

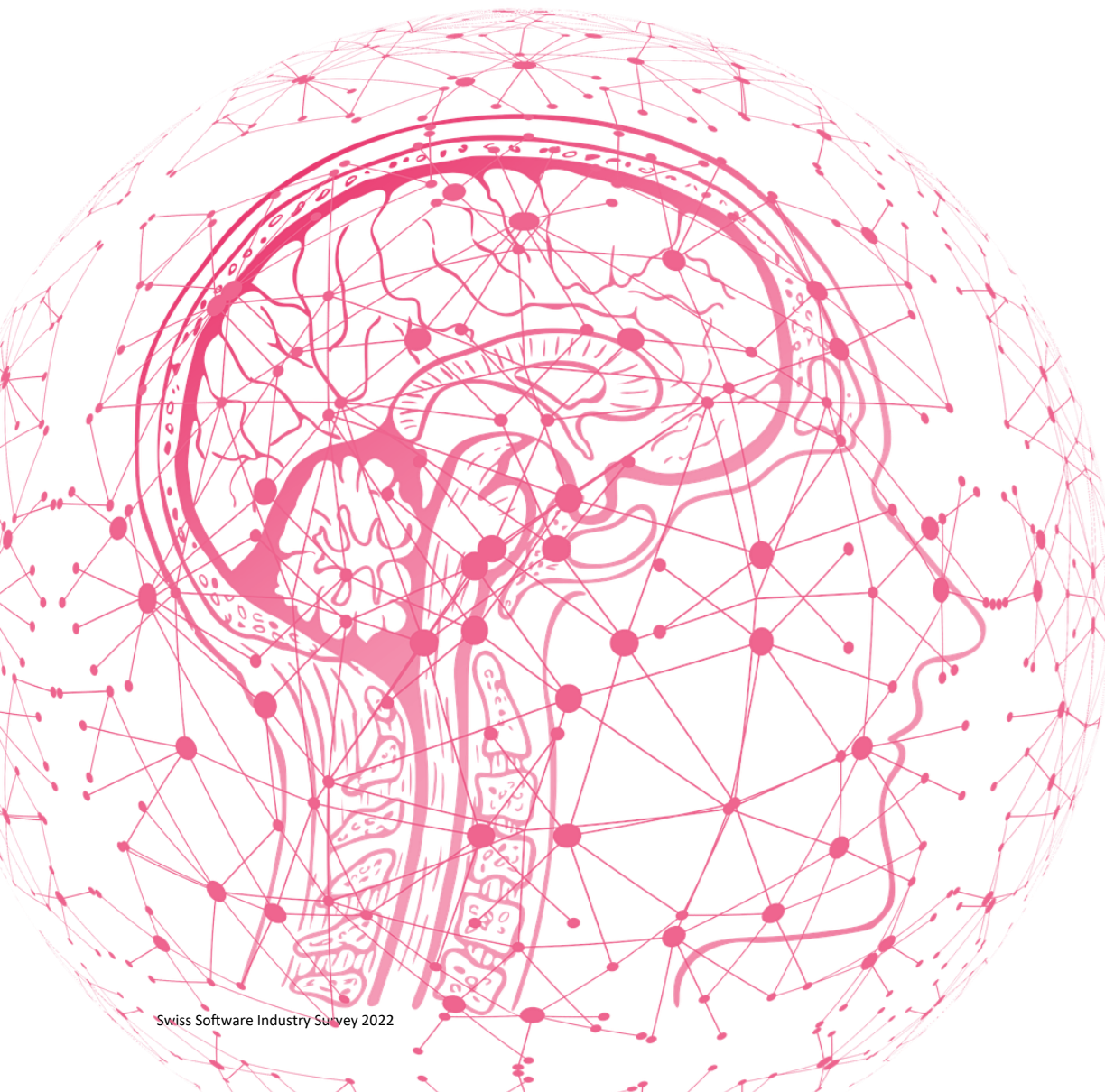
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Institute of Information Systems - Information Engineering

October 2022

Swiss Software Industry Survey 2022

Current State, Emerging Trends, and Long-term Developments

A Study of the University of Bern on behalf of SWICO



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Bern, October 2022

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Additional remarks:

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Preface

In 2022, the unemployment rate in Switzerland fell to a historic low of 2 percent. At the same time, the working population in Switzerland is getting older while net immigration remains constant. These developments are not leaving the Swiss software industry unscathed. Swiss software companies are already fighting fiercely for the few talents on the labor market and know that this war will be fought even more intensively in the near future. The eighth edition of the Swiss Software Industry Survey (SSIS) takes this situation as an opportunity to look more closely at the war for talent in the Swiss software industry. This year's SSIS aimed in particular to discover the extent to which domestic software companies are suffering from the war for talent and what measures they have taken in the past or are planning for the future to meet this challenge. Beyond focusing on labor market challenges, however, the SSIS 2022 remains the most comprehensive study of its kind in Switzerland. As such, it provides a detailed overview of the current state, emerging trends and long-term developments in the Swiss software industry.

This year, the SSIS was conducted for the second time under the patronage of Swico, the industry association for digital Switzerland. This patronage ensures the future of the SSIS for the years to come. Besides, it enables us to be as close as possible to the Swiss ICT industry. In this sense, we would like to thank Swico and its Interest Group "Software, Services, and Consulting" for the trust they have placed in us and look forward to working with them in the years to come. As in previous years, we would also like to thank our partners sieber&partners, tranengineering and the Institute for Business Studies Basel (IWSB) as important supporters of the SSIS.

We hope you enjoy reading this year's SSIS Report.

Yours sincerely,

Dr. Thomas Hurni

Simon Perrelet

Prof. Dr. Jens Dibbern

Table of Contents

5 Executive Summary

6 Revenue,
Profitability
& Future Growth

11 Sources of Revenue

15 Internationalization
& Sourcing

21 Special Topic:
War for Talent

31 About the SSIS 2022

Executive Summary

In the first year freed from the restrictions due to the COVID19 pandemic, the Swiss software industry is looking to the future with confidence: The industry expects revenue growth of 6.5% this year and 6.3% in 2023 (approximately 3 percentage points more than the expected revenue growth in 2021). Expectations regarding employment growth are also more confident than a year ago and stand at 5.7% in 2022 and 2023 (3.6 percentage points more than the recorded employee growth in 2021). The Swiss software industry thus expects a return to growth rates at the level of the years before the COVID19 pandemic. In addition, Swiss software companies are reporting an increase in the EBIT margin to 9.4% for 2021 compared to 8.1% in 2020. All the while, the Swiss software industry generated a mere 6.1% of its revenue abroad in 2021 (3.6 percentage points less than in 2021).

Above-Average Time-to-fill

On average, it takes the Swiss software companies surveyed 81 days from the time a job is posted to the time this vacant position is filled. This figure is significantly higher than in other industries, where companies require around 50 days to fill a vacancy.

Recruitment Focus on Women and Graduates

In the three previous years, Swiss software companies have focused on recruiting female employees and university graduates. Efforts to recruit these groups of employees were correspondingly high. Remarkably, the efforts to recruit employees from abroad were comparatively low in the same period.

Different Measures for Successful Employee Retention

Swiss software companies have made efforts to retain employees over the past three years. In particular, they have been successful in retaining employees who are important to them, who are still in training or who have recently become parents. To this end, Swiss software companies have invested in the past three years in flexible working and part-time models as well as in the possibility of reconciling work and family or training. When it comes to retaining important employees, the significance of above-average fringe benefits became apparent.

Diverse Precautions in the War for Talent

As the shortage of skilled workers is unlikely to ease in the near future, Swiss software companies are relying on various measures, including a further increase in their efficiency to accomplish more with the same workforce or more outsourcing to nearshoring destinations.

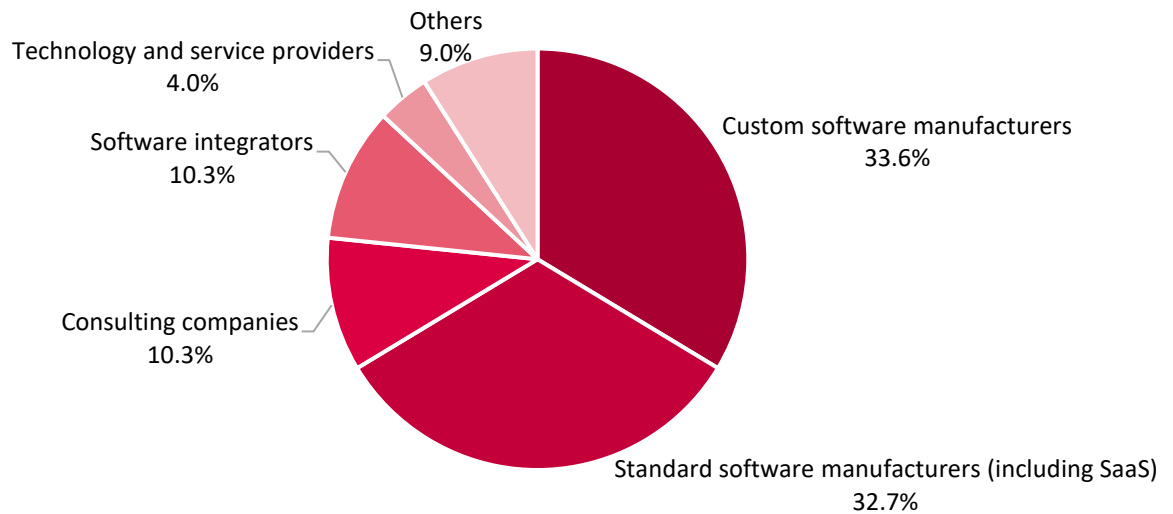
Spotlight on

Revenue, Profitability & Future Growth



Participating Companies

Figure 1: Number of companies per sub-industry as percentage of total responses



Source: SSIS 2022

N = 321

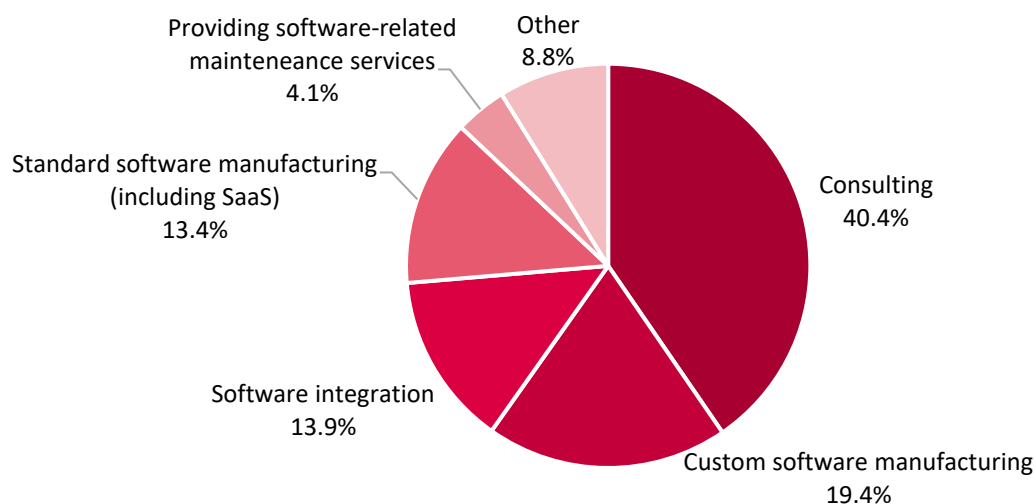
Software-related Consulting, the Main Source of Revenue

Figure 1 shows the distribution of companies participating in the SSIS 2022. As in previous years, the manufacturers of custom software and standard software dominated our sample. Both sub-industries account for about one-third of the answers. Consulting companies (10.3%), software integrators (10.3%), and technology and service providers (4%) follow at some distance.

Figure 2 shows the weighted revenues by activity, with software-related consulting as the largest source of revenue at 40.4%. The second largest source of revenue is the manufacturing of custom software with 19.4%. This is followed by software integration with 13.9% and the production of standard software with 13.4%. The provision of software-related maintenance services accounts for 4.1% and other activities account for 8.8%.

Revenues by Activity

Figure 2: Revenues of Swiss Software Companies by Activity

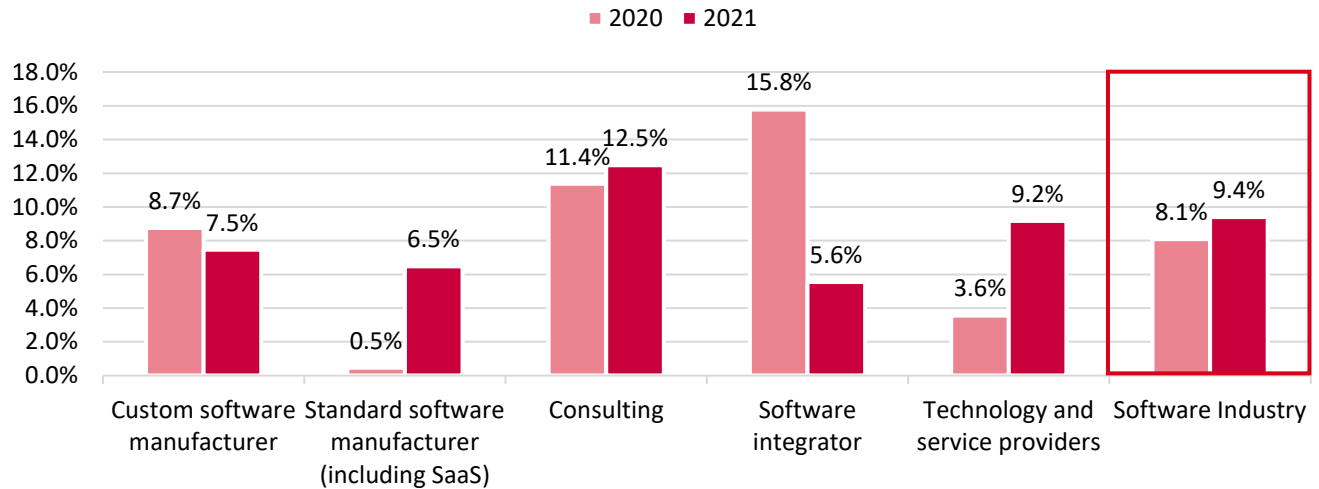


Source: SSIS 2022

N = 131

EBIT Margins

Figure 3: EBIT margins by sub-industries in 2020 and 2021



Source: SSIS 2022

N = 114

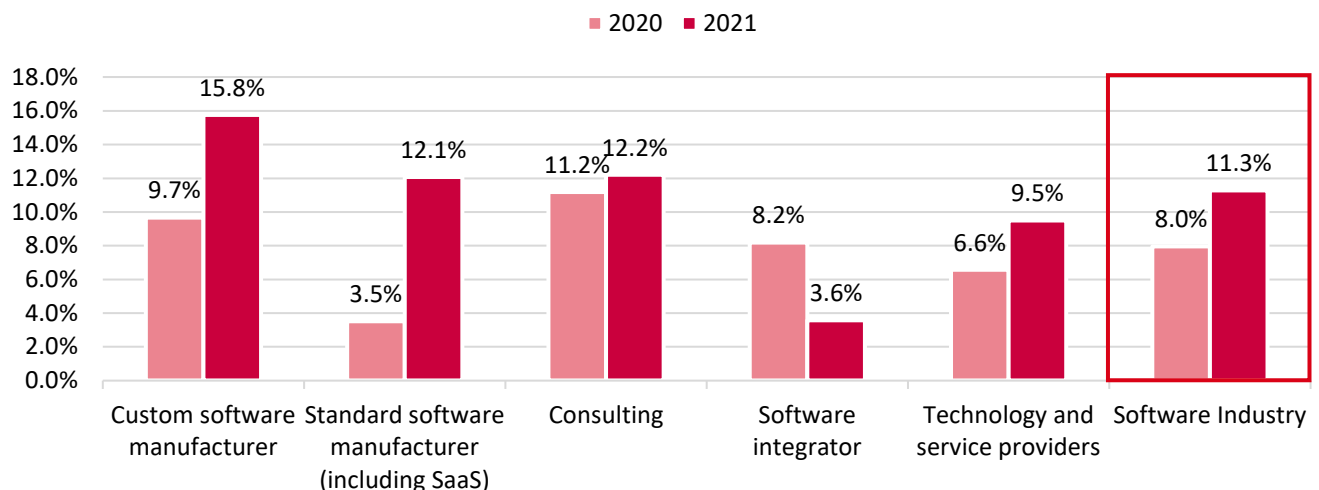
Higher EBIT and EBITDA Margins

Figure 3 shows the EBIT margins of the sub-industries with an industry-wide increase to 9.4%. This trend applies to standard software manufacturers (6.5%), consulting firms (12.5%), and technology and service providers (9.2%), while the EBIT margins for custom software manufacturers (7.5%) and software integrators (15.8%) decreased.

Figure 4 shows the EBITDA margins of the Swiss software industry with an industry-wide increase from to 11.3% in 2021. This trend applies to custom software manufacturers (15.8%), standard software manufacturers (12.1%), consulting firms (12.2%), and technology and service providers (9.5%), while the EBITDA margins for and software integrators (3.6%) decreased.

EBITDA Margins

Figure 4: EBITDA margins by sub-industries in 2020 and 2021

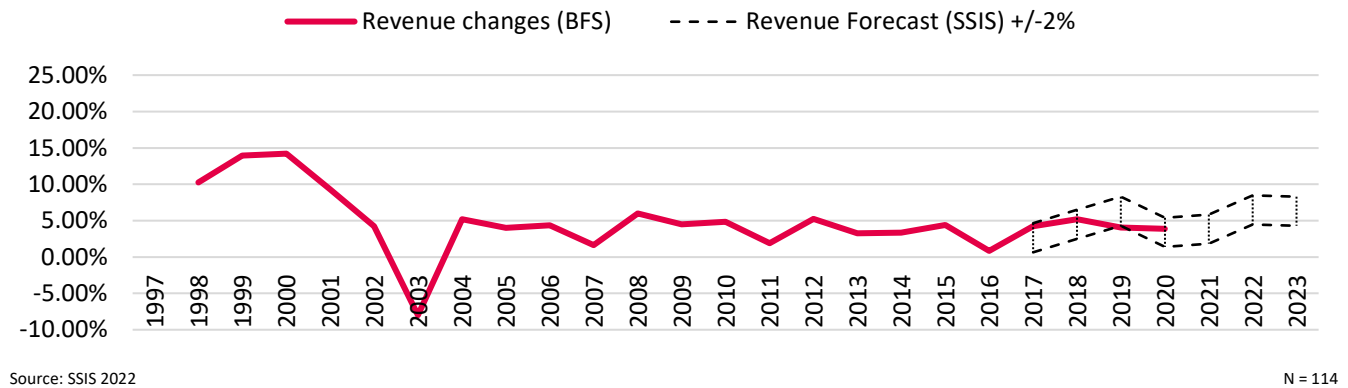


Source: SSIS 2022

N = 114

Revenue Growth Forecast

Figure 5: Expected year-over-year revenue growth



N = 114

Back to Normal - Revenue Growth Expected to Exceed 5%

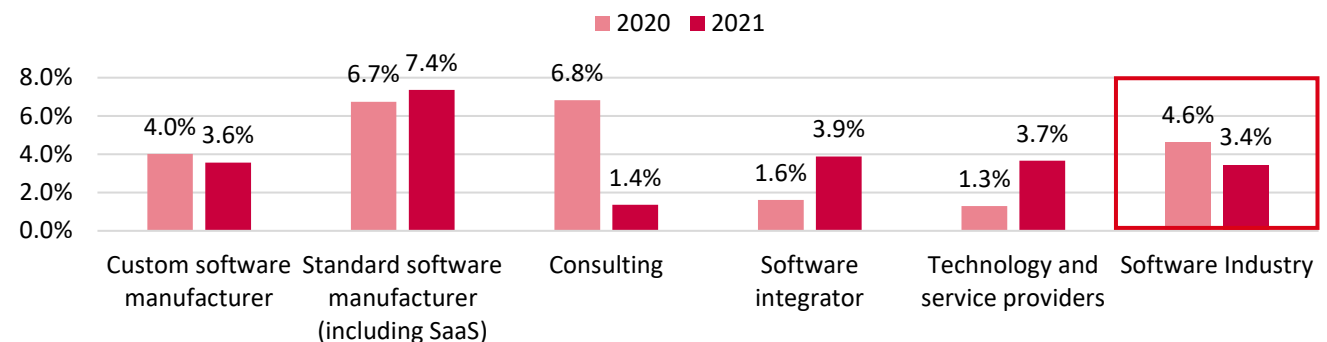
Figure 5 shows the expected revenue growth of the Swiss software industry in the form of a target corridor of +/- 2%. Based on the adjusted expectations, the Swiss software industry is expected to grow by 6.5% in 2022 and by 6.3% in 2023. This optimistic forecast comes on the heels of the modest growth forecast of 3.8% in

2021, which can be attributed to the Covid 19 pandemic and its aftermath.

Please note that this target corridor is only an estimate, which may prove false, in particular due to unexpected external impacts.

Research and Development Investments

Figure 6: R&D investments by sub-industries in 2020 and 2021 as percentage of revenue



Source: SSIS 2022

N = 114

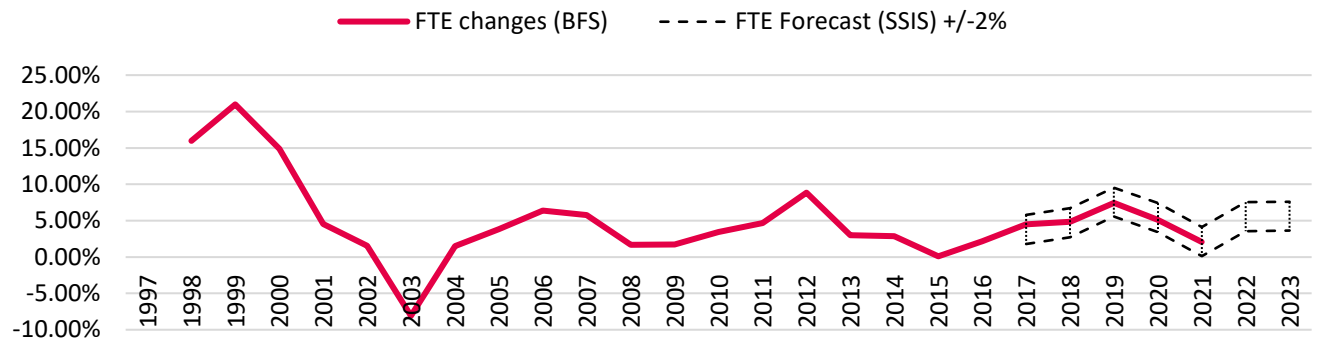
Decreasing Investments in Research and Development

Figure 6 shows the spending on research and development (R&D) by Swiss software companies as a percentage of revenues in 2021 as compared to 2020. Overall, Swiss software companies spent a lower proportion of their revenues (3.4%) on R&D in 2021 (4.6% in 2020). Particularly noteworthy is the decline in R&D invest-

ments of consulting companies from 6.8% in 2020 to a mere 1.4% in 2021. Less striking is the decline among manufacturers of custom software from 4.0% in 2020 to 3.6% in 2021. Interestingly, all other sub-industries increased their R&D investments from 2020 to 2021.

Employee Growth Forecast

Figure 7: Expected year-over-year growth of workforce



Source: SSIS 2022

N = 131

Optimistic Employee Growth Prospects

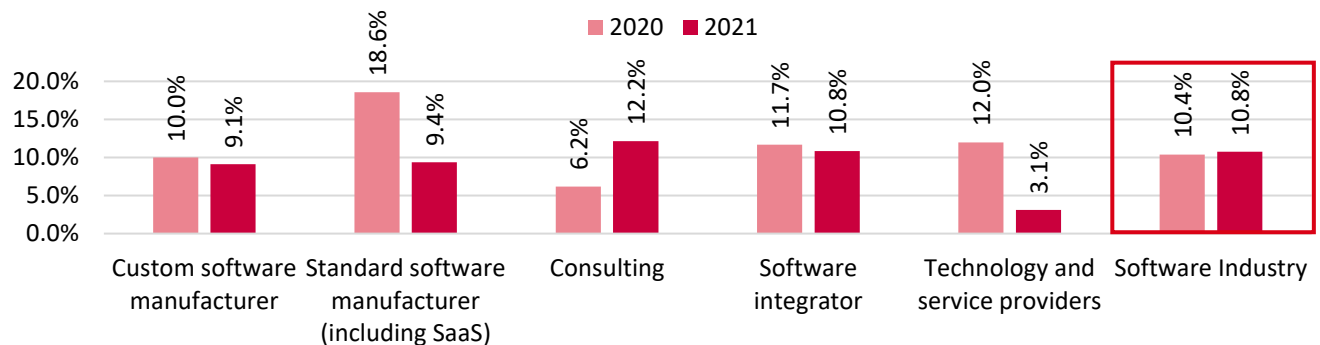
Figure 5 shows the expected growth in the number of full-time equivalents (FTEs) in the Swiss software industry in the form of a target corridor of +/- 2%. Based on the adjusted expectations, the number of FTEs in the Swiss software industry is expected to grow by 5.7% in 2022 and 2023. This optimistic forecast comes on the

heels of the modest FTE growth forecast of 2.2% in 2021.

Please note that this target corridor is only an estimate, which may prove false, in particular due to unexpected external impacts.

Employee Fluctuation

Figure 8: Employee fluctuation in 2020 and 2021 using the Basic Formula



Source: SSIS 2022

N = 124

Stable Employee Fluctuation

Figure 8 shows the employee fluctuation rate in the Swiss software industry in 2021, calculated using the basic formula [(leavers / number of employees at the beginning of a period) * 10]. Based on this calculation, employee fluctuation remains fairly stable, with a slight increase from 10.4% in 2020 to 10.8% in 2021. The high-

est fluctuation in 2021 was recorded by consulting companies (from 6.2% to 12.2%). The standard software manufacturers, in turn, were able to largely stabilize their employee fluctuation (from 18.6% to 9.4%).

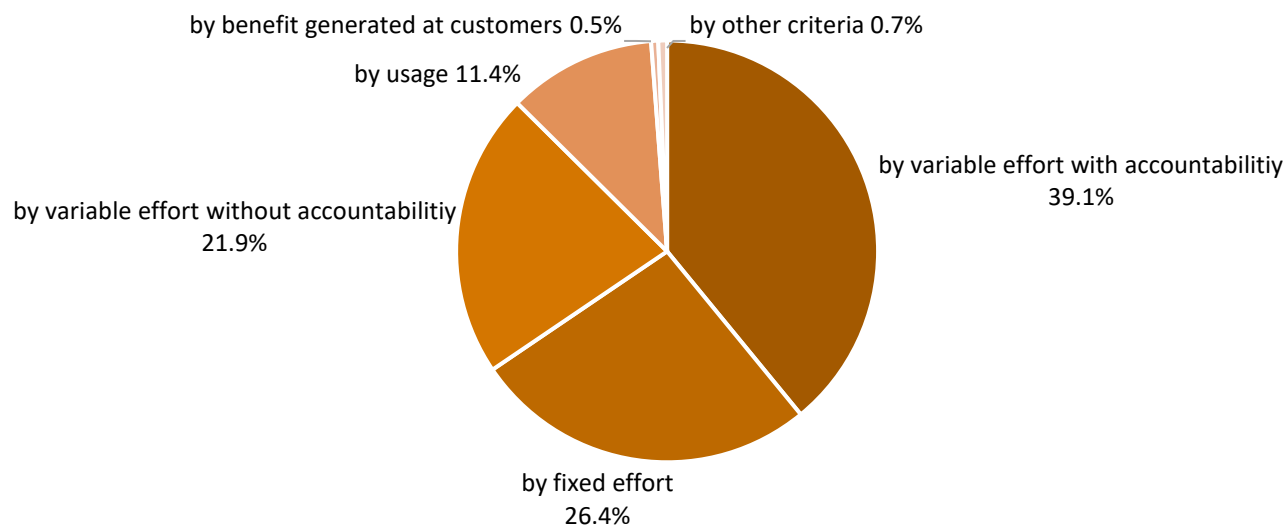
Spotlight on

Sources of Revenue



Billing Models

Figure 9: Billing models of the Swiss software industry as a percentage of industry revenue



Source: SSIS 2022

N = 131

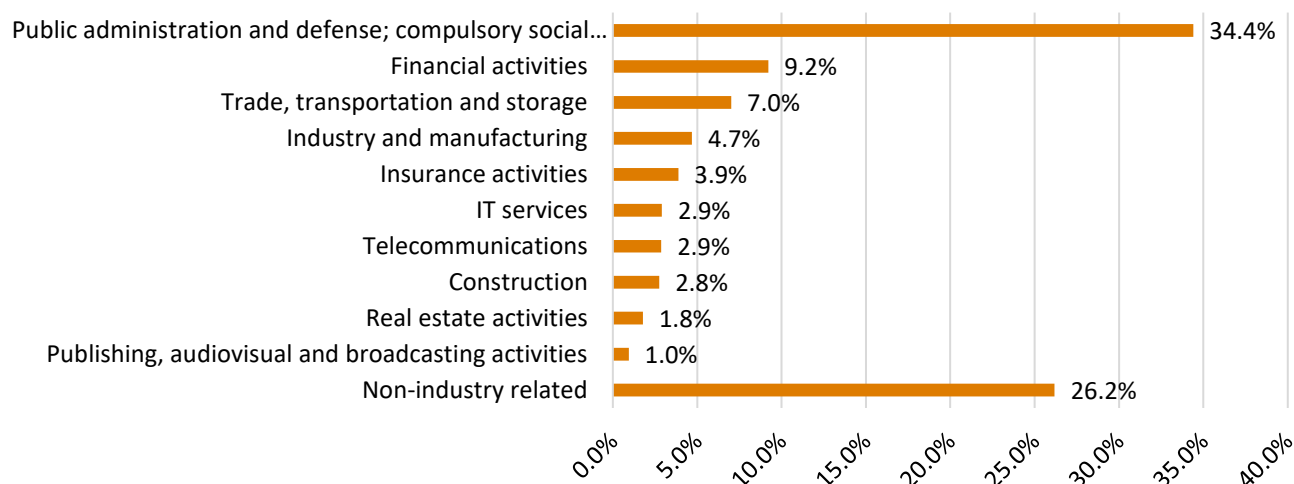
Strong Focus on the Public Sector

Figure 9 shows the most important billing models in the Swiss software industry. By far the most revenue was billed by variable effort with accountability (39.1%), followed by revenue billed by fixed effort (26.4%) and variable effort without accountability (21.9%). Revenue from billing models based on usage (11.4%) or benefit generated at customers (0.5%) remained low.

Figure 10 shows the most important client industries for the Swiss software industry - this year for the first time in terms of the revenues generated in each industry. The most important client industry for the Swiss software industry is the public sector (34.4%). Around a quarter of revenue is not attributable to any particular industry.

Revenue per Industry

Figure 10: Most important industries for the Swiss software industry in terms of revenue

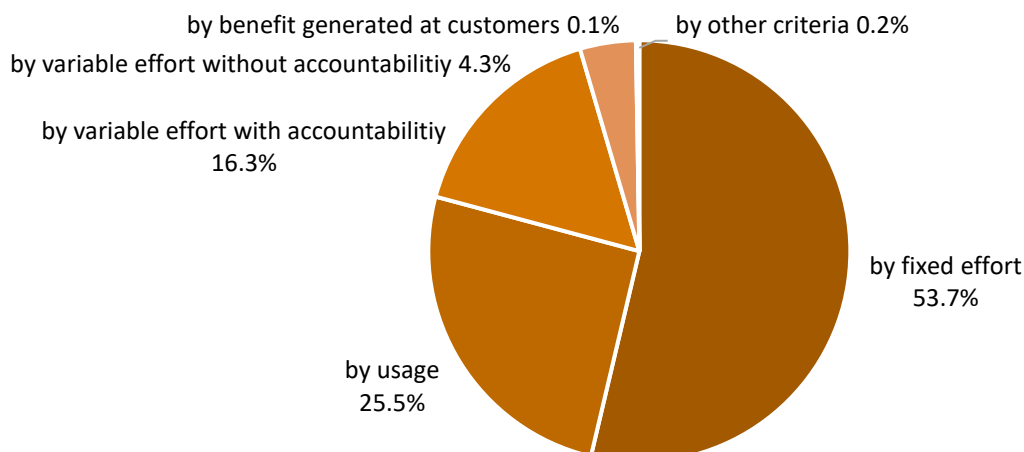


Source: SSIS 2022

N = 131

Billing Models of Standard Software Manufacturers

Figure 11: Billing models of standard software manufacturers as a percentage of the sub-industry revenue



Source: SSIS 2022

N = 41

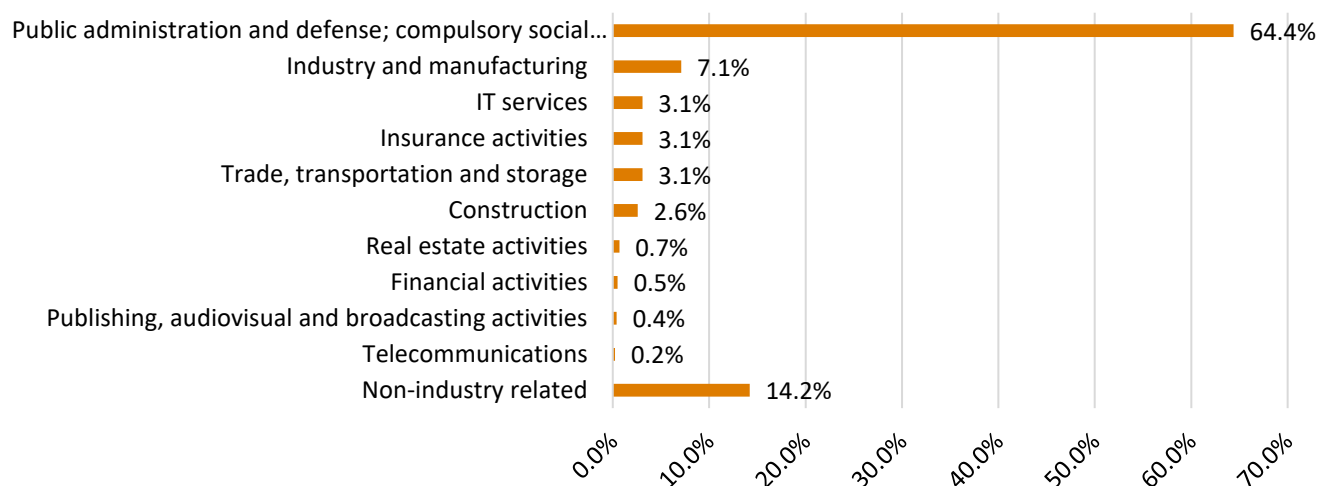
Usage-based Billing Models on the Rise

At 52.7%, the most important billing model for standard software manufacturers is billing based on fixed costs (see Figure 11). Given the increasing importance of cloud solutions, billing by usage is the second most important billing model for standard software manufacturers (24.5%). Variable billing models have only very little significance for standard software manufacturers.

At 64.4%, the public sector is the most important client industry for the standard software manufacturers (see Figure 12). Other client industries follow only at a great distance, with industry and manufacturing in second place with 7.1%. Around 15% of sales cannot be allocated to any specific industry.

Revenue per Industry for Standard Software Manufacturers

Figure 12: Most important industries for the standard software manufacturers in terms of revenue

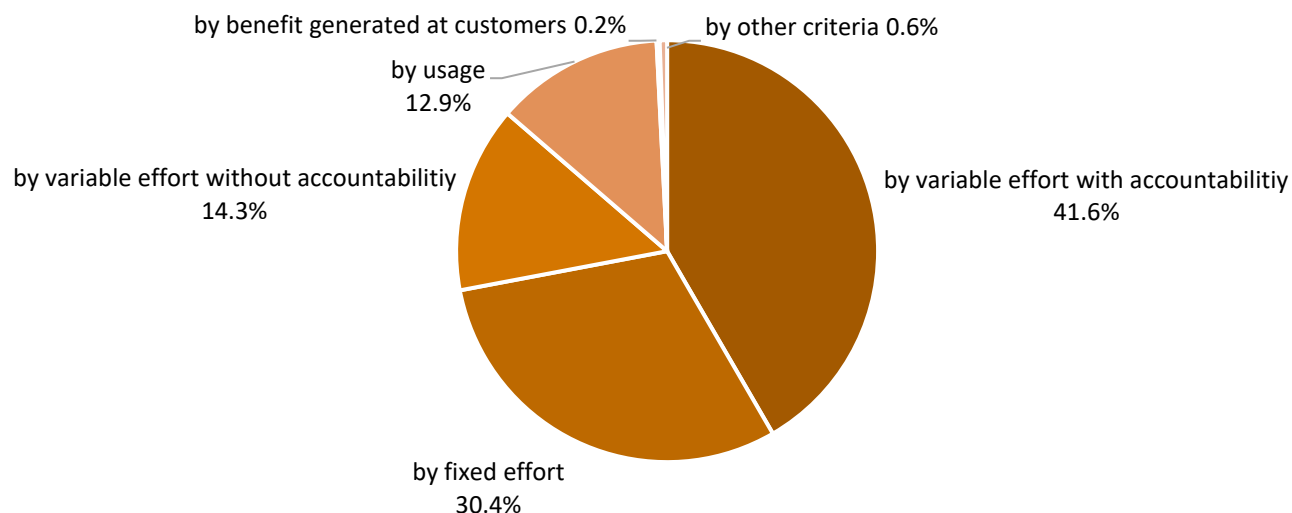


Source: SSIS 2022

N = 41

Billing Models of Custom Software Manufacturers

Figure 13: Billing models of custom software manufacturers as a percentage of the sub-industry revenue



Source: SSIS 2022

N = 41

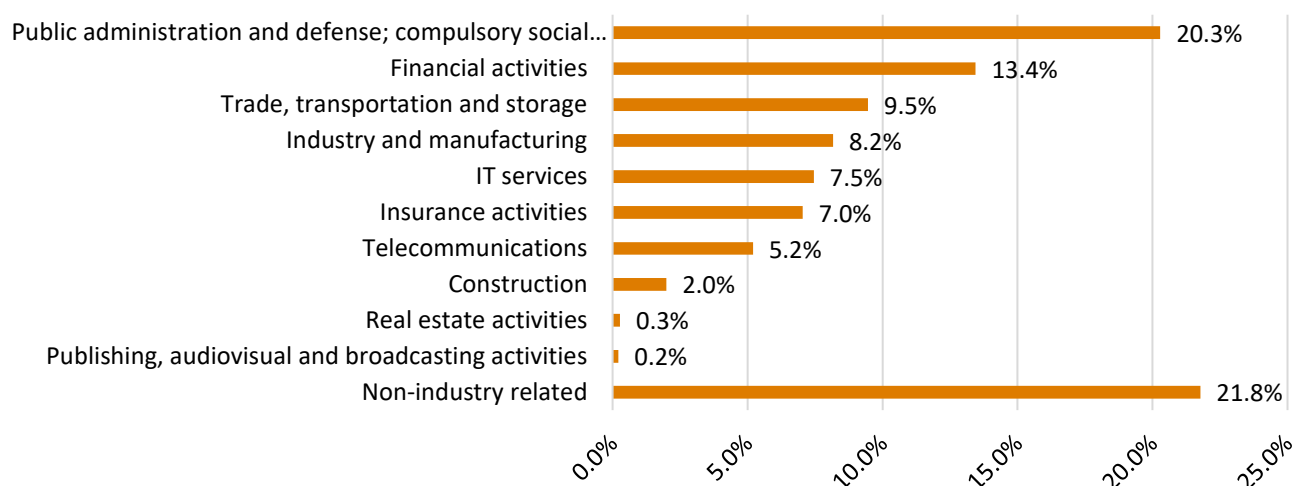
Revenue per Industry

At 41.6%, the most important billing model for custom software manufacturers is billing by variable effort with accountability (see Figure 13). At 30.4%, billing by fixed effort is the second most important billing model for manufacturers of custom software. Billing models based on variable effort without accountability or on usage are only of minor importance.

Figure 14 shows the most important industries for custom software manufacturers. At 20.3%, the public sector is the most important client industry for custom software manufacturers, followed by the financial sector (13.4%). Interestingly, about 22% of sales cannot be allocated to any specific industry.

Revenue per Industry for Custom Software Manufacturer

Figure 14: Most important industries for the custom software manufacturers in terms of revenue

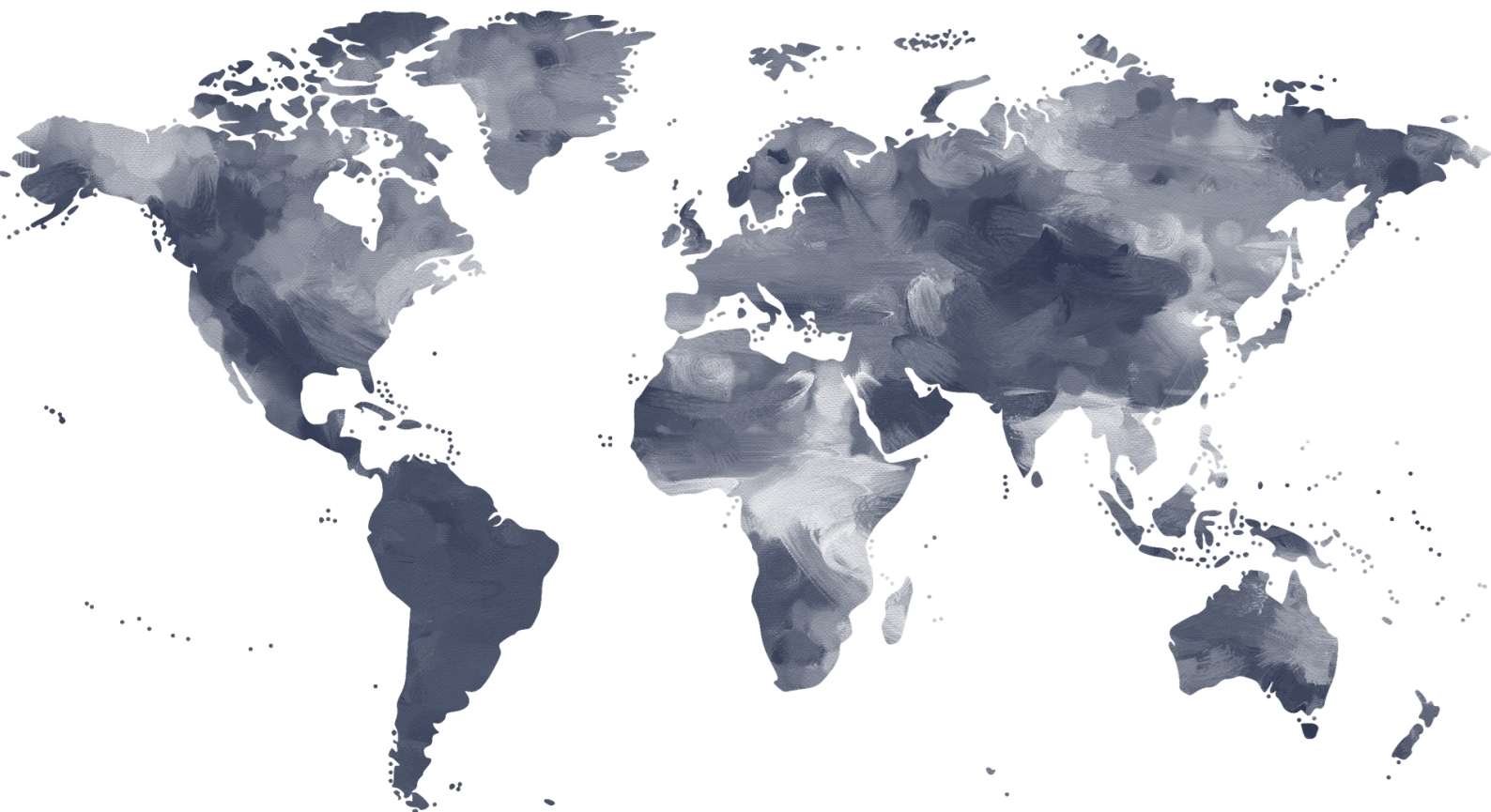


Source: SSIS 2022

N = 41

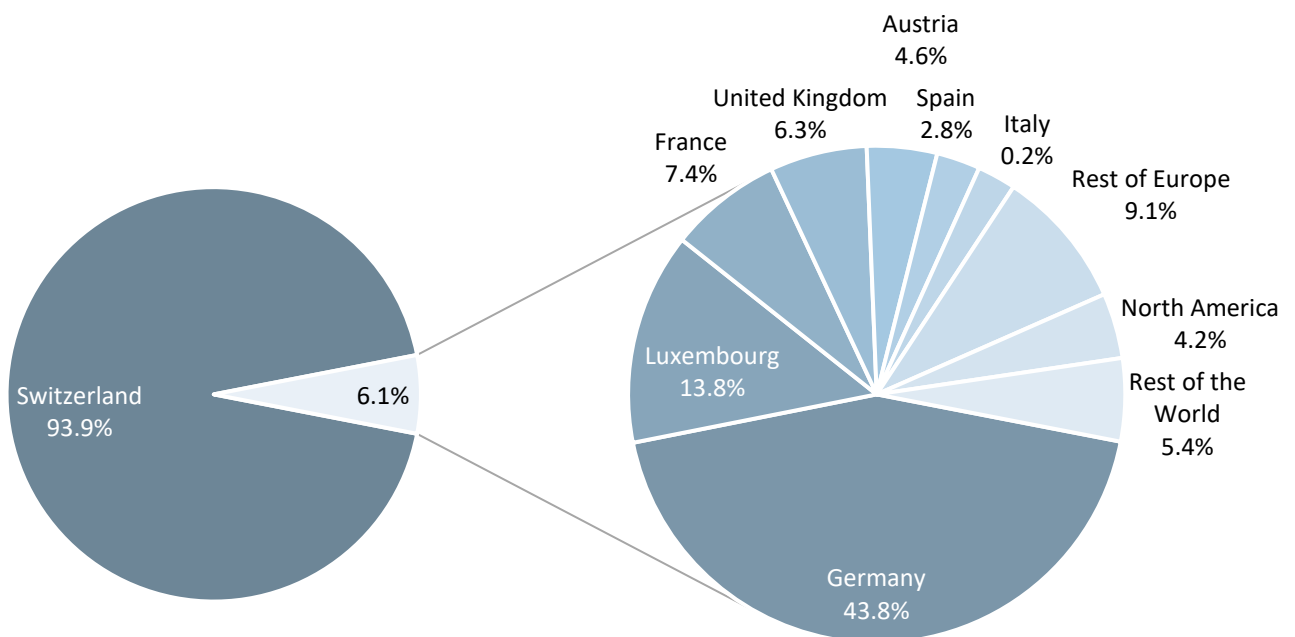
Spotlight on

Internationalization & Sourcing



Degree of Internationalization and Target Markets

Figure 15: Distribution of international revenue



Source: SSIS 2022

N = 131

The Swiss software industry generated
6.1%
 of its revenue outside Switzerland

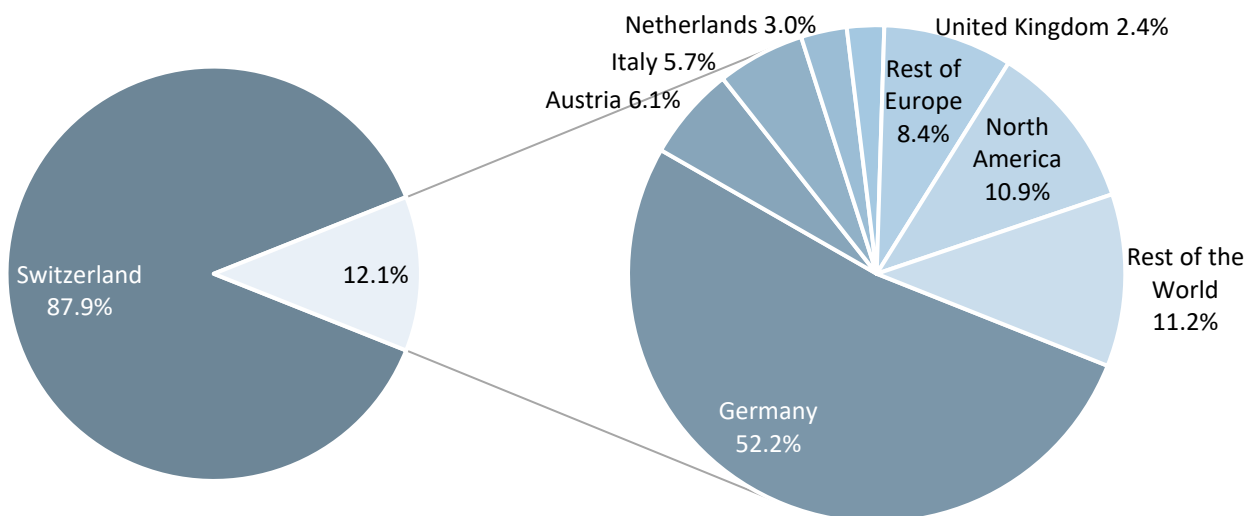
Less Revenue From International Markets

Figure 15 shows the distribution of the revenues of the Swiss software industry on the domestic market and the international markets in 2021. Compared to 2020, the share of revenues generated abroad has decreased once again, this time from 9.7% to 6.1%. As in previous years, Germany remains the most important export

market (43.8% of revenues generated abroad). Lower shares of revenue were generated in Luxembourg (13.8% of revenues generated abroad), France (7.4% of revenues generated abroad) and the United Kingdom (6.3% of revenues generated abroad). The overseas export markets continue to be of minor importance.

Degree of Internationalization and Target Markets of Standard Software Manufacturers

Figure 16: Percentage of onshoring, nearshoring, and offshoring from external service providers



Source: SSIS 2022

N = 41

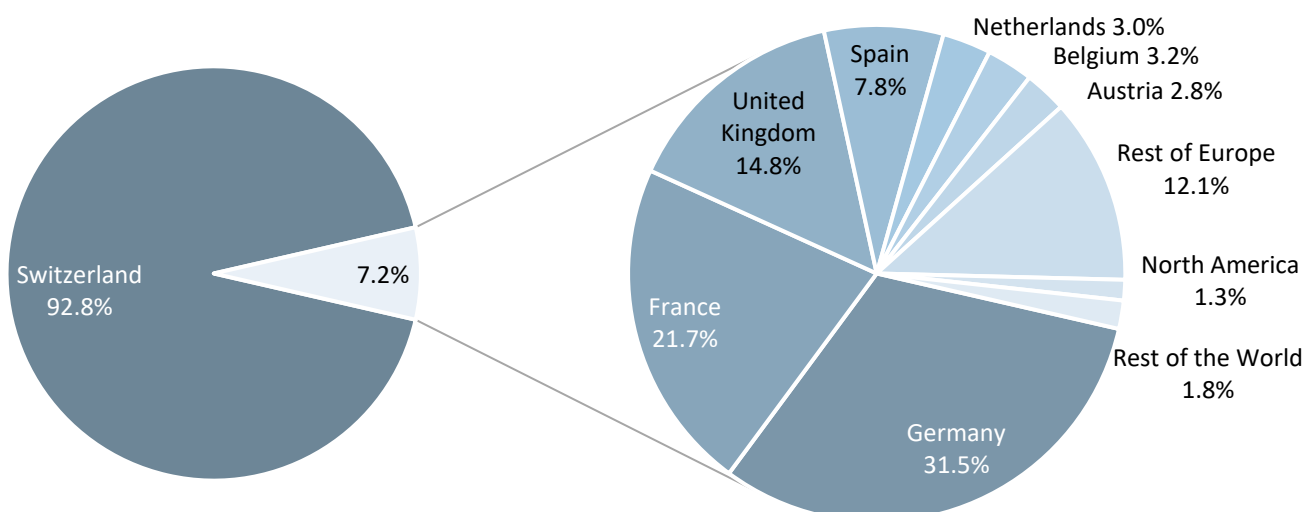
Revenue per Industry

Standard software manufacturers (see Figure 16), generated in 2021 12.1% of their revenue abroad. Most important export market was Germany (52.2% of revenues generated abroad). Lower shares of revenue were generated in Austria and Italy (6.1% and 5.7% of revenues generated abroad). Oversea markets account for 22.1% of revenues generated abroad.

In contrast, custom software manufacturers (see Figure 17), generated 7.2% of their revenues abroad. Most important export market was Germany (31.5% of revenues generated abroad) followed by France (21.7% of revenues generated abroad), the United Kingdom (14.8% of revenues generated abroad), and Spain (7.8% of revenues generated abroad).

Degree of Internationalization and Target Markets of Custom Software Manufacturers

Figure 17: Percentage of onshoring, nearshoring, and offshoring from internal service providers

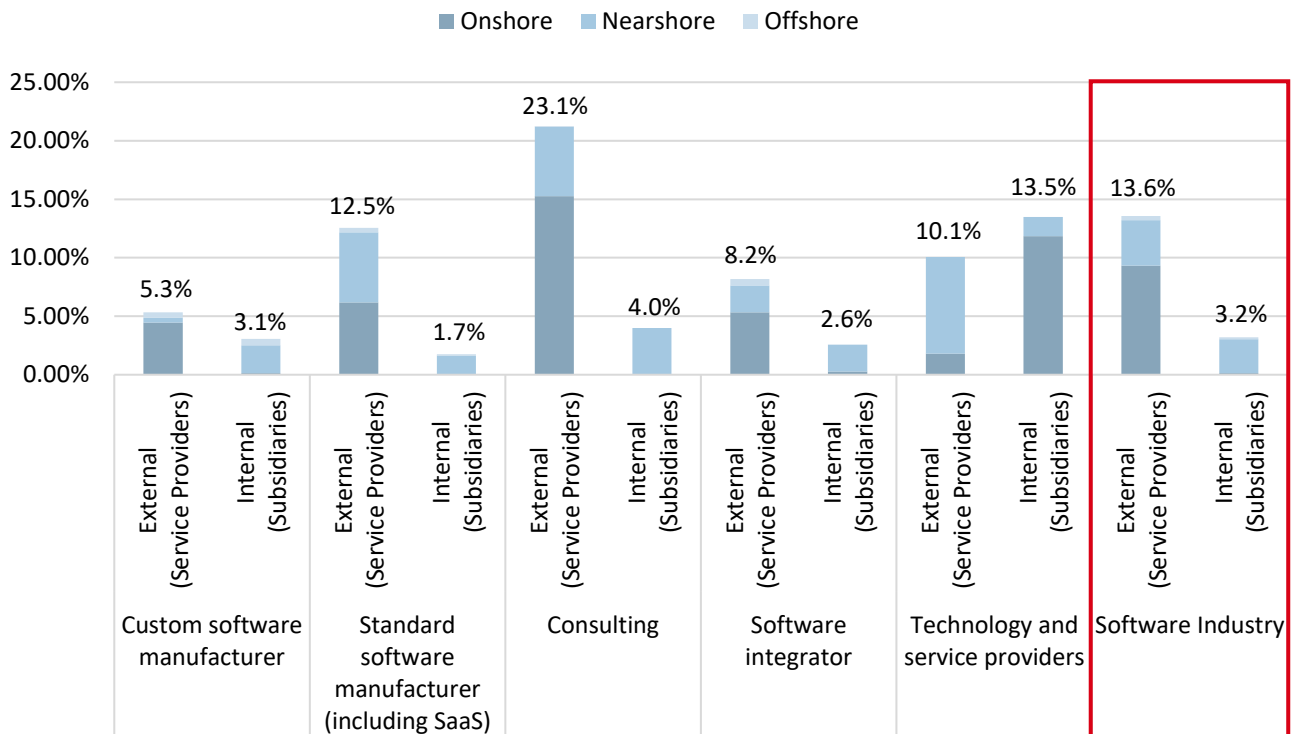


Source: SSIS 2022

N = 41

Outsourcing and Subsidiaries

Figure 18: Percentage of companies that outsource and/or own subsidiaries by sub-industries



Source: SSIS 2022

N = 102

On average, Swiss software companies source

13.6%

of their total value added from outsourcing providers

Outsourcing in the Swiss Software Industry

Sourcing, i.e., the development, improvement, and operation of IT products and/or services by external service providers and/or subsidiaries, is of crucial importance for Swiss software companies. Figure 18 shows the total value added by external service providers and/or own subsidiaries in 2021.

Our results show that consulting companies (21.3%) draw the highest share of their value added from external service providers. At some distance, they are followed by standard software manufacturers (12.5%), technology and service providers (10.1%), software integrators (8.2%) and manufacturers of custom software (5.3%). Overall, Swiss software companies source 13.6% of their value added from external service providers.

Interestingly, technology and service providers obtain the highest share of their value added from own subsidiaries (13.5%). Consulting companies (4%), manufacturers of individual software (3.1%), software integrators (2.6%) and manufacturers of standard software (1.7%) follow at a great distance. Overall, Swiss software companies source 3.2% of their value added from their own subsidiaries.

Sponsored Spotlight on

Reasons and Criteria for Sourcing

presented to you by

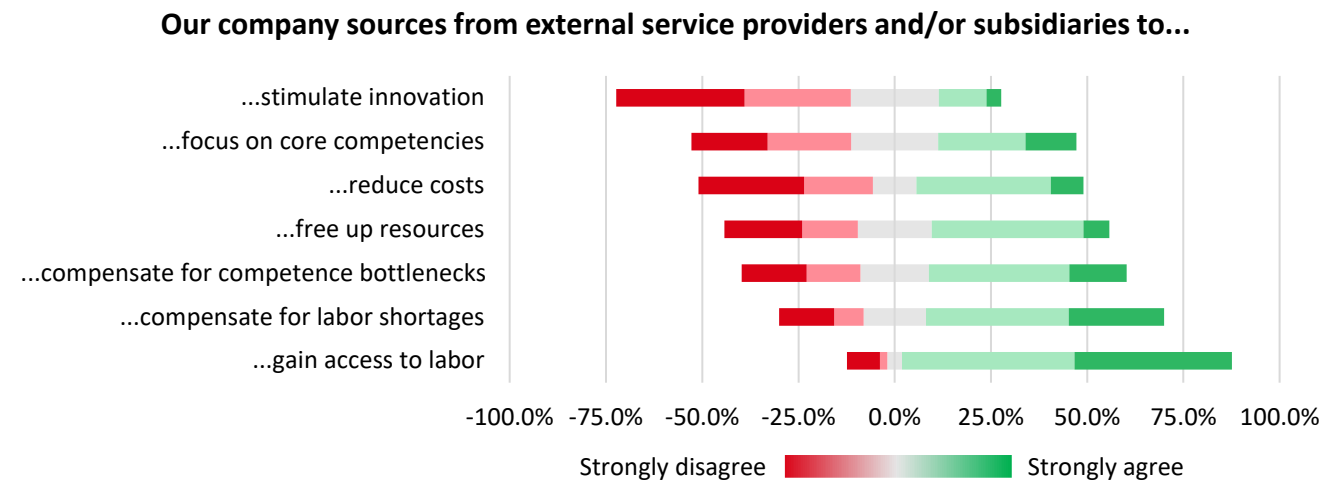
ri/wers

About ri/wers

As your service provider for customized, innovative software development, ri/wers ensures that you set the pace in your business thanks to smart software. Headquartered in Bern and with its own development center in Bratislava/Slovakia, Riwers focuses entirely on leanness and effectiveness. With our know-how you simplify processes, improve products and scale your applications - fast, easy, transparent and sustainable.

Reasons Why Swiss Software Companies Source

Figure 19: Reasons why Swiss software companies choose to source from external service providers and/or subsidiaries



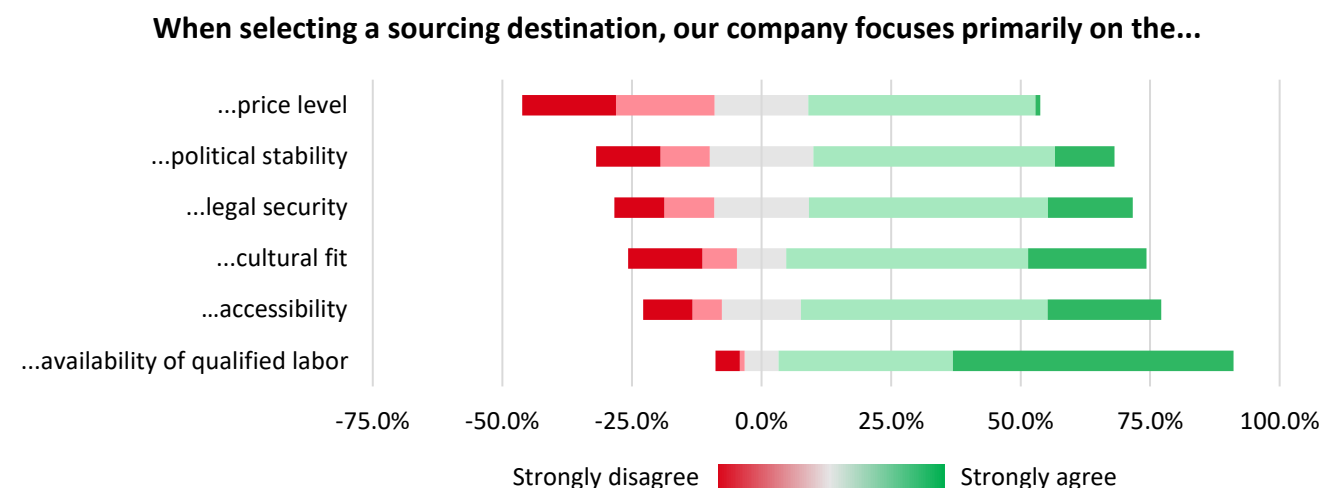
Reasons and Criteria for Sourcing

Figure 21 shows why Swiss software companies choose to outsource to external service providers and/or subsidiaries. The top reasons include access to labor (85.8% confirmation) and the compensating for labor shortages (61.9% confirmation) or competence bottlenecks (51.4% confirmation). Interestingly, cost reductions (43.4% confirmation), the desire to focus more on core competencies (35.8% confirmation) and the stimulation of innovations (16.6% confirmation) hardly matter.

Figure 22 shows why Swiss software companies favor certain sourcing destinations. In line with the reasons for outsourcing, the availability of qualified labor is the most important factor (87.9% confirmation). Accessibility (69.5% confirmation), cultural fit (69.5% confirmation), legal security (62.5% confirmation) and political stability (58.1% confirmation) follow. Price level is the least important, but still critical factor (44.8% confirmation).

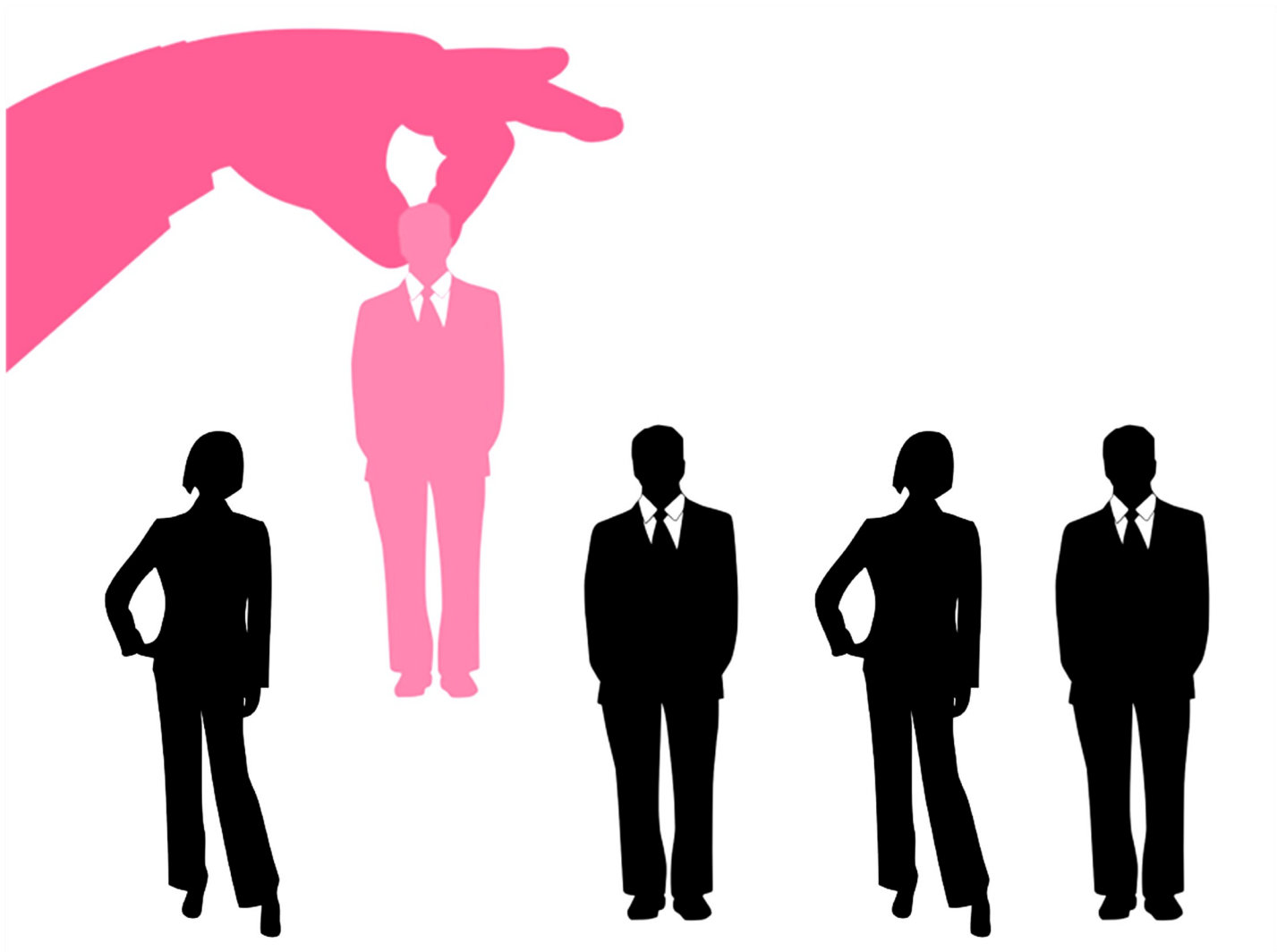
Criteria of Swiss Software Companies in the Selection of Sourcing Destinations

Figure 20: Criteria why Swiss software companies select specific sourcing destinations



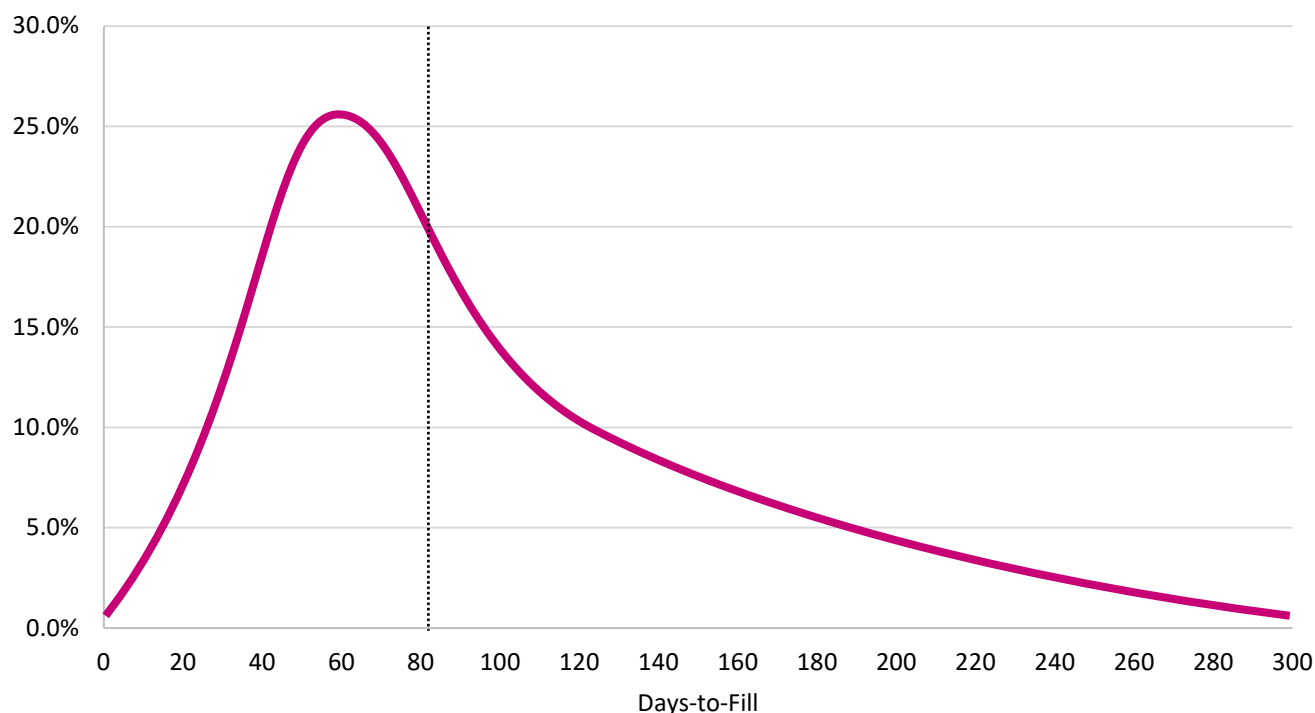
Spotlight on

War for Talent



Time-to-Fill Open Positions

Figure 21: How many days a Swiss software company needs on average to fill a position after a job posting



Source: SSIS 2022

N = 100

On average, it takes Swiss software companies

81 days

to fill open positions

The War for Talent

For years, Swiss software companies have struggled to recruit qualified personnel in sufficient numbers to serve the enormous market growth. This year's SSIS Special Topic takes this difficulty as an opportunity to take a closer look at the ongoing war for talent in the Swiss software industry and beyond.

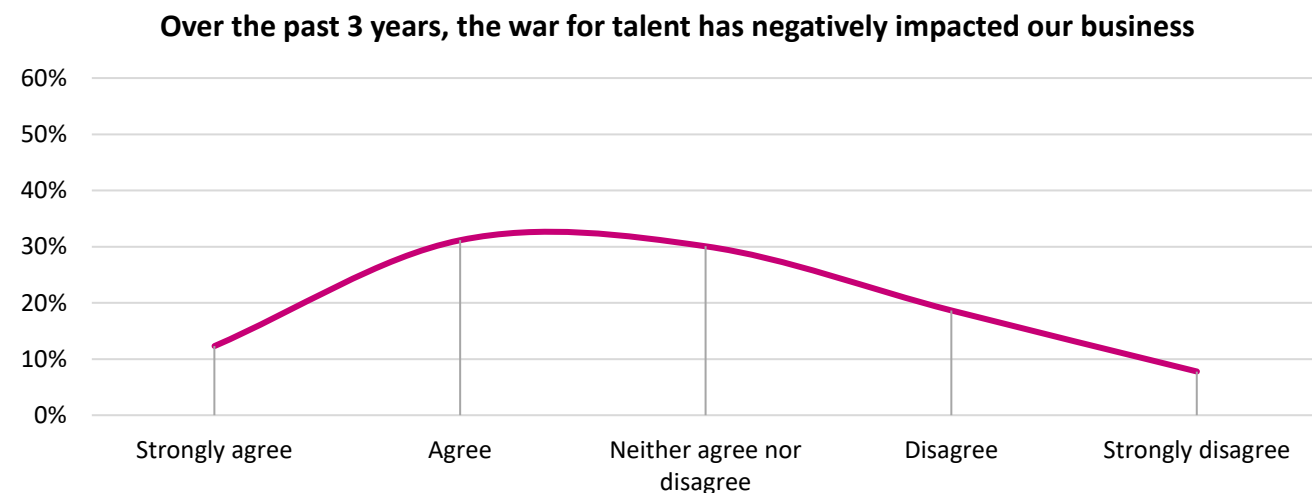
One key indicator to measure the severity of the war for talent is the Time-to-Fill, shown in Figure 21. The time-to-fill describes how many days it takes companies to fill vacancies after a job posting has been approved. At

around 81 days, this value is comparatively high, assuming an average time-to-fill of around 50 days across all industries based on a Glassdoor study in Europe. It underscores the problem facing the Swiss software industry, which urgently needs to be addressed.

The following pages take a detailed look at the issues surrounding the war for talent and the measures taken by Swiss software companies.

Perceived Impact of the War for Talent

Figure 22: The perceived impact of the war for talent on the Swiss software industry over the past three years



Source: SSIS 2022

N = 184

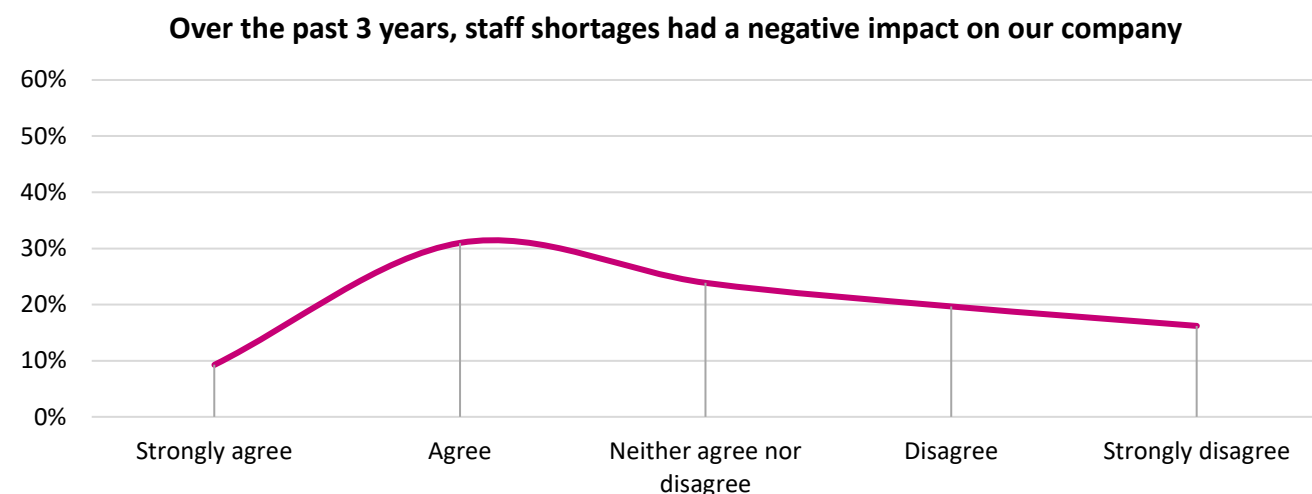
The Impact of the War for Talent

Figure 22 shows the perceived impact of the war for talent on the Swiss software industry over the past three years. 43.5% of the respondents see a negative or even a very negative impact of the fight for talent on their company. By contrast, 26.4% perceived no negative impact of the war for talent on their company.

Figure 23 shows the perceived impact of staff shortages on the Swiss software industry over the past three years. 40.3% of the respondents see a negative or even a very negative impact of the fight for talent on their company. By contrast, 35.9% perceived no negative impact of the war for talent on their company.

Perceived Negative Impact of Staff Shortages

Figure 23: The perceived negative impact of staff shortages on the Swiss software industry over the past three years

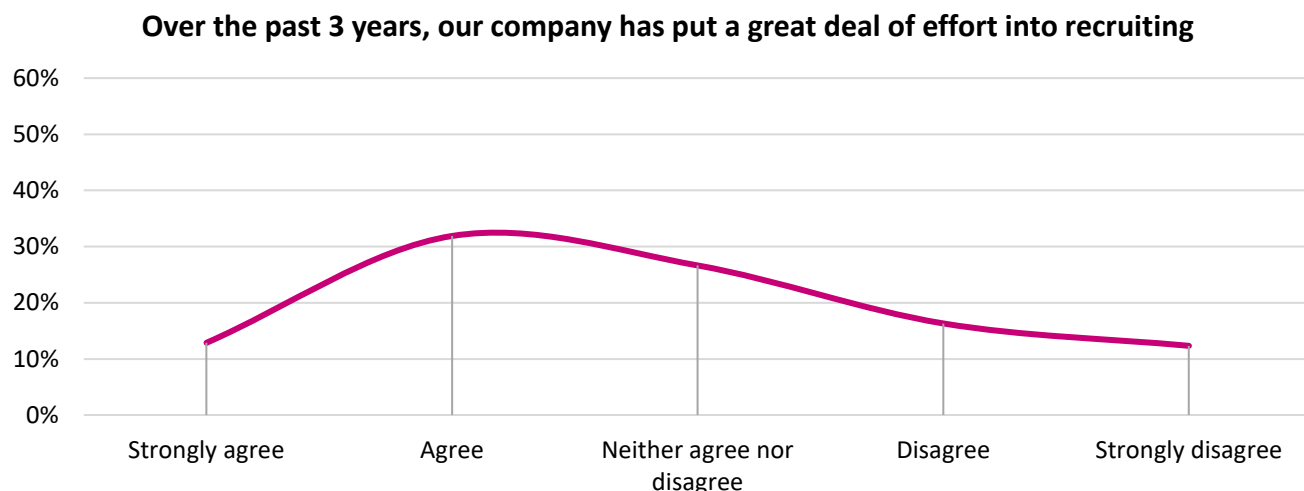


Source: SSIS 2022

N = 184

Effort Put Into Recruitment

Figure 24: The time and effort put into recruitment over the past three years



Source: SSIS 2022

N = 184

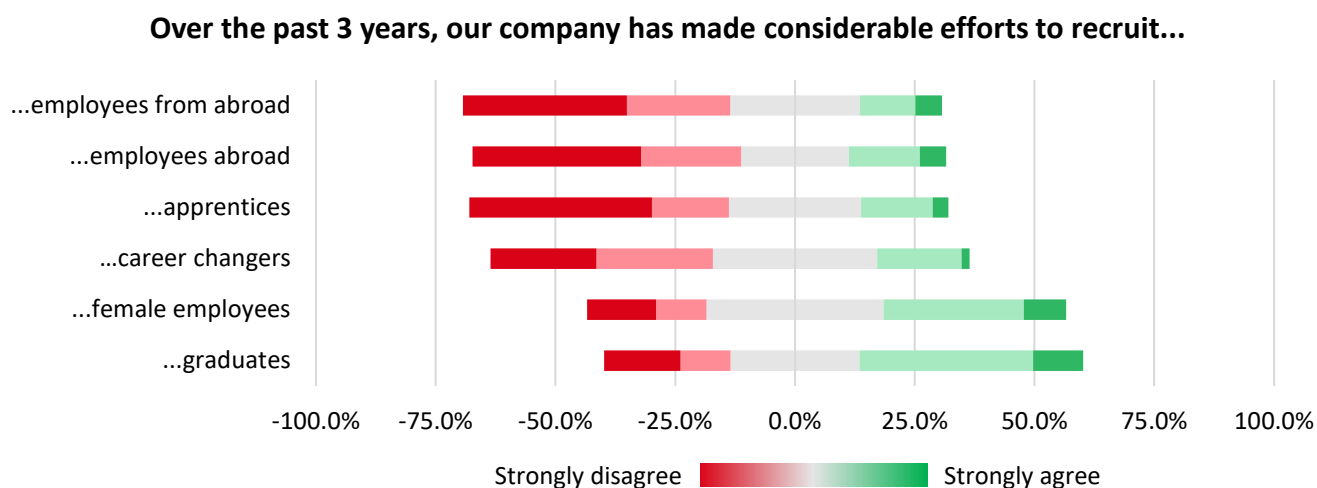
How Swiss Software Companies Recruit

Figure 24 shows how much time and effort Swiss software companies have put into recruiting in the last three years. 31.9% of the respondents indicated that they had spent a great deal of time and effort on recruitment. 12.9% even indicated that they had spent an extremely high amount of time and effort on recruiting. In contrast, 28.6% of the respondent did not put excessive time and effort into recruiting.

Figure 25 shows the most important recruitment focuses of Swiss software companies. Graduates represent the most important category of candidates. 46.7 % of respondents indicated that they place an emphasis on graduates. The second most important category of candidates is women: 38.1% of respondents indicated that they place an emphasis on women. The other four categories of candidates were only actively recruited by less than one-fifth of respondents each.

Recruitment Focuses

Figure 25: The focus groups of Swiss software companies in recruiting

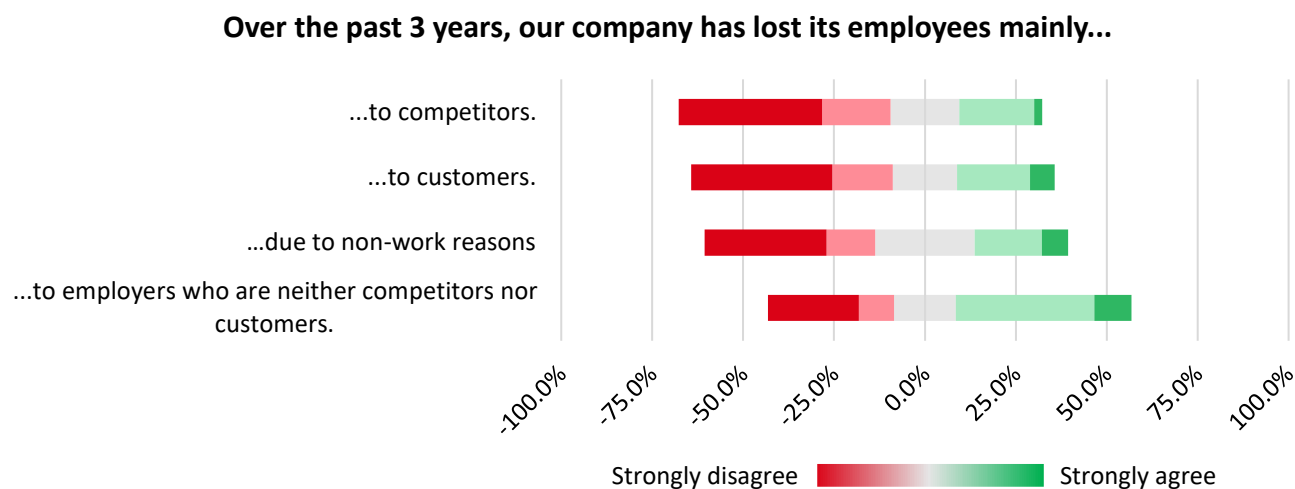


Source: SSIS 2022

N = 184

Leavers Destinations

Figure 26: Where employees who leave Swiss software companies go



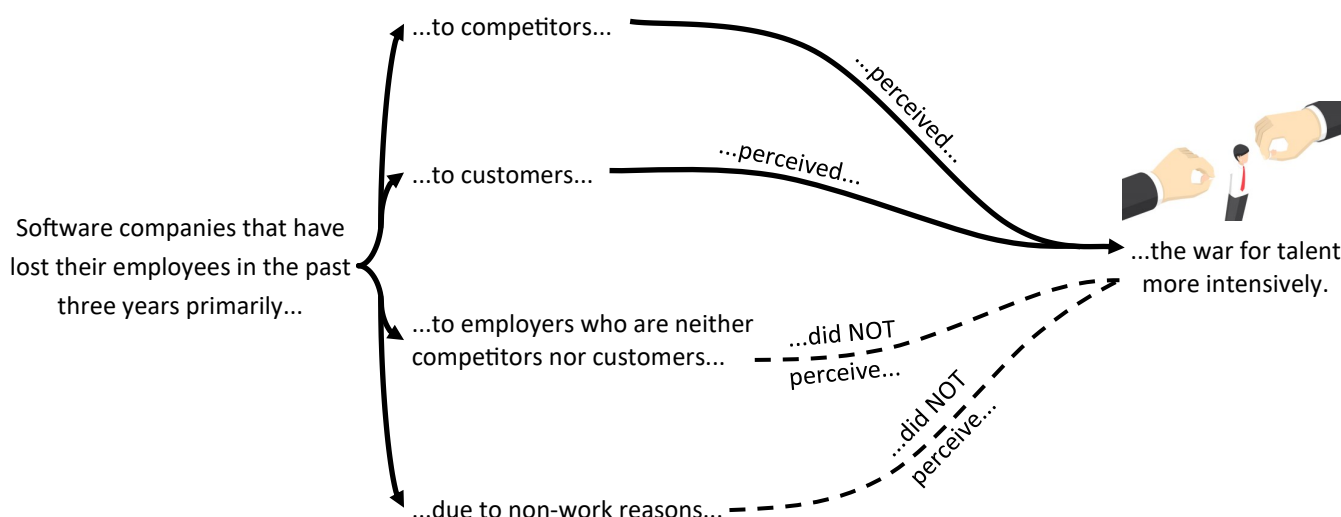
Where Employees Who Leave Swiss Software Companies Go

Figure 26 shows where employees who leave Swiss software companies primarily go. Interestingly, 48.3% of respondents indicated that employees who left them primarily went to employers who were neither competitors nor customers. Only 26.9% of respondents indicated that their employees primarily went to their customers and 22.9% indicated that their employees primarily went to their competitors.

Figure 27 shows how the destinations of leaving employees correlate with the perceived war for talent of the companies concerned. While there is no correlation between companies that lose employees primarily due to non-work reasons or to employers that are neither competitors nor customers and the perceived war for talent, there is a strong correlation between companies that lose employees primarily to customers and/or competitors and the perceived war for talent.

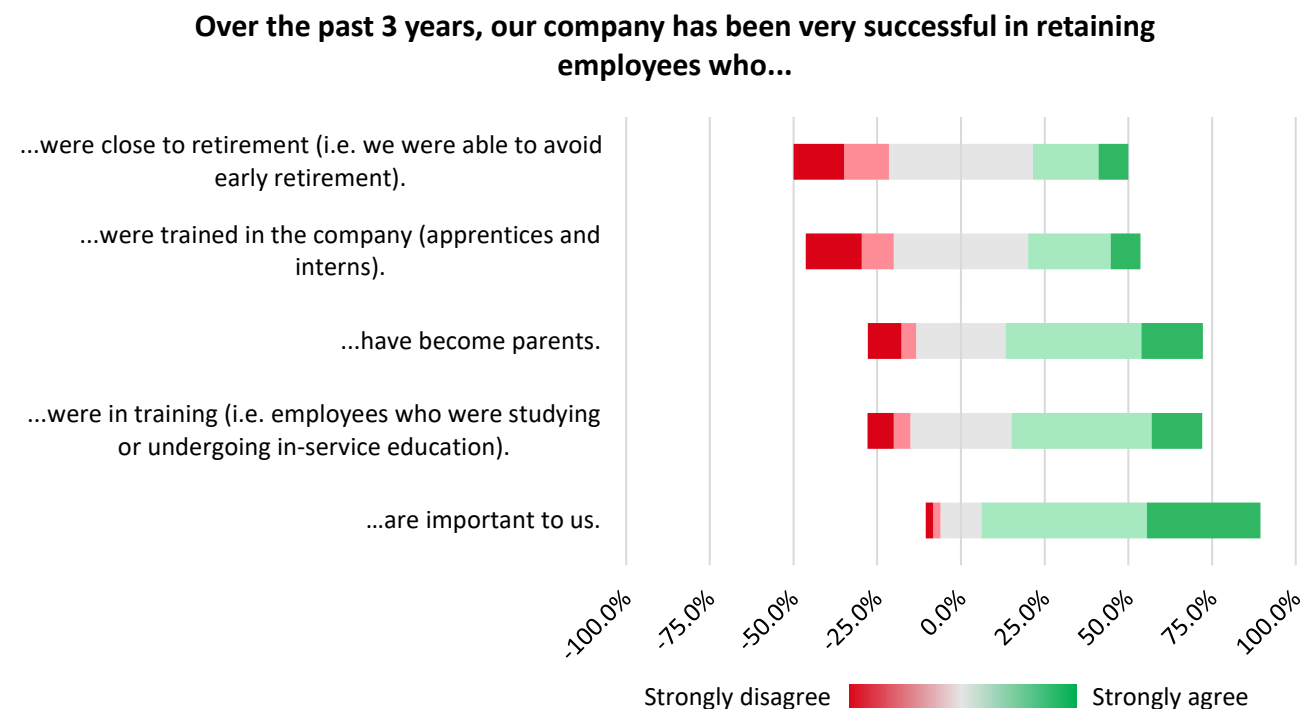
The Impact of the Leavers Destinations

Figure 27: The Impact of the leavers destination on the perceived war for talent



Employee Retention

Figure 28: Which employees Swiss software companies were able to retain



Source: SSIS 2022

N = 184

Among Swiss software companies

83.3%

successfully retained employees who are important to them

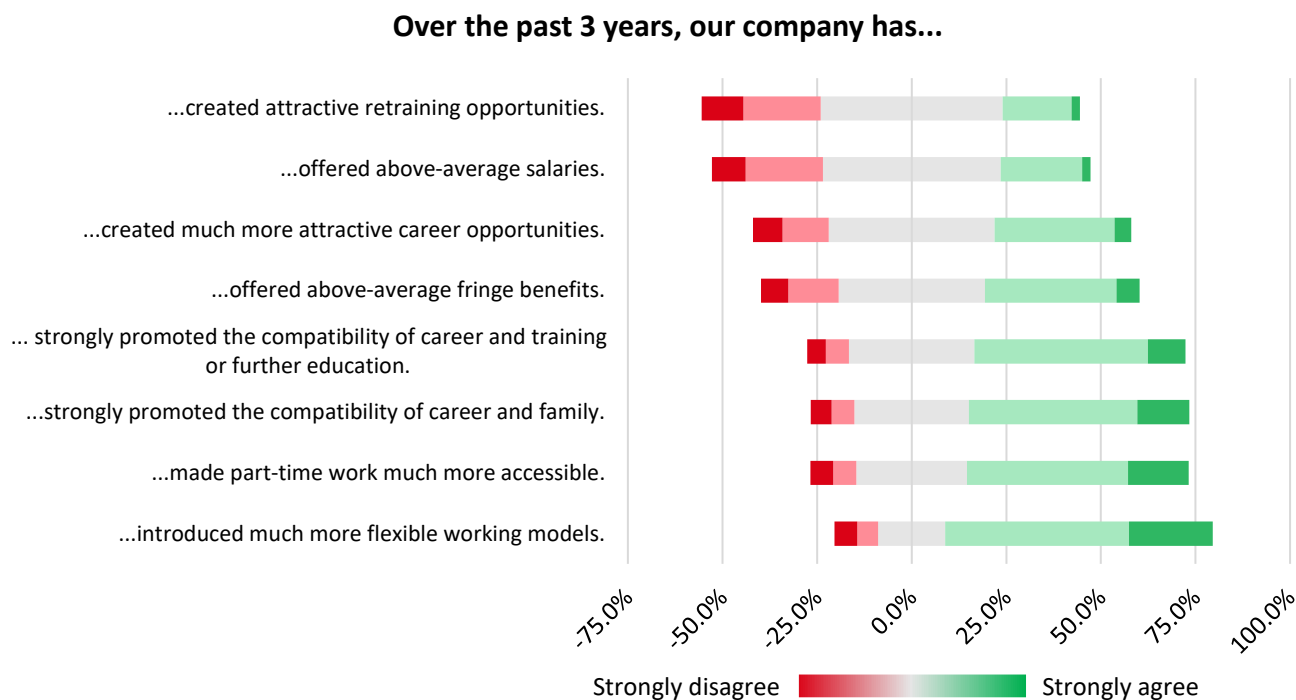
Swiss Software Companies Are Successful in Retaining Important Employees

One of the strategies for dealing with the increasingly fierce war for talent is to retain employees - as is the case in the Swiss software industry. As shown in Figure 28, Swiss software companies have succeeded in doing this over the past three years, particularly with employees who are important to them. In fact, 83.3% of the respondents were able to retain important employees. Swiss software companies were also successful in retaining employees who were in training (57% of respondents indicated that they successfully retained such employees in the past three years) and employees

who recently became parents (58.9% of respondents indicated that they successfully retained such employees in the past three years). Swiss software companies experienced more difficulty in retaining apprentices. Here, only 33.5% of respondents stated that they had successfully retained such employees in the past three years, while 26.3% had explicitly struggled. A major challenge for the respondents was the retention of employees who were close to retirement. Here, 28.5% of respondents indicated that they had difficulty in retaining such employees.

Employee Retention Measures

Figure 29: Measures taken by Swiss software companies to retain employees



Source: SSIS 2022

N = 184

Among Swiss software companies

70.7%

introduced more flexible working models in the past 3 years

Flexibility as the Chosen Means to Retention

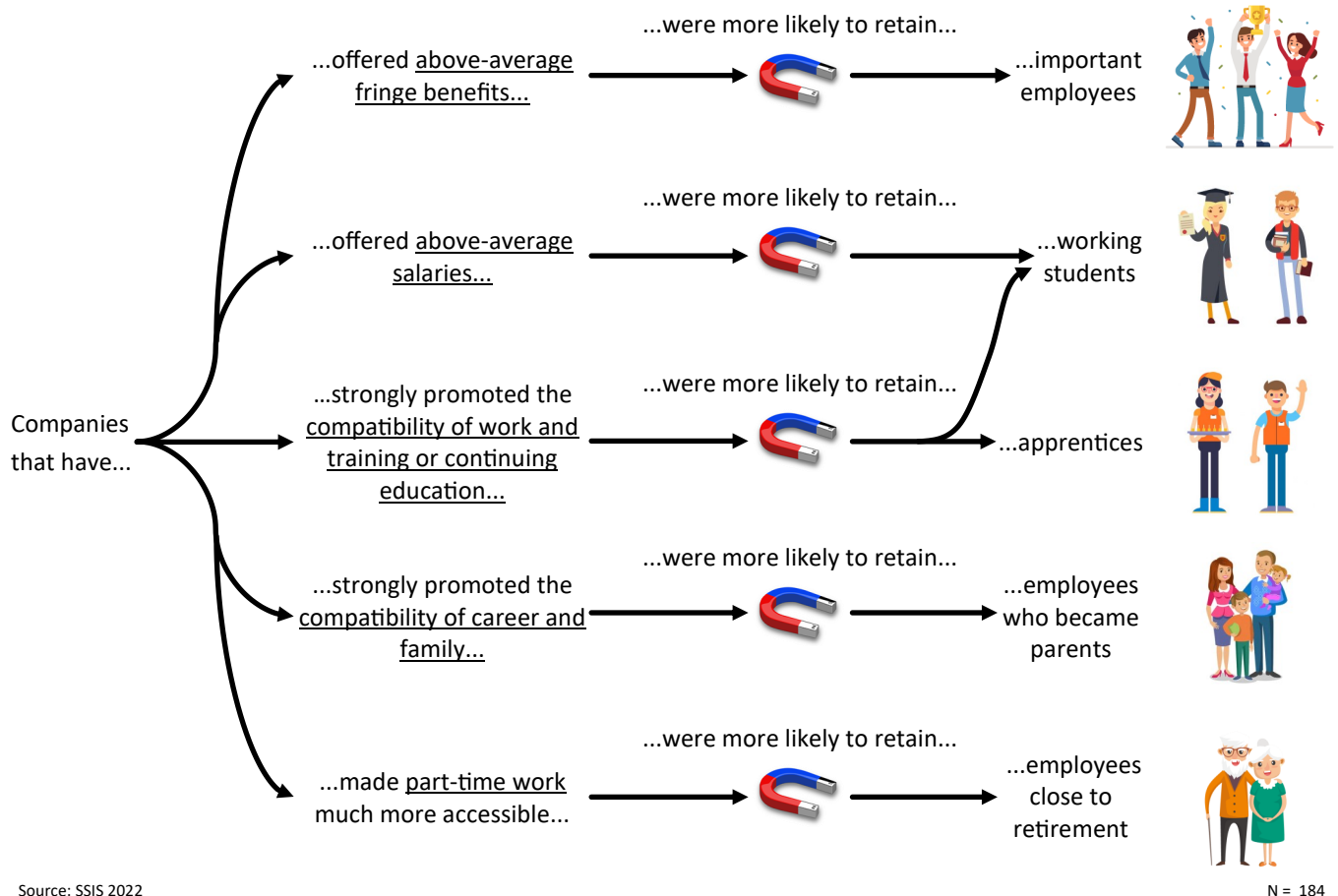
The measures for retaining employees are diverse. Figure 29 illustrates which specific measures Swiss software companies have mainly taken in the last three years to retain their employees.

By far the most important measure was the introduction of more flexible working models. 70.7% of respondents indicated that they had done precisely this in the last 3 years. This is followed at some distance by the facilitation of part-time work (58.6% of respondents), the promotion of the compatibility of work and family

(58.2% of respondents), and the promotion of the compatibility of work and training or further education (58.7% of respondents). A considerable number of Swiss software companies invested in above-average fringe benefits (40.9% of respondents) and more attractive career paths (36.1% of respondents). Interestingly, comparatively invested in above-average salaries (23.8% of respondents) or attractive training and retraining opportunities (20.4% of respondents) to retain employees.

Successful Retention Measures for Specific Employee Groups

Figure 30: Which companies were able to retain which groups of employees and by what measures



Swiss software companies that relied on

Fringe Benefits

were the most successful in retaining important employees

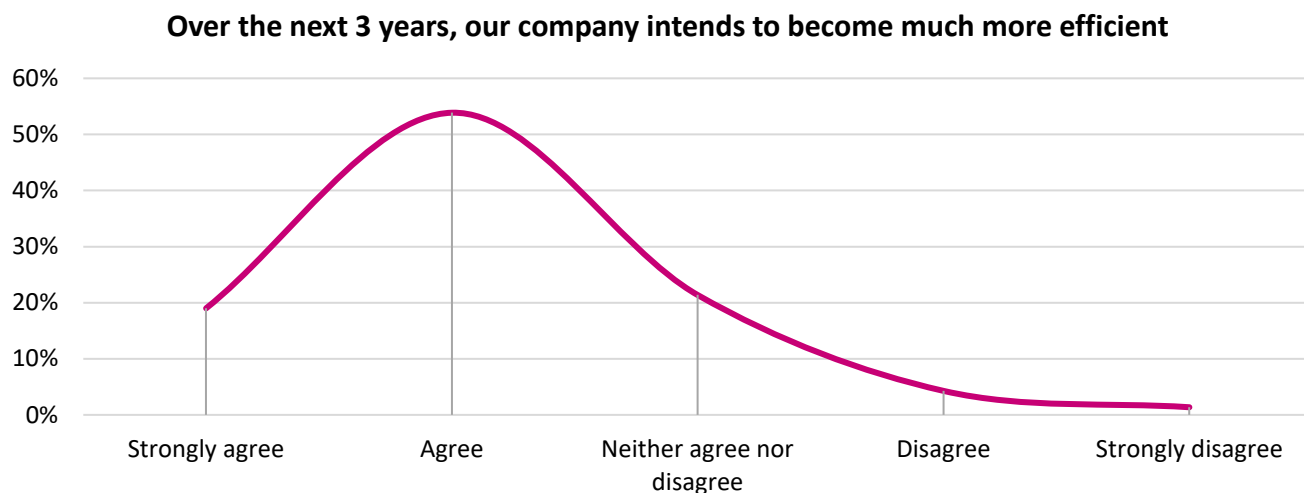
To Retain Important Employees, Attractive Fringe Benefits are Imperative

Retention measures say little about their effectiveness. Therefore, Figure 30 illustrates the correlations between retention measures and the retention of specific employee groups. In other words, Figure 30 reveals the measures that best helped to retain specific employee groups. For important employees, these are fringe benefits. That is, Swiss software companies that have invested primarily in above-average fringe benefits over the past three years were more successful in retaining employees who are important to them. Working students were best retained by companies that have

invested in above-average salaries and the compatibility of work and training or continuing education. Apprentices were best retained by companies that have invested in the compatibility of work and training or continuing education. Employees who became parents were best retained by companies that have invested in the compatibility of career and family. While employees close to retirement were best retained by companies that have made part-time work much more accessible.

Intended Efficiency Increase

Figure 31: The intended efficiency increase among Swiss software companies over the next three years



Source: SSIS 2022

N = 184

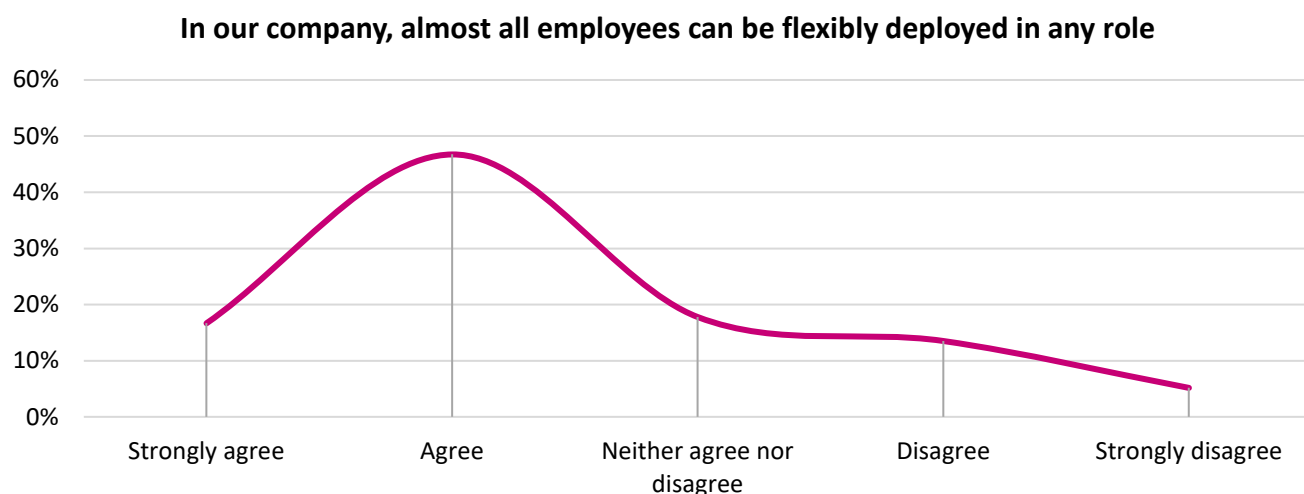
Efficiency Increase with a Flexible Workforce

Figure 32 shows the intended increase in efficiency of Swiss software companies over the next three years. 72.9 % of the respondents intend to become more efficient or even much more efficient in the next three years. In contrast, only 5.7% of the companies surveyed do not intend to increase efficiency.

Figure 33 shows the perceived flexibility of employees in Swiss software companies. 63.5 % of the respondents consider their employees to be flexible. This means that these companies believe that their employees are able to quickly acquire the skills they need, quickly learn how to use new technologies, or even perform any given task within the company. Still, 18.7% consider their employees to be not flexible.

Employee Flexibility

Figure 32: The perceived flexibility of employees in Swiss software companies

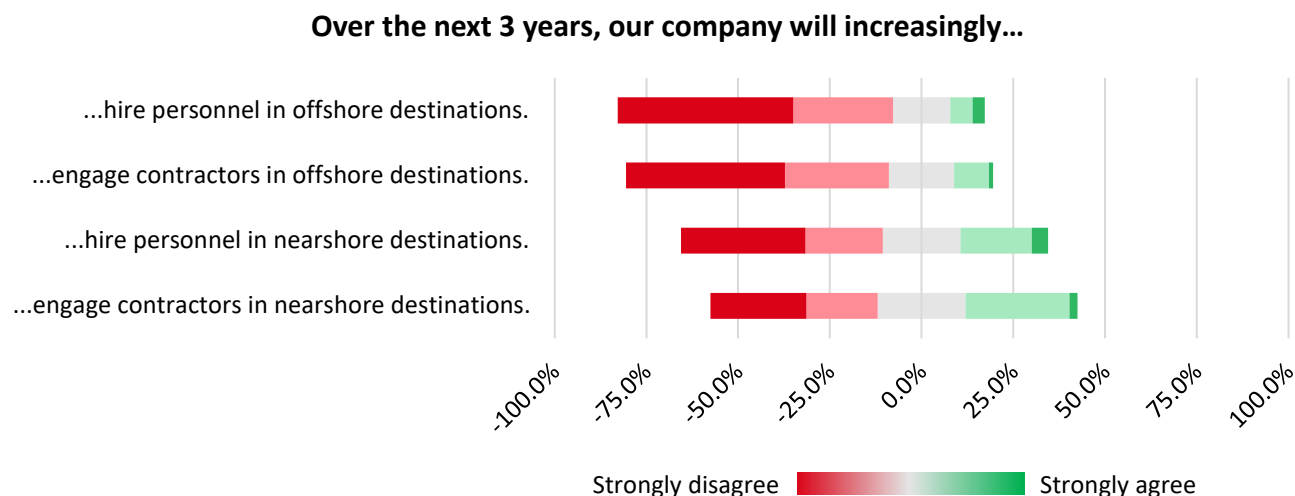


Source: SSIS 2022

N = 184

Intention to Outsource

Figure 33: The intention of Swiss software companies to outsource in the next three years



Source: SSIS 2022

N = 184

Outsourcing as (No) Way to Escape the War for Talent?

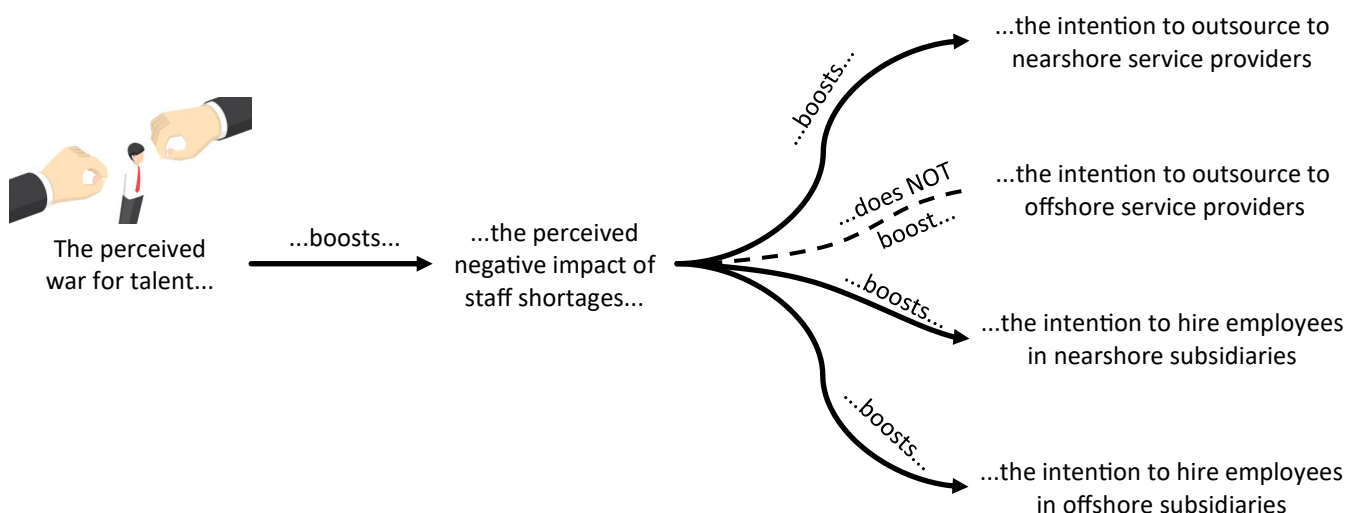
Figure 34 shows how likely it is that Swiss software companies will outsource to external service providers and/or subsidiaries in nearshore and offshore destinations over the next three years. 30.6% of respondents indicated that they are likely to outsource to nearshore providers, while 45.6% do not consider this an alternative. 23.9% are likely to hire staff in nearshore subsidiaries, while 55% do not consider this an alternative. 10.6% are likely to outsource to offshore firms, while 71.7% do not

consider this a real alternative. Solely 9.4% are likely to hire staff in offshore subsidiaries, while 75% do not consider this option.

Figure 35 illustrates that companies that perceived the war for talent more acutely not only felt the impact of staff shortages more acutely, but are also more likely to outsource to nearshore service providers or hire staff in nearshore or offshore destinations.

The War for Talent and Sourcing Strategies

Figure 34: Which companies are more likely to outsource



Source: SSIS 2022

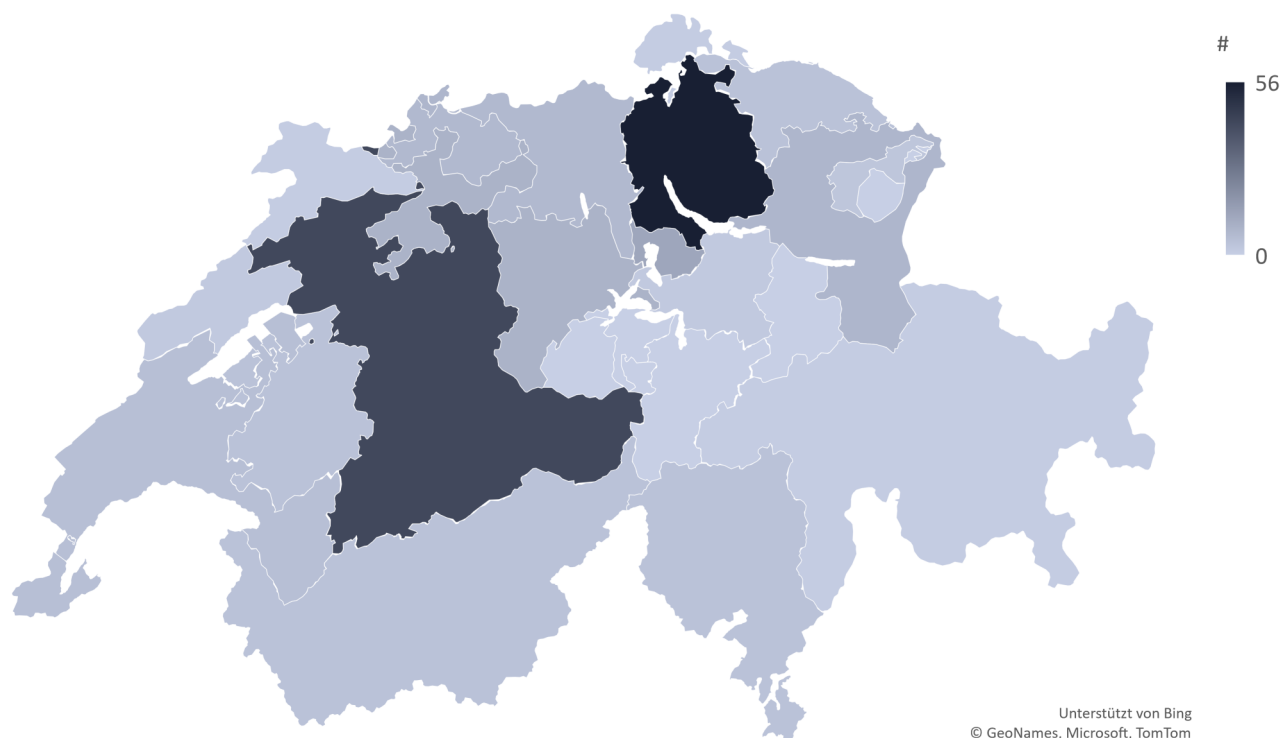
N = 184

Method and Official Statistics

About the SSIS

Geographical Distribution of the Participants in 2021

Figure 35: Participating companies per canton



Source: SSIS 2022

N = 426

About the SSIS in 2022

This year we conducted the Swiss Software Industry Survey (SSIS) for the sixth time. With the sixth iteration, the SSIS managed to defend its pole position in terms of size, geographical reach, and methodological rigor:

Reach of the survey: The Swiss software industry survey aims to represent the entire Swiss software industry—rather than only a couple of large companies. Therefore, the SSIS...

- ...builds on an extended and refined high-quality contact database with approximately 4'500 validated Swiss software companies
- ...covers all Swiss language regions
- ...and builds on a large sample size with 321 participants, 131 post-stratified data points on revenue and profitability

Rigor of the survey: To meet highest research standards...

- ...we developed, refined, and assessed new constructs by following state-of-the-art procedures for construct development
- ...we relied on the extrapolation method, which builds on state-of-the-art econometrical procedures (post-stratification by region, sub-industries, company size, and revenue)

Additional benefits for participating companies: All participants of the survey can compare their own performance against other companies using our benchmarking website. In addition, companies which participate regularly can now benchmark their performance over time (www.softwareindustrysurvey.ch).

Official Statistics - Employees and Added Value

Table 1: Distribution of Added Value in 2020 and distribution of Full-Time Equivalents in 2021 by industry

Sections	Added Value	FTE
Mining and quarrying	0.13%	0.11%
Manufacturing	18.42%	15.50%
Energy supply, water supply, waste management	1.99%	1.13%
Construction	5.23%	8.28%
Trade; repair of motor vehicles and motorcycles	14.56%	12.95%
Transportation, storage, information and communication	5.17%	6.54%
Accommodation and food service activities	1.23%	4.45%
IT and other information services	3.07%	2.72%
Financial service activities	5.70%	2.65%
Insurance	4.33%	1.06%
Real estate activities, professional, scientific, technical and administrative activities	18.54%	16.51%
Public administration	11.03%	4.29%
Education	0.61%	6.14%
Human health and social work activities	8.12%	13.72%
Arts, entertainment, recreation and other services	1.88%	3.97%

Source: BESTA , Added Value 2020, FTEs 2021

The SSIS as Complement to Official Statistics

Data about the Swiss software industry is provided as part of official statistics nested in the broad categories of “Computer programming, consultancy and related activities” and “Information service activities” (NOGA codes 62 & 63).

The data on added value (i.e., revenue) and FTEs (i.e., number of full time equivalents) provided by the Federal Statistical Office emphasize the major importance of the local Information Technology and Information Services sector. With more than 20 billion Swiss francs it adds 3.07% to the Swiss GDP (see Table 1) and employs 2.72% of all jobholders in Switzerland, and is one of the strongest growing sectors.

These official statistics provide reliable information about the size and growth of the IT sector. Yet, they do not draw a detailed picture about the software industry.

Therefore, the SSIS positions itself as a complementary study that enriches official statistics. Compatibility with official statistics is ensured by focusing on two NOGA codes (62, 63). Yet, we provide a richer picture of what is going on within these codes. Specifically, the report enables the following additional insights:

- ◆ Trend analysis of key performance indicators incl. EBIT, EBITDA, R&D expenditure, employee growth, and revenue growth
- ◆ Indicators on profitability
- ◆ Analyses along practically relevant categories (standard vs. custom software, maintenance vs. testing, etc.).