Evaluation of Luxembourg's COVID-19 Response

HIGHLIGHTS
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Introduction

Responding to COVID-19 has been an unprecedented challenge for OECD countries — both due to the magnitude of the crisis and the severity of its impact on health, on the economy and on citizens’ well-being. In response to this situation, OECD countries have deployed significant human, financial and technical resources in a relatively short period of time to manage and mitigate the consequences of the crisis. To build resilience to large-scale crises, countries now need to learn from this period to understand what worked (or not), why and for whom. To this end, the OECD has developed an analytical framework to evaluate government responses to COVID-19, around three axes: pandemic preparedness, crisis management, and response and recovery policies. Luxembourg is the first country to apply this analytical framework and thus to comprehensively evaluate its responses to the coronavirus pandemic. It serves as an example to other countries.

This summary document presents the main conclusions of the report on the Evaluation of Luxembourg’s COVID-19 Response. This evaluative report was informed by the OECD’s work on the “First lessons from government evaluations of COVID-19 responses”, which provides a synthesis of the main lessons learned from the evaluations produced by public administrations in OECD countries. This report is an important step in collecting robust evidence on government responses to COVID-19. Its conclusions and recommendations will guide governments in their efforts to achieve a sustainable and inclusive recovery.
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While the COVID-19 pandemic has not affected all countries with the same intensity, the response to the crisis has been an unprecedented challenge for most countries. In this context, Luxembourg has deployed, in a short period of time, significant human, financial and technical resources to manage and mitigate the consequences of the crisis. This report, which is part of the OECD’s work on evaluating COVID-19 responses, aims to understand what measures have worked or not, why and for whom, in order to learn from this period and thus strengthen the country’s future resilience.
SIDE-19 RESPONSES

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1.1. HOW CAN THE RESPONSE TO THE COVID-19 CRISIS BE EVALUATED?

Evaluating governments’ responses to the pandemic requires looking at the measures taken to this end throughout the entire risk management cycle. The OECD’s work on ‘Government Evaluations of the COVID-19 Response’ identifies three types of policy responses that governments need to evaluate to better understand what has worked and what has not worked in countries’ responses to the pandemic. These three types of measures are:

- **Pandemic preparedness**: these are the measures taken by governments to anticipate the pandemic before it materialises and to prepare for a global health emergency.
- **Crisis management**: these are the policies and actions implemented by governments once the pandemic has materialised to co-ordinate action across levels of government and between ministries, to communicate with citizens and the public, and to involve the whole-of-society in the response to the crisis.
- **Response and recovery**: these are the policies and measures adopted to mitigate the consequences of the pandemic and the economic crisis on citizens and businesses and, secondly, to support economic recovery and reduce the loss in citizen’s well-being (confinements, restrictions, financial support, etc.).

![Figure 1.1. Framework for evaluating COVID-19 responses](image-url)

**Note**: The phases are represented as a circle because they are not necessarily chronological.

To ensure robust results, this evaluation is based on mixed methods. It benefited from comparative data from the OECD’s work on government evaluations of the COVID-19 response. These data were supplemented by a survey administered to the Luxembourg central government authorities who were in charge of the various measures put in place to respond to the pandemic, as well as a survey administered to local actors who had a key role in the response to the crisis: the 102 municipalities and cities, the 171 fundamental education institutions, and the 4 hospitals. Administrative microdata has also been used to analyse the impact of the pandemic on the economy and the labour market.

The evaluation also benefited from qualitative data. The OECD teams met with a wide range of stakeholders, including ministries, representatives of municipalities and schools, the health sector (hospital and medical home), MEPs, representatives of civil society (trade unions, Red Cross, Caritas, Asti,...), the Consultative Commission on Human Rights, private laboratories, the Patients’ Association, the Pharmacists’ Union, the Circle of General Physicians, the Association of Physicians and Dentists, Employers’ Associations (UEL, CLC, Chambre des Métiers, Fedil...) of COPAS, the Luxembourg Mental Hygiene League and the Luxembourg Economic and Social Council.

In order to understand what has been successful — or not — in the preparation and response to the COVID-19 pandemic in Luxembourg, the evaluation analyses both the measures adopted, their implementation process and the results they achieved, by addressing all of the evaluation criteria.

**Figure 1.2. Evaluation criteria**

1.2. WHAT WERE LUXEMBOURG’S STRENGTHS AND CHALLENGES IN COPING WITH THE CRISIS?

Several factors can affect a government’s ability to cope with a crisis. Thus evaluating governments’ responses to the crisis requires understanding the extent to which they have been able to take such factors into account in order to make sure that the measures they deployed were appropriate to the national context (this relates to the issue of relevance and coherence of measures). It is therefore important to understand what are the structural strengths and challenges of a country that may impact policies’ performance.

Luxembourg’s small size has been an asset in managing this large-scale crisis as it made implementing mitigation measures easier. On the other hand, the country’s strong openness, cultural diversity and dependence on foreign workers, have posed important challenges in terms of educational continuity and functioning of the essential sectors. The national political system’s stability and the important centralisation of public governance, have also enabled public authorities to make quick decisions. On the economic front, Luxembourg was able to rely on good fiscal space and a highly tertiarised economy to cope with the economic shock and the new working arrangements imposed by the lockdown.

1.3. OVERVIEW OF LUXEMBOURG’S RESPONSE TO THE CRISIS

Luxembourg put in place policies to prepare for the arrival of the pandemic in January 2020. As from the early January 2020, the government monitored the evolution of the COVID-19 situation. During the months of January and February, the government began an inter-ministerial preparation phase, to assess the needs and preparedness of the various ministries, critical infrastructure and essential services for the health crisis. On 1 March 2020, when Luxembourg detected the first COVID-19 case on its territory, the Prime Minister activated the crisis cell. On 13 and 16 March 2020, the government adopted measures to restrict travel and close off non-essential activities, akin to a “confinement”. The state of emergency (called “state of crisis” in Luxembourg) was declared on 18 March 2020.

Figure 1.3. General timetable of the crisis and implementation of crisis management mechanisms in Luxembourg

Source: Authors
This is the beginning of the first phase of the pandemic. These travel restrictions and the rules for social distancing and mask-wearing would, as in many OECD countries, be adapted throughout the next two years.

Once the state of crisis was adopted, the Luxembourg authorities put in place means to co-ordinate the cross-government and whole-of-society response to the crisis. To this end, the government adapted the organisation of the crisis cell and established consultative bodies (scientists and civil society). Frequent communication to the public across all channels (written press, television, radio, social networks, etc.) was also set up. The Luxembourg Parliament also adapted its way of functioning in light of the crisis to reduce the time it takes to examine legislation. With the exception of a few changes, these mechanisms were maintained throughout the duration of the crisis in Luxembourg.
The COVID-19 pandemic was unprecedented in many countries not only by its magnitude, but also by the rapid spread of the virus and the complex impact of the measures put in place to limit contamination. Luxembourg benefited from a mature risk management system before the COVID-19 crisis. While an influenza pandemic had been found less likely than other critical risks by the government, Luxembourg authorities were able to deploy and adapt the government’s influenza pandemic plan very quickly to address this emergency. Luxembourg has thus been able to quickly and effectively co-ordinate the efforts of all actors involved in crisis management, at local, inter-ministerial and international levels, in order to ensure the continuity of essential services. However, the concept of critical infrastructure used in Luxembourg, which determines which actors must have contingency plans, could be revised in the future in favour of a broader definition — in order to cover all essential services.
2.1. THE LUXEMBOURG GOVERNMENT’S ANTICIPATION CAPACITIES BEFORE THE PANDEMIC

Anticipatory capacities are needed to ensure that action takes place either before the shock or at least before substantial impacts have fully manifested themselves. Effective anticipatory action requires robust forecasting and triggers/parameters linked to pre-agreed financing, along with risk monitoring and analysis, and sense-making capabilities.

As such, anticipatory capacities are integral to risk governance as they help predefine needs and respond to them more effectively, and thus reduce the impact of a hazard or threat on lives and livelihoods.

Box 2.1. OECD Council Recommendation on the Governance of Critical Risks

The 2014 OECD Council Recommendation on the Governance of Critical Risks calls for governments to:

- Identify and assess all risks of national significance and use this analysis to inform priorities in risk management decisions.
- Establish governance mechanisms to co-ordinate risks and manage crises across government.
- Collaborate with the private sector and civil society, and across borders through international co-operation, to better assess, mitigate, prepare, respond and respond to critical risks.


Luxembourg’s national risk assessment had identified the risk of an influenza pandemic before the COVID-19 pandemic, and a government plan had been developed accordingly. This influenza pandemic plan identified direct impacts on the population as well as long-term economic impacts. However, the influenza pandemic was considered less likely than other risks faced by Luxembourg, and attention and resources were focused on risks other than human pandemics. Luxembourg now has the opportunity to learn from the COVID-19 pandemic regarding the prioritisation of the risks it faces. The risk assessment must also include risks whose impact is considered unlikely but catastrophic, in order to strengthen its preparedness for ‘black swan’ events.

Luxembourg was also able to quickly establish a flexible organisational structure in response to the pandemic, thus aligning efforts between the political authorities and the institutions in charge of risk management. As soon as a first case of COVID-19 appeared on national territory, the Prime Minister activated the crisis cell as foreseen in the “Influenza Pandemic” government plan. The date of activation of the crisis cell corresponds to the earliest date of activation of a national crisis management mechanism amongst neighbouring European countries, and has enabled Luxembourg to take steps to anticipate the spread of the virus in the country very quickly.
The national influenza pandemic plan in Luxembourg contained detailed measures to address the medical and non-medical aspects of a pandemic. These measures served as a starting point to advise all critical infrastructure and critical service providers on COVID-19 pandemic preparedness before the first case of contamination in the country.
2.2. PREPAREDNESS OF ESSENTIAL SERVICES AND CRITICAL INFRASTRUCTURE OPERATORS

A challenge that all OECD countries have faced during the pandemic has been to ensure the continuity of certain services that are essential to the well-being of citizens. Luxembourg’s risk management system does not identify critical sectors for economic activity as such and is based on the concept of ‘critical infrastructure operators’. These operators are the ones that have the potential to cause the greatest impacts in the event of shutdown or destruction. For example, emergency services (mainly the Grand Ducal Fire and Rescue Corps) fall into this category and had, as such, put in place emergency plans prior to the outbreak of COVID-19. These plans were supplemented by a COVID-19-specific emergency plan, introduced as part of the national pandemic preparedness campaign between January and March 2020.

In all OECD countries, the pandemic has highlighted the importance of certain services, which were not previously identified as ‘critical’ but which can be considered essential in the context of a crisis. In Luxembourg, providers of these services were not required to have a crisis plan in order to ensure the continuity of their operations. As a result of the COVID-19 outbreak, essential service providers had to put in place ad hoc contingency plans to avoid large-scale disruptions.

Luxembourg has also relied on the private sector to ensure the supply of essential goods and to avoid a shortage of personal protective equipment (PPE). At an early stage of the pandemic, the national stock of PPE was insufficient to ensure the number and variety of equipment needed for the COVID-19 response. In March 2020, a national logistics unit was set up within the National Crisis Cell to help health system actors acquire necessary personal protective equipment and essential medicines. Luxembourg also used the logistics and transport capacities of the country’s private sector to establish direct contact with production facilities abroad, to purchase equipment directly from producers and to transport stocks to the national territory.

2.3. MANAGING THE CROSS-BORDER EFFECTS OF THE PANDEMIC

Luxembourg’s diplomatic network also played an important role throughout the pandemic. Drawing in particular on reports from its embassies and consulates, as well as bilateral exchanges with, and communications from, European bodies, Luxembourg was able to monitor the development of the COVID-19 situation as of January 2020, and adapt its crisis strategy accordingly.

Regular exchanges with European bodies and border countries show the importance Luxembourg has demonstrated to international co-operation in the fight against COVID-19. This co-operation was particularly useful in promoting neighbouring countries’ understanding of the measures taken in Luxembourg (for example the national mass-testing campaigns) to avoid, as much as was possible, border restrictions. In addition, European and international co-operation facilitated the repatriation of Luxembourg citizens abroad, and the protection of frontier workers’ interests, as well as that of other persons who had to travel cross border.
Summary of recommendations

- Improve the risk assessment process and use it to strengthen national resilience.
- Ensure that contingency plans reflect current knowledge of potential crises.
- Improve the preparation of essential services.
- Strengthen international co-operation to deal with future crises.
Managing modern and complex crises, such as the COVID-19 pandemic, requires that governments mobilise, and co-ordinate between, multiple actors beyond traditional emergency services. In Luxembourg, inter-ministerial management of the crisis, led by the highest level of government, was particularly agile. Similarly, crisis communication has benefited from strong leadership and reached a broad audience, despite some difficulties related to the consistency of messaging. While Luxembourg stands out for the very active involvement of its Parliament throughout the crisis, thus ensuring continuity of the democratic life of the nation, a greater involvement of civil society in crisis management would be desirable. Today, Luxembourg could strengthen its system of scientific advice to the government and more systematically evaluate the impact of the measures adopted during the crisis, in order to draw relevant lessons for the future.
3.1. INTER-MINISTERIAL CO-ORDINATION OF THE COVID-19 CRISIS RESPONSE

As stated in the OECD Recommendation on the Governance of Critical Risks, strong leadership at the centre is essential for effective governance of the crisis. In Luxembourg, the inter-ministerial co-ordination of the crisis, which was managed at the highest level of government, was particularly agile. Indeed, Luxembourg could rely on the pre-existing leadership of the office of the High Commission for National Protection (HCPN), which sits in the Centre of Government (Ministry of State), to clearly articulate the national response to COVID-19. The HCPN was established in its current form in 2016, with a view to co-ordinating the various contributions of ministries, administrations and services, to crisis management, as well as to ensure the implementation and monitoring of all relevant decisions. Along with the HCPN, the Minister of Health and the Director of Health also played a key role. This dual approach meant that Luxembourg could benefit from the highly specialised health expertise it needed to respond to the pandemic, while preserving the inter-ministerial dimension of crisis management.

Beyond clear leadership, crisis management requires appropriate governance arrangements to co-ordinate the response efforts across different government stakeholders. To this end, the OECD Recommendation on the Governance of Critical Risks calls for the creation of a crisis cell to co-ordinate disaster response efforts. Such a crisis cell was provided for in the general framework for risk governance in Luxembourg, but its composition had to be adapted to better address this complex crisis.

The crisis cell, chaired by the HCPN and the Ministry of Health, was also composed of several working groups, which oversaw and managed separate thematic areas, such as hospitals, diagnosis and contact-tracing, testing, primary care, care networks and homes, logistics, the health reserve, and communication.

Figure 3.1. Composition of the crisis cell during the first wave of the pandemic

Organisation of the Luxembourg Crisis Cell between 15 March 2020 and mid-May 2020

Source: Authors based on internal documents submitted by HCPN
The fact that the organisation of the crisis cell changed over the course of the different pandemic waves, the multidisciplinary composition of the working groups and the high level of representation within them, allowed Luxembourg to be responsive and innovative in managing the crisis. Indeed, the stakeholders interviewed by the OECD Secretariat underlined that these mechanisms contributed to agile crisis management. However, it would have been useful for the government to clarify the specific competences and tasks of each of the working groups through explicit terms of reference. Moreover, Luxembourg could further involve civil society in the various working groups, and do so from the outset. Indeed, stakeholder engagement and civil society involvement is particularly important in the context of complex crises where there are many unknowns that affect all parts of society.

The COVID-19 crisis required governments to make clear and legitimate decisions, based on reliable data, in a context where there were many unknowns and the time allocated to dialogue and information gathering was extremely short. While no such information system existed before the crisis, Luxembourg very quickly set up a system (‘Qlik’ system) to monitor key indicators in real-time to manage the pandemic. To be better prepared for future crises, the HPCN should strengthen its overall critical risk monitoring system and establish sustainable and shared data collection processes jointly with critical infrastructures and services.

In Luxembourg, as in many OECD countries, an ad hoc scientific advice committee was set up in March 2020, known as the COVID-19 Task Force. The creation of this committee facilitated the centralisation of scientific advice to government in a context of high uncertainty and rapidly evolving evidence. In the future, maintaining high levels of citizens’ trust in government will require clarifying the role of science and expert advice in policy-making. This will require, among other things, establishing a permanent system of general scientific advice to the government.

3.2. EXTERNAL CRISIS COMMUNICATION

Overall, crisis communication has been very effective in Luxembourg. The government Crisis Communication Services have been able to rely on the existence of a clear crisis communication strategy pre-existing the pandemic, to mobilise a wide range of channels, in order to reach a wide audience and listen to citizens’ expectations. The government has also made significant efforts to adapt messages in the country’s three official languages, as well as in some languages frequently spoken by cross-border or immigrant communities, as well as to use two-way communication channels (Facebook live, email helpdesk, etc.).

Luxembourg, however, has experienced, like many OECD countries, some difficulties relating to the coherence of messaging. These difficulties are mainly due to the many sectoral and geographical measures adopted during the different waves of the pandemic. Nevertheless, the government can increase the coherence of messaging by making a concerted effort to clarify the scientific rationale behind its decisions and by systematically assessing the impact of its communication efforts.
3.3. WHOLE-OF-SOCIETY INVOLVEMENT IN CRISIS MANAGEMENT

Finally, as regard to whole-of-society involvement in crisis management, vertical co-ordination between the central government and municipalities and cities has been more effective in Luxembourg than in other OECD countries. 95% of municipalities responding to the OECD survey believe that they received the central government support they needed to manage the crisis.

Luxembourg also stands out how actively involved the Parliament was during the crisis, with the exception of a short state of crisis phase between mid-March and the end of June 2020. This involvement has ensured continuity in the democratic life of the nation, but should not replace other forms of citizen engagement, as these remain very useful in building trust in government in a representative democracy.

In any event, Luxembourg should now focus on drawing lessons from the crisis, including by investing in its capacity to assess public policies, to increase its resilience to future crises.

### Summary of recommendations

#### Enhancing transparency in crisis management
- Increase the involvement of civil society, and put in place mechanisms for direct engagement of citizens.
- Clarify the competences and tasks of each of the crisis management bodies.
- Publish all opinions of the Task Force.

#### Clarifying and strengthening the role of scientific expertise and evidence in public decision making
- Establish a permanent system of scientific advice to the government.
- Develop a list of national experts from different disciplines and organisations.
- Continue to make the scientific rational that underpins public decisions explicit.

#### Preparing for the next crises
- Strengthen the HPCN-led critical risk monitoring system.
- Develop shared protocols and processes for data collection.
- Develop a harmonised health information system.
- Learn from this crisis and prepare for the next one.
- Consider reviewing the scope and definition of critical infrastructure.
The COVID-19 pandemic had a major impact on the Luxembourg population’s health. In the face of these challenges, the interministerial crisis cell facilitated the mobilisation of resources and actors, thus enabling Luxembourg to rapidly develop new systems and expand health services to absorb the shock of the pandemic. The mechanisms put in place during this time, such as mass testing, contact-tracing, increased hospital capacity or the health reserve, are proof of the quality of the healthcare system’s response to the COVID-19 crisis. But the pandemic also revealed structural weaknesses in the health system, which resulted in Luxembourg being insufficiently prepared for a pandemic of this magnitude. Today, Luxembourg must pursue its efforts to develop new care-delivery models, place greater emphasis on risk prevention, as well as adopt a multidisciplinary approach to care.
4.1. THE DIRECT HEALTH IMPACT OF COVID-19

The direct health impact, measured in terms of excess mortality, is lower in Luxembourg than in other OECD countries on average. The excess mortality rate was 1,226 per million inhabitants in Luxembourg, as of the first half of 2022. This is more than 60% below the OECD average. However, the pandemic has disproportionately affected older and disadvantaged populations. The mortality rate among populations aged 80 and over residing in long-term care facilities (a population on average more vulnerable than in other OECD countries) is almost twice as high as in the OECD average.

The effectiveness of the vaccination campaign in Luxembourg in reducing hospitalisations and deaths is undeniable. The preparatory work done, starting in March 2020, by the thematic working groups on key topics such as storage and delivery flows, or the development of information systems, meant the campaign could be easily carried out. While the vaccination campaign was highly personalised (with invitations and personal support), vaccine hesitancy still seems relatively high in Luxembourg. In May 2022, almost 30% of Luxembourg's resident population had still not received a complete vaccination scheme – although this data suffers from some overestimation biases. It would have been useful to deploy vaccination in medical offices and pharmacies earlier in Luxembourg. Targeted awareness-raising activities, around on community-based approaches, also need to be strengthened.

4.2. THE INDIRECT IMPACTS OF THE PANDEMIC

The indirect impacts of the pandemic in Luxembourg are worrying, both in terms of postponement of diagnosis and routine care, as well as in regard to deterioration of mental health (mainly among young people and employed people). In Luxembourg, as in many OECD countries, the pandemic itself, as well as the measures adopted to halt the pandemic during the first two waves, had significant negative consequences in the field of mental health. The survey conducted by the National Institute of Statistics and Economic Studies (STATEC) in collaboration with TNS Ilres, shows signs of a marked deterioration in the mental health of Luxembourgers. One in three residents say their mental health deteriorated during the COVID-19 pandemic, a proportion that declines with age.

Luxembourg also saw a decline in consultations of non-hospital treatments. General practitioners, dentists, dermatologists, ophthalmologists, pediatricians and psychiatrists saw their consultations decrease by more than 10% over the whole year, and by more than 26% between March and May 2020. Hospital activity also declined and non-urgent operations declined in the majority of hospitals. Thus, non-urgent and non-essential surgical procedures were postponed in Luxembourg hospitals during the acute phases of the crisis, which could lead post-crisis to an increase in waiting times for certain surgical procedures. Cancer screening and treatment also suffered delays in 2020, with a sharp decrease in the number of carcinological interventions. For example, for the whole of 2020, hysterectomies surgery activity decreased by 27% compared to 2019. Delays in diagnosis and treatment of cancer are likely to have a serious impact on the patient’s prognosis.
4.3. WHAT RESILIENCE IN MANAGING THE PANDEMIC CRISIS?

The responsiveness of the inter-ministerial crisis cell and the mobilisation of health system actors have been remarkable, putting in place many pragmatic solutions as early as mid-March 2020 to absorb the shock and mitigate the pandemic. Intensive testing was put in place at the beginning of the pandemic thanks to an arsenal of actions such as mass testing or the setting up of mobile teams. Such a large-scale testing strategy is one of the best practices in OECD countries for reducing virus transmission rates and rapidly detecting clusters in specific sectors. The total number of possible cases in Luxembourg would have been more than 40% higher without this large-scale testing programme. The contact-tracing system was effective in identifying contact cases with the help of three key factors: increased capacities, targeted support to fragile populations based on retrospective surveys, and the development of the CARE+ application.

Luxembourg also significantly increased hospital capacity by doubling the number of intensive care beds during the first pandemic wave, enabling the health sector to respond to the large influx of patients, both residents and from neighbouring countries. This increase capacity was made possible by limiting surgical and medical activities only to urgent and essential interventions during the first wave.

The health reserve, as well as the reallocation of staff to critical sectors of activity, meant that Luxembourg was able to mobilise health workers during the first two pandemic waves, thus avoiding any shortages in COVID-19 care. In fact, unlike most OECD countries, Luxembourg did not suffer from a shortage of health workers during the COVID-19 pandemic.

Figure 4.1. Unlike most OECD countries, Luxembourg did not suffer from a shortage of health workers to respond to the COVID-19 pandemic

Note: This diagram shows countries’ responses to the question: “On a scale of 1 to 5, please indicate the impact of the lack of health personnel in coping with the COVID-19 pandemic: 1 (low), 2 (low-medium), 3 (medium), 4 (medium-high) and 5 (high)”. Source: OECD questionnaire on the resilience of health systems.
By developing new care delivery models, Luxembourg was able to preserve some of the key functions of its healthcare system. Public authorities now need to maintain these efforts and evaluate these practices to improve the future resilience of the health system. For example, Luxembourg has reorganised primary care to respond more efficiently to the population’s needs during the first waves of the pandemic. The establishment of the Advanced Care Centres and COVID-19 Consultation Centres in the primary care sector is among the best practices in OECD countries.

Teleconsultations, tele-monitoring of COVID-19 patients, and e-prescription services were quickly deployed to maintain access to care in Luxembourg. However, compared to other OECD countries, teleconsultations accounted for only 9% of all medical consultations in 2020, compared to an average of 21% in OECD countries.

New mechanisms for mental health support for public and health workers have been created, but multisectoral approaches linking mental health and education, youth and employment policies are lacking to meet the needs of at-risk populations.

**Summary of recommendations**

**Preparing for the next crises**
- Develop a single information system for the entire health system.
- Invest more in health workers, invest in primary care based on multi-professional teams.
- Strengthen hygiene skills and the medicalisation of long-term care structures.
- Establish a central purchasing and logistics centre for all health institutions for critical products, medicines and medical devices.
- Maintain the health reserve by providing required training.

**Absorb shock and straighten health system functions**
- Strengthen the provision of health services to disadvantaged populations.
- Strengthen screening and surveillance for depressive disorders, and develop multisectoral mental health policies.
- Assess the risk-benefits of deploying remote care services.
- Rethinking the rise of hospital capacity more finely to maintain the continuity of non-urgent interventions.
The way Luxembourg’s education system managed the pandemic is different from other OECD countries due to the low number of days schools remained closed. Overall, the education system was able to withstand the upheavals imposed by the crisis, thanks to its flexible and efficient management of the health situation, infrastructure which was well suited to distance learning, and co-ordinated investments by educational actors at all levels of the system. Through these concerted efforts, Luxembourg was able to maintain good pedagogical continuity. However, the priority given to reopening schools did not always manage to address the challenges posed by the crisis, particularly in regard to the increase in educational inequalities and support to teachers during the course of the pandemic. With this in mind, the government could increase its targeted support measures to certain categories of students and, on the longer term, reflect on deeper changes to its education system. The education policies adopted during the crisis would have also benefited from better consultation with local actors to adapt certain measures to schools’ needs.
5.1. UNDERSTANDING LUXEMBOURG’S EDUCATION SYSTEM

Understanding Luxembourg’s education system is essential to putting into perspective the Luxembourg government’s decisions during the pandemic. The uniqueness of Luxembourg’s education system lies largely in its multilingual approach to teaching and learning, and in the very international population it hosts. The country has three official languages (Luxembourgish, German and French), each of which is a language of instruction in the education system. Children between the ages of 1 and 4 can benefit from the plurilingual education programme of the early education and reception services. The language of instruction then evolves as students progress through their academic journey. In the “traditional” education system, pre-primary education is provided in Luxembourgish, primary education in German (including children’s literacy), and most of secondary education in French or German. Higher education is provided in German, English and French.

Despite high investments (the annual expenditure per student in Luxembourg is more than twice the OECD average), Luxembourg has performed below the OECD average in the three areas assessed by the PISA 2018 survey (reading, mathematics and science).

The Ministry of National Education, Children and Youth (MENEJ) has a wide scope of action, but leaves educational autonomy to schools and teachers. Although schools’ curricula are centralised, teachers remain autonomous when it comes to implementing them. This educational autonomy extends to the choice of teaching materials, as well as to their choices of vocational training. Finally, while it is for the MENEJ to provide equipment and infrastructure (including digital) to secondary schools in a harmonised way, it is a competency that falls to the municipalities when it comes to primary schools.

5.2. PEDAGOGICAL CONTINUITY DURING THE HEALTH CRISIS

Schools remained open most of the time during the COVID-19 pandemic in Luxembourg. In order to ensure pedagogical continuity, Luxembourg stands out for its desire to minimise the number of days schools were closed. The MENEJ strategy thus meets the first of ten OECD principles for an effective and equitable educational recovery during and after the pandemic: to keep schools open as much as possible and in a safe manner. Overall, in 2020 and 2021, basic education schools were closed for 48 days and secondary education establishments for 34 (even fewer days for students in their final year of high school, as they were allowed to return earlier to prepare end-of-year exams). Pedagogical continuity solutions were also put in place during this time.

As a results, Luxembourg ranks among those countries in the OECD that have closed their schools the least amount of time, with the OECD average being about 81 days in primary schools and 94 days in secondary education. Pedagogical continuity was ensured thanks to the Luxembourg authorities’ efforts to lend digital materials and deploy special support measures (e.g. through telephone help or individual coaching) to students with special needs. Having succeeded in building consensus on the overall strategy that underpinned its entire action, is also one of Luxembourg’s successes in managing the crisis.
5.3. EFFECTS OF THE COVID-19 CRISIS AND GOVERNMENT RESPONSES ON
STUDENT OUTCOMES AND WELL-BEING

Unlike in most OECD countries, there was no systematic negative effect detected on pupils’ learning outcomes in Luxembourg, as a result of the pedagogical continuity allowed by distance learning or later, by alternated learning, once schools were reopened. Overall, the system was able to withstand the upheavals imposed by the crisis, teaching continued and learning followed. The results of the Standardised Tests (EpStan) of the two years of crisis remained broadly stable. The test scores in both languages and in mathematics did not follow a downward trend despite the challenges posed by distance learning first, and alternated learning later.

Figure 5.1. Results of Standardised Tests (EpStan) in Basic Education

Note: Cycles 2.1, 3.1 and 4.1 correspond to levels 1, 3 and 5, i.e. classes of CP, CE2 and CM2 in France.
Source: Results of Standardised Tests (EPStan) administered by LUCET.
However, the slight decline in the results in German oral comprehension in 2020, and in writing in 2021, could have been anticipated given the nature of Luxembourg’s education system and the linguistic plurality of its school population, as well as the effects on the workload of pupils, teachers and parents, who had to cope in the long run with exceptional circumstances. In this sense, a broader reflection could be carried out in regard to making different learning pathways more permanent, for example by following the model of European schools, which could better suit (the increasingly numerous) pupils who do not speak Luxembourgish or German at home, two factors which are key to academic success in Luxembourg.

Luxembourg has conducted several studies to assess the impact of the pandemic on the well-being of educational actors (students, parents and teachers). Despite their methodological limitations, these multiple surveys paint a nuanced picture of the mental situation of students, parents and teachers during the crisis. As is the case in other OECD countries, it appears that the well-being of pupils, teachers and parents has been affected by the crisis, although on the whole both teachers and parents felt that they had been able to cope with distance learning and the constraints imposed by the health situation. No significant decrease in the level of well-being of students can be observed, even if the health situation was certainly not pleasant for them. Rather, it is the well-being of teachers that seems to have deteriorated as the crisis lasted.

5.4. ENGAGEMENT, CO-ORDINATION AND COMMUNICATION WITH EDUCATION SYSTEM ACTORS IN LUXEMBOURG DURING THE COVID-19 PANDEMIC

As in other education systems, the sense of urgency shared by the actors of the Luxembourg system fostered rapid reactions and a general spirit of solidarity during the crisis. This facilitated the implementation of important measures, such as school-closings, partial and then full reopenings of schools, or the establishment of health protocols and large-scale testing in schools.

The ministry has created a specific crisis governance structure for education, the “COVID-19 and education” cell, to respond to the evolution of the crisis in the second half of 2020. Within the framework of this governance structure, and in particular through the co-ordination unit, the MENEJ and the health sector were able to work jointly to decide on the different adaptation measures needed in schools at the different stage of the pandemic. The main concern guiding these decisions was the health safety of students and teachers.
Summary of recommendations

Ensure pedagogical continuity in times of crisis

- Keep schools open as much as possible as a primary means of pedagogical continuity, through flexible and effective health protocols, which are developed and continuously revised in close collaboration with the Ministry of Health, without neglecting the pedagogical support of local actors over time.
- Introduce differentiated forms of support, particularly in times of crisis, to prevent inequalities in learning contexts that are likely to increase school inequalities; in the long term, consider making different learning pathways, that better suit children who do not speak German or Luxembourgish at home, more permanent.
- Support teachers in a concerted manner in their pedagogical functions when they continue to face unusual teaching situations.
- Rethink the distribution of school management and digital infrastructure responsibilities between the central government and municipalities to ensure uniform coverage at all levels of education.

Strengthening stakeholder engagement mechanisms

- Include the education sector in the Luxembourg government’s inter-ministerial crisis cell.
- Establish, as early as possible, a stable governance structure.
- Work towards finding, in times of crisis, a balance between time for stakeholder engagement in decision making, and communication of decisions taken.
- Continue to strengthen the department’s information infrastructure.
In the face of the health crisis, OECD countries’ fiscal response has been rapid and massive, and has taken on many shapes. In Luxembourg, the overall support to businesses was similar to that of many OECD countries. It consisted of a variety of measures aimed at providing a response adapted to the situation of each company. These measures can be grouped into four main categories: i) measures to maintain employment, ii) direct aids, iii) cancellation and deferral of taxes, and iv) state loans and guarantees.
6.1. OVERVIEW OF THE OVERALL BUSINESS SUPPORT SCHEME AND MAIN EXPENDITURE ITEMS

Like its neighbours, Luxembourg quickly deployed support to its businesses. The first measures were put in place in the first weeks of the crisis, following the adoption of the state of crisis law on 24 March 2020. Relatively flexible budgetary procedures, accompanied by regular transmission of budgetary information to Parliament, allowed the government to quickly commit and disburse the necessary appropriations.

The measures put in place cover a variety of schemes and have made it possible to meet the needs of most economic sectors. The measures most favoured by companies are short-time work, repayable advances, uncovered aid cost, recovery aid and the state guaranteed loan.

Luxembourg’s fiscal effort is in line with that of other comparable OECD countries. Of the 3.57 billion EUR that Luxembourg allocated in two years to deal with the COVID-19 crisis, 2.85 billion EUR was earmarked for businesses and households (of which 200 million EUR were granted in the form of a state-guaranteed loan). This amount corresponds to 3.8% of its GDP (2021) and is close to the level of expenditure of other European countries.
In particular, Luxembourg has chosen to focus on employment schemes, thus maintaining a relatively high level of employment, particularly in the early stages of the crisis. This choice, aligned with those made by other open economies such as Ireland and Belgium, seems relevant to retain as much as possible cross-border workers.

6.2. IMPLEMENTATION OF THE BUSINESS SUPPORT SCHEME IN LUXEMBOURG

Job retention was supported by a short-time work scheme introduced on 18 March 2020. This special scheme was based on advances to businesses and ex post accounting control, and an existing advisory framework. Unlike short-time work, direct aids took longer to implement because of the lack of a pre-existing legal framework. In addition, self-employed workers did not receive short-time work and received specific flat-rate aid two weeks after the first flat-rate aid.

Public administrations have been reactive and have been able to cope with a large influx of demands from businesses, by working together with employers’ associations and relying on IT tools. This agility allowed companies to obtain aid quickly, a decisive factor in safeguarding their liquidity.
6.3. TARGETING AND IMPACT OF THE SUPPORT SCHEME IN LUXEMBOURG

The health restrictions put in place in Luxembourg starting in March 2020 to contain the rise of COVID-19 infections weighed heavily on businesses. In some sectors, businesses have faced a sharp decline in their activity. The amounts of aid and employment support disbursed were overall sufficient to preserve the financial situation of most businesses, as measured by their profits, liquidity and solvency.

The subsidies were mainly targeted at the businesses that were most affected by the crisis, i.e. those which were relatively dynamic before the crisis, but which required support to survive. Businesses that were either not profitable (or indebted), or highly profitable, in 2019 received less aid during the crisis. The first four deciles of the most impacted businesses, in terms of declining turnover in 2020, received 57% of total subsidies, which meets the objective of supporting the sectors most exposed to the crisis.

The bankruptcy rate of the hospitality, restaurant and café (HORECA) sector, among the most affected by the crisis, declined in 2020 and 2021, which confirms a certain efficiency and generosity of the aid put in place for this sector. However, sectors particularly affected by the crisis will require more monitoring in the future as some, such as HORECA, are facing structural changes due to the dissemination of teleworking and videoconferencing.

Summary of recommendations

**Improving the targeting of aid measures**
- Take the self-employed in account more in aid.
- Monitor, over the short term, the sectors most affected by the crisis to ensure their resilience.
- Better integrate and facilitate access to administrative and business balance sheet data.
- Consider the progressivity of aid to better target any future intervention.

**Strengthening the scheme for the implementation of aid to enterprises**
- Consider setting up a consultation structure with the social partners for all future interventions.
- Continue the simplification and digitalisation of administrative procedures.
- Continue improving Parliamentary information and scrutiny.

**Improving information in Parliament**
- Pursue regular exchanges with the Chamber of Deputies on beneficiaries, targeting and the impact of the measures put in place.

**Assessing the long-term impact of aid**
- Continue the monitoring and evaluation of business support measures.
Labour market and social policies in Luxembourg were relatively well prepared going into the COVID-19 pandemic. As employees fell ill, reduced their working hours or lost their earnings, paid sick-leave, family leave, job retention schemes and unemployment benefits kicked-in. Existing schemes were extended and reinforced, while new measures were adopted to respond to emergent needs. The tight labour market coming out of the crisis has aided a strong recovery, and many of those deeply affected have since recovered their livelihoods. Nevertheless, there remains scope for fine-tuning policies to ensure, if such a crisis happens again, support reaches everyone who needs it, and no one is left to fall through the cracks.
7.1. THE IMPACT OF THE COVID-19 CRISIS ON THE LABOUR MARKET AND SOCIAL OUTCOMES IN LUXEMBOURG

The containment of the COVID-19 pandemic required unprecedented restrictions on social and economic activity. In Luxembourg, the Grand Duke declared a state of crisis on 18 March 2020 and endorsed a total lockdown, requiring the closure of all non-essential businesses and schools, and imposing severe mobility restrictions. Although necessary, these restrictions have led to widespread disruptions in the life, employment and incomes of the Luxembourg population.

The Luxembourg labour market has been severely affected. The unemployment rate increased by 1.8 percentage points in 2021, while the number of hours worked decreased by 10% compared to the previous year. Yet the recovery has been fast and strong. Employment rates now exceed pre-crisis levels and inactivity rates have fallen to levels never seen since the period leading up to the 2008 financial crisis. However, the sectoral concentration of the crisis has led to a pronounced exposure of certain groups.

Accelerated access to employment retention schemes helped mitigate the impact of the shock on the labour market and, at the height of the crisis, nearly two in five employees benefited from this scheme. However, the impact of the crisis was very different across worker groups, and depended, to a large extent, on their sector of employment and the types of jobs they occupied. Workers in heavily affected sectors and jobs deemed “non-essential” that required physical proximity and therefore could not be performed at home saw their work disappear, while those with short work histories and precarious contracts found themselves less protected by the massive support for employment through short-time work.

7.2. POLICIES TO PROTECT EMPLOYMENT AND INCOME IN LUXEMBOURG DURING THE COVID-19 CRISIS

With its comprehensive and generous employment and livelihood protection systems, Luxembourg was well positioned to support its population during the COVID-19 pandemic. These protection mechanisms, which were rapidly expanded to adapt to the demands of the crisis, have minimised job losses and maintained the incomes of many people.

Paid sick leave, which replaced 100% of income, was essential to protect workers and ensure that people infected with COVID-19 and quarantine remained isolated.

Luxembourg also very quickly introduced exceptional family leave. This exceptional family leave has been an essential and innovative part of the country’s emergency response to the crisis. This policy allowed parents to retain their jobs and income, while providing care for their children. During the lockdown period in spring 2020, nearly 40% of eligible parents benefited from this measure, and it is likely that it played an important role in preventing the widening gap in the gender employment rate observed in some OECD countries.

In addition to the extension of employment retention schemes and unemployment and social assistance schemes, Luxembourg has implemented targeted support measures for non-standard workers, which are poorly covered by standard employment and income protection mechanisms. These include the self-employed, especially those in the arts, entertainment and leisure sectors.

Support schemes were not available and accessible to all workers — young people, those with interspersed professional careers and self-employed workers were the most vulnerable. Women suffered more strongly from the crisis, but women’s employment rates recovered and improved compared to men. Workers with more
fragmented careers, especially young people, may have faced gaps in the coverage of unemployment benefits. Young adults between the ages of 18 and 25 had limited access to social assistance. Some Luxembourg workers had to find a compromise between exceptional family leave and employment retention arrangements. Foreign-born workers have been hit hard, but a strong recovery has occurred thanks to increased employment in highly skilled services, health and construction. Workers concentrated in the most heavily affected sectors have often been less able to access support from short-time work, income support and even sick leave. Self-employed workers were less well covered by paid sick leave and exceptional family leave than employees.
Summary of the main recommendations

Review short-term unemployment

- Assess the option of requiring stronger employer contributions to unworked hours as support is rolled back.
- Strengthen incentives to train while on job retention schemes – particularly for those who are likely to struggle to find a new job should their previous positions become inviable.
- Examine avenues for offering recurrent support, comparable to short-time work (chômage partiel), to the self-employed.
- Ensure that employment retention schemes are more mobilised to preserve the jobs of the workers most in need.

Adapt the exceptional family leave

- Enable those eligible for exceptional family leave but receiving support under short-time work to receive a top up to bring them to a comparable level of support.
- Ensure gender balance among workers taking family leave.
- Examine ways to extend support to the self-employed who must look after their family due to school closures or illness/quarantine.

Expanding access to paid sick leave

- Ensure that, in the event of a pandemic, all self-employed workers have access to paid sick leave.

Expanding access to unemployment benefits

- Consider, in a similar crisis, reducing or waiving minimum-contribution requirements to improve access for young workers and those with patchy employment histories.

Ensure that social assistance is accessible to all those in need

- Strengthen support for the livelihoods of young workers; not everyone will have access to family support.
References


Evaluation of Luxembourg's COVID-19 Response

HIGHLIGHTS

As countries seek to learn from the COVID-19 crisis and increase their resilience for the future, evaluations are important tools to understand what worked or not, why and for whom. This report is the first of its kind. It evaluates Luxembourg’s responses to the COVID-19 crisis in terms of risk preparedness, crisis management, as well as public health, education, economic and fiscal, and social and labour market policies. While Luxembourg’s response to the pandemic has been particularly agile, preserving the country’s resilience will require maintaining high levels of trust in government, reducing inequalities, and laying the foundations for inclusive growth. The findings and recommendations of this report will provide guidance to public authorities in these efforts.

For more information, please consult oe.cd/lux-gov