meaning that in spite of not having suffered any pandemic period loss in sales, these firms expected a lower sales level in 2022 than prior to the start of the pandemic.



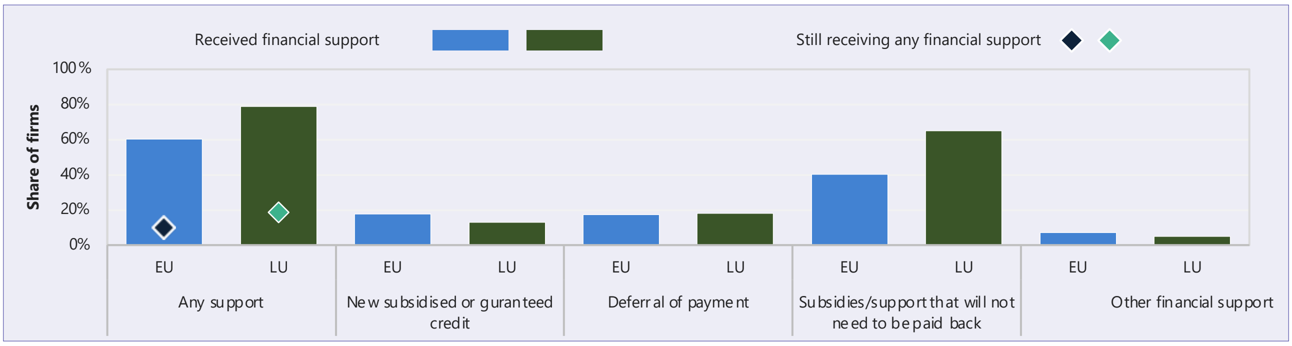
Q. Compared to 2019, before the pandemic started, did your company's sales and turnover in 2020 decline, increase or stay the same?
Q. Compared to 2020, did your company's sales and turnover in 2021 decline, increase or stay the same?
Q. Compared to 2019, do you expect your sales or turnover in 2022 to be higher, lower or about the same?

Base: All firms (excluding don't know/refused responses)

Impact of COVID-19

FINANCIAL SUPPORT RECEIVED IN RESPONSE TO COVID-19

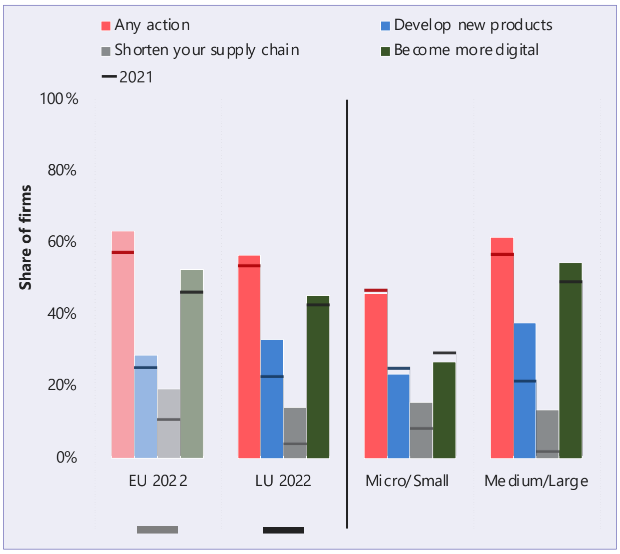
- The proportion of Luxembourg's firms that received financial support in response to COVID-19 is higher than the EU average (79% versus 60%.) The proportion that continues to receive support is also higher (19% versus 10%).
- Two-thirds of Luxembourgish firms (65%) were provided subsidy or support that will not be paid back (higher than the EU average (40%).
- Compared to the EU average, a similar proportion of Luxembourg's firms benefited from deferred payments (18% versus 17%), and subsidised or guaranteed credit (13% versus 18%).



Q. Since the start of the pandemic, have you received any financial support?
Q. Are you still receiving (any of) this financial support?

Base: All firms (excluding don't know/refused responses)

ACTIONS AS A RESULT OF COVID-19



- Nearly six in ten Luxembourgish firms (57%) say they have taken at least one action in response to COVID-19. The figure is virtually unchanged since EIBIS 2021 (53%) and is similar to the EU average (63%).
- As reported by 45% of Luxembourg's firms, the most frequently taken action or investment is to become more digital. This is a similar level to EIBIS 2021 (42%) but remains below the EU average (53%).
- Medium/large firms (62%) are more likely than micro/small businesses (46%) to have taken action of some kind. In particular, Luxembourg's largest firms have responded to a greater degree by becoming more digital (54% versus 27%).

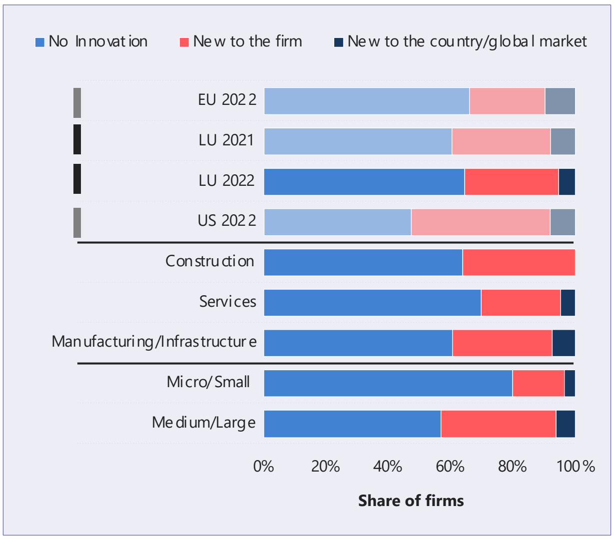
Q. As a response to the COVID-19 pandemic, have you taken any actions or made investments to...?

Base: All firms (excluding don't know/refused responses)

Innovation activities

INNOVATION ACTIVITY

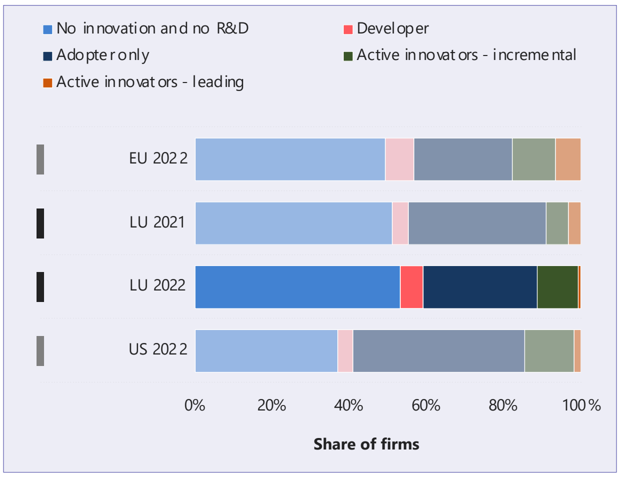
- A third (36%) of Luxembourg's firms developed or introduced new products, processes or services as part of their investment activities. This reflects EIBIS 2021 (40%) and the EU average (34%).
- The proportion of innovating firms appears lower among services firms (30%) than those in manufacturing/infrastructure (40%). There are also fewer micro/small firms than medium/large businesses investing in new products, processes or services (20% versus 43%).
- Fewer Luxembourgish firms (5%) than the EU average (10%) have developed or introduced products, processes or services that were new to either the country or global market. Only among manufacturing/infrastructure firms (7%) is the figure higher than 5%. In construction it is zero.



Q. What proportion of total investment was for developing or introducing new products, processes, services?
Q. Were the products, processes or services new to the company, new to the country, new to the global market?

Base: All firms (excluding don't know/refused responses)

INNOVATION PROFILE



- One in ten Luxembourgish firms (11%) can be classified as active innovators — firms that invested significantly in research and development and introduced a new product, process or service. The proportion is similar to EIBIS 2021 (9%) but lower than the current EU (18%) or US (15%) average .
- As in EIBIS 2021 (51%) a majority of Luxembourg's firms did not innovate or invest in R&D in the last financial year (53%). This matches the EU average (49%) but is higher than in the US (37%).

Q. What proportion of total investment was for developing or introducing new products, processes, services?
Q. Were the products, processes or services new to the company, new to the country, new to the global market?
Q. In the last financial year, how much did your business invest in Research and Development (including the acquisition of intellectual property) with the intention of maintaining or increasing your company's future earnings?

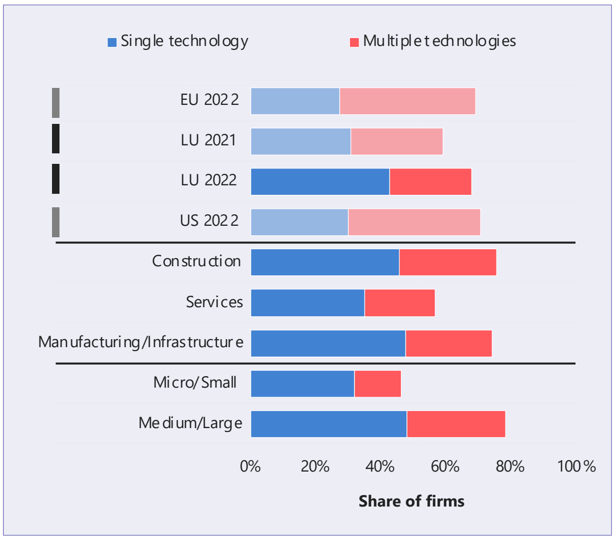
Base: All firms (excluding don't know/refused responses)

The 'No innovation and no R&D' group comprises firms that did not introduce any new products, processes or services in the last financial year. The 'Adopter only' introduced new products, processes or services but without undertaking any of their own research and development effort. 'Developers' are firms that did not introduce new products, processes or services but allocated a significant part of their investment activities to research and development. 'Incremental' and 'Leading innovators' have introduced new products, processes and services and also invested in research and development activities. The two profiles differ in terms of the novelty of the new products, processes or services. For incremental innovators these are 'new to the firm'; for leading innovators' these are new to the country/world'.

Innovation activities

USE OF ADVANCED DIGITAL TECHNOLOGIES

- Reflecting the EU average (69%), almost seven in ten Luxembourgish firms (68%) use at least one advanced digital technology. However, fewer of its firms are utilizing multiple technologies (25% versus 42%)
- Except for services (57%), over seven in ten firms in each sector is employing at least one digital technology. It reaches 76% among construction firms.
- A greater proportion of Luxembourg's medium/large firms than micro/small businesses is utilising digital technologies (78% versus 46%). They are also more likely to employ multiple digital technologies (30% versus 14%).
- Compared to the EU average, Luxembourg's firms are more likely to use drones (39% versus 23%), but fewer employ digital platform technologies (27% versus 49%) or 3-D printing (9% versus 23%).



EIBIS 2022
Q. To what extent, if at all, are each of the following digital technologies used within your business? Please say if you do not use the technology within your business?

EIBIS 2021
Q. Can you tell me for each of the following digital technologies if you have heard about them, not heard about them, implemented them in parts of your business, or whether your entire business is organised around them?

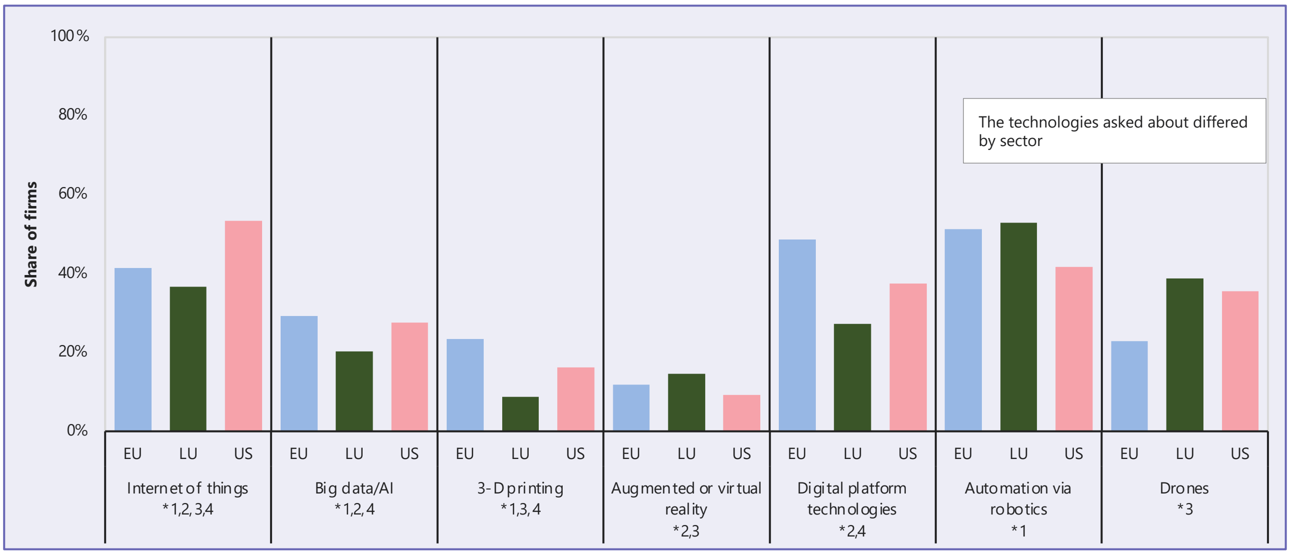
Base: All firms (excluding don't know/refused responses)

Please note: question wording and definitions changed between 2021 and 2022, comparisons between the two waves should not be made.

Reported shares combine used the technology 'in parts of business' and 'entire business organised around it'

Single technology is where firms have used one of the technologies asked about. Multiple technologies is where firms have used more than one of the technologies asked about

ADVANCED DIGITAL TECHNOLOGIES



*** Sector: 1 = Asked of Manufacturing firms, 2 = Asked of Services firms, 3 = Asked of Construction firms, 4 = Asked of Infrastructure firms**

Q. To what extent, if at all, are each of the following digital technologies used within your business? Please say if you do not use the technology within your business?

Base: All firms (excluding don't know/refused responses);
Sample size LU: Manufacturing (26); Construction (43); Services (63); Infrastructure (44).

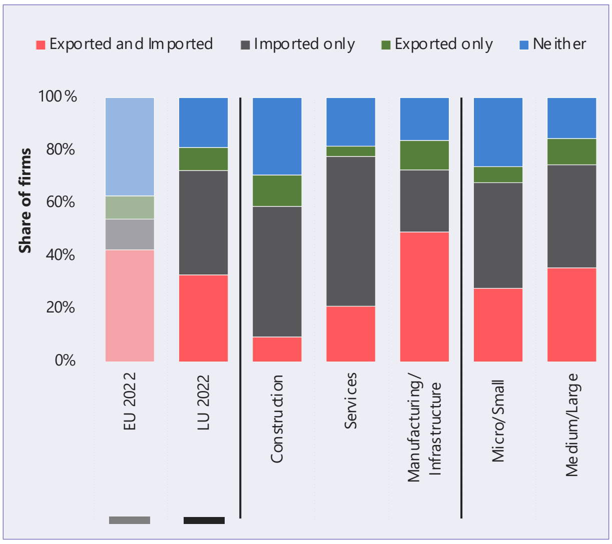
Reported shares combine used the technology 'in parts of business' and 'entire business organised around it'

Please note: question wording changed between 2021 and 2022, comparisons between the two waves should not be made.

International trade

ENGAGEMENT IN INTERNATIONAL TRADE

- Similarly to most small countries, a higher proportion of Luxembourgish firms are engaged in international trade compared to the EU average (81% versus 63%).
- At least 71% of firms in each sector trade outside their home market. Those in the manufacturing or infrastructure industry are the most likely to export (60%).
- Luxembourg's medium/large firms are more likely than its micro/small businesses to trade internationally (86% versus 74%), or to export (45% versus 34%).

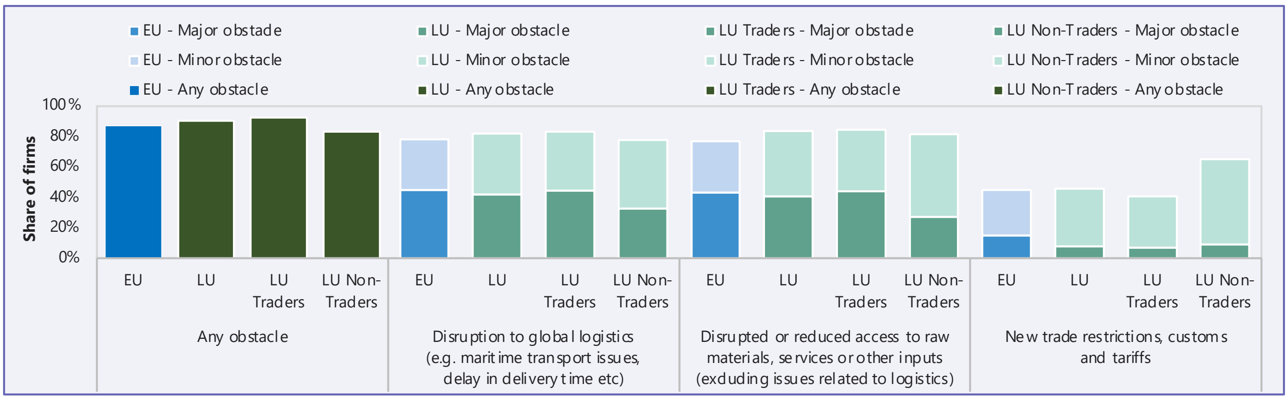


Q. In 2021, did your company export or import goods and/or services?

Base: All firms (excluding don't know/refused responses)

DISRUPTIONS RELATED TO INTERNATIONAL TRADE

- Reflecting the EU average (87%), nine in ten Luxembourgish firms faced disruptions linked to international trade (91%). Exporters and importers have been impacted to a slightly greater degree than its non-traders (92% versus 83%).
- Disrupted or reduced access to raw materials, services or other inputs (84%), and disruption to global logistics (82%) are the main trade-related obstacles for Luxembourg's firms. Almost half have found trade restrictions, customs or tariffs an obstacle to their activities (46%).
- In each case the proportion of Luxembourg's firms that have found these disruptions problematic is similar to the EU average.



Q. Since 2021, did any of the following present an obstacle to your business's activities?

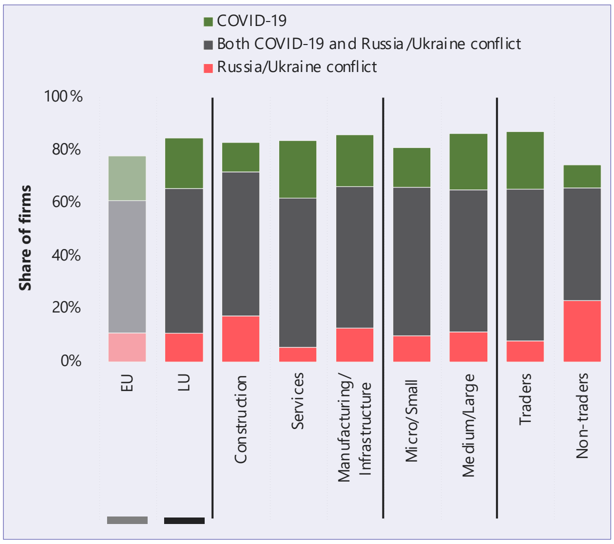
Any obstacle combines 'minor' and 'major' obstacles into one category

Base: "Any obstacle" - All firms (excluding those who said don't know/refused/not applicable responses to all three international trade obstacles)
Base: Individual obstacles - All firms (excluding those who said don't know/refused/not applicable)

International trade

EXTERNAL FACTORS IMPACTING INTERNATIONAL TRADE

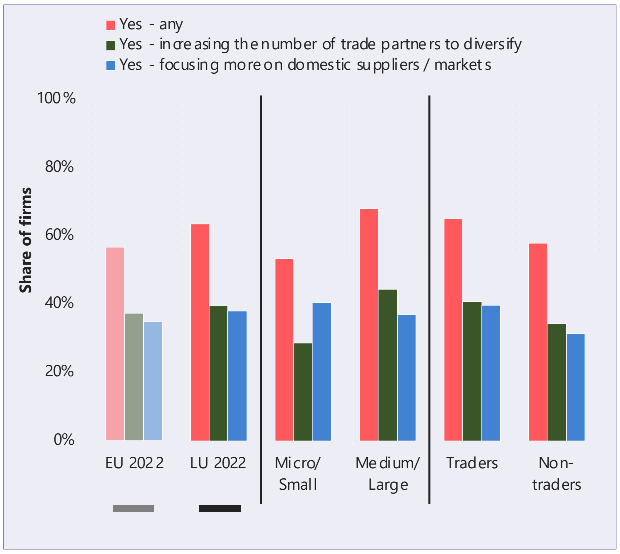
- A higher proportion of Luxembourgish firms than the EU average have been impacted by external factors disrupting international trade (85% versus 78%). As a stand-alone factor, COVID-19 has impacted slightly more of Luxembourg's firms than the Russia-Ukraine conflict (19% versus 11%).
- At least eight in ten firms in every sector have been effected by these external factors. The figure reaches 86% among manufacturing/infrastructure firms. Among services and manufacturing/infrastructure firms COVID-19 has had more impact than the Russia-Ukraine conflict. Among construction firms the opposite is true.
- More medium/large than micro/small firms have been impacted (86% versus 81%), and more traders than non-traders (87% versus 75%). Among medium/large firms and traders, COVID-19 has had a greater impact than the Russia-Ukraine conflict.



Q. You have just said that you experienced {an obstacle/obstacles} to your business activities since 2021. Did Covid-19 and/or the Russia-Ukraine conflict, including the sanctions imposed by the International community, contribute to this in anyway?

Base: All firms (excluding don't know/refused/not applicable responses)

ACTIONS TO MITIGITATE INTERNATIONAL TRADE DISRUPTIONS



- Nearly two-thirds of Luxembourg's firms (64%) are taking action to mitigate the impact of international trade disruptions. This is broadly in line with the EU average (57%).
- Luxembourgish firms are equally as likely to be focussing on increasing or diversifying trading partners (39%), than on domestic suppliers or markets (38%). These figures also reflect the EU average (37% and 35% respectively).
- A larger proportion of medium/large firms than micro/small firms have taken steps to mitigate the impact of international trade disruptions (68% versus 53% respectively). Traders (65%) have been a little more active than non-traders (58%).

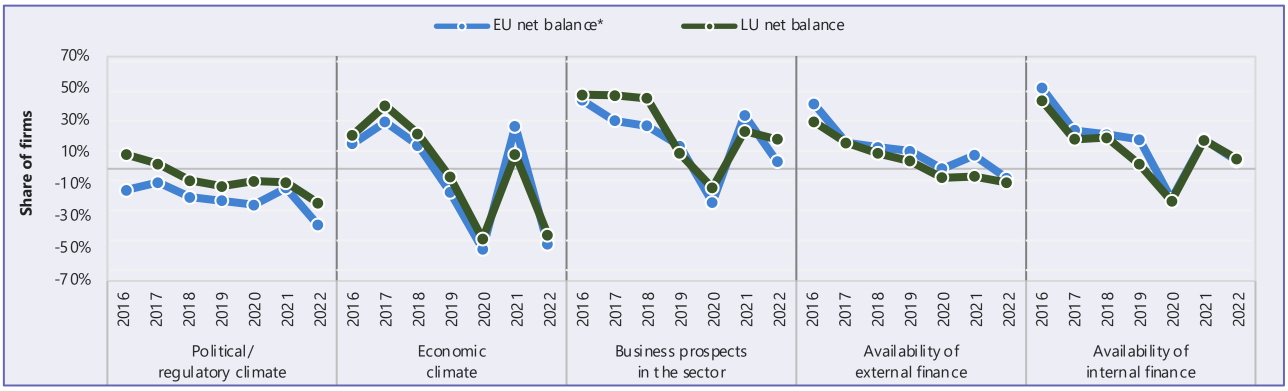
Q. Is your company taking any actions to mitigate the impact of these disruptions?

Base: All firms facing trade disruptions (excluding don't know/refused responses)

Drivers and constraints

SHORT-TERM FIRM OUTLOOK

- Luxembourg's firms are less optimistic about investment conditions than in EIBIS 2021. Their view of the economic climate is much more pessimistic (-46% versus +8%). The balance thinking availability of internal finance will improve remains positive (+5%), but more firms expect the availability of external finance to get worse rather than better (-11%).
- Compared to the EU average, Luxembourgish firms have a similar short-term outlook. However, they are more optimistic than other EU firms about business prospects for the sector (+18% versus +3%) and less pessimistic about political/regulatory climate (-25% vs 40%).



Q, Do you think that each of the following will improve, stay the same, or get worse over the next 12 months?

Base: All firms

**Net balance is the share of firms seeing improvement minus the share of firms seeing a deterioration*

SHORT-TERM FIRM OUTLOOK BY SECTOR AND SIZE (net balance %)

	Political / regulatory climate	Economic climate	Business prospects	External finance	Internal finance
Luxembourg	25%	46%	18%	11%	5%
Construction	16%	15%	5%	21%	4%
Services	25%	33%	22%	16%	3%
Manufacturing/ Infrastructure	27%	66%	21%	4%	7%
Micro/Small	22%	34%	1%	17%	5%
Medium/Large	26%	52%	26%	8%	10%

Please note: green figures are positive, red figures are negative

Q. Do you think that each of the following will improve, stay the same, or get worse over the next twelve months?

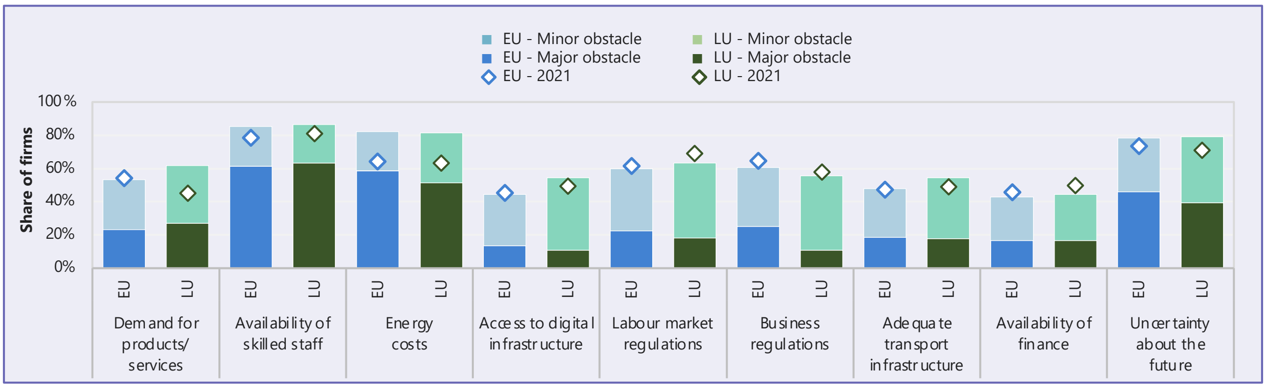
Base: All firms

- In every sector and for smaller and larger firms alike, firms are substantially more negative than positive about Luxembourg's political and economic climate.
- A balance of two-thirds of manufacturing/infrastructure firms (-66%) and a half of medium/large businesses (-52%) are pessimistic about the economic climate.
- Business prospects are more optimistic. Only construction firms (-5%) feel pessimistic, and the balance is far lower among micro/small firms (+1%) than Luxembourg's larger businesses (+26%).
- Expectations for the availability of external finance are uniformly negative. The balance ranges from -21% to -4% in each sector. Firms are slightly more optimistic about the availability of internal finance, but only fewer than one in ten firms in each sector is.
- Micro/small firms are more pessimistic than larger businesses about availability of both external (-17% versus -8%) and internal finance (-5% versus +10%).

Drivers and constraints

LONG-TERM BARRIERS TO INVESTMENT

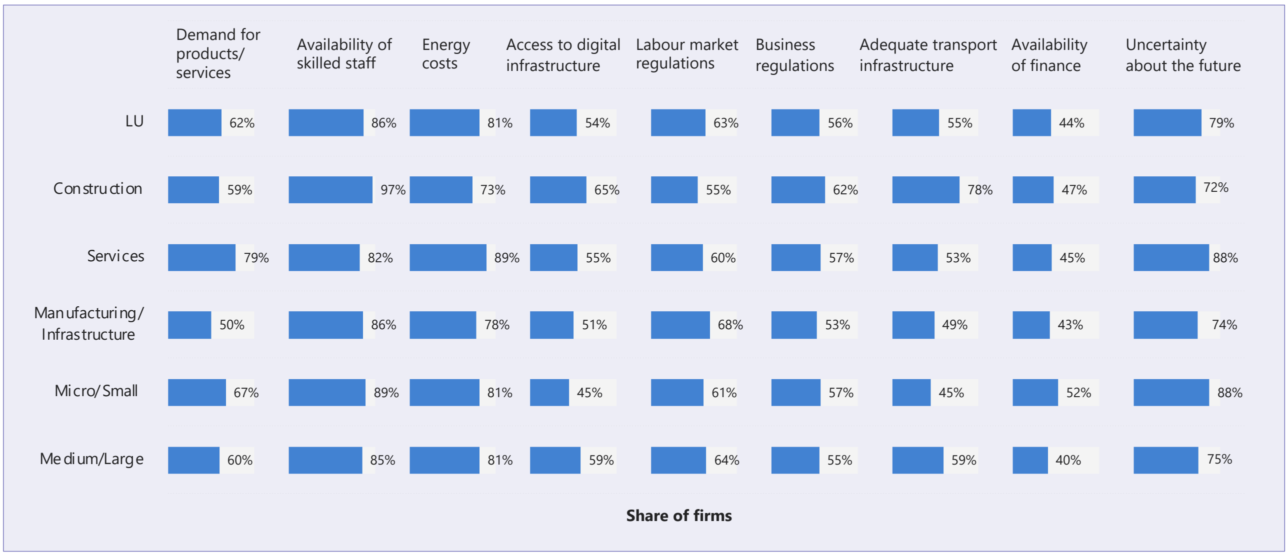
- About eight in ten Luxembourgish firms regard the availability of skilled labour (86%), energy costs (81%) and uncertainty about the future (79%) as barriers to investment. The energy costs figure is 18 points higher than EIBIS 2021.
- The least considered obstacle is the availability of finance (44%).
- Except for two factors, the proportion of Luxembourgish firms saying it obstructs investment is close to the EU average. Demand for products/services (62% versus 53%) and access to digital infrastructure (54% versus 44%) is mentioned slightly more often than across the EU.



Q. Thinking about your investment activities, to what extent is each of the following an obstacle? Is it a major obstacle, a minor obstacle or not an obstacle at all?

Base: All firms (data not shown for those who said not an obstacle at all/don't know/refused)

LONG-TERM BARRIERS BY SECTOR AND SIZE



Reported shares combine 'minor' and 'major' obstacles into one category

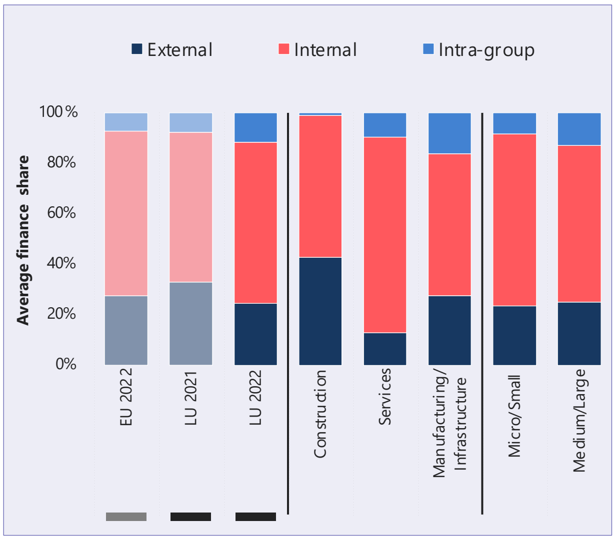
Q. Thinking about your investment activities, to what extent is each of the following an obstacle? Is it a major obstacle, a minor obstacle or not an obstacle at all?

Base: All firms (data not shown for those who said not an obstacle at all/don't know/refused)

Access to finance

SOURCE OF INVESTMENT FINANCE

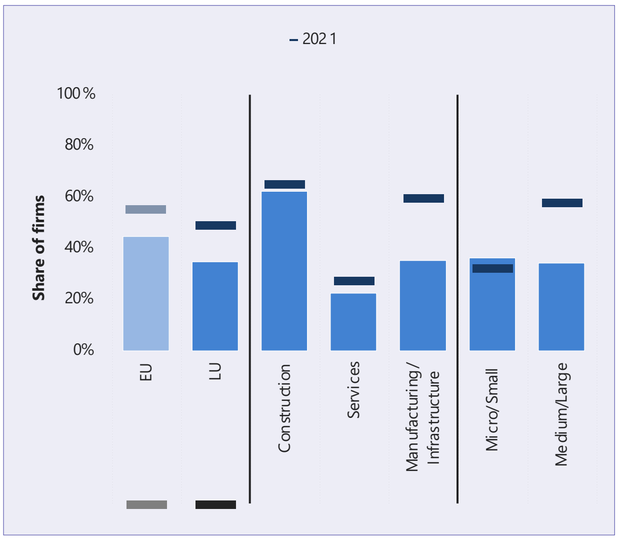
- As in EIBIS 2021 (59%), the biggest proportion of Luxembourgish firms' investment finance comes from internal sources (64%). The amount currently financed from external sources is a little lower than EIBIS 2021 (25% versus 33%) but in line with the EU average (28%).
- Only 13% of service firms' investment is financed from external sources. This compares to 27% in manufacturing/infrastructure firms and 43% within construction businesses.
- The sources of investment finance are similar for both micro/small and medium/large firms.



Q. What proportion of your investment was financed by each of the following?

Base: All firms who invested in the last financial year (excluding don't know/ refused responses)

USE OF EXTERNAL FINANCE



- Just over a third of Luxembourgish firms investing in the last financial year funded at least some of this using external finance (35%). The proportion using external finance is lower than EIBIS 2021 (49%) and the current EU average (45%).
- Over six in ten construction firms (62%) have accessed external finance, but the figure is much lower in the manufacturing/infrastructure (36%) and service sectors (23%). The proportion of manufacturing/ infrastructure firms using external finance is much lower than in EIBIS 2021 (36% versus 59%).
- The proportion of micro/small firms accessing external finance matches that of larger business (36% versus 34%). This is the result of a large drop among medium/large firms since EIBIS 2021 (58% versus 34%).

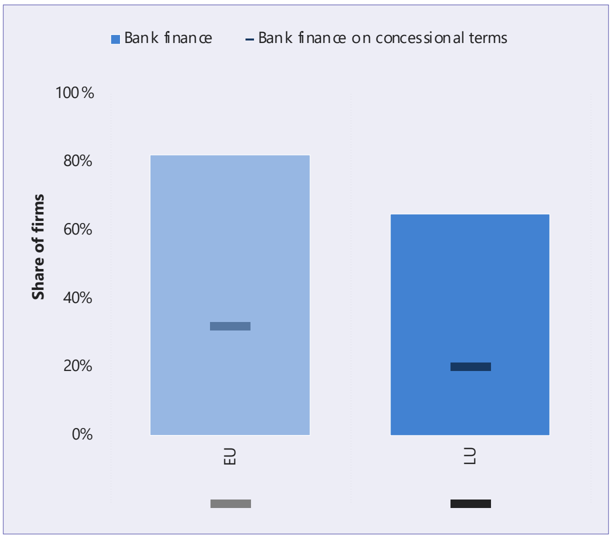
Q. Approximately what proportion of your investment in the last financial year was financed by each of the following

Base: All firms who invested in the last financial year (excluding don't know/ refused responses)

Access to finance

ACCESS TO BANK FINANCE AND CONDITIONS

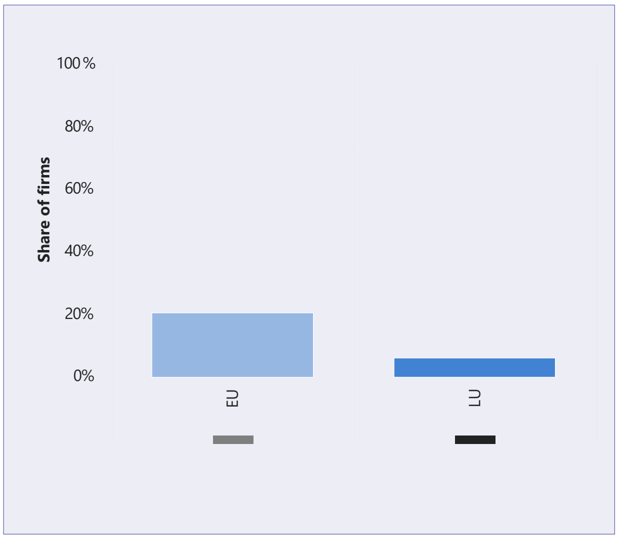
- Two-thirds of Luxembourgish firms (65%) accessing external finance received funding from a bank, with 20% obtaining it on concessional terms. Luxembourg's firms have been supported by banks to a lesser extent than those across the EU (82%).



Q. Which of the following types of external finance did you use for your investment activities in the last financial year?
Q. Was any of the bank finance you received on concessional terms (e.g. subsidised interest rates, longer grace period to make debt payments)?

Base: All firms who used external finance (excluding don't know/refused responses)
** Caution base size <30*

SHARE OF FIRMS WITH FINANCE FROM GRANTS



- Compared to the EU average, far fewer Luxembourgish firms have received external finance in the form of grants (6% versus 21%).

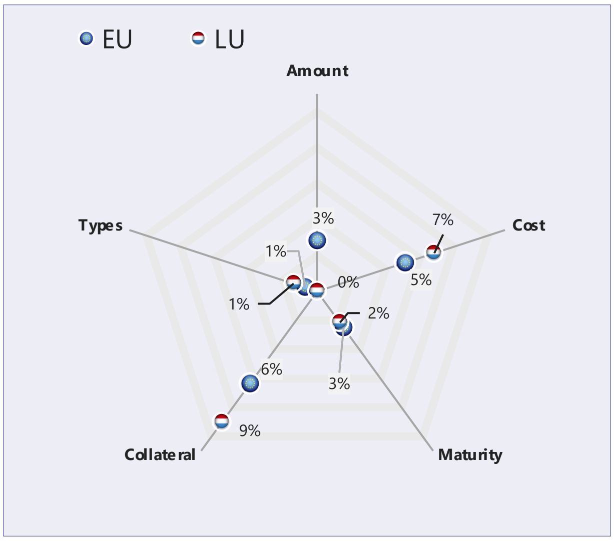
Q. What proportion of your total investment in your last financial year was financed by grants?

Base: All firms using external finance (excluding don't know/refused responses)

Access to finance

DISSATISFACTION WITH EXTERNAL FINANCE RECEIVED (% of firms)

- Luxembourgish firms that used external finance are overwhelmingly satisfied with each aspect of the finance received. Only for cost (7%) and collateral requirements (9%) did more than one in twenty firms express dissatisfaction.
- For each aspect of external finance the figures in Luxembourg are similar to those across the EU.



Q. How satisfied or dissatisfied are you with ...?

Base: All firms who used external finance in the last financial year (excluding don't know/refused responses)

DISSATISFACTION BY SECTOR AND SIZE (% of firms)

	Amount	Cost	Maturity	Collateral	Type
LU	0%	7%	2%	9%	1%
Construction	0%	0%	0%	7%	5%
Services	0%	0%	4%	16%	0%
Manufacturing/ Infrastructure	0%	14%	2%	7%	0%
Micro/Small	0%	0%	8%	2%	0%
Medium/Large	0%	9%	0%	12%	2%

- Dissatisfaction levels are very low across all sectors and size classes. In only three instances are more than one in ten firms dissatisfied with some aspect of the external finance they received.
- The cost of finance was unsatisfactory to 14% of manufacturing/infrastructure firms. Meanwhile, 16% of services firms and 12% of medium/large firms were dissatisfied with collateral requirements.

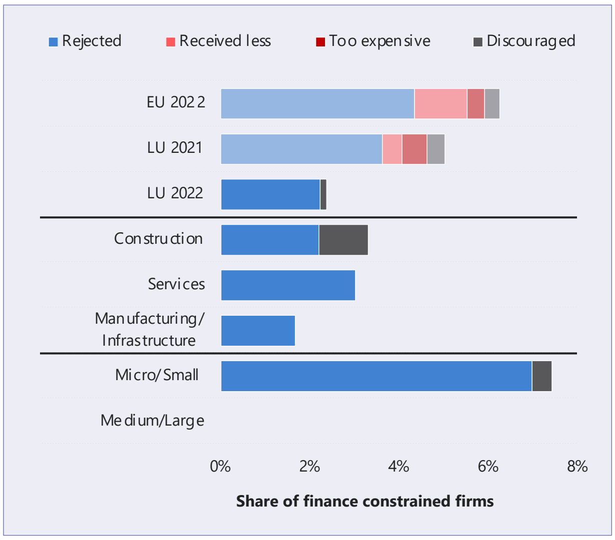
Q. How satisfied or dissatisfied are you with ...?

Base: All firms who used external finance in the last financial year (excluding don't know/refused responses)

Access to finance

SHARE OF FINANCE CONSTRAINED FIRMS

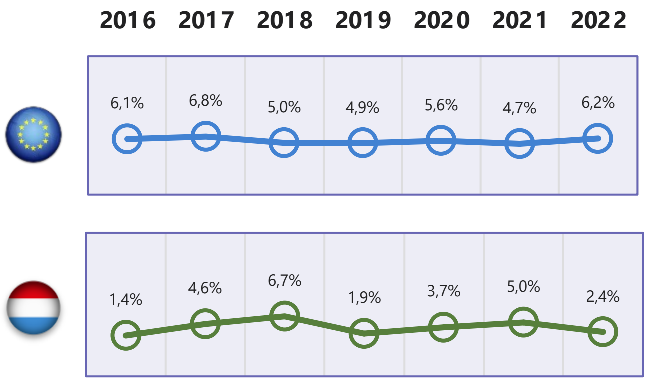
- The share of financially constrained firms in Luxembourg (2.4%) is less than half that seen in EIBIS 2021 (5.0%) or the current EU average (6.2%). None of Luxembourg's medium/large firms are financially constrained meaning they are only found in the micro/small segment (7.0%).
- The figures are very low in all sectors, ranging from 1.7% among manufacturing/infrastructure firms to 3.3% in construction.



Finance constrained firms include: those dissatisfied with the amount of finance obtained (received less), firms that sought external finance but did not receive it (rejected) and those who did not seek external finance because they thought borrowing costs would be too high (too expensive) or they would be turned down (discouraged)

Base: All firms (excluding don't know/refused responses)

SHARE OF FINANCE CONSTRAINED FIRMS OVER TIME



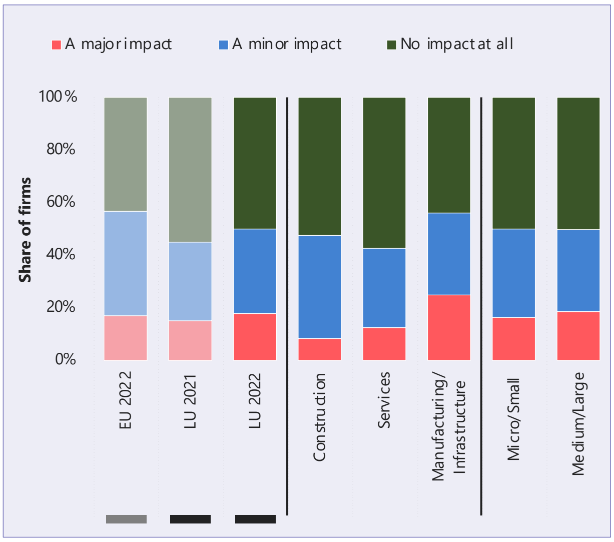
- Only in EIBIS 2016 (1.4%) and 2019 (1.9%) has the proportion of financially constrained firms in Luxembourg been lower than it is now (2.4%).
- In EIBIS 2021 Luxembourg had a similar proportion of financially constrained firms as the rest of the EU (4.7% versus 5.0%). Now it is less than half the proportion seen in the EU as a whole (2.4% versus 6.2%).

Base: All firms (excluding don't know/refused responses)

Climate change and energy efficiency

IMPACT OF CLIMATE CHANGE – PHYSICAL RISK

- The proportion of Luxembourgish firms facing climate-related losses (50%) is similar to both EIBIS 2021 (45%) and the EU average (57%). Firms in Luxembourg are almost twice as likely to say weather events are having a minor (32%) rather than a major impact (18%).
- The highest share firms that face climate related losses is in manufacturing/infrastructure (56%). A quarter of businesses in this sector (25%) say weather events are having a major impact, which is over double the figure within services (12%) or construction (8%).
- Climate events are leading to physical losses for half of micro/small and medium/large firms (both 50%).

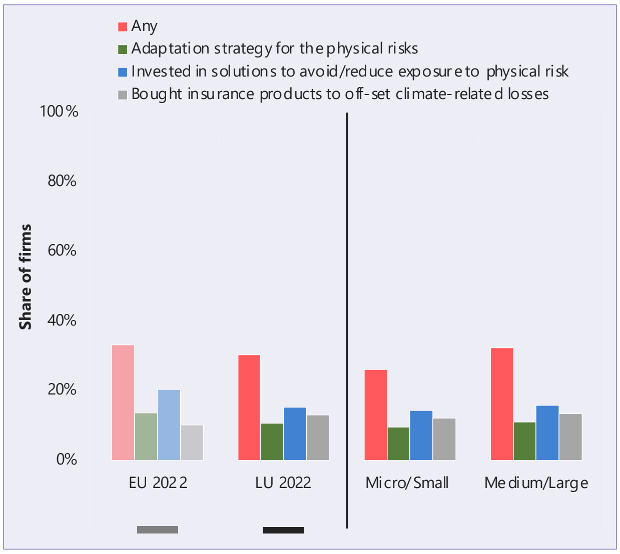


Q. Thinking about the impact of climate change on your company, such as losses due to extreme climate events, including droughts, flooding, wildfires or storms or changes in weather patterns due to progressively increasing temperature and rainfall. What is the impact, also called physical risk, of this on your company?

Please note: question wording changed between 2021 and 2022. Comparisons should be treated with caution.

Base: All firms (excluding don't know/refused responses)

BUILDING RESILIENCE TO PHYSICAL RISK



- Three in ten Luxembourgish firms (30%) have developed or invested in measures to build resilience to the physical risks caused by climate change. This is similar to the EU average (33%).
- Firms in Luxembourg are as likely to have responded by investing in solutions to avoid or reduce exposure to physical risk (15%), as to have bought relevant insurance (13%), or to have adapted their strategy (11%).
- A similar share of Luxembourg's medium/large (32%) and micro/small firms (26%) has developed or invested in measures to build resilience to physical risk. In both size groups firms are as likely to have developed or invested in each of the three measures presented to them.

Q. Has your company developed or invested in any of the following measures to build resilience to the physical risks to your company caused by climate change?

Base: All firms (excluding don't know/refused responses)

Climate change and energy efficiency

IMPACT OF CLIMATE CHANGE – RISKS ASSOCIATED WITH THE TRANSITION TO A NET ZERO EMISSION ECONOMY OVER THE NEXT FIVE YEARS

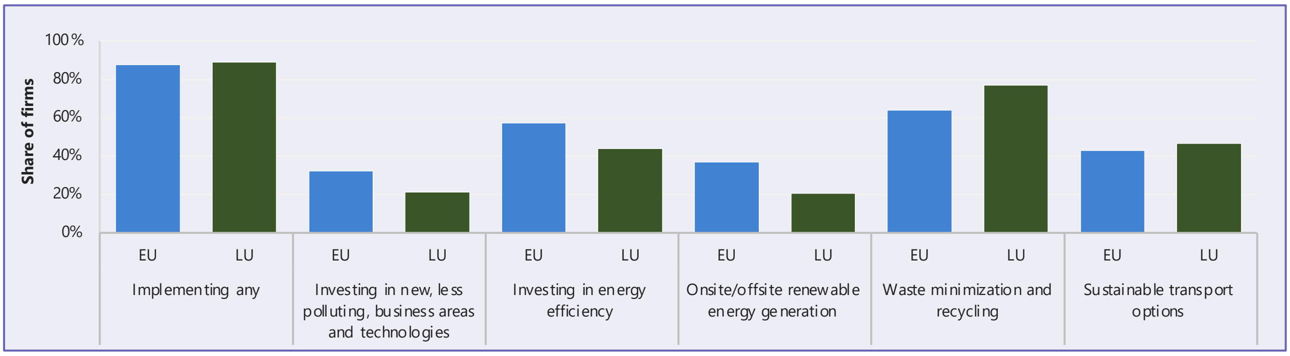
- Almost twice as many Luxembourgish firms regard the transition to stricter climate standards and regulations a risk (41%) as consider it an opportunity (22%). In EIBIS 2021 more considered it an opportunity than a risk (39% versus 29%).
- The proportion of Luxembourgish firms considering the transition to stricter climate standards and regulations as a risk is now higher than the EU average (41% versus 32%).
- Fewer than one in ten construction firms (9%) or two in ten in the services sector (17%) consider this transition as an opportunity. More manufacturing/ infrastructure firms also consider the transition as a risk rather than an opportunity (36% versus 30%).
- The opinions of micro/small and medium/large firms are broadly similar and regard the transition to stricter climate standards and regulations more as a risk rather than an opportunity.

Q. Thinking about your company, what impact do you expect this transition to stricter climate standards and regulations will have on your company over the next five years?

Base: All firms (excluding don't know/refused responses)

ACTIONS TO REDUCE GHG EMISSIONS

- Almost nine in ten Luxembourgish firms (89%) are taking actions to reduce Greenhouse Gas (GHG) Emissions. This is similar to the EU average (88%).
- The main action being taken by Luxembourg's firms is to minimise or recycle waste (77%). Over four in ten are also investing in sustainable transport solutions (47%) and energy efficiency (44%).
- Luxembourgish firms are more likely than those across the EU to be making investments in waste minimisation and recycling (77% versus 64%), but a smaller share of firms are investing in less polluting business areas and technologies (21% versus 32%), energy efficiency (44% versus 57%) or renewable energy generation (20% versus 37%).



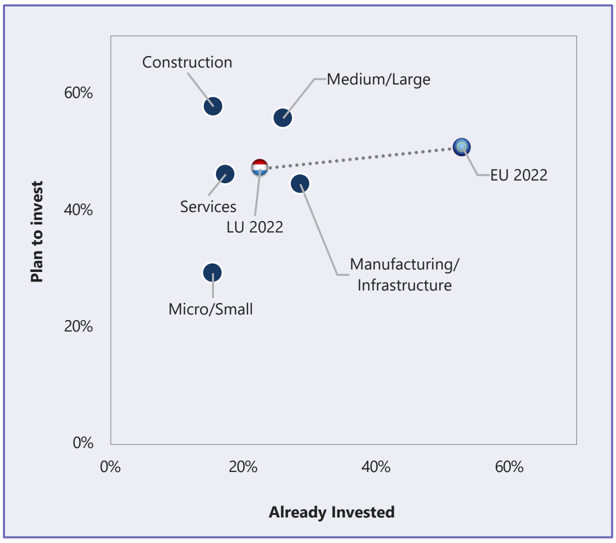
Q. Is your company investing or implementing any of the following, to reduce Greenhouse Gas (GHG) emissions?

Base: All firms (excluding don't know/refused responses)

Climate change and energy efficiency

INVESTMENT PLANS TO TACKLE CLIMATE CHANGE IMPACT

- Luxembourg's firms are much less likely than those across the EU to have invested in tackling the impacts of weather events and reducing carbon emissions (22% versus 53%). However, a similar proportion have plans to invest in the next three years (47% versus 51%).
- In no sector has more than three in ten firms already invested in this area (manufacturing/ infrastructure have the highest proportion at 28%).
- Construction firms (58%) are the most likely to have investment planned to tackle the effects of climate-change. Only a smaller share of services (46%) and manufacturing/infrastructure (45%) firms are planning such investment.
- A higher proportion of medium/large than micro/small firms have already invested (26% versus 15%) and also plan to make investments related to climate change (56% versus 29%).



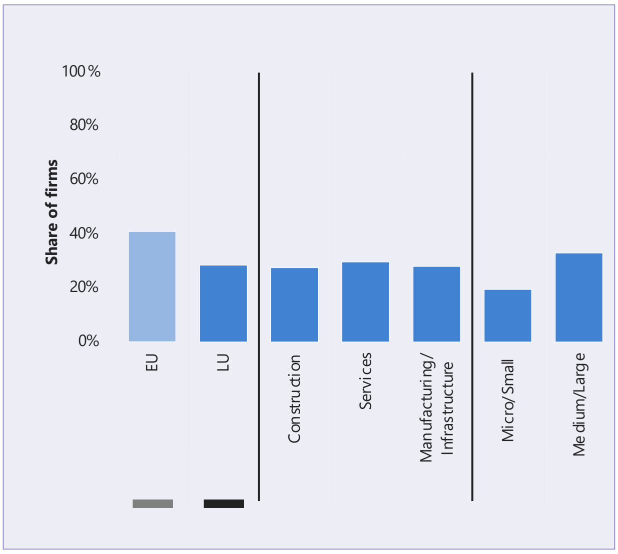
EIBIS 2022
Q. Which of the following applies to your company regarding investments to tackle the impacts of weather events and to help reduce carbon emissions?

Base: All firms (excluding don't know/refused responses)

EIBIS 2021
Q. Now thinking about investments to tackle the impacts of weather events and to deal with the process of reduction in carbon emissions, which of the following applies?

Please note: question change and an additional answer option was included in 2022, this may have influenced the data. Treat comparison to previous waves with caution.

CLIMATE CHANGE TARGETS FOR OWN GREENHOUSE GAS (GHG) EMISSIONS



- Luxembourgish firms are less likely than those across the EU to set and monitor targets for their own GHG emissions (29% versus 41%).
- The proportion of firms that sets and monitors GHG emissions targets is similar across all sectors.
- Medium/large firms are more likely than micro/small businesses to set and monitor targets for their own GHG emissions (33% versus 19%).

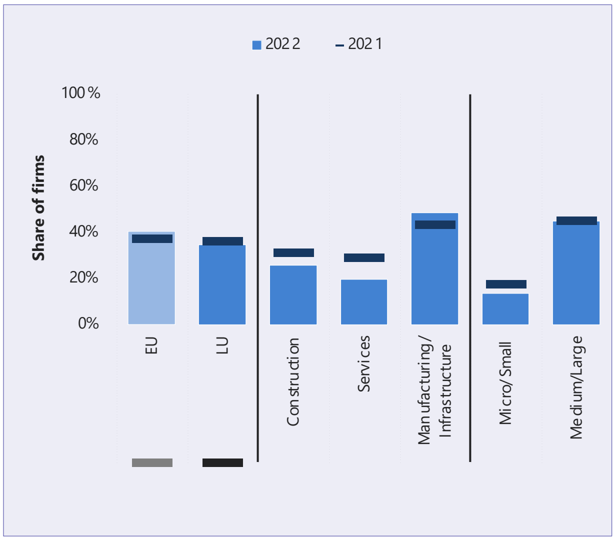
Q. Does your company… set and monitor targets for its own Greenhouse Gas (GHG) emissions

Base: All firms (excluding don't know/refused responses)

Climate change and energy efficiency

SHARE OF FIRMS INVESTING IN MEASURES TO IMPROVE ENERGY EFFICIENCY

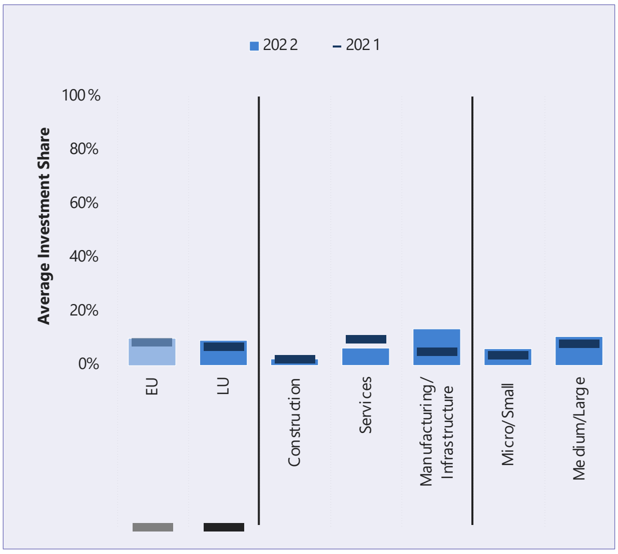
- The share of Luxembourgish firms investing in measures to improve energy efficiency (35%) is similar to EIBIS 2021 (36%) and the current EU average (40%).
- While it has remained stable among manufacturing/ infrastructure firms, fewer construction and service sector firms than in EIBIS 2021 are investing in energy efficiency. It is now much higher among manufacturing/infrastructure firms (49%) than those operating in the construction (26%) or services sector (20%).
- Luxembourg's medium/large firms (45%) remain far more likely than its micro/small businesses (13%) to be investing in energy efficiency, with both figures similar to EIBIS 2021 (45% and 18% respectively).



Q. What proportion of the total investment in the last financial year was primarily for measures to improve energy efficiency in your organisation?

Base: All firms

AVERAGE SHARE OF INVESTMENT IN MEASURES TO IMPROVE ENERGY EFFICIENCY



- On average, Luxembourg's firms directed 9% of their total investment primarily towards improving energy efficiency. This is a similar level to EIBIS 2021 (7%) and in line with the current EU average (10%).
- The only noticeable change since EIBIS 2021 is that the share of manufacturing/infrastructure firms' investment directed towards energy efficiency has increased from 5% to 14%.
- Micro/small and medium/large firms are focussing a similar proportion of their investment on energy efficiency improvements (6% and 11% respectively).

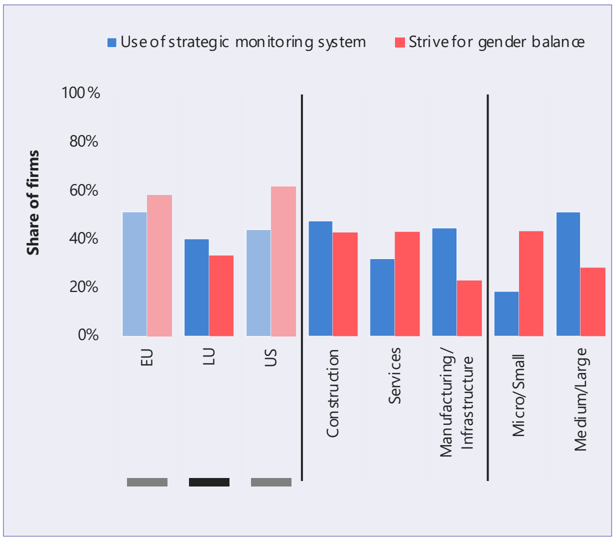
Q. What proportion of the total investment in the last financial year was primarily for measures to improve energy efficiency in your organisation?

Base: All firms who have invested in the last financial year (excluding don't know/refused responses)

Firm management, gender balance and employment

FIRM MANAGEMENT AND GENDER BALANCE

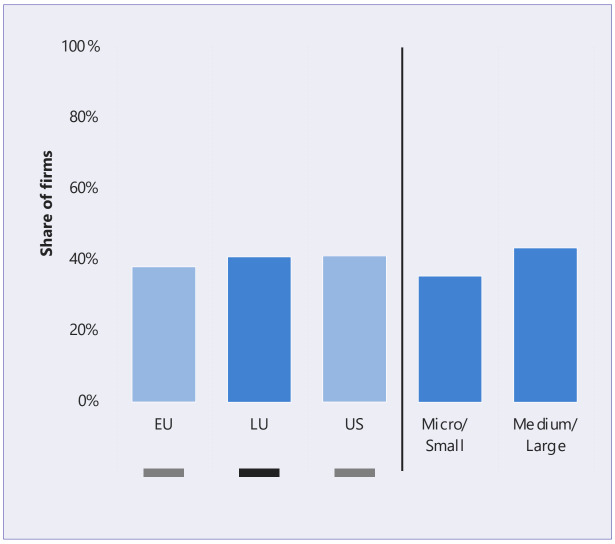
- Four in ten Luxembourgish firms (40%) use a strategic monitoring system. This is lower than the EU average (51%) but similar to the US (44%).
- The proportion of Luxembourg's firms striving for gender balance within their business (33%) is much lower than either the EU average (58%) or the US (62%).
- Across sectors, the use of strategic monitoring systems ranges from 32% in services firms to 48% in construction. No more than 43% of firms in any sector (construction and services) are working to achieve gender balance. It accounts for only 23% of manufacturing/infrastructure firms.
- Larger firms are more likely than micro/small businesses to be utilising strategic monitoring systems (51% versus 19%) while it is Luxembourg's smaller firms that are more likely to be working towards gender balance (44% versus 28%).



Q Does your company...?

Base: All firms (excluding don't know/refused responses)

FIRMS WHO HAVE INCREASED EMPLOYEE NUMBERS SINCE 2019



- Over four in ten of Luxembourg's firms (41%) have increased their employee numbers since 2019. This is in line with the EU average (38%) and the US (41%).
- A higher proportion of medium/large (43%) than micro/small firms (36%) have increased employee numbers since 2019.

Q. How many people does your company employ either full or part time at all its locations, including yourself?

Q. How many people did your company employ either full or part time at all its locations at the beginning of 2019, before the COVID-19 pandemic?

Base: All firms (excluding don't know/refused/did not exist in 2019 responses)

EIBIS 2022 – Country technical details

SAMPLING TOLERANCES APPLICABLE TO PERCENTAGES AT OR NEAR THESE LEVELS

The final data are based on a sample, rather than the entire population of firms in Luxembourg , so the percentage results are subject to sampling tolerances. These vary with the size of the sample and the percentage figure concerned.

	EU	US	LU	Manufacturing/ Infrastructure	Construction	Services	EU vs LU	Manufacturing/ Infrastructure vs Construction	Micro/ Small	Medium/ Large
	(12021)	(800)	(180)	(70)	(44)	(63)	(12021 vs 180)	(70 vs 44)	(126)	(54)
10% or 90%	1.1%	4.1%	5.6%	8.4%	11.8%	9.1%	5.6%	14.4%	4.7%	7.9%
30% or 70%	1.7%	6.2%	8.5%	12.9%	18.0%	13.8%	8.6%	22.1%	7.2%	12.1%
50%	1.8%	6.8%	9.3%	14.0%	19.6%	15.1%	9.4%	24.1%	7.9%	13.2%

GLOSSARY

Investment	A firm is considered to have invested if it spent more than EUR 500 per employee on investment activities with the intention of maintaining or increasing the company's future earnings.
Investment cycle	Based on the expected investment in current financial year compared to last one, and the proportion of firms with a share of investment greater than EUR 500 per employee.
Manufacturing sector	Based on the NACE classification of economic activities: firms in group C (Manufacturing).
Construction sector	Based on the NACE classification of economic activities: firms in group F (Construction).
Services sector	Based on the NACE classification of economic activities: firms in group G (wholesale and retail trade) and group I (accommodation and food Services activities).
Infrastructure sector	Based on the NACE classification of economic activities: firms in groups D and E (utilities), group H (transportation and storage) and group J (information and communication).
Micro/Small	Firms with between 5 and 49 employees.
Medium/Large	Firms with at least 50 employees or more employees.

Note: the EIBIS 2022 country overview refers interchangeably to 'the past/last financial year' or to '2021'. Both refer to results collected in EIBIS 2022, where the question is referring to the past financial year, with the majority of the financial year in 2021 in case the financial year is not overlapping with the calendar year 2021.

EIBIS 2022 – Country technical details

The country overview presents selected findings based on telephone interviews with 180 firms in Luxembourg (carried out between April and July 2022).

BASE SIZES *(*Charts with more than one base; due to limited space, only the lowest base is shown)*

Base definition and page reference	EU 2022/2021	US 2022	LU 2022/2021	Manufacturing	Services	Construction/ Infrastructure	Micro/ Small	Medium/ Large
All firms, p. 3, p.12, p.13, p. 21 (top)	12021/11920	800	180/180	26	63	88	126	54
All firms who have invested in the last financial year (excluding don't know/refused responses), p. 4 (top)	9704/9670	668	148/149	19	48	80	96	52
All firms who have invested in the last financial year (excluding don't know/refused responses), p. 4 (bottom)	9501/9523	668	151/157	20	48	82	99	52
All firms (excluding 'Company didn't exist three years ago' responses), p. 5 (top)	11735/11648	778	176/179	25	63	85	124	52
All firms (excluding don't know/refused responses), p. 5 (bottom)	11814/11765	780	178/179	26	61	88	124	54
All firms (excluding don't know/refused responses), p. 6 (top)	11810/NA	795	177/NA	26	62	86	123	54
All firms (excluding don't know/refused responses), p. 6 (bottom)	11725/NA	784	175/NA	26	61	85	122	53
All firms (excluding don't know/refused responses), p. 7 (top)	11945/11857	762	179/178	26	63	87	126	53
All firms (excluding don't know/refused responses), p. 7 (bottom)	11989/11891	796	180/179	26	63	88	126	54
All firms (excluding don't know/refused responses), p. 8 (top)	11735/11648	778	176/179	25	63	85	124	52
All firms (excluding not applicable/don't know/refused responses to all 3 questions), p. 8 (bottom)	8728/8780	615	141/146	18	46	76	92	49
All firms (excluding don't know/refused responses), p. 9	11980/NA	800	179/NA	26	63	87	125	54
All firms (excluding don't know/refused responses), p. 10 (top)	11975/NA	798	178/NA	26	63	86	124	54
All firms (excluding those who said don't know/refused/not applicable responses to all three international trade obstacles) p. 10 (bottom)	11382/NA	790	178/NA	26	62	87	126	52
All firms (excluding don't know/refused responses), p. 11 (top)	9339/NA	680	154/NA	23	54	75	107	47
All firms facing trade disruptions (excluding don't know/refused responses), p. 11 (bottom)	9265/NA	707	155/NA	23	54	76	107	48
All firms who have invested in the last financial year (excluding don't know/refused responses), p. 14	10051/8675	665	145/130	20	46	78	94	51
All firms who used external finance (excluding don't know/ refused responses), p. 15 (top)	4107/4059	275	55/57	7	13	35	34	21
All firms who used external finance (excluding don't know and refused) p. 15 (bottom)	4155/4100	280	56/58	7	13	36	35	21
All firms who used external finance in the last financial year (excluding don't know/refused responses) , p. 16	3988/3964	270	54/56	7	13	34	33	21
All firms (excluding don't know/refused responses), p. 17	11504/11518	715	168/176	25	59	81	116	52
All firms (excluding don't know/refused responses), p. 18 (top)	11911/11849	790	180/180	26	63	88	126	54
All firms (excluding don't know/refused responses), p. 18 (bottom)	11909/NA	784	180/NA	26	63	88	126	54
All firms (excluding don't know/refused responses), p. 19 (top)	11172/11384	759	174/173	25	61	85	120	54
All firms (excluding don't know/refused responses), p. 19 (bottom)	11964/NA	794	179/NA	25	63	88	125	54
All firms (excluding don't know/refused responses), p. 20 (top)	11685/NA	763	174/NA	25	60	86	122	52
All firms (excluding don't know/refused responses), p. 20 (bottom)	11712/NA	783	175/NA	25	62	85	123	52
All firms who have invested in the last financial year (excluding don't know/refused responses), p. 21 (bottom)*	9752/9617	677	148/156	19	46	82	97	51
All firms (excluding don't know/refused responses) p. 22 (top)	11696/11616	785	177/179	26	63	85	124	53
All firms (excluding don't know/refused/did not exist in 2019 responses) p. 22 (bottom)	11662/11718	783	174/178	25	61	85	121	53

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