



KOF Bulletin

No. 109, July/August 2017

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EDITORIAL

Dear readers,

Part-time work is considered a good thing, after all it allows working mothers to reconcile family and career. However, according to the first article of this month's Bulletin, part-time work can also act as a career barrier, discriminating against women in part-time positions. The second article presents the results of the latest KOF Investment Survey, which shows that the respondents plan to expand their investment activities by around six per cent this year. In the third article, we investigate the impact of competition-based financing on universities' productivity. According to one of the study's findings, public international funds reduce the productivity of the top-performing universities, indicating a significant administrative expense caused by competition-based financing.

We hope you enjoy reading the newsletter and wish you a nice summer. The next Bulletin will be published in early September.

David Iselin, Solenn Le Goff and Anne Stücker

ECONOMY AND RESEARCH

Does Part-Time Work Increase Gender Inequality on the Labour Market?



Although the prevalence of part-time work among women facilitates their involvement into the labour market, it also has its downsides. Part-time work represents a career barrier, cementing inequality between the sexes. Childcare is the main reason why women opt for part-time work. A larger range of childcare facilities and more part-time executive positions for women and men would mitigate the problem.

Part-time work prevalent among women

In the period from 1970 to 2016, the proportion of employees working on a part-time basis rose from 12 per cent to 35 per cent. The trend towards part-time work in Switzerland applies both to women and to men, although the differences in levels are enormous: male part-time employees account for 16 per cent, female part-timers for 57 per cent. The Netherlands are the only OECD (Organisation for Economic Cooperation and Development) country with a higher percentage of women in part-time employment than Switzerland. Where men are concerned, Switzerland is just above the OECD average.

Part-time work as career barrier

Generally, the trend towards part-time work is seen as a positive development since it promotes compatibility of family and career, and contributes towards the integration of women into the labour market. Part-time work can, however, also have negative effects. Where executive positions are linked to full-time jobs, it can be a career obstacle. A descriptive evaluation of the Swiss Labour Force Survey (SAKE) supports this assumption: 87 per cent of executives in medium-sized and big companies hold full-time positions. As few as two per cent work at employment levels below 50 per cent. The same is true for management

T 1: Probability of Holding an Executive Position in a Medium-Sized or Big Company (20 Staff Members or More)

	Model 1	Model 2	Model 3
Man	Ref. cat.	Ref. cat.	Ref. cat.
Woman	-0.064***	-0.05***	-0.028***
Incl. control variables	No	Yes	Yes
Incl. level of employment	No	No	Yes
No. observ. (unweighted)	126 979	126 640	126 016
Control variables: Age, nationality, education level, industry, job tenure			
No freelancers, employed fam. members or apprentices			
Weighted probit regression with robust standard errors clustered by person			
Presentation of marginal effects			

*** p<0.01

Source: FSO, Swiss Labour Force Survey 2010–2015

positions below the executive level. The data also show that women are significantly underrepresented in executive positions. This begs the question to what degree part-time work explains their underrepresentation.

Part-time work entrenches gender inequality

To answer the question, the researchers prepared an estimate of the impact gender has on the probability of holding an executive position (see T 1). On average, 11.6 per cent of men and 5.2 per cent of women are members of the company management. The difference amounts to 6.4 percentage points (Model 1). Where comparative analysis is carried out between women and men of the same age, level of education, nationality and job tenure, in the same industry, the average difference is five percentage points (Model 2). A portion of the original difference is thus explained by the above characteristics. Once the level of employment is added as a further variable, the disadvantage suffered by women is reduced by a further 2.2 percentage points down to 2.8 (Model 3). Hence, one-third of women's underrepresentation in executive jobs is explained by their high proportion in part-time employment.

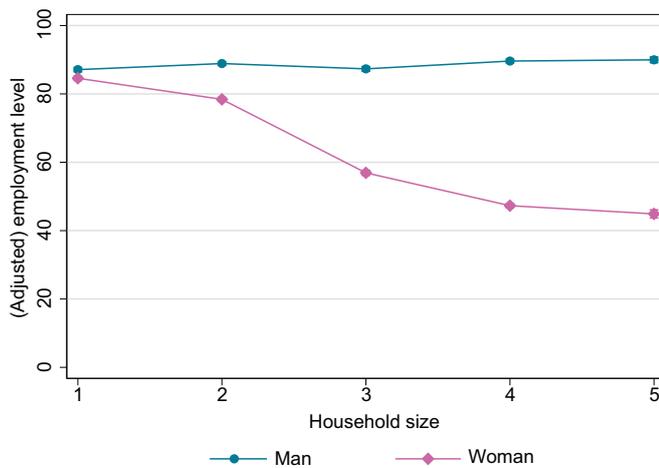
Childcare is main reason for part-time employment

Why do so many women work part-time? In the SAKE survey, one-third of the women state that childcare is their main reason, while a further 16 per cent state other family-related reasons. Graph G 1, which shows the average employment level by gender and household size, presents the relevance of childcare to the prevalence of part-time work among women in the comparison of employees of the same age, education level and nationality in the same industry. The employment level of men is not affected, or even positively affected, by the presence of further household members. In contrast, the employment level of women, which starts off the same as men, declines from 85 per cent in single households to 45 per cent in households with five members.

Lack of (affordable) childcare facilities

The fact that women, in particular, reduce their working hours when they have children is associated with traditional role models. However, as long as women continue to earn less than men, this decision also makes sense at the financial level. Many women among the SAKE respondents state

G 1: Employment Level by Gender and Household Size



Note: The graph reflects the average employment level of men and women between the ages of 25 and 50 for various household sizes. Personal characteristics, such as age, education and nationality as well as industry were controlled. Unemployed persons and inactive persons are included with a zero employment level.

Source: FSO, Swiss Labour Market Survey 2010–2015.

that it is the lack of (affordable) childcare that forces them to withdraw from the labour market to look after the children. In comparison to other countries, there is room for improvement in Switzerland. Since the public sector's contributions to childcare costs are below-average, families in Switzerland pay a higher than average share of the costs.

Conclusions

A number of conditions must be met to guarantee that people have real choices in terms of their employment level. Employees in full-time positions must be able to achieve a good work-life balance, which depends on the public sector providing an affordable and comprehensive childcare infrastructure. Furthermore, the bias against part-time employees that keeps them from holding executive positions must be removed. Part-time positions should become commonplace at all management levels – both for women and men. The classic division of roles where household and childcare responsibilities are concerned must be challenged if gender equality is to improve.

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The KOF Spezialanalyse 'Verstärkt Teilzeitarbeit die Geschlechterungleichheit auf dem Arbeitsmarkt?' by Daniel Kopp can be found on the website: www.kof.ethz.ch/en →

KOF Investment Survey: Companies Revise Up 2017 Investment Plans

According to the results of the semi-annual KOF Investment Survey, total investments by Swiss companies are set to rise in 2017. The respondents are planning to expand investment activities by around six per cent this year. This represents a slight upward correction of investment plans compared to the last Investment Survey.

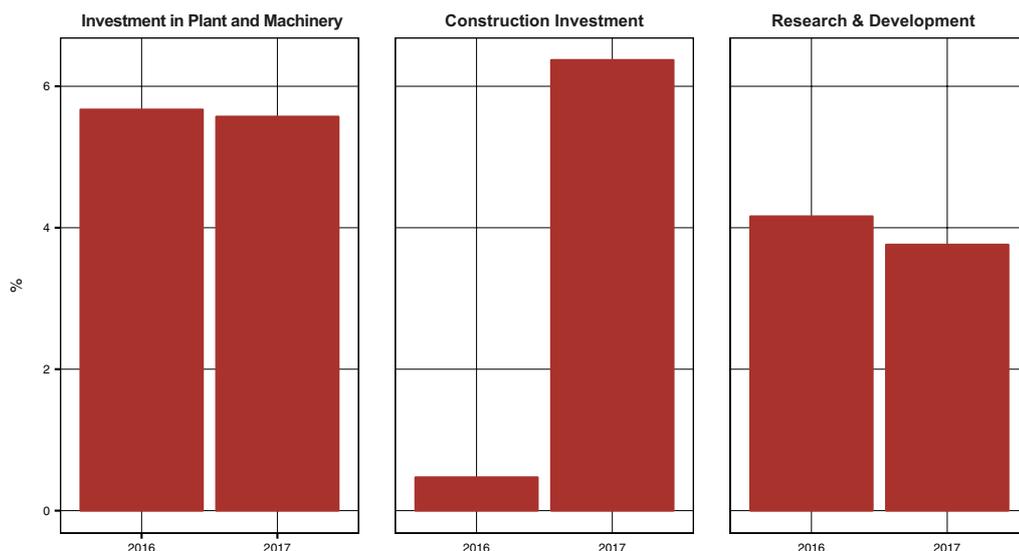
After completion of the Investment Survey which was conducted in spring 2017 we now have a second set of figures on investment plans for the year 2017. The respondents had already been surveyed on their expected 2017 investment activities last autumn. At the time, they anticipated an increase in investment activities of around five per cent, with industry and construction being the main drivers. According to the current results, the companies have adjusted their expectations and are now anticipating slightly higher investment dynamics of around six per cent in 2017. There has been a minor shift among the sectors. While investment activities in the industrial and construction sectors may be slightly less dynamic than expected in autumn, the service sector revised up its expectations. In 2018, the companies expect a further rise in investment activities. However, according to the current survey, this increase will be much more moderate than in 2017.

Service providers drive gross investment

This year, industry is likely to record solid growth in investments. Compared to autumn 2016, the respondents expect slightly slower gross investment growth of around four per cent (autumn survey: 5%). Construction investments are set to expand by two per cent and investments in plant and machinery (excluding R&D) by up to five per cent. Research and development expenditure will rise by around three per cent. The biggest increase in investment is planned by the textile industry as well as the chemical and pharmaceutical industries. Paper and print product manufacturers and metal product producers report the largest expected decline in investments.

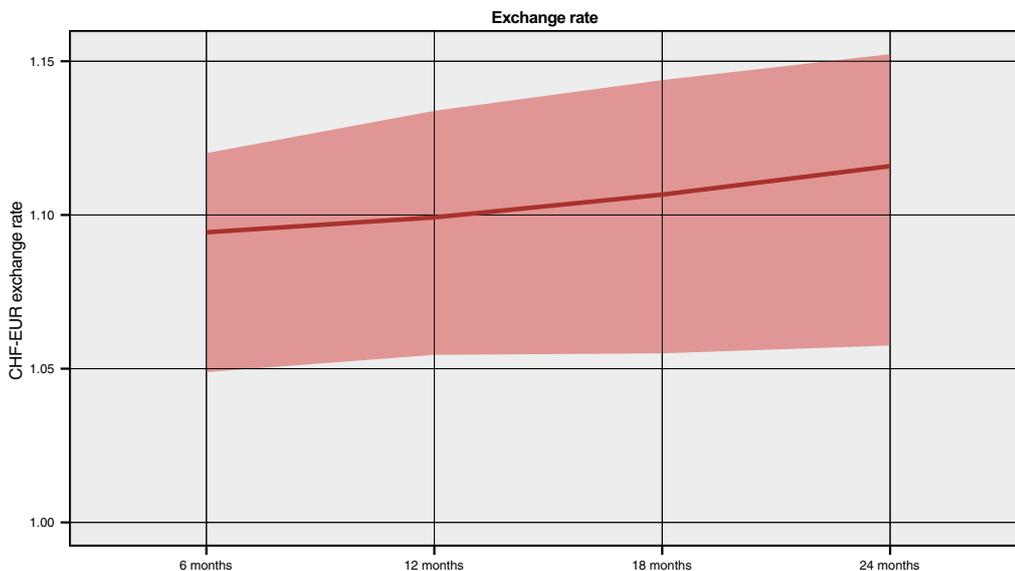
As well as industry, the increase in macroeconomic private investments is also driven by positive dynamics in the tertiary sector. There has been a significant upward revision of

G 2: In/decrease in Investments in 2016 and 2017 by Investment Type
(calculated on the basis of the quantitative responses in the spring 2017 survey)



G 3: Companies' Exchange Rate Expectations

(The shaded area indicates the most probable range in which the companies expect the exchange rate to be. The unbroken line shows the value that is assumed to be the most likely exchange rate)



expected 2017 investments in the service sector. Gross investments in this area are set to rise by just under seven per cent (autumn: 4%). The biggest rates of change are reported by telecommunications as well as banks and financial service providers. Transport also expects a high growth rate. In contrast, investments in the distributive trades (cars, retail and wholesale) are declining. The construction industry is slightly less optimistic about its 2017 investment activities than industry and services. According to the respondents, gross investments are likely to rise by around three per cent this year, driven exclusively by the main construction trades. Companies in the conversion business plan to reduce their investments this year.

Companies anticipate slight devaluation

Aside from questions regarding companies' investment activities, the KOF Investment Survey in spring also includes a question regarding the future development of the exchange rate. In this context, KOF asks the companies about their subjective exchange rate expectations. In specific, the companies are asked to state the upper and lower limits of a target range in which the Swiss franc to euro exchange rate will most likely be in the coming 6, 12, 18 and 24 months. Subsequently, the companies are asked to indicate the figure within the range they consider most likely.

According to the current survey results, the companies expect a Swiss franc to euro exchange rate of around 1.09 in the coming two years. With the exchange rate fluctuating around 1.07 during the main survey response period in March and April, the companies anticipated a slight devaluation. According to the survey results, in March and April the companies anticipated an exchange rate of 1.08 in six months and a slightly weaker rate of 1.09 in two years. However, on the whole, the companies' expectations are dominated by significant insecurity regarding the actual exchange rate, which is reflected by the wide spread. The average limits of the target ranges stated by the companies indicate expectations of an exchange rate between 1.04 and 1.12 in two years' time.

Over 2,700 companies took part in the KOF Investment Survey in spring 2017.

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You can find more information about the KOF Investment Survey on our website:

www.kof.ethz.ch/en/surveys/business-tendency-surveys/investment-survey.ch →

How Does Competitive Funding Affect the Productivity of Universities?

Universities worldwide increasingly rely on funding they have to acquire in competition with others rather than on funding they are being granted as block-grant. However, little is known with respect to how competitive funding affects the behaviour of universities. Therefore, this study analyses how tuition fees, international public funds and private funds influence the productivity of the most productive universities and whether they force peers to catch up with others or rather decrease their ability to compete.

How can competitive funding affect productivity?

Competitive funding can affect productivity through three channels: the administration effect, the competition effect and the sorting effect. The administration effect arises because competitive funding requires universities to invest time and money in reporting how the funding has been used and what outputs have been produced. Since these costs arise for all universities alike, the administration effect decreases the productivity of all universities. Hence, this decreases the productivity of the most productive universities but has no effect on the distance of peers to the most productive university since it reduces the productivity of the less productive peers as well.

Finally, the sorting effect arises because competitive funding intensifies sorting of good students and staff into the most productive universities. Since teaching good students might be easier and because good staff is more productive, the best universities become more productive. Simultaneously, however, the decrease in student and staff quality increases the distance of peers to the most productive university.

Table 2 summarises these arguments by showing how the administration, competition and sorting effect impact the productivity of the most productive universities and their distance to less productive peers. Since the relevance of

T 2: Summary of Potential Channels

	Administration Effect	Competition Effect	Sorting Effect	Total
Most Productive University	-	+	+	?
Distance of Peers	0	-	+	?

The competition effect represents the general justification for introducing competitive funding. It argues that competition for funding limits the ability of universities to pursue their own goal, forcing them to become more productive. Hence, the competition effect increases productivity of all universities. However, assuming that the most productive universities face substantial competition from their international peers, independent of the funding mode, suggests that the competition effect is particularly strong for the less productive universities, forcing them to catch up and reduce the distance to the most productive universities.

these three channels remains unknown, the total effect can take either direction. However, differentiating between the effect on the most productive university and its peers allows researchers to discern the relative strength of the three channels.

Which data are used?

The study uses data from universities in eight European countries between 1994 and 2006. The simple production function assumes that professors, other research staff and administrative staff work together in teaching students and publishing research publications.

What do the results show?

The results suggest that international public funds decrease the productivity of the best performing universities, which suggests a non-negligible effect because of the administrative burden induced by competitive funding. This highlights the relevance of optimising the administrative process of competitive funding in a way that reduces these costs. However, competition for international public funds also disciplines universities, as evidenced by a decrease in the distance of peers to the most productive university. Conversely, tuition fees enhance the productivity of the best performing universities, but increase the distance to universities with lower productivity, which suggests a strong sorting effect. This highlights the relevance of accompanying tuition fees with scholarships to offset unintended consequences in terms of equity. Finally, the study finds no impact of private funding on the productivity of teaching

and research publications, though it might affect the productivity of technology transfer, an aspect which is not analysed in the study.

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Literatur

Bolli, T., M. Olivares, A. Bonaccorsi, C. Daraio, A.G. Aracil, and B. Lepori (2016): The Differential Effects of Competitive Funding on the Production Frontier and the Efficiency of Universities. *Economics of Education Review*, 52, 91–104.

<https://doi.org/10.1016/j.econedurev.2016.01.007> →

The Impact of Digitalisation in Switzerland – a Literature Study

According to a recent literature study on the effects of digitalisation in Switzerland, a positive impact should be expected at least in the longer run. In the short term, the main beneficiaries are companies that develop digitalisation technologies. In terms of employment, there is likely to be a change in required qualifications. All in all, the employment trend in Switzerland will be either positive or negative depending on the speed and efficiency with which companies, public institutions and employees respond to the new

requirements. On top of this, there will be heterogeneous effects on productivity and employment, not only across sectors but also within sectors, since the impact channels of digitalisation technologies have different effects on the type of service provision and, to some degree, service acquisition. These findings could support sector-specific, and perhaps company-specific, measures designed to maximise the positive effects and minimise the negative effects of digitalisation.



Developing technologies themselves – how companies can profit the most from digitalization in the short term.

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The KOF Studie No. 85 (in German) 'Identifikation und Bewertung von wirtschaftlichen Entwicklungen im Bereich Digitalisierung aufgrund vorhandener Literatur' (Identification and assessment of economic trends in the field of digitalisation based on current literature) by Benjamin Balsmeier and Martin Wörter can be found on the website:

<https://doi.org/10.3929/ethz-b-000166035> →

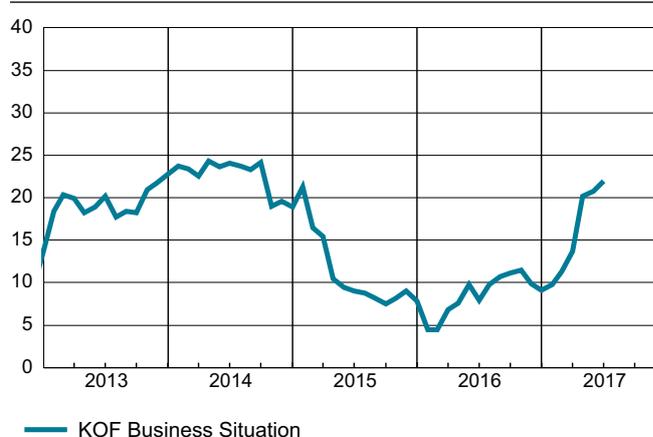
KOF INDICATORS

KOF Business Situation: Further Improvement

In June 2017, the KOF Business Situation Indicator for the Swiss private economy went up for the sixth consecutive time (see G 4). The companies' business situation has thus been gradually improving since the beginning of the year, reflecting the Swiss economy's solid upward trend.

With numerous sectors contributing to the improvement of the business situation, the rising trend has a broad basis. The upturn in the retail and manufacturing industries is significant, while the business situation in the construction sector and the financial and insurance sectors picked up slightly (see T 3). The situation in the project engineering sector is more or less stable. Wholesale, hotel and catering and the other service providers were last surveyed in April. At the time, the wholesalers and the other service providers reported a substantial improvement of their business situation. The indicator in the hotel and catering industry rose slightly.

G 4: KOF Business Situation Indicator
(balance, seasonally adjusted)



T 3: KOF Business Situation for Switzerland (seasonally adjusted balances)

	Jun 16	Jul 16	Aug 16	Sep 16	Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17	Apr 17	May 17	Jun 17
Private sector (overall)	7.9	9.8	10.7	11.1	11.5	9.9	9.1	9.8	11.3	13.7	20.2	20.8	22.0
Manufacturing	-4.9	-8.5	-8.0	-7.7	-5.9	-9.4	-8.6	-9.8	-7.8	-5.3	-1.5	-0.8	3.4
Construction	23.0	23.5	27.7	23.2	24.9	26.6	24.5	28.4	28.1	31.9	31.6	29.4	30.5
Project engineering	44.3	45.4	46.2	46.1	45.8	42.1	46.4	47.6	47.6	49.4	50.0	47.5	47.1
Retail trade	-9.5	-11.9	-10.5	-8.6	-7.5	-11.6	-9.3	-7.2	-9.5	-6.3	-3.2	-9.2	-1.9
Wholesale trade	-	3.7	-	-	3.4	-	-	-7.5	-	-	14.7	-	-
Financial services	15.5	18.2	22.8	23.0	24.5	21.9	17.8	21.6	31.5	33.1	32.8	38.9	39.7
Hotel and catering	-	-21.9	-	-	-17.1	-	-	-17.1	-	-	-16.4	-	-
Other services	-	23.7	-	-	21.9	-	-	26.4	-	-	35.6	-	-

Answers to the question: We assess our business situation as good/satisfactory/bad. The balance is the percentage of 'good' answers minus the percentage of 'bad' answers.

From a regional perspective, the business situation brightened up in the majority of the main FSO (Federal Statistics Office) regions, reflecting the improvement on a broader regional basis. The indicator rose in the FSO regions of Central Switzerland, North-West Switzerland, Eastern Switzerland, Espace Mittelland and the Lake Geneva region. The decline of the indicator in Ticino is the exception. However, in this region, the business situation indicator had risen significantly in the preceding month. The Zurich region reported little change in the situation in June. (see G 5).

Explanation of graphs

Graph G 4 shows the KOF business situation for all sectors of the economy covered by the survey. For sectors of the economy that are only surveyed quarterly, the business situation is maintained at the same level during the intervening months.

Graph G5 reports the business situation in the major regions used by the Federal Statistics Office. The regions are coloured differently depending on the business situation. The arrows within the regions indicate the change in the business situation compared to the previous month. An arrow pointing upwards means that the situation has improved compared to the previous month.

The KOF business situation is based on over 4,500 reports by Swiss companies. Every month, businesses are surveyed in the following sectors: industry, retail trade, construction and project engineering as well as financial and insurance services. Businesses in the hotel and catering sector, wholesalers and the other service providers are surveyed in the first month of every quarter. Among other questions, the businesses are asked to assess their current business situation. They may rate their situation as

G 5: KOF Business Situation in the Private Sector



The angle of the arrows reflects the change in the business situation compared to the previous month

Source: KOF

Net balances

■ 55 to 100	■ 30 to under 55	■ 16.5 to under 30
■ 9 to under 16.5	■ 5 to under 9	■ -5 to under 5
■ -9 to under -5	■ -16.5 to under -9	■ -30 to under -16.5
■ -55 to under -30	■ -100 to under -55	

‘good’, ‘satisfactory’ or ‘bad’. The balance of the current business situation is the percentage difference between the ‘good’ and ‘bad’ responses.

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You can find more information about the KOF Business Tendency Surveys on our website: www.kof.ethz.ch/en/surveys/business-tendency-surveys →

KOF Economic Barometer: Prospects Are Brightening Again

In June 2017, the KOF Economic Barometer rose by 3.5 points (from revised 102.0 in May) to 105.5 (see G 6). It has thus largely recovered from the substantial decrease in the previous month. Accordingly, the short-term outlook for the Swiss economy suggests above-average growth rates.

Last month, the KOF Economic Barometer, with a new reading of 105.5 points, stood visibly above its long-term average. The strongest impulses, contributing positively to the dynamics of the Barometer, stemmed from manufacturing. At the same time, the indicators of the construction sector as well as those for export development were having a slightly negative impact.

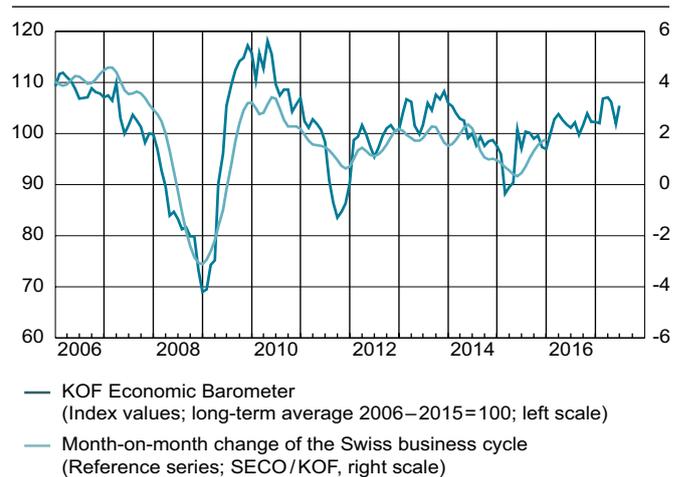
Within the manufacturing sector, the improved outlook manifested itself primarily in the wood-processing, food and metal industries. These positive dynamics were somewhat compensated by a more negative outlook by architects.

The improved sentiment in the manufacturing sector is primarily the result of a more optimistic judgment of the incoming orders in June 2017. However, it also reflects an improvement of the indicators for the overall business climate and competitiveness, which has increased again compared to the previous month.

KOF Economic Barometer and reference time series: annual update

In September 2016, the scheduled annual update of the KOF Economic Barometer took place. The annual update of the Barometer includes the following stages: redefinition of the pool of indicators that enter the selection procedure, update of the reference time series, a new execution of the variable selection procedure and a procedure to estimate missing monthly values of quarterly variables. The updated reference series is the smoothed continuous growth rate of Swiss GDP according to the new System of National Accounts ESVG 2010, released at the end of August 2015, which takes into account the release of the previous year's annual Gross Domestic Product (GDP) data by the Swiss

G 6: Economic Barometer and Reference Series



Federal Statistical Office. As a result of the indicator variable selection procedure, the updated KOF Economic Barometer is now based on 272 indicators (instead of 238 as in the previous vintage) from a pool of more than 400 potential indicator series. They are combined using statistically determined weights.

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For detailed information on the KOF Economic Barometer, visit our website:
www.kof.ethz.ch/en/forecasts-and-indicators/indicators/kof-economic-barometer →

AGENDA

KOF Events

KOF Forecast Conference Herbst 2017

Drohende wirtschaftliche Abschottung in der Welt – was sind die Aussichten für die Schweiz?

Donnerstag, 5. Oktober 2017, 17.45 Uhr

UBS Konferenzgebäude Grünenhof

Nüscherstrasse 9, 8001 Zürich

Gastreferenten:

Prof. Simon J. Evenett, Universität St. Gallen – SIAW –
Schweizerisches Institut für Aussenwirtschaft und

Angewandte Wirtschaftsforschung

Prof. Dr. Tobias Straumann, Universität Zürich,

Institut für Volkswirtschaftslehre, Historisches Seminar

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