

STUDY ON BEHALF OF BIOGEN AND INTERPHARMA

The importance of pharmaceutical companies for the regional economy

Illustration of impact channels as exemplified by
Biogen in the canton of Solothurn

Facts & figures

Biogen is building a next-generation biologics manufacturing facility in Luterbach near Solothurn.



The Biogen construction site is currently one of the biggest building sites in Switzerland. More than 1,000 specialists are engaged in the construction of the new production site at the same time.



A total of 29,000 m³ concrete and 12,500 tonnes of steel will be used in the construction – this is equivalent to 5 times the volume of concrete in the Leaning Tower of Pisa and twice the volume of steel in the Eiffel Tower.



The piping would stretch from Luterbach to Zug (101 km), while the cabling would reach as far as Hamburg (843 km).



The construction phase will last 3 years (2016–2018); production is set to start in 2019.

Contents

4

The pharma cluster of Switzerland

Switzerland's biotech and pharmaceutical industry is one of the most important pillars of the local economy in various regions.

6

The pharma industry as regional driver

Other sectors also benefit from the pharmaceutical industry. For every franc of value added that is generated by the pharmaceutical industry, another 70 cents is generated in other sectors.

8

Effects for the region

As major investors, producers or research and development centres, pharmaceutical companies provide economic stimulus for the regional economy and population.

10

Luterbach near Solothurn

The newcomer on Switzerland's biotech map.

12

From groundbreaking ceremony to operational facility

During the planning, construction and operation of the new Biogen manufacturing facility, the local economy benefits in a variety of ways.

18

Flagship and catalyst for the regional economy

The Biogen project has a magnetic appeal for the location.

21

Good and stable framework conditions are key

Access to important export markets, the availability of qualified people and the excellence of Switzerland as a research hub are crucial to the future success of the pharmaceutical industry.

The pharma cluster of Switzerland

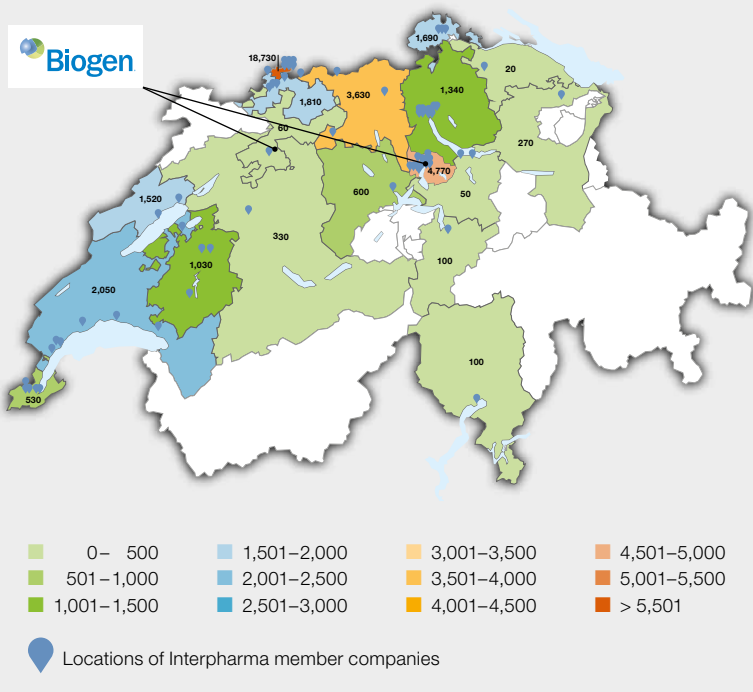
Switzerland's biotech and pharmaceutical industry is one of the most important pillars of the local economy in various regions.

At present, the biotechnology company Biogen is investing around 1.5 billion Swiss francs in a next-generation biologics manufacturing facility. It is currently one of the biggest construction sites in Switzerland. The southern area of the former cellulose factory of Attisholz in Luterbach will see the construction of a next-generation manufacturing facility by 2018 that is set to supply vital medicines to a million patients each year.

When Biogen starts production there in 2019, the number of employees in the canton's pharmaceutical sector will more than double, making the canton of Solothurn also well and truly part of Switzerland's pharma landscape. The past two decades have seen the growth of a globally important pharma cluster, in which international companies such as Celgene and MSD have also taken root. With a total workforce of around 46,000 people, pharmaceutical companies today employ around double the number of people they did 20 years ago.

The biotech and pharma industry grew to become one of the most important pillars in various regions, if not the crucial driver of the regional economy. In Basel, for example, it now accounts for almost 40 percent of the economy, and an economically significant pharma cluster has also developed in the Lake Geneva region (20%) and the canton of Schaffhausen (16%). In addition, the canton of Zug is home to the headquarters of some of the world's biggest pharmaceutical companies.

Number of employees and locations of Interpharma member companies by canton as at end of 2016



The figures are based on the 24 companies that were members of Interpharma in September 2017, even if they were not yet members in 2016. The entire headcount (all divisions) in Switzerland was included. In the case of two companies, the figures are based on data from 2015.

Source: Interpharma

The pharma industry as regional driver

Other sectors also benefit from the pharmaceutical industry. For every franc of value added that is generated by the pharmaceutical industry, another 70 cents is generated in other sectors.

The biotech and pharmaceutical industry is a very high value-added sector and also much more productive compared with other industries. With a relatively low consumption of resources, it contributes substantially to the country's economic prosperity. The value-added of the pharmaceutical industry is four times greater than that of industry as a whole (see BAK Economics/Polynomics, 2017: The Importance of the Pharmaceutical Industry for Switzerland).

High productivity is a prerequisite for investments in R&D and attractive salaries

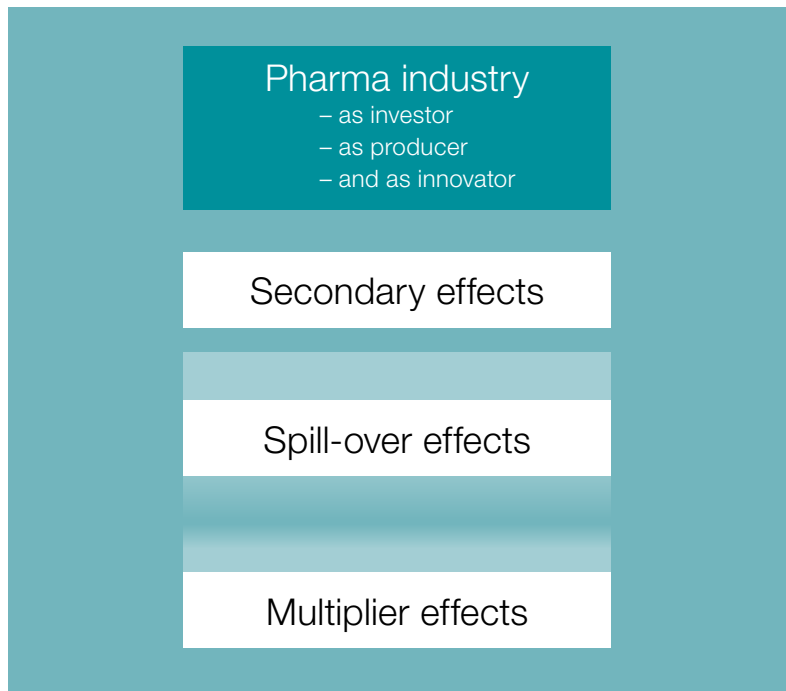
This productivity is the result of the industry's high capitalization, a workforce with an above-average level of qualifications, intensive innovation and a high level of production efficiency. This is not only a prerequisite for the substantial financial investments that pharmaceutical companies have to make in order to remain competitive. The high productivity also provides for an above-average level of pay.

Accounting for 25 percent of the entire industrial value added in Switzerland, as it does today, the pharmaceutical industry is a key pillar of the export industry. The value added of the sector grew by an average of 7.2 percent a year in the last decade, contributing significantly to the growth of Switzerland's economy. As a result of this expansion, the workforce in the sector has also grown by more than 12,000 additional jobs in the last ten years to 45,500.

Companies from other sectors also gain from the growth

The entire economy benefits from the success of Switzerland's pharmaceutical companies. For every franc of value added generated by the research and production activities of the pharmaceutical industry, another 70 cents of value added is generated in other sectors. Overall, Swiss companies from other sectors generated around CHF 20.7 billion and created more than 138,000 jobs. Every job in the pharmaceutical industry resulted in more than 3 additional full-time equivalents in companies that benefit indirectly from the production and research operations of the pharmaceutical industry.

As an industrial hub, each region benefits from the pharmaceutical industry through a variety of impact channels. The companies provide economic impetus for the regions and the population as major investors, producers or research and development centres. The associated payment streams impact each region in a variety of ways: secondary effects, spill-over effects and multiplier effects.



Effects for the region

As major investors, producers or research and development centres, pharmaceutical companies provide economic stimulus for the regional economy and population.

The manufacture of pharmaceutical products is dependent on various factors: a well-qualified workforce, state-of-the-art production plants and also goods and services from other sectors, such as basic chemical components, energy and consulting or financial services.

Secondary effects

Thanks to the high qualifications of its workforce, the pharmaceutical industry is one of the sectors with the highest average levels of pay. Some of this income flows back into the regional economic cycle in the form of consumer spending. It is mainly trade and industry that benefit from this.

When a company opens a new site or expands an existing one, this leads to numerous orders for regional companies from other sectors, e.g. for the purchase of land, development and preparatory work, the construction of new buildings or the installation and fitting of production facilities and laboratories.

More than 1,000 specialists are currently deployed on site for the Biogen project. During the construction phase, regional tourism will benefit, for example the hotel industry and hospitality sector, the retail trade and the real estate sector.

Further spill-over effects arise as a result of cluster formation, e.g. when suppliers set business close to production or a start-up scene emerges around research hubs or cooperation agreements in research are concluded with local universities.

Spill-over effects

The magnetic appeal of flagship projects, such as that of Biogen, has a knock-on effect, stimulating overall economic growth and reinforcing the region's "brand".

Multiplier effects

The companies that benefit from secondary and spill-over effects of pharma companies engender further effects in turn as a result of goods and services being sourced from their suppliers. Multiplier effects of this kind arise along the entire value chain and can be quantified on the basis of macroeconomic models.

Luterbach near Solothurn

The newcomer on Switzerland's biotech map.

To meet the global increase in demand for high-value medicines, Biogen is building its next-generation biologics manufacturing facility on the Borregaard site (southern section of the former Attisholz cellulose factory) in Luterbach near Solothurn.

The biotech company is investing a total of around CHF 1.5 billion in the new site to build a facility that will bring together, amongst other things, the latest concepts in cell culture technology and protein purification.

Combined with state-of-the-art IT infrastructure, this will enable Biogen to produce biopharmaceuticals on a large scale.

The site will also include laboratories, offices, utility buildings and storage facilities. As from 2019, 600 new jobs will be created on the Biogen site in Luterbach. It is already clear today that production capacity at the new site will increase further depending on how demand develops.



From groundbreaking ceremony to operational facility

During the planning, construction and operation of the new Biogen manufacturing facility, the local economy benefits in a variety of ways.

Biogen investments drive local economy

Where medicines for a million people will be manufactured as from 2019 there are still builders at work in the autumn of 2017. The shell of the building was completed in record time, and now Biogen is pushing ahead with the completion of its next-generation manufacturing facility in Luterbach. The company is awarding a great many works contracts to Swiss companies, including quite a number from the greater Solothurn region. The regional construction industry has reported record sales revenue, not least also as a result of the major construction site in Luterbach.

Andreas Gasche is especially delighted. He is director of the cantonal trade association of Solothurn and has been a strong advocate for regional trade and industry. Amongst other things, a website has been set up in consultation with the canton's economic development agency and in collaboration with Biogen, where regional building firms and suppliers can bid for contracts on the Biogen construction site. "Our objective is to ensure that the greatest possible share of investments in the form of value added remains in the region," says Andreas Gasche.

The biotech company is investing CHF 1.5 billion in the building of its new production site. A substantial proportion of the cost goes on the planning, infrastructure development and building of the manufacturing facility. One local company to benefit, for example, is energy supplier AEK Onyx AG, which laid 120 tonnes of copper cable for supplying the new facility with power.

The BAK Economics analysis shows that this will not be the only example by far. On the basis of model calculations, BAK reckons that the Biogen investment will generate a gross value added of more than CHF 800 million in the whole of Switzerland, creating more than 2,000 jobs in the process, many of them in the region.



Biogen construction site in September 2016

How the local tourism industry benefits from the Biogen project

More than 1,000 building specialists are at work on the construction site at any one time – including engineers and planners who have been called in to work on the project and spend a fixed period of time in the region for this purpose. They stay overnight in the hotels of Solothurn and the surrounding region and generate high sales revenue for the hotel industry or are housed in rented accommodation, from which the real estate business benefits.

“We expect 2017 to show a demand for 1,500 overnight stays in the region. In addition, more than 70 apartments have already been rented for project workers who will remain in the region for longer,” says Markus A. Ziegler, Director of Corporate Affairs with Biogen.

Restaurants and shops are also feeling the effects of the major Biogen project. Sales are increasing thanks to spending by the people working on the Biogen construction site. The regional hospitality sector is hoping that business will also continue in this order of magnitude after production is started in 2019 and that Biogen will provide a further boost to the regional tourism industry in the form of business, seminar and congress events.



Rendering of the planned manufacturing facility. Ongoing project development means that changes are still possible (© Biogen and Burckhardt+Partner AG).

As from 2019, Biogen will create 400 jobs for the production of biotech medicines

Biogen is pursuing a very ambitious timetable: it was only in 2015 that the company opted for the site in Luterbach. Thanks to the good cooperation between the canton and the company, the groundbreaking ceremony took place already in January 2016. And in 2018 the construction phase is set to be completed and preliminary test phases will be run. The production of medicines is due to start in 2019.

“From Luterbach we will be able to supply vital medicines to a million people,” says Markus Ziegler from Biogen. He describes how the new plant in Luterbach will set new technological standards and be one of the world’s most productive pharmaceutical production facilities: “Production will be fully automatic and will be supported by cutting-edge IT infrastructure.” This will speed up production. “And we will also increase the yield, i.e. produce more with the same effort. Overall, we will be three to five times more productive than in existing plants.”

More than 100 people are already working directly for Biogen in Luterbach. Of these, around two-thirds were recruited in Switzerland. Up to 20 new recruits are joining them each month. At the start of production in 2019, Biogen will employ 400 people in Luterbach.



The interior of the manufacturing facility

Orders to outside companies have an indirect impact in the region

Numerous orders are being placed with outside companies. In some cases, these companies operate as on-site contractors. With these companies alone, Biogen creates 200 additional jobs for the operation and maintenance of equipment in the areas of maintenance, safety, cleaning, catering and surrounding works. “To ensure that production runs smoothly, for example, we need electricians for maintenance or chefs and service personnel for the staff restaurant on the site,” explains Dr. Rico Domenig, Director of Facilities at Biogen. “In these areas, we are working with specialists from CBRE. Most of the jobs can be filled with people from the region.” CBRE is a global company from Basel that offers integrated services, amongst other things, for production facilities in the pharmaceutical sector.

Biogen's pharmaceutical manufacturing facility will make itself felt on the regional jobs market. Aside from the 400 jobs that will be created directly at Biogen and the 200 jobs in the areas of maintenance, safety, cleaning, catering and surrounding works, numerous other jobs will be created by the project.



200 jobs have been created at outside service providers operating in the areas of maintenance, safety, cleaning, catering and surrounding works on the site.

Besides the above outsourced facility services, Biogen also awards contracts for the sourcing of goods and services. “A number of suppliers have set up business in the region in order to work with us,” says Domenig. According to Biogen, energy and business services are largely sourced from Swiss companies. Additional stimulus to the local economy comes from the consumer spending of employees who live in the region. Trade and industry in the region are benefiting from this.

As from 2019, Biogen’s production operations will also make their mark in Switzerland’s economy. On the basis of existing information regarding the external goods and services contracts awarded as from 2019 and on the (cautious) assumption that labour productivity will be in line with the industry norm, calculations using the input-output model of BAK Economics indicate that the Biogen facility will result in an additional growth potential of 1.5–2.0 percent in the canton’s GDP in 2019.

Flagship and catalyst for the regional economy

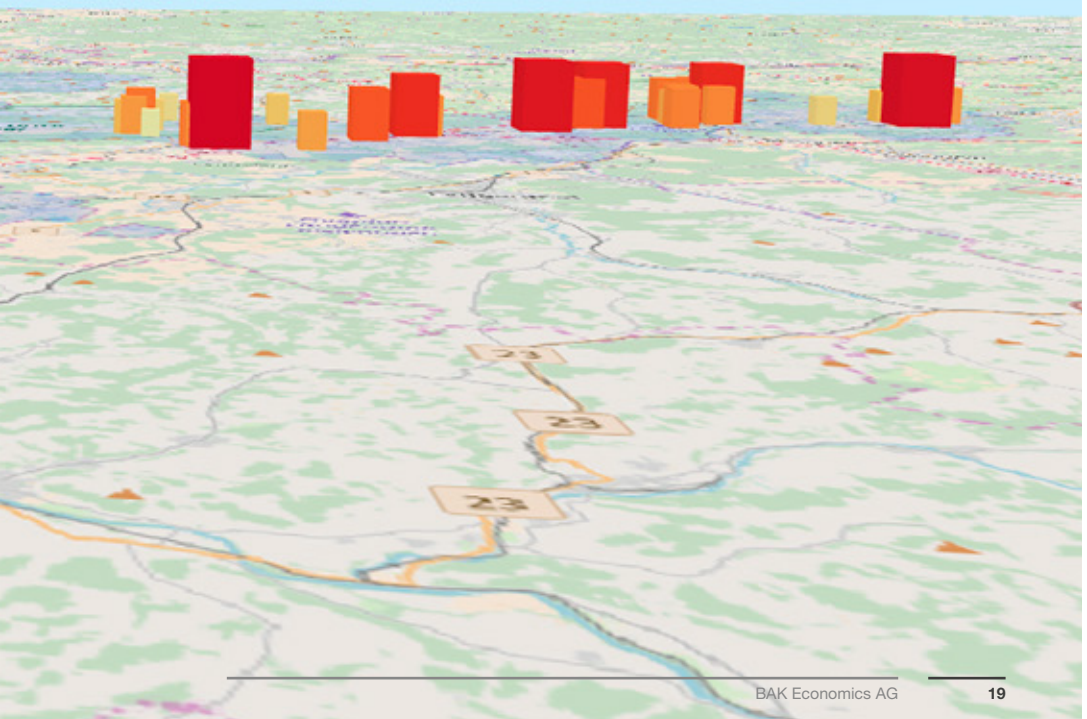
The Biogen project has a magnetic appeal for the location.

The canton has landed a big fish with Biogen. When the company starts production in 2019, it will be one of the biggest employers in the canton's industry. Biogen's decision to establish its facility in Luterbach also reflects on the successful work done by the canton of Solothurn. "The fact that Luterbach won the bid against competition from locations not only in other cantons, but also in other countries, was only possible because with the Attisholz site in Luterbach the canton was able to offer, amongst other things, a strategic land reserve that met Biogen's present and future need for space," says Sarah Koch, head of the economic development agency for the canton of Solothurn.



The land could have been sold much earlier. “Numerous queries about the site had been received in the past. However, the canton didn’t want to force through a project quickly at any cost, but wanted to make the most sustainable economic use of the land as possible for the canton,” explains Sarah Koch. After the tough competition for the location, the work of the economic development agency is not yet done, says Sarah Koch: “We are providing support to suppliers keen to set up business here, so that the region can additionally benefit from the direct and indirect effects of the biotech company Biogen. The first suppliers have already established themselves in the region. Aside from support for the companies that are settling here, marketing of the region as a place to live is also an important instrument for motivating as many of the 600 employees as possible to find a place of residence in the canton of Solothurn.”

Biogen will be one of the biggest employers in the canton’s industry.



Biogen is a flagship project that offers a magnetic appeal for the location – beyond the life sciences cluster as well. “If an international biotech company opts for Luterbach, then that is definitely a good location,” says Martin Köppel, site manager of the Schaffner Group, which manufactures electrical engineering components. The establishment of the Biogen facility made the decision to build its own new headquarters in Luterbach that much easier and put an end to the discussion on where to locate it.

The decision to opt for Luterbach has also drawn the attention of other companies to Solothurn as a business hub. For example, says Sarah Koch, there have been a number of queries and projects in the biotech sector. She feels the canton is positioned as an attractive business hub.

The canton would like to get as much tailwind as possible from the establishment of Biogen's facility and above all to further expand as part of the regional life sciences cluster. Until now, the life sciences sector here has been represented mainly by medtech companies; with Biogen, the business location is now getting a strong foothold in biotech.

The canton's economic development agency wants to avoid focusing too heavily on one sector. “We will continue to provide support for all sectors. We are striving for a balanced diversification of sectors,” says the head of the economic development agency. She emphasizes that high value-added industries in general are very important for innovative strength and economic growth.

Good and stable framework conditions are key

Access to important export markets, the availability of qualified people and the excellence of Switzerland as a research hub are crucial to the future success of the pharmaceutical industry.

Switzerland's pharmaceutical industry needs good framework conditions for future success. Free trade and the free movement of people are especially important. The country's high degree of integration in the world economy shows that Switzerland's pharmaceutical industry is extremely dependent on access to international sales and procurement markets. And international trade agreements with other countries are correspondingly important. At least as important is access to international labour markets, because the pharmaceutical companies need far more qualified people than are available in Switzerland to maintain their strong growth. "Besides making the most of the domestic potential with regard to qualified personnel, it is crucial for our member companies that they can also recruit the best researchers and other specialists in the EU without the red tape of bureaucracy," says René Buholzer, General Secretary of Interpharma. "Freedom of movement in Europe is therefore key to Switzerland's position as a pharma hub," he emphasizes.

A competitive system of corporation tax is also of fundamental importance for the longer-term development of Switzerland as a pharmaceutical hub. Some countries have improved their tax-related framework conditions in the last few years, especially for highly innovative companies, and introduced new instruments, such as the patent box or generous write-down options for research and development expenditure, for example.

There is a lot to be said for Switzerland at present: in terms of both market access and also tax competitiveness the country is well positioned. And Switzerland also has no need to hide its light under a bushel when it comes to infrastructure, availability of qualified personnel, intercontinental accessibility or quality of life. But the vote in favour of the mass immigration initiative or the rejection of CTR III show that this position has become more uncertain. And the next important vote is just around the corner in the form of the proposed new tax reform TP17. "In the canton of Solothurn there is also need for action on taxation to ensure it remains competitive as a business hub," says Daniel Probst, Director of the Solothurn Chamber of Commerce. And for highly qualified personnel on above-average salaries, the canton must be just as attractive in terms of tax in order to enjoy the fiscal benefits of the impact on jobs.

Besides all the above-mentioned factors, there was another crucial aspect behind Biogen's decision to opt for Luterbach: as owner of the site of the former Attisholz cellulose factory, the canton was able to offer a plot of land that was both big enough and readily available.

An important trump card of the canton was also the speed with which the approval procedure and building permits could be processed. "The administrative department did a very good job here and proved just how agile it is," says Daniel Probst. In this respect, he takes the view that small, well-organized cantons like Solothurn with a high degree of internal networking between business and administration have an advantage and says: "The rapid handling of the administrative procedures to get Biogen established here will serve as a future benchmark for other companies."

Study on behalf of



interpharmaph