International Market Access

# Supply of goods in times of crisis: *analysis and lessons for Switzerland*

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## At a glance

Since the beginning of the COVID-19 pandemic, global supply chains have been struggling. We have come to realise that our supply of goods cannot be taken for granted. To call for the decoupling of the Swiss economy, however, is short-sighted – after one and a half years of crisis, the necessity of international trade is all too obvious. Meanwhile, if Switzerland wants to successfully overcome future crises, it should sustainably strengthen its systemic resilience by means of different measures at the national and international level.

Inhalt



## Executive summary

In spring 2020, people around the world were directly affected by the shortage of medical supplies such as protective masks and disinfectants. Since the beginning of 2021, the economy is recovering. However, difficulties within global supply chains have by no means disappeared. On the contrary: currently, congested container ports and a mismatch between supply and demand are causing delivery delays worldwide.

The economic consequences of the pandemic have reignited the discussion about security of supply in Switzerland. Calls for more self-sufficiency are being voiced. However, the crisis has shown that decoupling the Swiss economy would not be an effective means of strengthening the supply of goods. Thanks to a diversified procurement network, complemented by sensible measures at home (e.g. compulsory stocks), there have been no prolonged supply bottlenecks for important goods in Switzerland.

However, further crises cannot be ruled out. It is therefore important to tackle reforms at national and international level that will consolidate Switzerland's resilience in the long term. This includes, for example, strengthening digital trade or intensifying international cooperation in research and development.

## Positions of ***economiesuisse***

- **Yes to security of supply, no to self-sufficiency:** Switzerland is a country with limited production capacities. As such, it must continue to strengthen and expand its access to global procurement markets.
- **Opening up instead of closing off:** global trade remains the basis for a stable supply of goods. Trade restrictions have proven counterproductive in the COVID-19 pandemic.
- **Reshoring misdiagnosis:** by focusing on final production, a supply bottleneck is not eliminated, but merely shifted along the value chain.
- **Improve systemic resilience in the long term:** the next crisis will not necessarily be epidemiological in nature. The lessons learned from the pandemic must therefore not be limited to the supply of goods. Switzerland must learn to respond better to unforeseen shocks of all kinds.


The pandemic and its economic consequences show us not only the efficiency but also the complexity and fragility of global supply chains. The availability of an essential commodity cannot be taken for granted. For Switzerland as a country with a small domestic market and no raw material resources, the following questions therefore arise:

- How can Switzerland secure its supply in times of cross-border supply chains?
- What role do the economy and the state play in this?
- What lessons need to be learned from the current pandemic in order to better anticipate risks in the future and respond more effectively in the event of a crisis?

Experience from one and a half years of the pandemic allows to distinguish between alleged and actual supply bottlenecks, and between self-sufficiency and security of supply. Myths can also be clearly separated from facts when analysing the causes. The concrete policy recommendations for the economy are also based on this kind of differentiated analysis.


Switzerland wants to be supplied with essential goods and services.'Security of supply' is guaranteed when vital goods are available in sufficient quantities. There are those who would prefer to produce domestically as much as possible. However, it is questionable whether such 'self-sufficiency' would be possible at all.

Statistics show that Switzerland is far from being able to produce all essential goods by itself. It is therefore dependent on imports. This is the case with food, for example. Here, the net self-sufficiency rate (ratio of domestic production to total domestic consumption) was 51 percent in 2018, due to the small agricultural area available. However, this value was only possible thanks to imports – of agricultural machinery, diesel, or fodder, for example. The situation is even more pronounced in the case of oil. Here, Switzerland is entirely dependent on imports.

This dependence is not new. In the last hundred years, Switzerland has never been able to and has never had to be completely self-sufficient. Nevertheless, it is important to note that despite epidemics such as SARS (2003), the swine flu (2009) or the current COVID-19 crisis, food security has never been at risk in recent decades. Security of supply was achieved without self-sufficiency. However, a variety of instruments and measures are needed to achieve it.

## How Switzerland ensures its supply of goods today

According to the National Economic Supply Act (NESA), supplying Switzerland with essential goods and services is the responsibility of the private sector. The state only intervenes in a supporting role (principle of subsidiarity). This is the responsibility of Switzerland's National Economic Supply (NES), which includes the Federal Office for National Economic Supply (FONES).

The NES has various instruments at its disposal for national supply. All measures are to be understood as supplementing imports of goods from abroad.

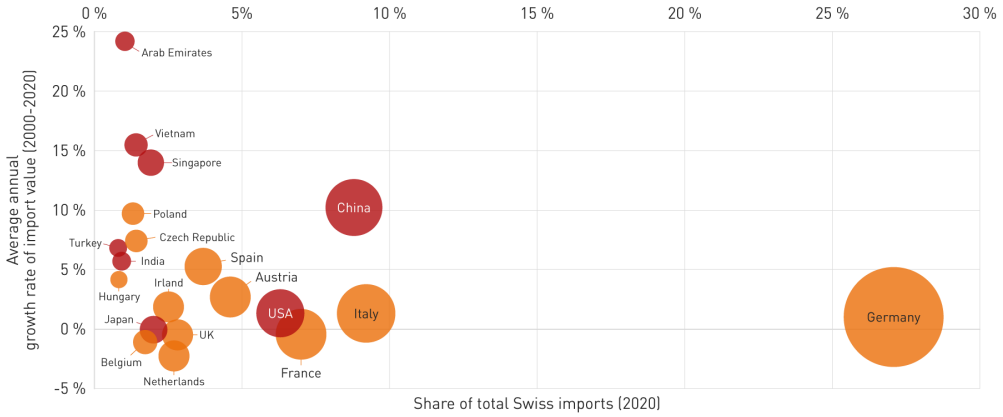
- **Compulsory stockpiling:** if the supply of a commodity can no longer be covered by the market due to shortages, the Confederation can release compulsory stocks. Sugar, rice, fertiliser, animal feed, mineral oil and various medicines are stored. However, stockpiling is the responsibility of the companies themselves.
- **Import promotion programs:** in the event of emerging shortages, tariff quotas can be expanded, or customs duties reduced.
- **Export controls:** the export of certain goods can be regulated for security policy reasons (export licence). However, supply policy considerations may also be relevant (e.g. export controls of medical equipment by individual EU states in March 2020).
- **Supply and consumption management:** this involves the targeted promotion of the production of certain goods and the management of their intended use (e.g. electricity quotas for large consumers by the NES).
- **Monitoring tools:** information and coordination platforms are available to keep a constant eye on the situation (e.g. online therapeutic products reporting platform).


It is well known that Switzerland is one of the world's strongest exporters. However, in the context of security of supply, a precise knowledge of the Swiss import structure is also helpful. Optimal access to foreign procurement markets is essential for Switzerland with its small domestic market and lack of raw materials.

## Switzerland's imports of goods in 2020

- The illustration of Switzerland's top 20 import partners in 2020 (see chart below) reveals its close integration with Europe: of the ten largest import partners, eight are European countries (orange bubbles). This situation is facilitated by geographical proximity and largely non-discriminatory access to the EU internal market.
- The two non-European countries (red bubbles) in the top 10 are the USA and China. The latter was able to record a relatively high average annual growth rate in imports of around 10 per cent between 2000 and 2020.
- Switzerland can also draw on a diversified network with countries from Asia or the Middle East. The Arab Emirates, Vietnam, and Singapore, for example, have the highest annual growth rates of all the top 20 importing countries.

**Switzerland's top 20 import partners in 2020**



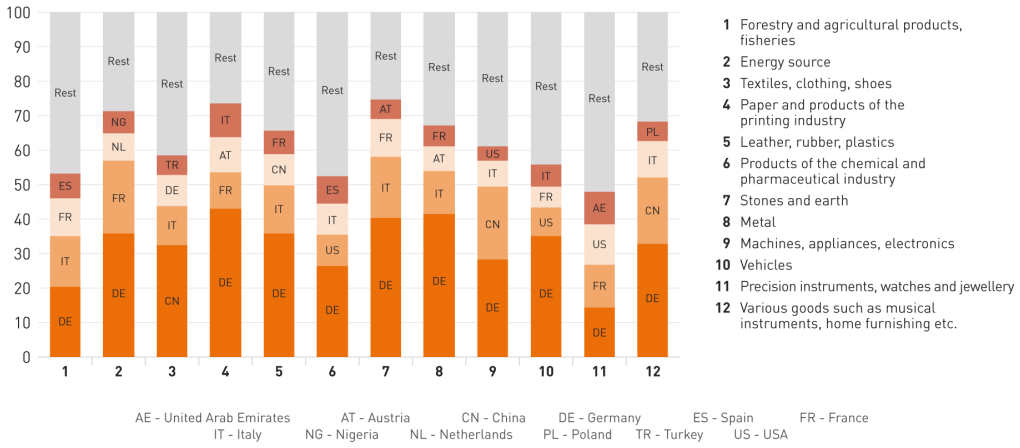

Source: Federal Customs Administration (FCA)
www.economiesuisse.ch

— Switzerland's close ties with its neighbouring countries are also reflected in the individual product categories: Germany is the largest import partner in eleven out of twelve categories (exception: China is the largest import country in the category of textiles, clothing and footwear). In addition, Italy or France are the second largest import partners in eight out of twelve categories.

— At 52 per cent, the cumulative share of the top four importing countries is second lowest for chemical and pharmaceutical products (after watches and jewellery).

**Imports by goods category**

▶ as % of total swiss imports, 2020




1 Forestry and agricultural products, fisheries
2 Energy source
3 Textiles, clothing, shoes
4 Paper and products of the printing industry
5 Leather, rubber, plastics
6 Products of the chemical and pharmaceutical industry
7 Stones and earth
8 Metal
9 Machines, appliances, electronics
10 Vehicles
11 Precision instruments, watches and jewellery
12 Various goods such as musical instruments, home furnishing etc.

AE - United Arab Emirates AT - Austria CN - China DE - Germany ES - Spain FR - France
IT - Italy NG - Nigeria NL - Netherlands PL - Poland TR - Turkey US - USA

Source: Federal Customs Administration (FCA)
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# Case #1: Bucher Industries – decentralised procurement strategy creates flexibility

**Bucher Industries**, based in the canton of Zurich, serves as a prime example of a company that successfully holds its own in the market thanks to a highly diversified procurement structure. The conglomerate specialising in mechanical and vehicle engineering has a highly decentralised organisation compared to its competitors. Most of the more than 50 locations worldwide have their own suppliers – more than 14,000 in total. ***'Proximity to suppliers is a key advantage for us. It gives us greater stability in procurement and enables us to react more flexibly in the event of bottlenecks,'*** explains Jacques Sanche, CEO of Bucher Industries.


With regard to the issue of supply, the COVID-19 crisis can be divided into two distinct phases:

**Acute pandemic phase (from spring until end of 2020):** due to the rapid spread of the coronavirus, the demand for goods to fight the pandemic skyrocketed. This led to shortages of products such as medical masks and disinfectants in many countries. Calls for greater self-sufficiency have followed in many countries. In Switzerland, too, there have been calls for certain production capacities to be relocated domestically.

**Recovery phase (from spring 2021 to present):** thanks to a global vaccination campaign and expansion in the production of medical goods, the epidemiological and therefore also the economic situation have recovered. However, disruptions in global supply chains have been accentuated. An unexpectedly strong increase in demand since last autumn is currently creating a tense situation in logistics. Various raw materials, intermediate products and industrial goods are being affected. A rapid easing of this challenging situation is not in sight.

## Acute pandemic phase: temporary shortage of goods to fight the pandemic

Triggered by the COVID-19 pandemic, the global economy fell into a deep recession in the spring of 2020. Government-imposed closures of production facilities and export restrictions also had a severe impact on certain Swiss imports. In the second quarter of 2020, imports recorded a seasonally adjusted decline of 16 percent compared to the previous quarter – the sharpest drop in decades.

During this acute pandemic phase, public interest was particularly focused on goods for the prevention and control of the pandemic. A list of such 'important medicinal products' is provided by the COVID-19 Ordinance 2 of 13 March 2020, which divides them into three categories:

| Product category | Examples |
|---|---|
| I. Active substances and medicinal products | Adrenalin, insulin, morphine, vaccines |
| II. Medical devices | Ventilators, medical oxygen, infusion solutions |
| III. Protective equipment | Face masks, protective suits, disinfectants |

Although Switzerland did not experience any persistent supply bottlenecks, the supply situation for some of these goods was tight for several weeks.

## I. Active substances and medicinal products

From February 2020 onwards, the FONES reported a temporary sharp increase in reports of supply disruptions on the therapeutic products reporting platform. More than a third of the reports from 2020 concerned ***antibiotics (33%)***, but ***antifungals (14%)***, ***analgesics (12%)*** and ***muscle relaxants (4%)*** were also mentioned. The reason most often given for the shortage was the increasing global demand. The data also show that the situation returned to normal after a short time (April 2020).

## II. Medical devices

While medical oxygen was always available, steel cylinders were in short supply at times. Therefore, the Swiss Agency for Therapeutic Products (Swissmedic) temporarily permitted the use of other technically suitable tanks. In the case of respiratory equipment, the supply could always be guaranteed despite strongly growing demand; only individual components were in short supply at times.

## III. Protective equipment

The demand for disinfectants increased sharply over a short period of time, resulting in a shortage of ethanol in particular. To counteract this shortage, the Federal Office of Public Health (FOPH) issued a temporary exemption permit for locally produced ethanol. In the longer term, the re-introduction of a compulsory stockpiling of ethanol is planned (see ‘Lessons from the crisis’ below).

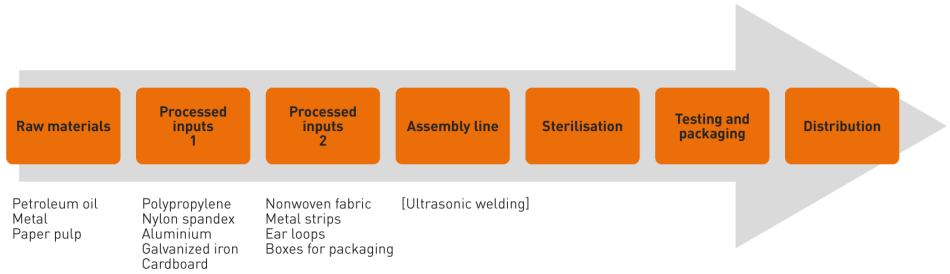
There was also a temporary shortage of face masks. As with the active substances, Switzerland is heavily dependent on imports (around 80 per cent of mask imports come from China). As global demand increased massively in a very short time in March 2020, Switzerland had to procure masks in a tight market. In addition, various states temporarily blocked the export of medical protective equipment to Switzerland. This also included some EU member states.

## Focus: The value chain of face masks

Face masks are inexpensive and disposable items. It is easy to forget that their production involves various raw materials and sometimes relatively demanding manufacturing steps (see following diagram). This includes, in particular, the production of the filter fleece in the so-called ‘melt-blown’ process.

This very process has been identified by the OECD as the most important bottleneck in the production of face masks. This is due to high initial investments in production facilities, which mean that the process can only be carried out by a limited number of companies. This also explains why, in the acute pandemic phase, many countries found it difficult to quickly increase the supply of protective masks.

**Several manufacturing steps in the production of face masks**




Source: Organisation for Economic Co-operation and Development (OECD), 2020
www.economiesuisse.ch

## Case #2: Face mask production in Switzerland

At the beginning of the pandemic, the prices for face masks exploded – in Switzerland people were paying up to ten Swiss francs per piece at the time. This prompted several Swiss companies to import machines from China in order to produce masks themselves.

However, almost a year and a half later, many Swiss mask producers have become disillusioned. They encountered difficulties already at an early stage, in some cases during the procurement and commissioning of the machines. In addition, foreign manufacturers have been able to expand their production capacities and prices have fallen. As a result, some companies had to reduce their production again due to lack of demand, and others had to discontinue it altogether.

**Cilander AG** also started manufacturing Community masks in May 2020. Despite the challenges, government acceptance guarantees are not an issue for the company: *'We do not believe that the laws of the market can be overridden with government requirements,'* says CEO Burghard Schneider. *'Switzerland must instead focus on those areas in which certified precision and highest quality count'.*

## Myths and Facts

## Myth I: The COVID-19 crisis has exposed nationwide supply gaps in Switzerland.

**Facts:** despite shutdowns, delivery delays and export restrictions imposed by various countries, Switzerland did not experience any widespread and persistent supply bottlenecks. This is also confirmed by the Federal Council in its Foreign Economic Policy Report 2020. Thanks to diversified supply chains, sensible legal requirements (e.g. compulsory stocks), as well as close cooperation between the private sector and the authorities, the situation remained under control.

Switzerland was able to react quickly to the temporarily tense supply situation for medical protective material and active ingredients.

Nevertheless, the resilience of the value chains should be strengthened with forward-looking measures(see ‘Lessons from the crisis’ below).

## Myth II: Trade restrictions are the most effective means of ensuring security of supply in Switzerland.

**Facts:** in the acute pandemic phase, many governments decided to impose export restrictions on medicines and protective materials in order to meet domestic demand. However, these measures are by no means an effective means of strengthening security of supply:

- Countermeasures by other trading partners can lead to a negative trade policy spiral. Precisely those primary materials that a country needs for its own production (e.g. substances for manufacturing medicines) could be affected. This causes international supply chains to falter.
- Export restrictions reduce supply on the world market, with a corresponding impact on prices. For example, the wave of export restrictions in 2020 increased the cost of medical supplies by an average of 23%, and the cost of protective masks by as much as 40%.
- Export bans do not encourage an expansion of production capacity. Due to economies of scale, a company may even have less incentive to sell domestically if it is prevented from exporting.

Global trade will therefore remain the basis of stable supply systems in the future. Thanks to a high level of exports, numerous international companies maintain considerable production capacity in Switzerland – for example for food, pharmaceuticals, chemicals, and other industrial products. This is due to the favourable framework conditions for global exports, which has a positive impact on supply security.

## Recovery phase: global challenges in transport and logistics

Since spring 2021, logistical problems in global supply chains have expanded and intensified. Transport on the world's oceans is disrupted. Many consumers and companies around the world are waiting in vain for their goods to be delivered on time. Industry experts call it a 'perfect storm'.

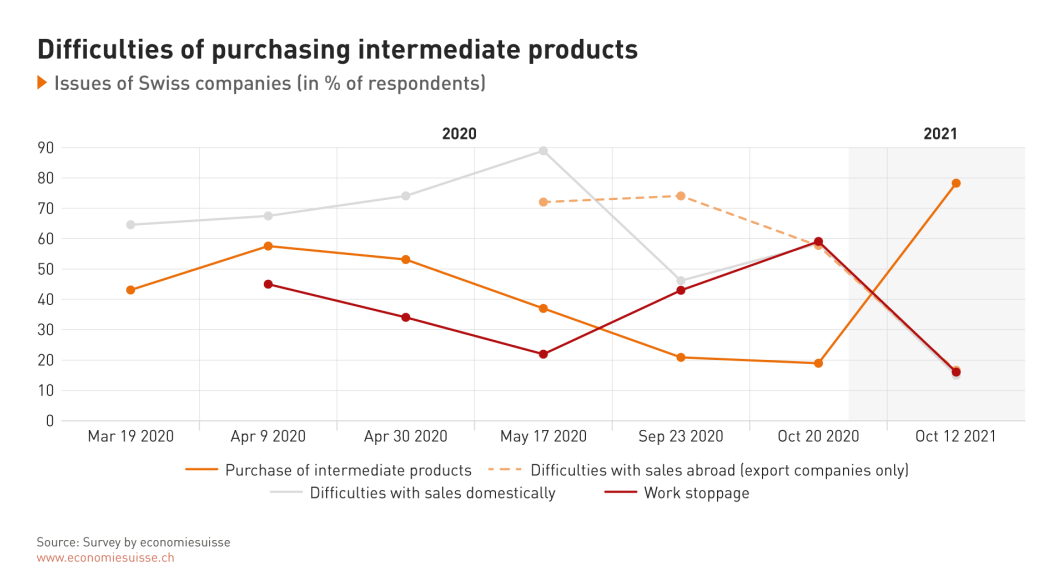
### Where do the supply chain disruptions come from?

- In 2020, a production freeze in Asia and a global decline in demand led to the short-term withdrawal of around 550 container ships from the market.
- In 2021, global demand increased massively. At the same time, it shifted from services to private consumption ('e-commerce'). As a result, demand for goods exceeded transport capacities for the first time in decades.
- On some routes, transport costs have increased by more than 500 per cent compared to the previous year. In many cases, this price increase is passed on to consumers.
- Containers are currently lacking on the most important trade route from Asia to Europe. This is because, among other things, medical equipment was transported to the southern hemisphere at the beginning of the pandemic.
- Port closures have led to congestion of countless container ships near the ports. In 2020, 65 percent of container ships were still running on time; in 2021, this figure dropped to 35 percent.
- Congestion at the ports shifted the problem to inland transport – aggravated by a lack of truck drivers.
- Due to the pandemic, there were repeated factory closures and corresponding production losses.

## Uncertainty for Swiss companies

Many Swiss companies are currently affected by the supply chain disruptions. a rapid normalisation of this tense situation cannot be expected. This is shown by a survey conducted by economiesuisse involving 237 companies and associations in October 2021:

A sales problem last year has meanwhile turned into a production problem. Four out of five companies report difficulties in sourcing input products. This proportion is significantly higher than during the acute phase of the pandemic last year (see chart below).
The shortage of materials affects almost the entire industrial sector (including construction), but also trade. Raw materials (steel or wood), as well as intermediate products (computer chips) and end products (washing machines or cars) are in short supply.
The supply bottlenecks for computer chips and semiconductors in particular are causing problems for numerous sectors. Medical technology, for example, currently lacks any planning security for procurement and production.
The most frequently cited reason for delivery bottlenecks is problems with transport and logistics (72%). However, limited production capacities (68%) and production stoppages at suppliers (64%) are also cited.
As a countermeasure, about two-thirds of the companies have increased their stocks, and about half of the companies are looking for additional suppliers. Likewise, about half of the companies have already been forced to raise prices. Three-fifths are planning this step within the next six months.




# Myths and Facts

## Myth III: Globalisation is a disadvantage for Switzerland's security of supply.

**Facts:** there is no evidence that countries that are less globalised coped better with the COVID-19 crisis than more internationally connected economies. On the contrary, a study by the OECD from February 2021 shows that integration into global value chains plays an important role in cushioning economic shocks related to the COVID-19 pandemic. Countries that are less globalised are less exposed to such shocks but are also far less able to be cushioned by international trade.

This also applies to Switzerland. It is the cross-border networking of development, research and production which guarantees an unprecedented level of availability, diversity, and degree of innovation of critical goods and services at favourable prices in Switzerland. A decoupling from global value chains would have the opposite effect.

## Myth IV: Switzerland needs to build up more production capacities at home in order to be able to respond better to supply chain bottlenecks.

**Facts:** the idea of division of labour is based on the logic that a country should specialise in the production of those goods for which it is relatively better equipped than others. Without massive state intervention and industrial policy, the complete production of critical supply goods in Switzerland thus makes no sense in an economic perspective

Moreover, even a European or Swiss manufacturer is dependent on inputs from abroad (e.g. chemical raw materials, yarns, plastics). It is therefore rather the geographical distribution that enables the economy to compensate for crises in certain regions by obtaining supplies from other markets. In other words, the distorted focus on final production does not solve the problem of a bottleneck, but merely shifts it along the value chain.

The fact that 're-shoring' of production is also an illusory undertaking from an economic point of view is exemplified by the example of generic medicines:

- The importance of the international division of labour makes self-sufficient production for the small Swiss market impossible. Generics consist not only of active ingredients, but also require additives and fillers. The production of such substances in Switzerland is simply not profitable.
- Even with high-cost efficiency, the current market price of generics could not be maintained due to the high production costs in Switzerland. Due to ongoing price reductions, it is only possible to work profitably with low margins through large volumes.
- The existing production capacity in Switzerland is already largely utilised. Investment in new production facilities would be necessary, but this cannot be justified due to difficult economic prospects.
- If at all, production capacity should be addressed continentally and in a coordinated manner with several states.

## Focus: The development of a COVID-19 vaccine

The development and production of vaccines are very complex and time-consuming processes. It is therefore all the more remarkable that several vaccines to protect against the coronavirus could be developed and approved within a very short time. What usually takes the pharmaceutical industry several years was achieved in just one year. In addition to accelerated approval procedures by the drug authorities, international cooperation in the areas of research, development, testing, and production was essential to achieve this result.

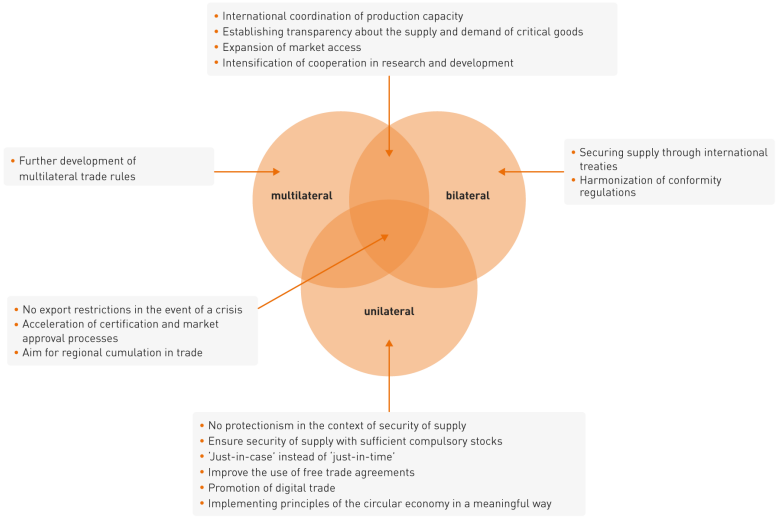
The place where an active ingredient is finally produced is of secondary importance for security of supply. National self-sufficiency for the production of vaccines is an illusion. Politically motivated export restrictions on the distribution of vaccines have a destabilising effect in the fight against a pandemic. They frequently lead to countermeasures that can severely disrupt functioning supply chains.


## Strengthening Switzerland's systemic resilience in crisis situations

The preceding examples show that decoupling the Swiss economy is not an effective means of strengthening security of supply in the long term. A state-supported expansion of domestic production for certain goods would be equally short-sighted.

At the same time, it is important not to focus exclusively on security of supply in the follow-up to the COVID-19 pandemic. The next crisis of global proportions may not necessarily be epidemiological in nature. Energy supply, cyberattacks, military conflicts or natural disasters also carry considerable risk. With this in mind, the current pandemic situation should be used to strengthen the systemic resilience of Switzerland and the international community in the long term. According to the business community, this requires various measures – both at the unilateral as well as at the bilateral and multilateral levels.

## Measures to strengthen Switzerland's systemic resilience




Source: economiesuisse
www.economiesuisse.ch

## Unilateral measures

- **No protectionism in the context of security of supply:** trade-restrictive measures should only be used for a limited period of time, in a proportionate manner and as a last resort. New trade restrictions or state subsidies to promote Swiss production are to be avoided.
- **Ensure security of supply with sufficient legally required compulsory stocks:** legally required compulsory stocks should be reviewed and expanded where appropriate (e.g. re-establishing a compulsory ethanol stockpile). Larger end users of critical goods (e.g. hospitals) should also take responsibility for reviewing their own storage strategy.
- **'Just-in-case' instead of 'just-in-time':** when choosing its suppliers, companies focus on minimising costs. However, the pandemic has highlighted the risks of this strategy. For greater resilience, forward-looking inventory planning and supplier diversification should therefore be increasingly included in strategic decisions once again.
- **Improve the use of free trade agreements:** SMEs in particular are sometimes unable to benefit from free trade agreements due to limited resources. Support is needed here in the form of appropriate information services and platforms.
- **Drive digital trade:** companies should invest more in digital supply chain management and supply chain transparency. At the same time, the state should support the private sector's risk management strategies by creating the right regulatory environment (e.g. digitalisation of customs processes).
- **Implement the principles of the circular economy in a meaningful way:** by extending the life and useful life of goods, Switzerland can better cushion the risks of global supply chains in the long term. There is still great potential in the area of waste recycling in this country – especially for private initiatives.

## Bilateral measures

- **Securing supplies in times of crisis through international treaties:** supply shortages of important goods have occurred not least due to restrictions on the movement of goods by individual states. Bilateral agreements can minimise Switzerland's exposure (e.g. assurance that export restrictions will be waived in the event of a crisis).
- **Cross-border harmonisation of conformity regulations:** not fragmentation, but cross-border harmonisation of product regulations strengthens security of supply in times of crisis. This includes, for example, mutual recognition agreements (MRAs).

## Multilateral/plurilateral measures

- **Further development of market access:** improve existing agreements with those countries where the largest increases in trade can be expected. Despite its dense network of free trade agreements, there is much potential for Switzerland (e.g. with the US, MERCOSUR, India).
- **Strengthening the WTO and further development of multilateral trade rules:** for Switzerland as a small economy, trade liberalisation achieved through the World Trade Organisation (WTO) is clearly the 'first-best solution'. For example, it should support the WTO Trade Facilitation Agreement to accelerate trade in essential goods.
- **Intensify cooperation in research and development:** Switzerland must maintain its leading position and intensify its exchange with the strongest research centres worldwide. Innovation also contributes to resilience for future crises, as the example of mRNA technology shows. The latter has been researched for years as a possible treatment against cancer. Through its successful application in vaccines, a surge in innovation in the field of cancer treatment is now conceivable.
- **Acceleration of certification and market authorisation processes:** Efficient certification processes increase the international availability of critical goods (e.g. clinical studies conducted in parallel for the approval of vaccines).
- **Aim for regional cumulation in trade in goods:** the creation of a 'cumulation region' between several common trading partners would enable Switzerland to take inputs from this cumulation region into account when manufacturing a product. This would facilitate trade and strengthen competitiveness.
- **International coordination of production capacity:** greater coordination of production in times of crisis should be promoted at continental level (e.g. for active medical substances).
- **Transparency of supply and demand of critical goods:** there is a need for a timely and comprehensive exchange of information between business and politics, both nationally and internationally. This is because uncertainty fuels protectionist policies. For example, a communication channel between vaccine manufacturers and other stakeholders could raise awareness of shortages.