



Swedish Life Science

Composition and future industry prospects

Aneheim Consulting
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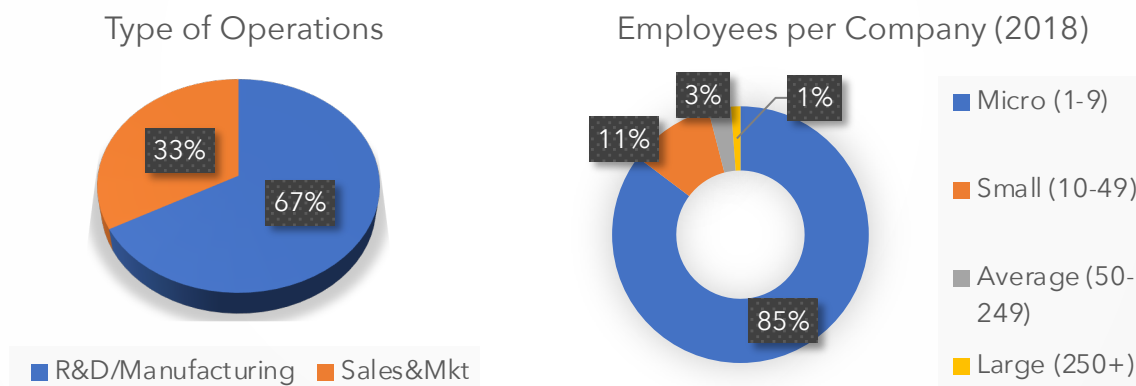
The future outlook of the Swedish life science industry was extremely uncertain when Astra Zeneca closed down their R&D facilities in Lund and Södertälje in 2012. Approximately 1900 employees, among them many highly educated individuals, were affected by this restructuring decision. The Swedish medtech sector also went through some turmoil at the same time, given St Jude Medical's closures in Uppsala and Järfälla, which affected 350 employees. Last but not least, Getinge off-shored parts of their R&D and manufacturing capacity, which affected ~ 300 staff in Sweden.

The anxiety around how Sweden's life science industry would manage to remain competitive was certainly merited. However, looking back 10 years later, it can be concluded that the transformation has played out far better than expected. The feared "brain drain" abroad has not happened, and life science is still a vital component of Swedish trade.

At the peak in 2006, the Swedish life science sector employed 45 000 people in ~900 companies. Today, the corresponding figures are 42 000 employees in ~ 3 000 companies. This white paper strives to provide an overview of what this Swedish crown jewel industry looks like today - post transformation.

The company landscape is dominated by micro organizations

The total turnover of the Swedish life science industry is ~ 164B SEK, but the scene is now highly characterized by companies with < 10 employees. Three times as many life science companies were founded during 2012 - 2014 compared to the previous three years. A probable explanation for this is that several former Astra Zeneca employees founded their own businesses¹.



It is a token of the strength for the entire Swedish business community that the transformation has panned out so well. The fact that Astra Zeneca not only restructured their R&D, which was a hard hit for Sweden, but also decided to open a state of the art biological manufacturing site in Södertälje in 2017, obviously dampened the negative effects of the other changes. As a matter of fact, Astra Zeneca's annual R&D investments in their Swedish operations account for 6% of the entire Swedish R&D investments². But independently from Astra Zeneca, the industry would have faced a real crisis if the co-operation between entrepreneurs, academic institutions, the public sector and the financial markets had not functioned so well.

Despite a reduction in the life science labor force of 3 000 people (approx. 6%), Sweden has now established two life science clusters in Lund (Medicon Village - 1600 employees) and in Stockholm/Uppsala, respectively.

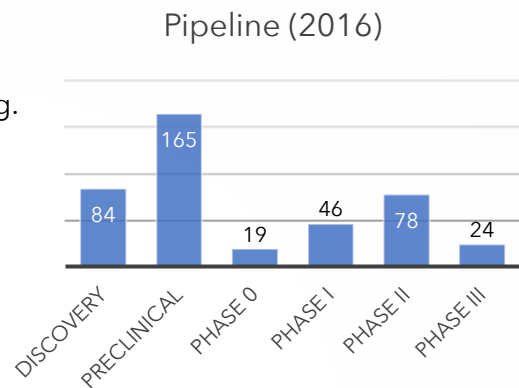
The number of private sector employees within the Stockholm/Uppsala cluster amounts to ~ 18 000 when adjusted for the Astra Zeneca site in Södertälje³. These two clusters together with Astra Zeneca's remaining R&D site in Gothenburg (2 400 employees) has created a viable platform for future growth in an industry that is moving towards more concentrated R&D and increased co-operation between small and large organizations.

The R&D pipeline & clinical trial activity is faced with challenges

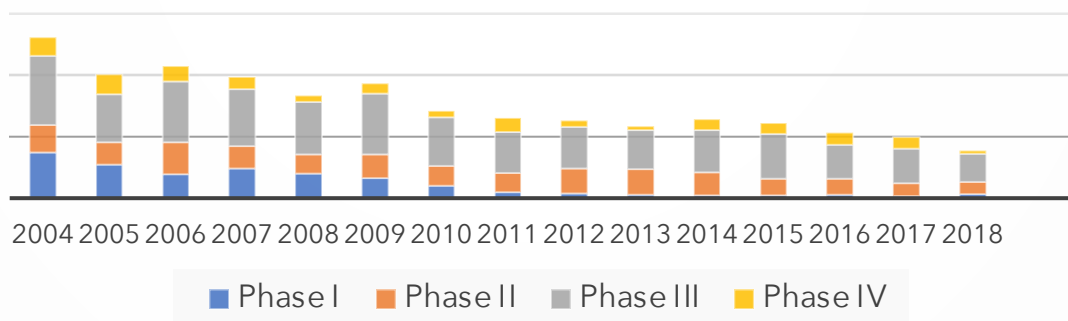
The aggregated picture of candidates in clinical trials looks fairly promising. Access to venture capital is a greater concern. The investment levels have remained at a steady level around 800-900 M SEK per annum the last five years⁴. However, there has been a shift towards companies with candidates in later stages.

Moreover, when looking at how clinical trials are trending rather than just a one year snapshot, the outlook is more alarming. The number of initiated clinical trials in Sweden decreased by 50% between 2011 - 2016¹.

Cost pressure has caused a shift in clinical trial activity towards the east, both globally and within Europe. This force is obviously difficult to combat but there are other variables at play as well. One interesting factor is that inclusion criterias for clinical studies are narrowing as they become increasingly dependent on genetic profiling.



of Initiated Clinical Trials in Sweden



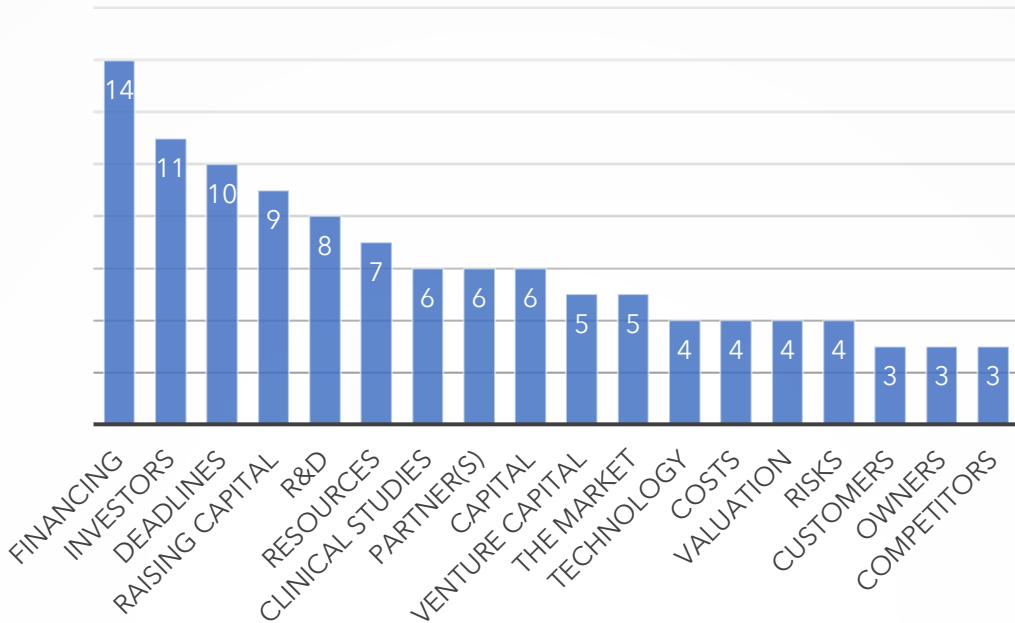
Given this trend, a smaller country like Sweden must more or less make its entire population available for inclusion, in order to successfully recruit trial participants. In that respect, the lack of coordination of patient journal data between Sweden's 21 regions is very counterproductive. Sweden has instead invested several billion SEK in our so called quality registers. However, even though these are often cited as a unique asset, they are used to a very limited extent in commercial clinical research.

Export trade patterns are changing rapidly

Not only clinical trials activity is migrating east, Sweden's life science export is following the same trend. China and Japan are clearly the fastest growing export markets. Swedish life science exports to China increased by 70% between 2011 & 2015¹. In 2015, China and Japan together accounted for 15% of the Swedish export value (vs. the United States: 18%). According to a 2020 report from the Swedish export council, China is now the leading trade partner for Swedish pharma companies (16%) and the 9th largest medtech export market⁵.

The greatest challenge is to secure financing

Sweden Bio (the Swedish Life Science Industry Organization) and a number of public growth institutes conducted a survey in 2019 to find out what entrepreneurs in life science experienced as their biggest challenges⁶. Among other things, they asked an open question about this and received the following number of cited challenges in response:

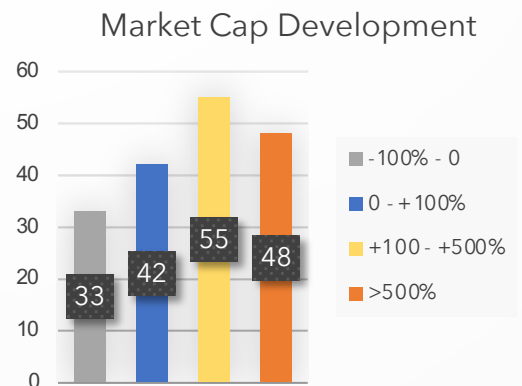


Responses related to raising capital received a total of 45 citations (Financing: 14, Raising capital: 9, Capital: 6, Venture Capital: 5, Investors: 11), which was thus considered a much greater challenge than, for example, R&D, clinical studies and competitors. Since the financing category completely dominated among the answers, we have examined what the financing opportunities have looked like in the life science industry.

The number of IPO:s have boomed

Despite the fact that business leaders have answered that financing has been the biggest challenge so far in their business endeavours, the last 10 years have been characterized by a rush to the stock market, especially for drug-developers. Stock market data shows that there were 193 listings between 2011-2021 in the category "Pharmaceuticals / Medicine"⁷. In fact, 1/4 of all small cap companies listed on the Stockholm Stock Exchange belong to this category.

The recently listed companies also seem to have performed very well. About 80% of the companies have either had a positive market cap development or been subject to a successful stock market buy-out. 43 companies have progressed to a larger trading platform while only 3 companies have been delisted and 5 have gone bankrupt.



So why was raising capital cited as the most challenging area of life science business? Of course, there is no one clear answer, but the rush to the stock market seems to have taken place in part at the expense of venture capital. As mentioned at the beginning, the levels of venture capital invested in life science have been relatively stable. But venture capital fell from ~ 60% of funding sources to ~ 25% from 2008 to 2018, primarily in favor of stock market equity⁶.

Given the new start-up rate during the last decade, which resulted in > 2 000 new life science companies, it is not unreasonable that the proportion of venture capital has fallen sharply despite the fact that the absolute levels of venture capital have been stable.

Presumably, the low interest rate environment since the financial crisis in 2008 has lowered the barriers for small companies to enter the stock market, given that investors have had difficulties creating adequate yields in the bond markets. But there also seems to be a preference among business leaders to raise capital via the stock market. Interviews with business leaders indicate that discussions about the company valuation are much tougher with business angels and venture capitalists than with equity investors.

It is worth noting, however, that during the same time horizon as the venture capital fell from 60% to 25% of the financing sources, the stock market financing cycles were also shortened from 0.5 - 0.6 per year to ~ 1 per year⁶. This is a little worrying as it could detract management teams from corporate governance whilst instead spending too much time on investor relations. Thus, in conclusion, perhaps the challenge of raising capital has more to do with the work required to secure financing rather than the availability of capital.

It is merely impossible to predict the long-term prospects of the Swedish life science clusters, but we certainly hope that some future global winners will be hatched. Given our analysis, it is clear that international partnerships are more important than ever. Entering into agreements at an early stage could not only help with venture capital financing but also with execution of clinical trials and access to future sales channels. When looking for partnerships, it is important to acknowledge the rapidly changing export patterns and seriously consider entering the fast growing Eastern markets.

In terms of financing, it seems that the Swedish stock markets is well positioned to be a catalyst for life science growth. However, from a management point of view, it is important to neither underestimate the cost nor the time commitment. An IPO will cost ~3 M SEK in one-off costs and take 6-12 months. Companies aspiring to go public also need to have a credible plan for how to handle investor relations, re-financing and ultimately achieving stable trading on the stock exchange.



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Sources:

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- 7) AC Insights Research via borsdata.se & nyemissioner.se