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The Legacy of the Coronavirus Will Not Go Away Soon

Decoupling of Productivity from Wages: A Phenomenon of the Central European Manufacturing Core?

The Impact of Foreign Managers on Productivity in the United Kingdom

The Vienna Institute for International Economic Studies
Wiener Institut für Internationale Wirtschaftsvergleiche

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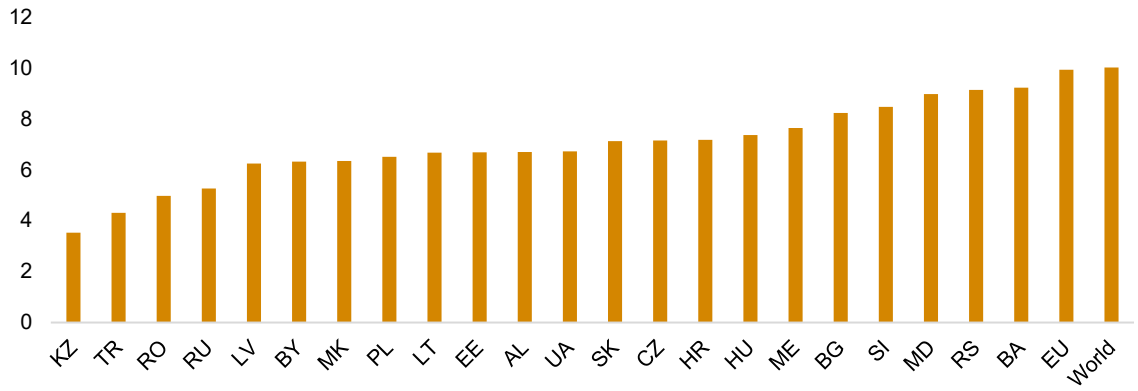
Chart of the month: Health expenditures in CESEE countries

BY VASILY ASTROV, RICHARD GRIEVESON AND BEATE MUCK

The current outbreak of the coronavirus naturally raises questions about the capacity of the healthcare systems of CESEE countries. In this context, it is interesting to look at the share of GDP spent on health, both privately and from public funds – see the chart below. One can see that in *all* CESEE countries, health expenditures are below the average for the EU and the world (which is around 10%). However, this is not surprising, as nearly all CESEEs are medium-income countries, where consumption is skewed more towards goods and less towards services. Furthermore, health services in CESEE countries tend to be much cheaper than in more advanced countries, which can be seen as one manifestation of the infamous 'Balassa-Samuelson effect'.

Current health expenditures in 2016, as % of GDP



Notes: The health expenditure estimates have been prepared by the World Health Organisation under the framework of the System of Health Accounts 2011 (SHA 2011). Estimates include healthcare goods and services consumed during each year, but not capital health expenditures such as buildings, machinery, IT and stocks of vaccines for emergencies or outbreaks. EU and the world: weighted averages, data for Kosovo not available.
Source: World Bank, WDI Database.

The low share of health expenditures in GDP should not be seen as the sole criterion of resilience in the face of the coronavirus. Factors which arguably matter more include geographical location (i.e. proximity to the hotbeds of the virus, such as China, Iran and Italy) and the government measures implemented to prevent the spread of the virus. In economic terms, it is not so much the epidemiological situation within the CESEE countries themselves, but their degree of openness and, especially, the structure of their economies which seem to be decisive at the moment. For instance, CESEE countries that rely heavily on tourism (Croatia, Montenegro, Albania) and energy production (Russia, Kazakhstan) are likely to be disproportionately affected by the global coronavirus epidemics. Given its fragility on the external front, Turkey is likely to suffer if there is a panic in the global financial markets and an accompanying 'flight to safety' away from emerging markets.[1]

[1] For more on this, see wiiw, *Forecast Report, Spring 2020*.

Opinion Corner*: The legacy of the coronavirus will not go away soon

BY JOSEF PÖSCHL[1]

Because of the coronavirus pandemic, Austria's borders with neighbouring countries are closed. In fact, they are tighter now than ever before, because – unlike in the 'iron curtain' period – no visa allows the borders to be crossed. This is definitely not something I expected to experience in my lifetime.

However, these developments should not come as a surprise. A world population of nearly 8 billion people with strong cross-border mobility is like a crowded laying hen farm, to put it in agricultural terms. I always knew that a new virus could suddenly appear, which would decimate the population stock. The current coronavirus, if it does not mutate for the worse, is something of a mild warning. Maybe it will give humanity a chance to become aware of the danger and be better equipped.

When the spread of the virus will be 'defused' is difficult to predict. By 'defused', I mean a state in which the incidence of serious illness and death is reduced to a level that does not stretch the capacity of hospitals and the funeral industry. In China, this has been a problem; in Italy, it is one at present. Other governments hope to be able to prevent similar bottlenecks from occurring in their countries. Even if they succeed, it will still not be possible to restore their economies and everyday living conditions without a struggle – after all, the number of cases of illness could increase again at any time. The threat will be over once a large proportion of people have come into contact with the virus, so that their immune systems are familiar with it. It is crucial that this contact does not occur explosively within a few weeks, but gradually over a longer period of time. This also increases the chance that an effective vaccine will become available.

This year, the economies of most countries will shrink for the following reasons. All components of private demand will decline: private consumption, private investment and exports. Public consumption will increase because of the additional state spending to combat the crisis, but governments will tend to cut back on investments. That is the demand side. There is also a shock on the supply side: many companies will go bankrupt and others will have to cut back production because of problems on the input side – these will not disappear very quickly either.

What will be the longer-term economic and political consequences of the coronavirus pandemic? Most likely, prime ministers will appear before the camera with a serious face and point out with the greatest regret that the fight against the pandemic has increased public debt to an unbearable extent and that the only way to save the welfare state is to make it 'leaner': reducing pensions, unemployment benefits and other social expenditure, increasing the deductibles on medical services, tuition fees, etc. At the same time, they will say that an increase in the VAT rate is essential, as well as a reduction in business taxes

* Disclaimer: The views expressed in the Opinion Corner section of the Monthly Report are exclusively those of the authors and do not necessarily represent the official view of wiiw.

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– after all, they will say, it is urgently necessary to boost the economy. Ordinary people will suffer as a result and, out of pent-up anger at politics, even more than before, will tend to give their votes to right-wing extremist saviours.

Is this too black a picture? I do hope so…

Decoupling of productivity from wages: a phenomenon of the Central European manufacturing core?

BY JORIS M. SCHRÖDER

The question of whether wage growth has been keeping up with productivity growth has sparked a debate about potential 'decoupling' in EU-CEE countries. There is strong cross-country variation in the extent of wage-productivity decoupling, and in the underlying reasons for it, but patterns are related to countries' industry structures.

'A rising tide should lift all boats' has been one of the central claims in the extensive debate on the decoupling of productivity growth from wage growth in the US (Economic Policy Institute, 2019). As labour productivity grows, so should the 'typical' worker's compensation (measured by median compensation). But at least in the case of the US, the two measures started to decouple in the 1970s.

Most of the EU-CEE11[1] countries have experienced growth in labour productivity following their integration into the EU and the euro area (Leitner & Stehrer, 2019). However, trickle down of increased labour productivity to local workers in the form of compensation and wage growth has been questioned (Bohle, 2018). Recent analyses show that the extent of decoupling between labour productivity and wages varies strongly between EU-CEE11 countries, but provide little explanation as to why the gains in productivity are (not) fully passed on to compensation growth, and why in some countries more than in others (Theodoropoulou, 2019).

WHAT UNDERLIES PRODUCTIVITY-WAGE DECOUPLING?

Debates about the 'true' extent of decoupling within individual countries have revealed that assessments of this are heavily dependent on the choice of indicators. However, the indicators that are chosen do not merely reflect measurement issues, but also illuminate different aspects and underlying reasons for a divergence between productivity growth and wage growth.

In the literature, four factors emerge as the most important in explaining the decoupling of labour productivity from the typical worker's gains from employment (see Figure 1).

› The first factor underlying decoupling is the divergence between labour productivity and average compensation over time, when both are deflated with the GDP deflator (GDPD). This is equivalent to a change in the labour share (Stansbury & Summers, 2018). The falling labour share of income is often attributed to technological advances, trade, institutions or 'superstar firms' (Autor et al., 2020; Karabarbounis & Neiman, 2014). Since 1975, the mining, transport and manufacturing sectors have globally experienced the biggest declines in the labour share (Karabarbounis & Neiman, 2014).

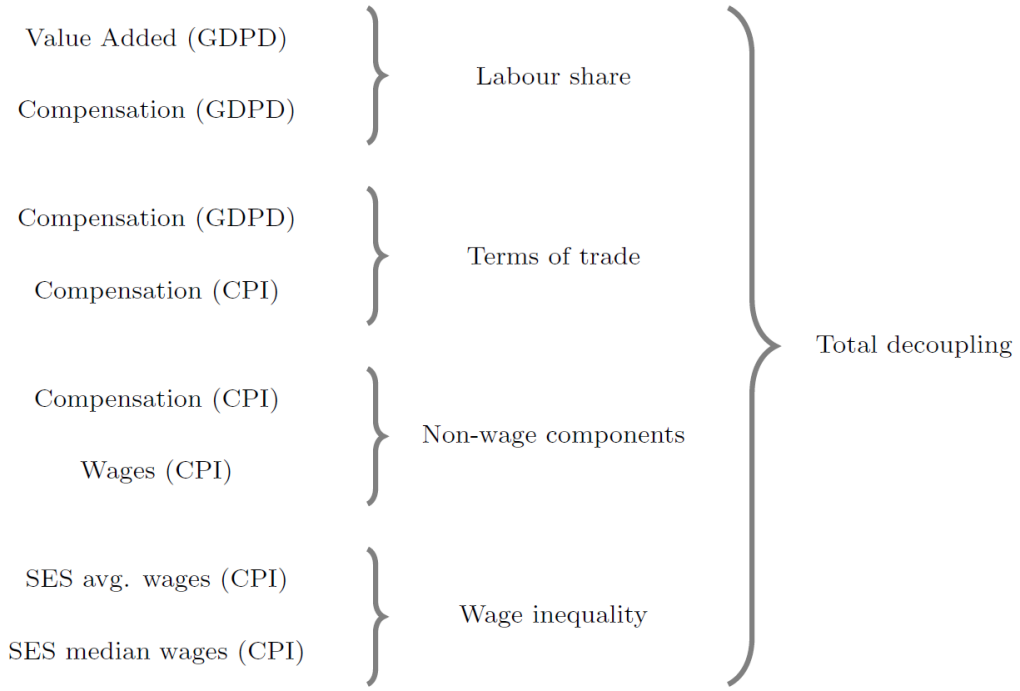
[1] Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia; owing to data limitations, Croatia is excluded in the following analysis.

› The second factor is the divergence between compensation deflated with the GDPD and compensation deflated with the consumer price index (CPI). Differences between the two price indices reflect changes in terms of trade, such as changes in export prices relative to import prices, or increases in housing costs, which account for a large part of the consumption basket (and therefore the CPI), but are not included in producer price indices (Feldstein, 2008; Kügler et al., 2018). For example, if the CPI grows faster than the GDPD, this means faster price growth of things workers consume relative to the price of what they produce.

› The third factor concerns the divergence between average compensation and average wages. Compensation of employees encompasses wages and salaries and also social contributions by employers. When considering the extent to which workers have benefited from productivity growth, compensation is a more useful measure than wages because it more holistically captures their gains from work (Feldstein, 2008).

› The fourth factor can be derived from the divergence between average and median wages[2]. Median wage growth is thought to reflect the typical worker's gains from employment, while average wages do not take distributional issues into account. Their divergence corresponds to the development of wage inequality, which has been identified as one of the main factors of decoupling in relation to the gains of a 'typical' worker rather than an 'average' worker (Nolan et al., 2019; Stansbury & Summers, 2018).

Figure 1 / Factors underlying the decoupling of labour productivity from median wages



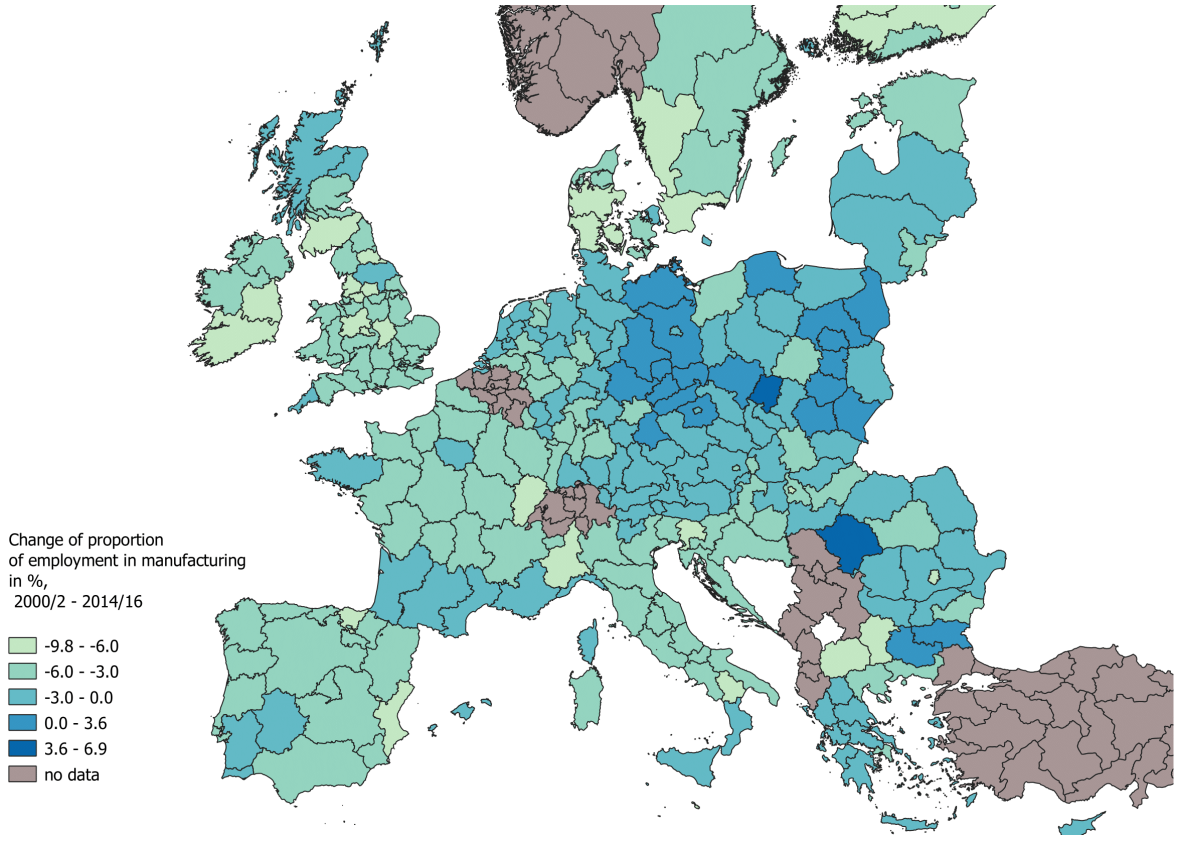
Note: GDPD = GDP deflator; CPI = Consumer price index; SES = Structure of Earnings Survey
Source: own display adapted from Nolan et al. (2019).

[2] As only median wages but not median compensation is available in the Structure of Earnings Survey (SES), this measure is used instead of compensation to capture developments in the income distribution.

TWO STORIES OF DECOUPLING IN CENTRAL AND EASTERN EUROPE

Domestic transformation strategies, EU accession policies and initial economic and geographic conditions explain different growth paths in the EU-CEE11 countries – for example, a 'dependent export-driven' regime in the Visegrád countries and a 'dependent debt-driven' regime in the Baltic countries (Bohle, 2018). Accordingly, some Central and East European countries specialised in manufacturing, whereas others de-industrialised quickly (Bohle, 2018; Stehrer & Stöllinger, 2015; Stöllinger, 2016). As Stehrer & Stöllinger (2015) show, the specialisation in manufacturing relative to other European countries occurred relatively recently, from the early 2000s onwards, and led to the formation of a Central European manufacturing core, including Germany, Austria, the Czech Republic, Slovakia, Hungary and Poland (see also Figure 2).

Figure 2 / Change in share of employment in manufacturing (NACE rev. 2 section C) between 2000/02 and 2014/16

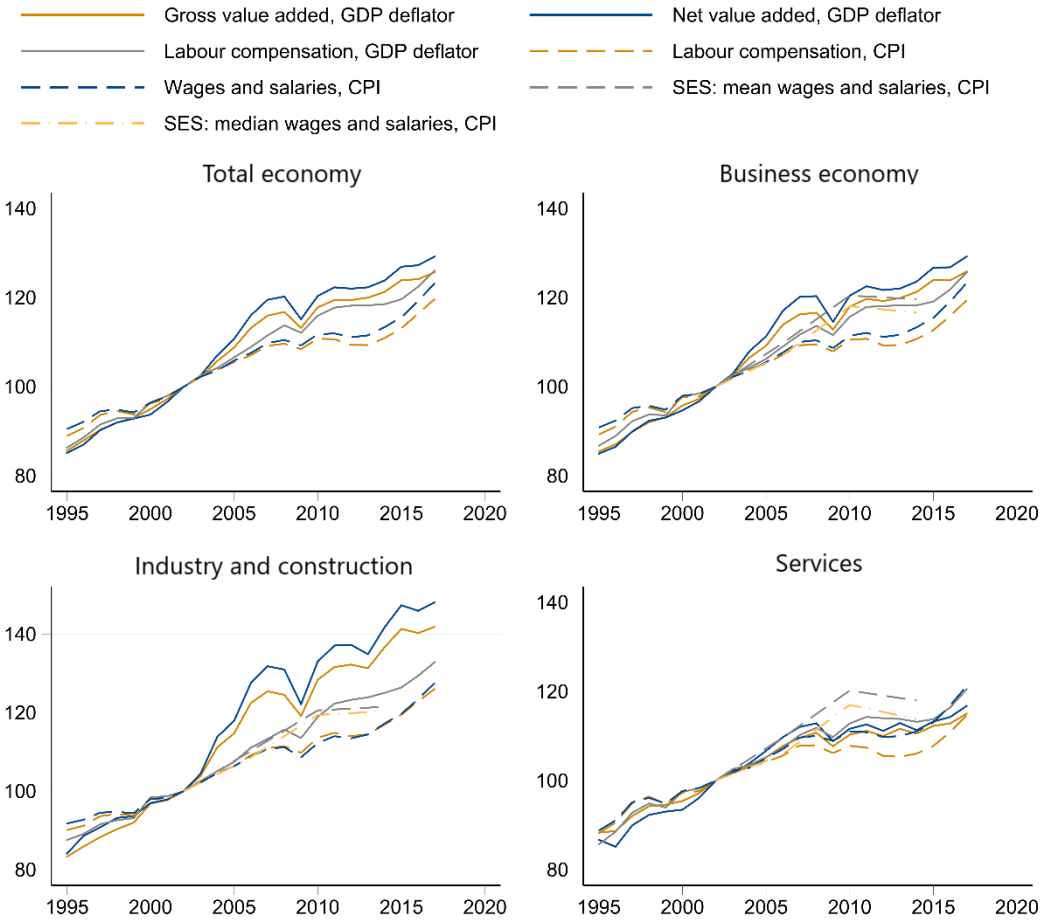


Note: 2000/02 = average values for the years 2000-2002; 2014/16 = averages for the years 2014-2016.
Source: Eurostat (2019); own display.

Productivity is generally assumed to grow faster within the manufacturing sector (Stöllinger, 2016). Additionally, the development of the labour share and wage inequality are tightly linked to the development of a country's industry structure (Karabarbounis & Neiman, 2014; Verhoogen, 2008). So how does the experience of decoupling vary between the manufacturing core and non-manufacturing core country groups, and do these developments have a sectoral dimension?

In general, we can see that patterns of wage-productivity decoupling reflect the different growth paths that countries followed in the wake of their EU integration, and their corresponding industry structures. In the countries of the CE manufacturing core (Figure 3), productivity has grown faster than compensation throughout most of the analysed period, from 2002 to 2017. The gap between productivity and wage growth shrank during the economic crisis and then widened before shrinking again in recent years, owing to strong compensation/wage growth on the back of rising labour shortages. Throughout this period, the decoupling of compensation from productivity is equally explained by a declining labour share and worsening terms of trade for workers, as CPI was generally rising ahead of the GDPD. Wage inequality and the slower growth of non-wage components of compensation play a smaller role in overall decoupling. Within industry and construction (sectors B-F), these patterns reappear much more pronounced, whereas they are much less pronounced in the services sector (sectors G-N), owing to slower productivity growth.

Figure 3 / CE manufacturing core countries: productivity and wage decoupling decomposition, 2002 = 100

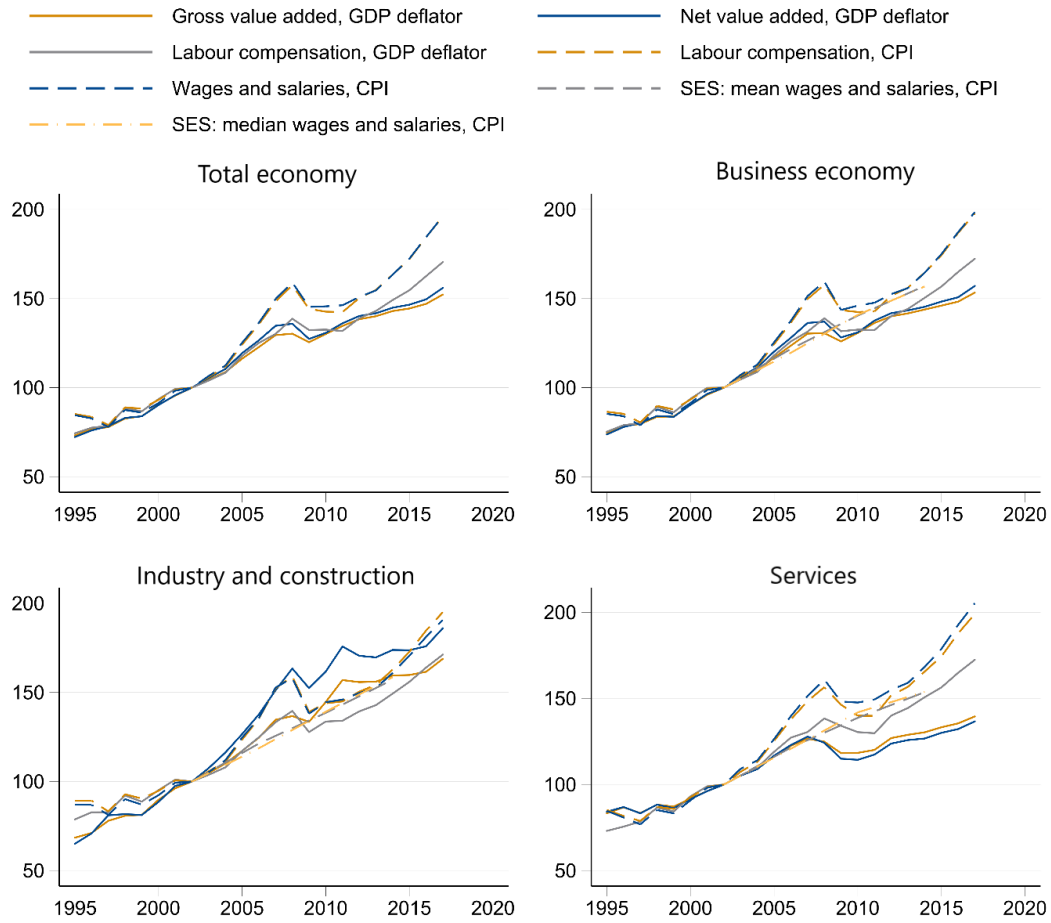


Note: Depicted are the unweighted averages of the growth rates within countries of the Central European manufacturing core (Austria, the Czech Republic, Germany, Hungary, Poland and Slovakia). Total economy = sectors B-S excluding O; Business economy = sectors B-N; Industry and construction = sectors B-F; Services = sectors G-N. Net value added = GVA – capital depreciation.
Sources: EU KLEMS (wiiw, 2019), national accounts (Eurostat, 2019), and SES (Eurostat, 2020); own display.

A very different picture emerges for the countries that are not part of the CE manufacturing core (Figure 4). These are characterised by 'negative decoupling', with compensation/wages having grown faster than productivity. This negative decoupling is almost equally explained by an increasing labour share and by improved terms of trade for workers in these countries between 2002 and 2017. The sectoral breakdown shows that growth of compensation and wages has been broadly in line with productivity growth in industry and construction (sectors B-F). In services (sectors G-N), however, compensation and wages at consumer prices have grown much faster than compensation at producer prices, which have outpaced productivity. This points to negative decoupling, arising from an increasing labour share and improved terms of trade for workers in these countries.

Although these aggregated results still obfuscate considerable cross-country variation in wage-productivity decoupling, they reveal an important link to countries' growth regimes and industry structures, and provide some insights for joint policy efforts.

Figure 4 / Non-manufacturing core EU-CEE11 countries: productivity and wage decoupling decomposition, 2002 = 100



Note: Depicted are the unweighted averages of the growth rates within EU-CEE11 countries that are not part of the Central European manufacturing core (Bulgaria, Estonia, Latvia, Lithuania, Romania and Slovenia; Croatia is excluded, owing to data limitations). Total economy = sectors B-S excluding O; Business economy = sectors B-N; Industry and construction = sectors B-F; Services = sectors G-N. Net value added = GVA – capital depreciation.
Sources: EU KLEMS (wiiw, 2019); national accounts (Eurostat, 2019); and SES (Eurostat, 2020); own display.

POLICY IMPLICATIONS

Potential implications of productivity-wage decoupling range from workers not benefiting from growth, at one extreme, to balance-of-payments difficulties at the other. The fact that compensation growth has broadly followed productivity growth in most countries highlights the importance of measures aimed at increasing productivity, and especially so in view of further challenges facing the region, such as demographic change (Leitner & Stehrer, 2019). However, a general implication of the productivity-wage decoupling literature has been that wages – particularly median compensation and wages – should play a central role besides productivity measures for monitoring living standards and inclusive growth (Nolan et al., 2019). Our analysis reinforces these findings with regard to the EU-CEE11 countries, and in particular those countries that belong to the CE manufacturing core, in which wage growth did not keep up with productivity growth. In these countries, the undermining of wage-negotiation mechanisms and coverage by collective-bargaining agreements generally led to only limited translation to workers of the benefits of productivity increases and improvements in the labour market situation, although the situation has reversed somewhat over the past few years (Astrov et al., 2019). Therefore, facilitating inclusive productivity growth necessitates an industrial policy that is linked to wage and fiscal policy measures, and pursued and co-ordinated on a European level (Gräbner et al., 2019; Landesmann & Stöllinger, 2020).

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The impact of foreign managers on productivity in the United Kingdom

BY DIMITRIOS EXADAKTYLOS, MASSIMO RICCABONI AND ARMANDO RUNGI[1]

We evaluate the contribution of foreign managers to the competitiveness of manufacturing firms in the United Kingdom. We find that domestic companies benefit from productivity gains after recruiting at least one foreign manager. These productivity gains are typically to be found in a range between 9 and 12 per cent. We argue that limits to the international circulation of talent after Brexit risk damaging the competitiveness of domestic manufacturing companies.

INTRODUCTION

Foreign employment in the United Kingdom has increased from 3.54% to 11.33% in the period from 1997 to 2019 (Office for National Statistics, 2019). Limits to immigration were one of the most debated issues throughout the campaign for Brexit, and a re-examination of the conditions under which the UK accepts foreign workers is at the top of the country's political agenda.

Although the exact legal framework of entry, permanence and exit of foreign nationals in the next years is not yet clear, it is almost certain that there will be additional barriers to the circulation of labour as a production factor. Dhingra, Huang, Ottaviano, Pessoa and Van Reenen (2017) estimate a negative impact on household income both under a Brexit scenario, in which the UK remains in the European Economic Area (EEA), and under a 'hard' Brexit scenario. In the first case, they estimate an average decrease in welfare of 1.34%; in the second case, the loss is 2.66%. Moreover, they show that there is no correlation between the rising immigrant share in the UK and unemployment and wage rates of UK nationals. The latter finding contradicts the claim of Brexit supporters that foreign workers harm the national labour market.

In our study (Exadaktylos, Riccaboni and Rungi, 2019), we focus on a peculiar category of high-skilled migrants, the foreign managers, and examine their contribution to the competitiveness of the UK manufacturing industry. It is widely acknowledged that management plays a crucial role in a company. Past studies show that the cross-country mobility of managers can be a channel of knowledge transfer from one firm to another. For instance, Giannetti, Liao and Yu (2015) show that the presence of directors who have worked or have been educated abroad is positively associated with a firm's profitability and productivity. On a parallel strand of research, Cho (2018) finds that managers moving from parent companies to foreign affiliates are able to increase labour productivity.

In the case of trade performance, Mion and Opromolla (2014) and Mion, Opromolla and Sforza (2016) find that firms have an incentive to headhunt managers with previous experience in exporting companies

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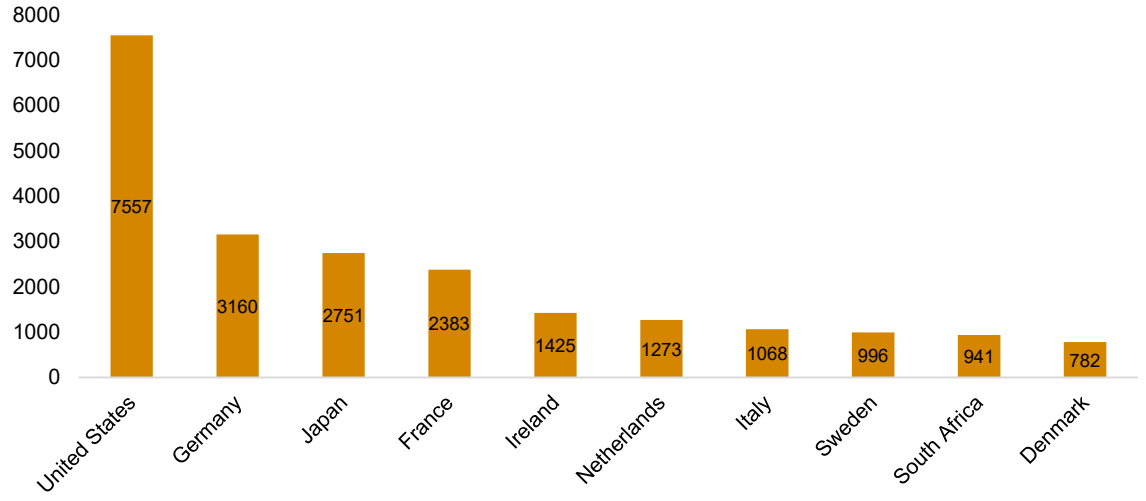
in order to increase their own exports. The export premium is higher when mobility takes place within the same industry.

From our point of view, we regard the relationship between foreign management and productivity as primary and, to our knowledge, relatively unexplored. Management is all about knowledge. It is an intangible asset that can be brought by foreign managers to boost competitiveness. Several mechanisms may facilitate knowledge transfer among firms, but they have not been associated specifically with foreign managers. For instance, the knowledge of foreign workers can combine with the knowledge of native employees and lead to more innovation (Laursen, Leten, Nguyen and Vancauteren, 2019). Alternatively, companies can hire foreign experts to train native employees, and together increase a firm's productivity (Markusen and Trofimenko, 2009).

DATA AND METHODOLOGY

For our empirical analysis, we source data on careers of managers and firms' financial accounts in the United Kingdom from the Orbis database by Bureau van Dijk. Interestingly, we can follow the careers of managers in the period 2009-2017 and examine when they have been hired by companies in the United Kingdom, possibly from another domestic or foreign company. Moreover, we can observe all the managers who have ever worked in these companies, even before 2009. This allows us to consider in our treatment group only those companies that recruited foreign managers for the first time in the period 2009-2017, as we describe later.

Figure 1 / Top 10 nationalities of foreign managers in UK manufacturing companies, up to 2017



Source: own elaboration based on Exadaktylos, Riccaboni & Rungi (2019).

Based on the information on managers' nationalities, we define a foreign manager as any manager who is not a UK national and we link the appointment event with ex post firm-level outcomes. The final

sample consists of 165,084 managers active in 13,106 manufacturing companies[2]. About 29% of these firms recruited at least one foreign manager in our period of analysis. Overall, we have a 7.9% share of managers with foreign nationality. In Figure 1, we indicate the top 10 nationalities of foreign managers retrieved from the entire sample. Most foreign managers in our sample come from the United States. Altogether, nationals from the European Union constitute 48.26% of our sample.

Our main proxy to measure the competitiveness of firms is total factor productivity (TFP) estimated using the technique by Ackerberg, Caves and Frazer (2015). Table 1 presents the average level of TFP in a log scale for firms that employ foreign managers, and those that do not. We perform a separate analysis for domestically owned companies and foreign subsidiaries of multinational enterprises. Preliminary evidence already shows that:

(i) Foreign subsidiaries are more productive than domestic companies. This is a well-known regularity in line with previous literature (Arnold and Javorcik, 2009; Bircan, 2019).

(ii) Domestic companies that employ at least one foreign manager are more productive than those without foreign managers. This finding motivates us to investigate whether it is the recruitment of foreign managers that leads to a higher TFP, or the other way round (companies with a higher potential are able to pick better talents on the labour market).

(iii) Domestic companies with foreign managers are on average as productive as foreign subsidiaries. This is an interesting finding that paves the way for a discussion on how the recruitment of foreign managers is another alternative for the internationalisation of firms that is worth further investigation.

Table 1 / Mean comparison of (log of) TFP between UK companies with and without foreign managers

Average value of TFP	With foreign managers	Without foreign managers	Total
All firms	2.638***	2.468***	2.528
	(0.013)	(0.009)	(0.008)
Domestic companies	2.656***	2.432***	2.458
	(0.027)	(0.010)	(0.009)
Foreign subsidiaries	2.634	2.670	2.643
	(0.015)	(0.025)	(0.013)

Note: *** indicates that the null hypothesis of a difference in sample means equal to zero can be rejected at 1% significance level.
Source: own elaboration based on Exadaktylos, Riccaboni and Rungi (2019).

[2] As we are able to track all managers who ever worked in each company (even before 2009), the 'total number of managers' indicates the number in the sample from the beginning of each firm's business activity until 2017. The descriptive statistics of Figure 1 are based on this sample.

EMPIRICAL STRATEGY AND RESULTS

The econometric strategy we adopt is presented in detail in Exadaktylos, Riccaboni and Rungi (2019). In our study, we consider as 'treated' all those companies that hired at least one foreign manager for the first time in the period 2009-2017. Therefore, we exclude those companies that had foreign managers before 2009. For our purpose, we exploit both a difference-in-difference identification strategy for the 'treated' companies, including some pre-treatment characteristics multiplied by time trends (baseline analysis) and a propensity score-matching technique to account for reverse causality (main analysis). We are interested in the effect of hiring foreign managers on TFP. However, as an alternative proxy for productivity, we also use the overall technical efficiency (OTE), which indicates the efficient allocation of resources with respect to the production frontier and is estimated through a stochastic frontier analysis (Kumbhakar, Lien and Hardaker, 2014).

The main findings are briefly presented in Table 2. In the first column, we present the results of our baseline analysis, where the sample consists of companies that recruited foreign managers for the first time in the period 2009-2017. The second column summarises the results of our main econometric analysis, where we run the regression including a control group (firms that did not recruit any foreign manager until the end of the period) of similar characteristics based on the propensity score matching. We find that domestic companies increase TFP by 9.97% on average over the years after the hiring of at least one foreign manager. The increase in OTE is 0.50%. Thus, the magnitude of the increase is much smaller in the case of OTE and it can be compared with the study of Wilson, Hadley and Asby (2001), which finds that managerial experience has a positive effect on technical efficiency, although the extent of this effect is small (about 0.03%).

Table 2 / Effect of foreign managers on productivity

	Outcome	Impact of hiring foreign managers (within treated sample)	Impact of hiring foreign managers (matched sample)
Domestic firms	Total factor productivity	11.18%**	9.97%***
	Technical efficiency	0.80%	0.50%**
Foreign subsidiaries	Total factor productivity	-4.50%	-1.61%
	Technical efficiency	-0.50%	-0.30%

Note: ** and *** stand for $p < 0.1$ and $p < 0.05$.
Source: own elaboration based on Exadaktylos, Riccaboni and Rungi (2019).

CONCLUSION

Talents from abroad in managerial positions can be valuable for domestic firms as they can bring new ideas or practices that can boost the productivity of an entire team. We find that this is the case of domestic firms in the UK manufacturing sector, but foreign firms do not report any improvement in competitiveness after new foreign recruits once we control for reverse causality. In fact, in the latter case, it is possible that the bulk of TFP improvements occurs before any foreign manager arrives. Interestingly, the productivity premia that we register after the recruitment of foreign managers by domestic firms are similar in magnitude to productivity gains registered after foreign acquisitions (Arnold and Javorcik, 2009; Bircan, 2019).

Finally, based on our findings, we argue that a free circulation of talents from abroad can strongly benefit the competitiveness of UK manufacturing, and that any limitation to the mobility of high skills is likely to backfire.

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Conventional signs and abbreviations used

%	per cent
ER	exchange rate
GDP	Gross Domestic Product
HICP	Harmonized Index of Consumer Prices (for new EU Member States)
LFS	Labour Force Survey
NPISHs	Non-profit institutions serving households
p.a.	per annum
PPI	Producer Price Index
reg.	registered

The following national currencies are used:

ALL	Albanian lek	HRK	Croatian kuna	RON	Romanian leu
BAM	Bosnian convertible mark	HUF	Hungarian forint	RSD	Serbian dinar
BGN	Bulgarian lev	KZT	Kazakh tenge	RUB	Russian rouble
BYN	Belarusian rouble	MKD	Macedonian denar	TRY	Turkish lira
CZK	Czech koruna	PLN	Polish zloty	UAH	Ukrainian hryvnia

EUR euro – national currency for Montenegro, Kosovo and for the euro-area countries Estonia (from January 2011, euro-fixed before), Latvia (from January 2014, euro-fixed before), Lithuania (from January 2015, euro-fixed before), Slovakia (from January 2009, euro-fixed before) and Slovenia (from January 2007, euro-fixed before).

Sources of statistical data: Eurostat, National Statistical Offices, Central Banks and Public Employment Services; wiiw estimates.

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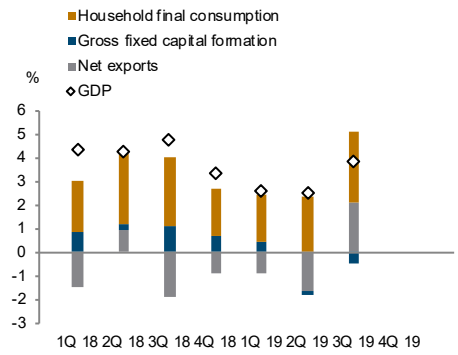
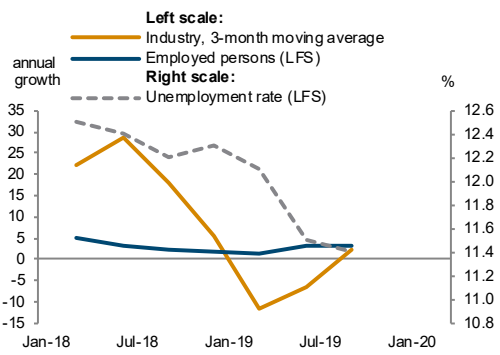
Albania

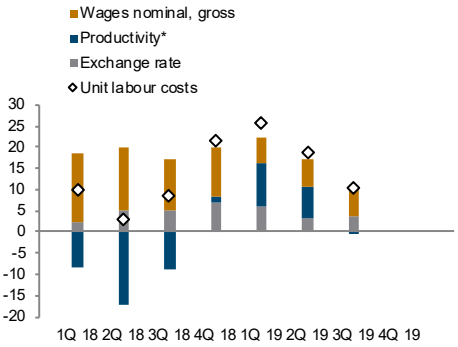
Real GDP growth and contributions
year-on-year



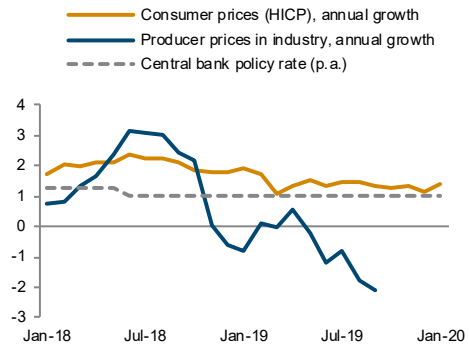
Real sector development
in %



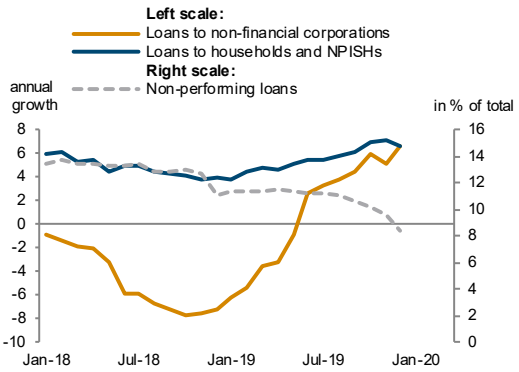
Unit labour costs in industry
annual growth rate in %



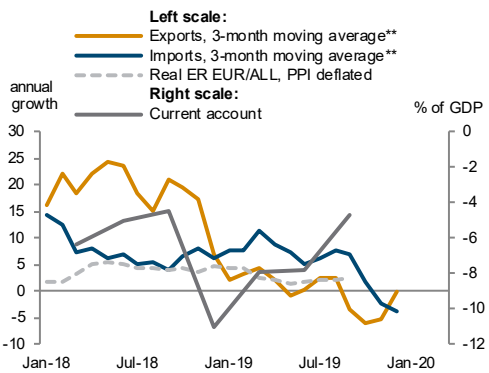
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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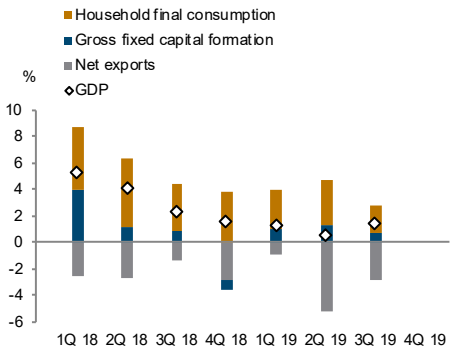
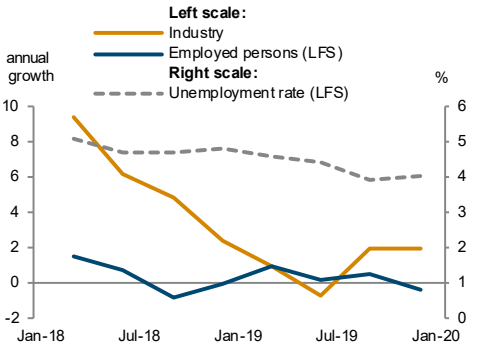
Belarus

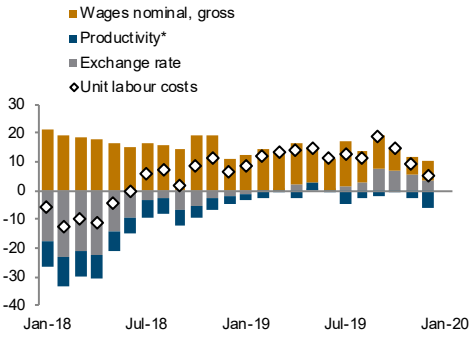
Real GDP growth and contributions
year-on-year



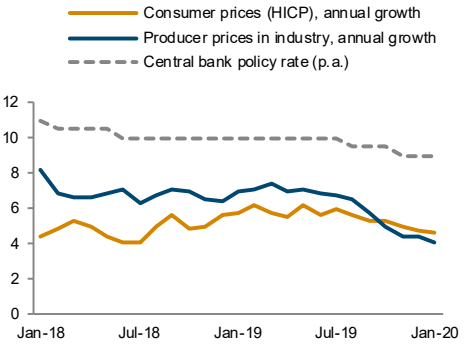
Real sector development
in %



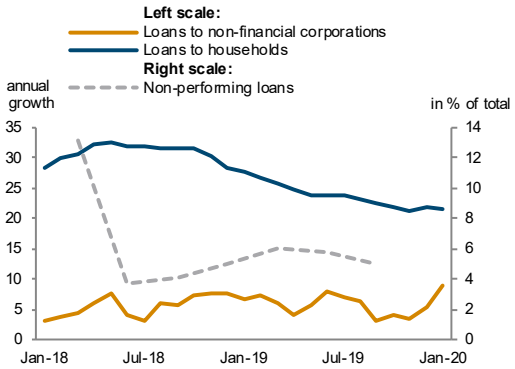
Unit labour costs in industry
annual growth rate in %



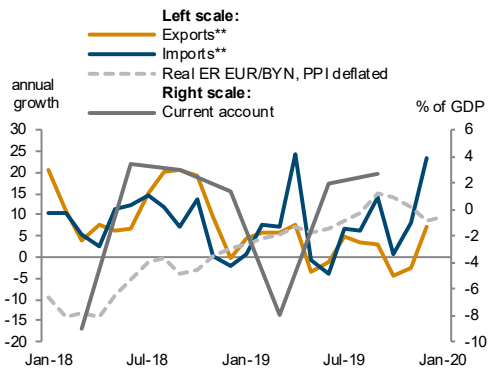
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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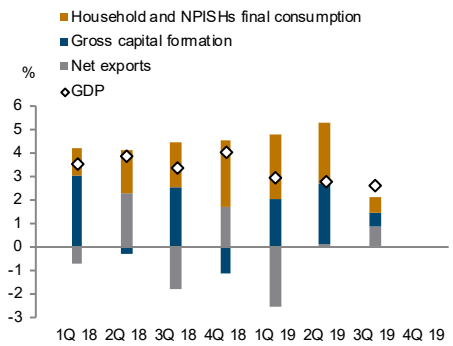
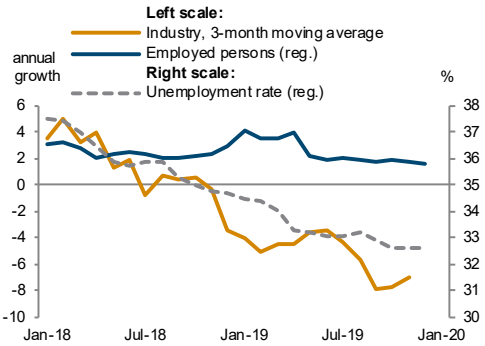
Bosnia and Herzegovina

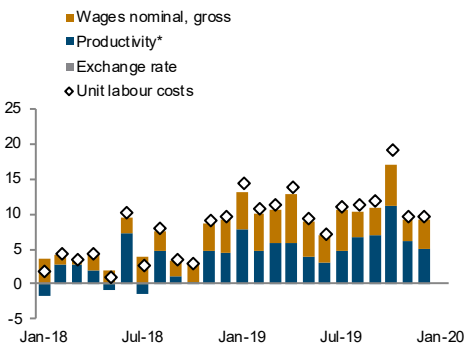
Real GDP growth and contributions
year-on-year



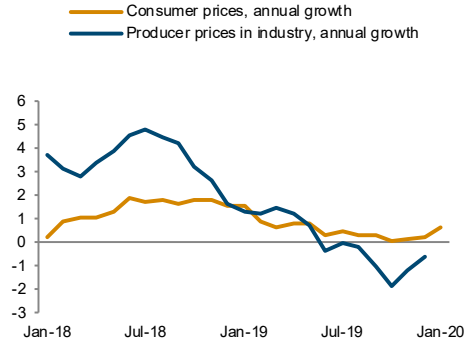
Real sector development
in %



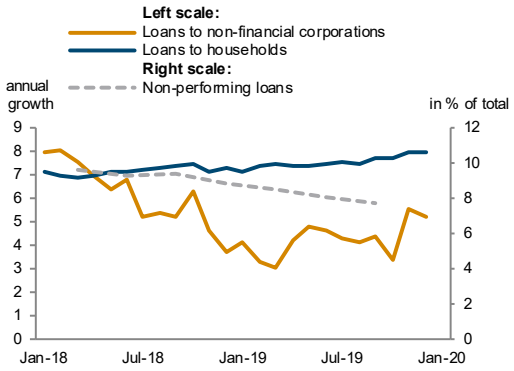
Unit labour costs in industry
annual growth rate in %



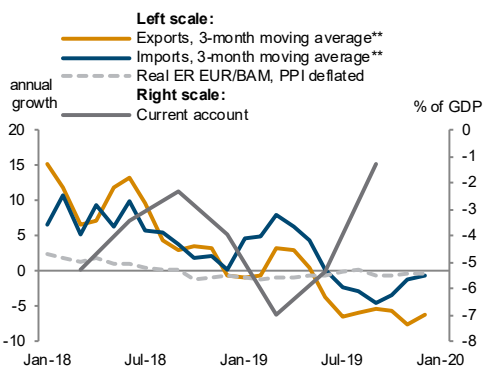
Inflation
in %



Financial indicators
in %



External sector development
in %



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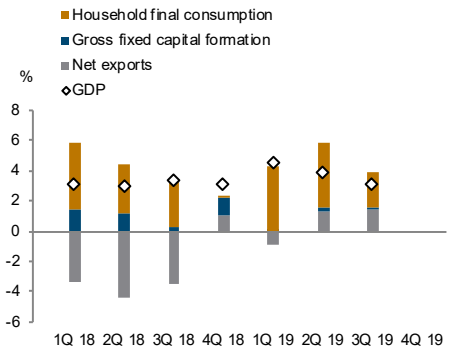
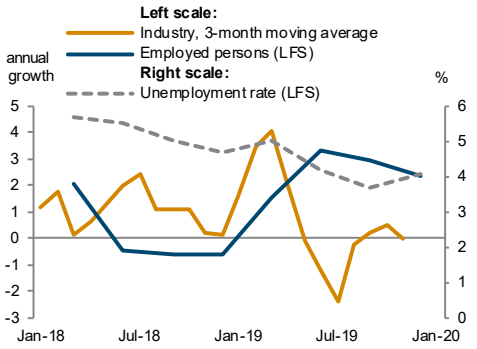
Bulgaria

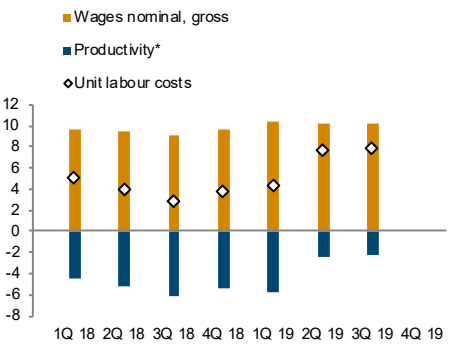
Real GDP growth and contributions
year-on-year



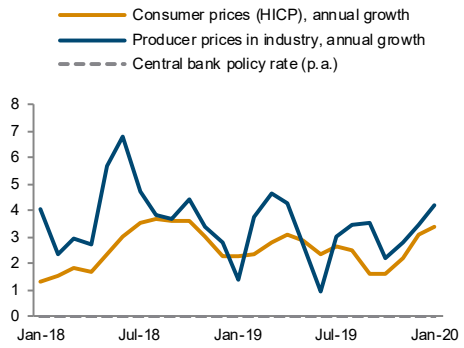
Real sector development
in %



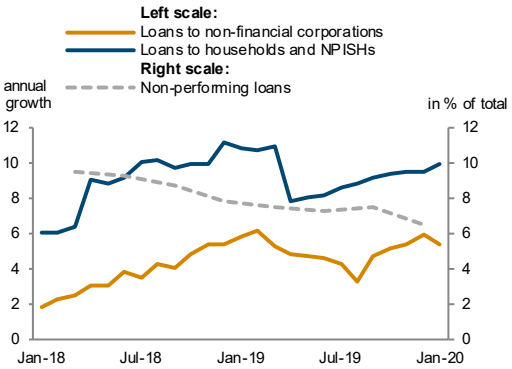
Unit labour costs in industry
annual growth rate in %



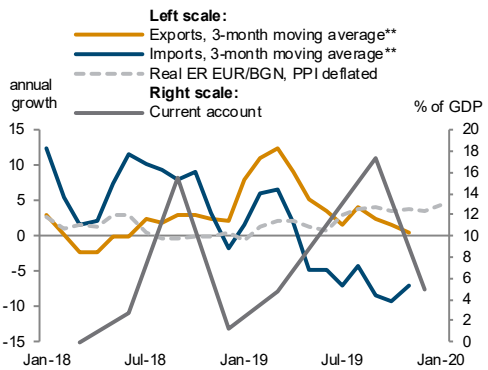
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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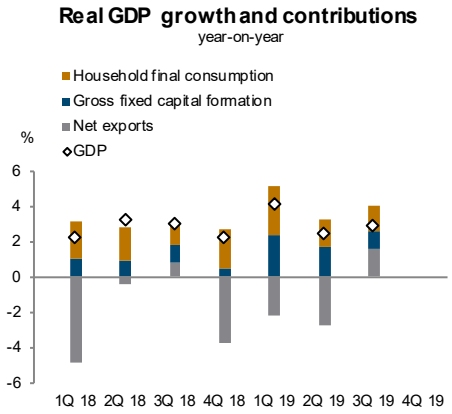
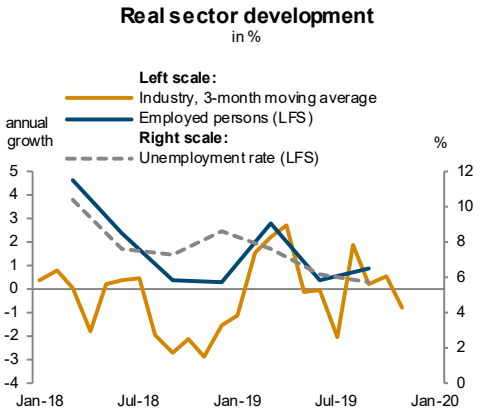
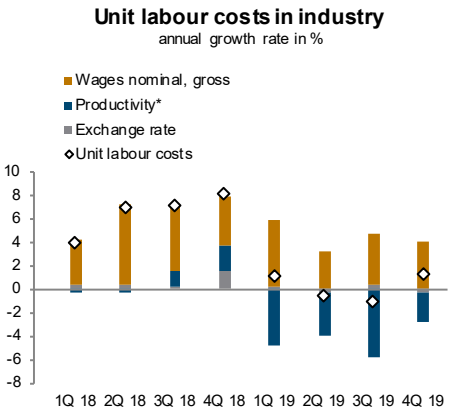
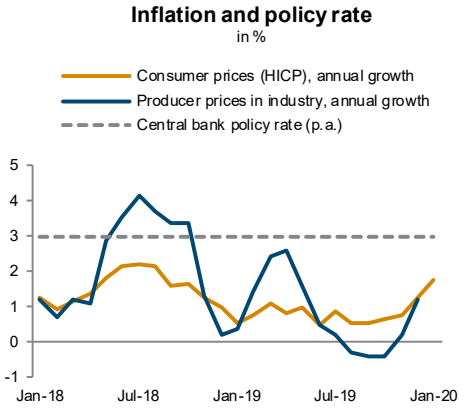
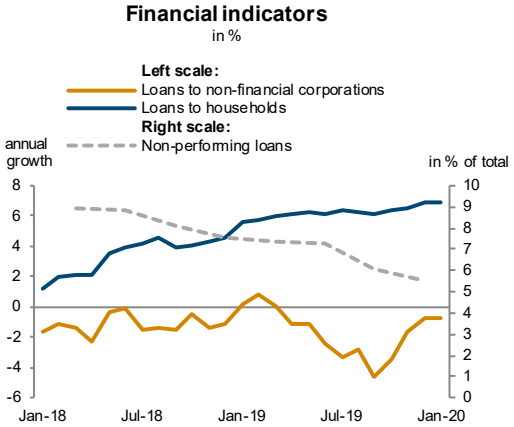
Croatia

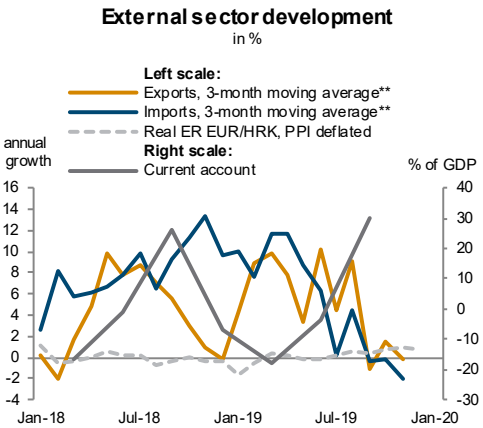












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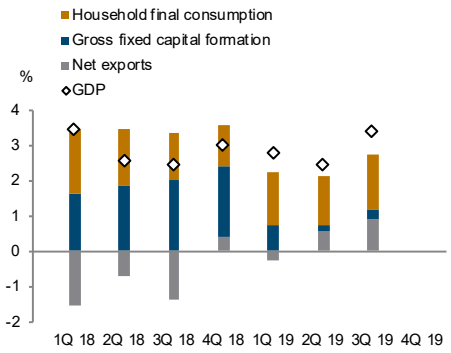
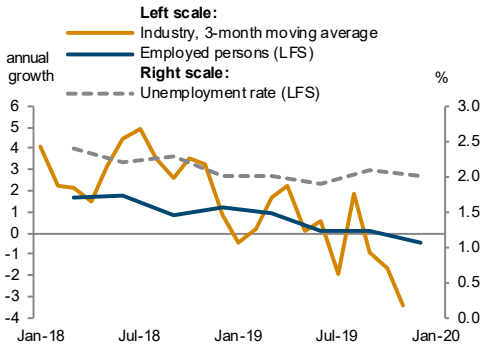
Czech Republic

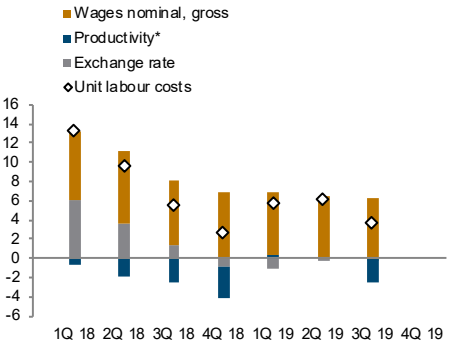
Real GDP growth and contributions
year-on-year



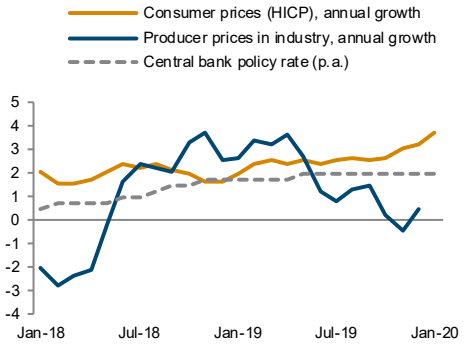
Real sector development
in %



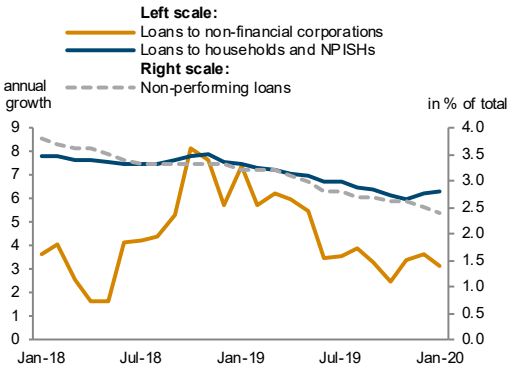
Unit labour costs in industry
annual growth rate in %



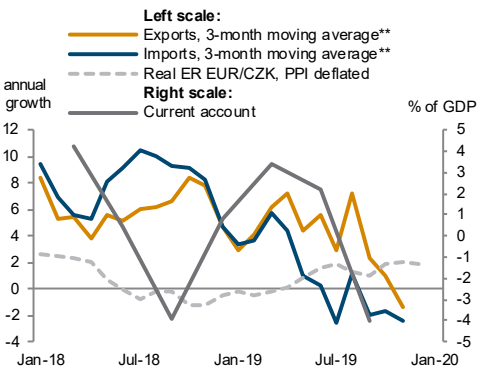
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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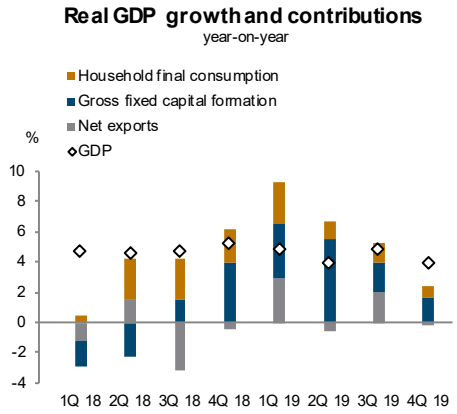
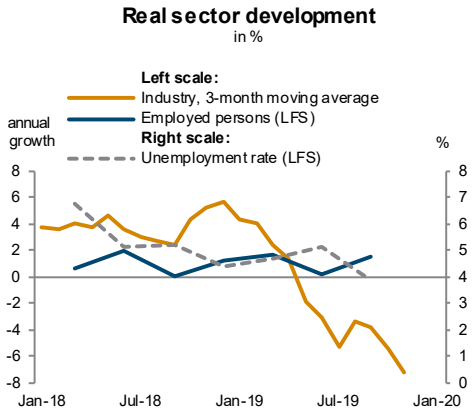
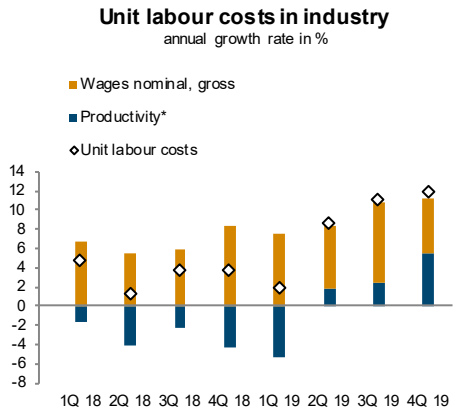
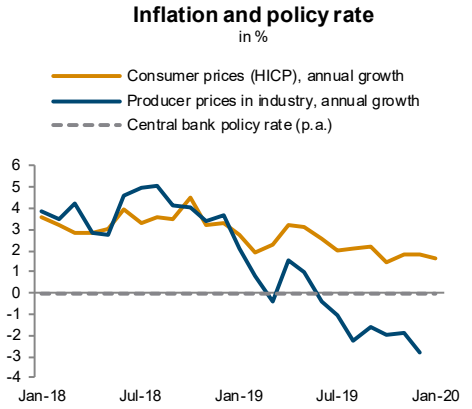
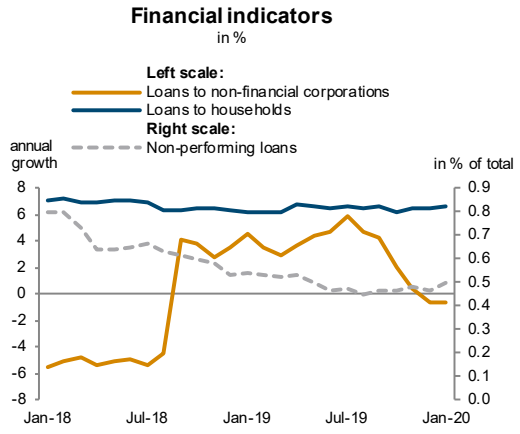
Estonia

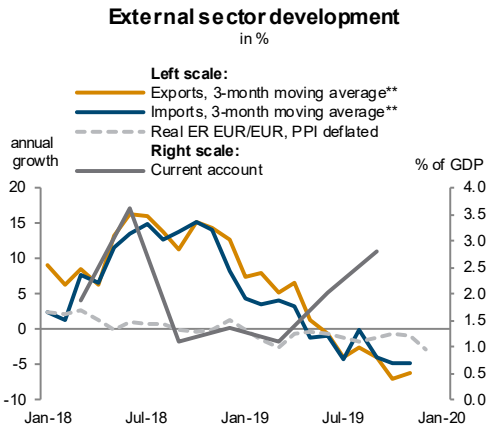












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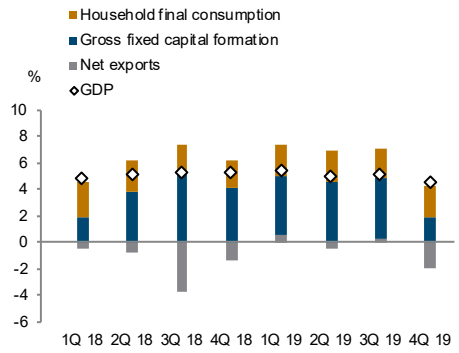
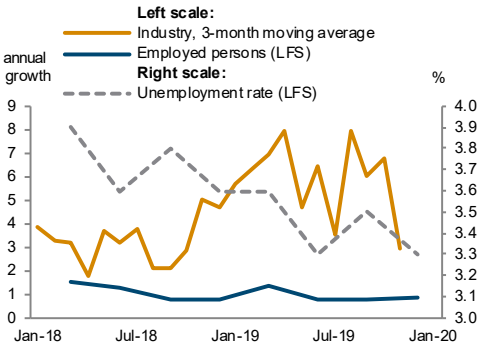
Hungary

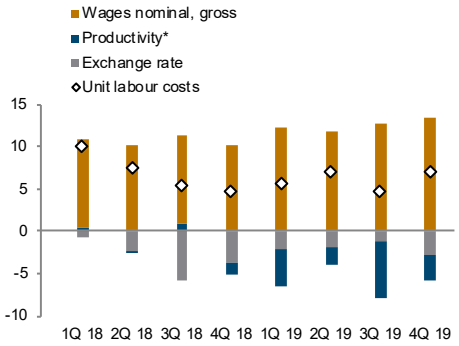
Real GDP growth and contributions
year-on-year



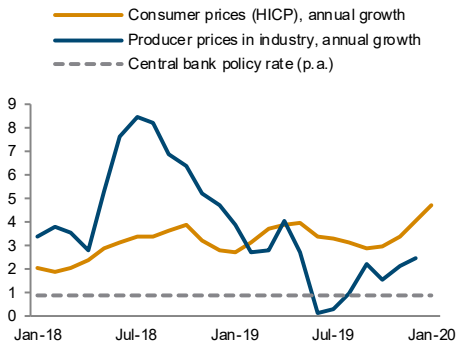
Real sector development
in %



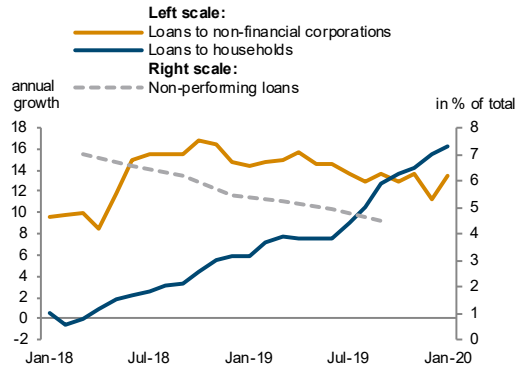
Unit labour costs in industry
annual growth rate in %



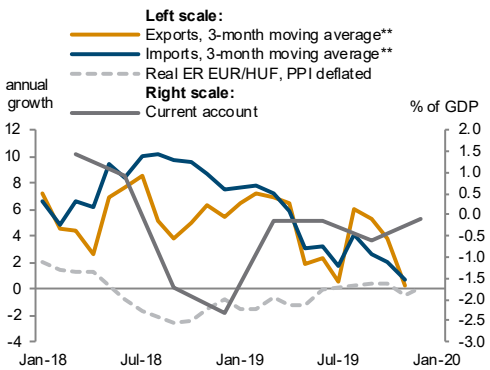
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



*Positive values of the productivity component on the graph reflect decline in productivity and vice versa.
**EUR based.

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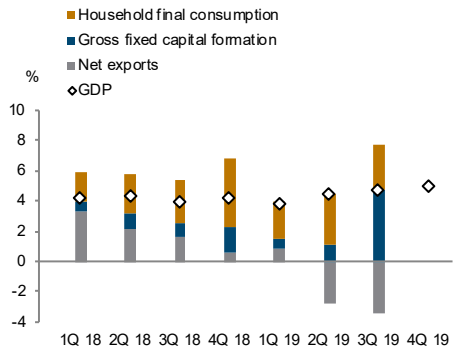
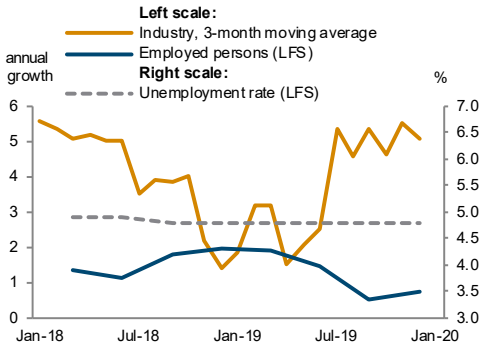
Kazakhstan

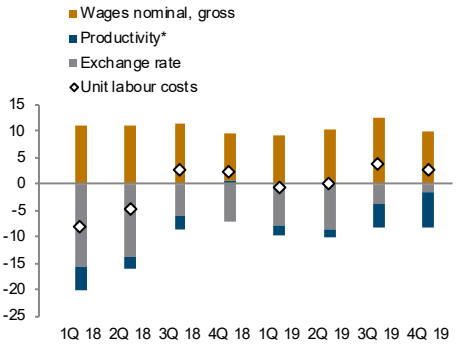
Real GDP growth and contributions
year-on-year



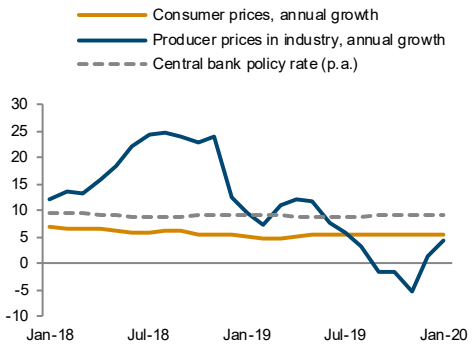
Real sector development
in %



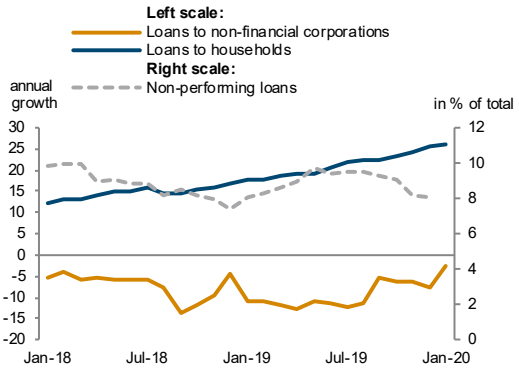
Unit labour costs in industry
annual growth rate in %



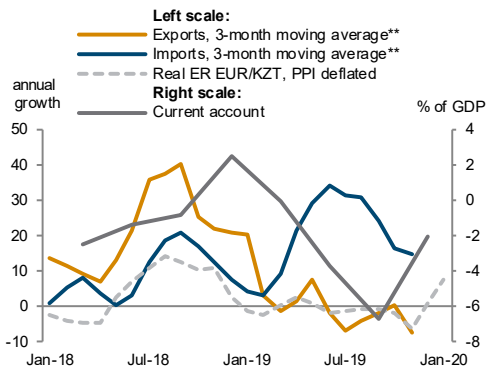
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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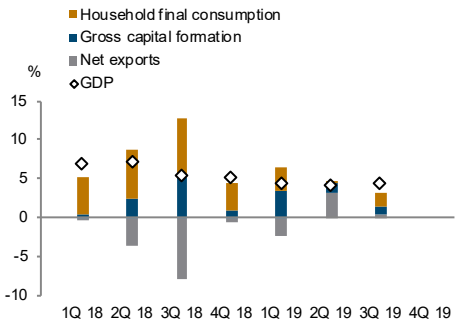
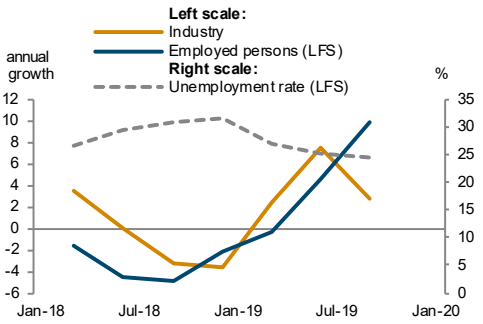
Kosovo

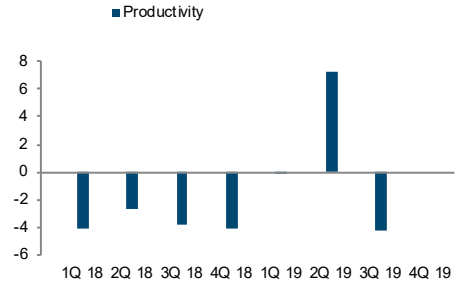
Real GDP growth and contributions
year-on-year



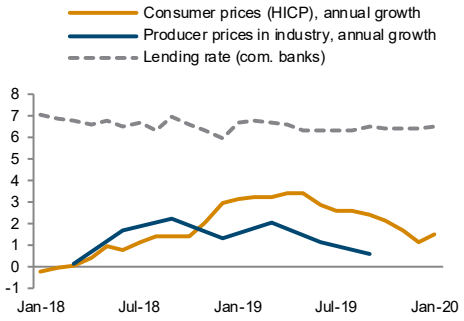
Real sector development
in %



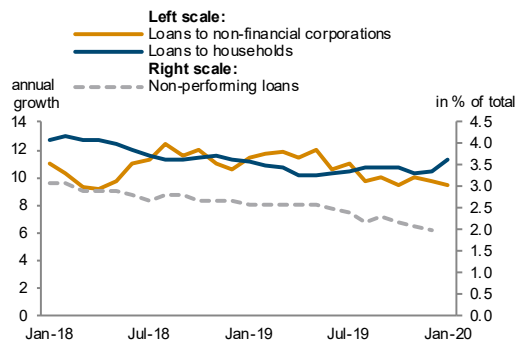
Productivity in industry
annual growth rate in %



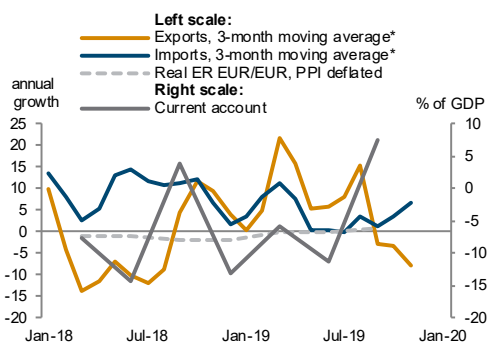
Inflation and lending rate
in %



Financial indicators
in %



External sector development
in %



*EUR based.

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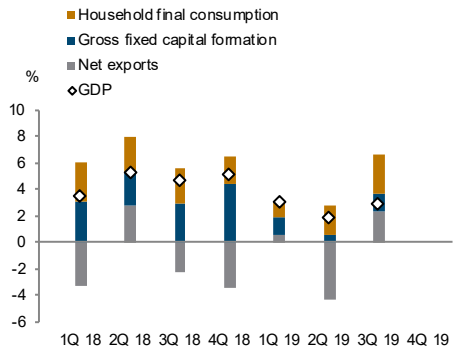
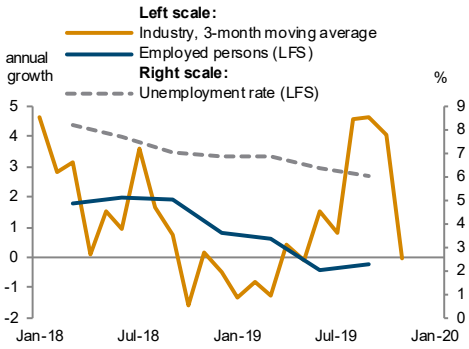
Latvia

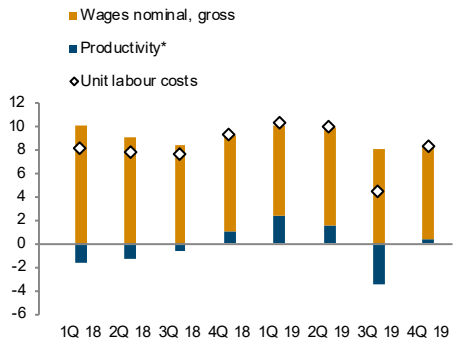
Real GDP growth and contributions
year-on-year



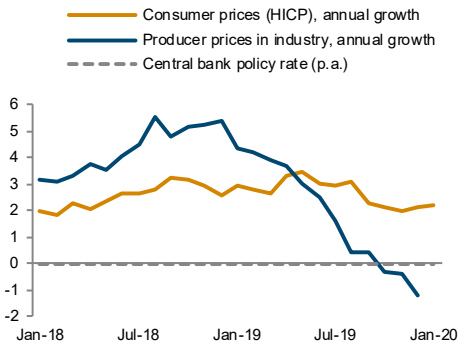
Real sector development
in %



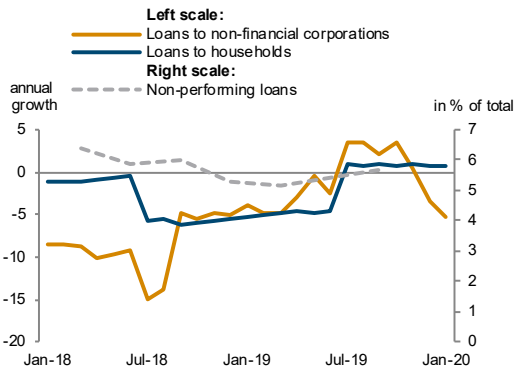
Unit labour costs in industry
annual growth rate in %



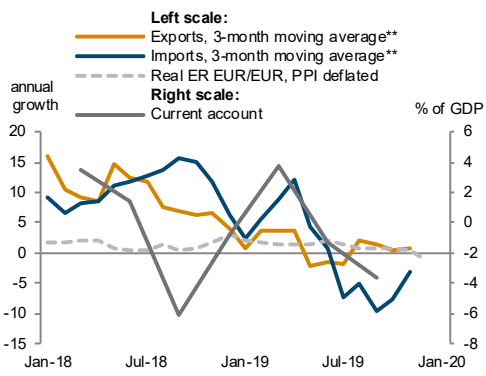
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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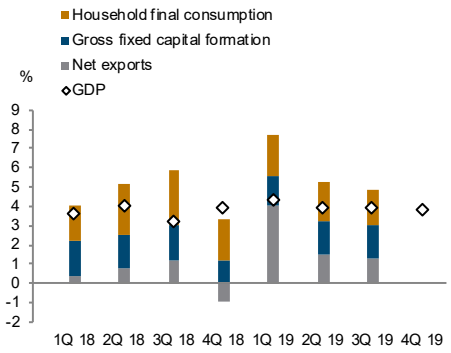
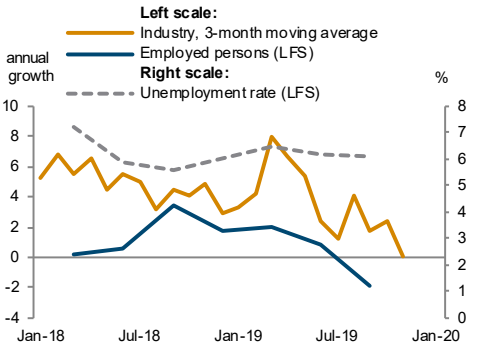
Lithuania

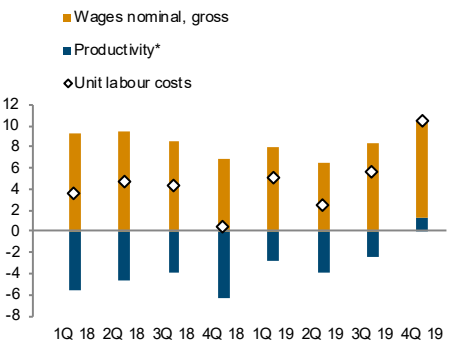
Real GDP growth and contributions
year-on-year



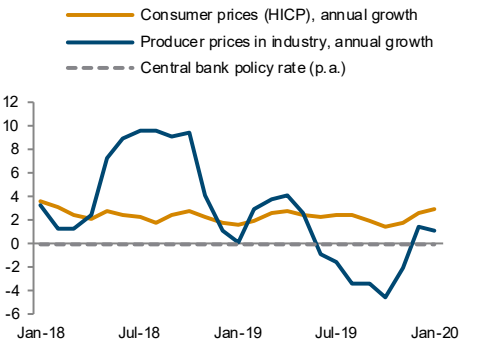
Real sector development
in %



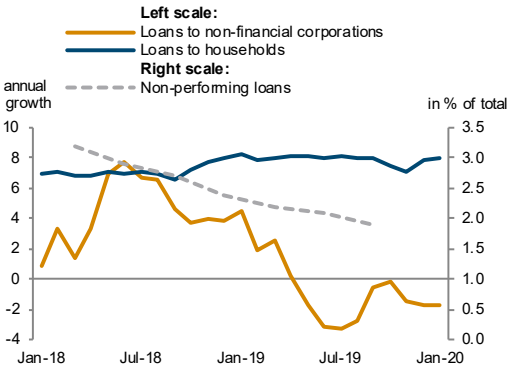
Unit labour costs in industry
annual growth rate in %



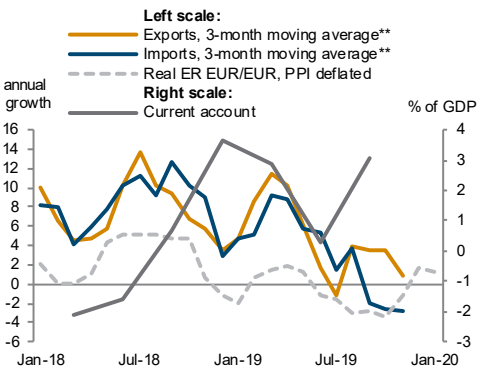
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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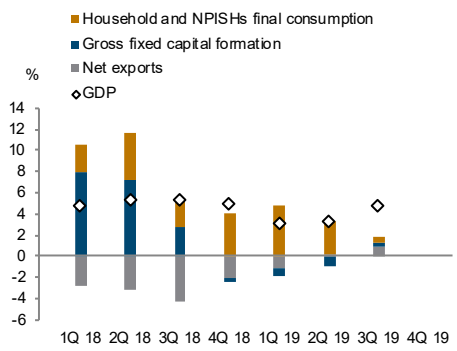
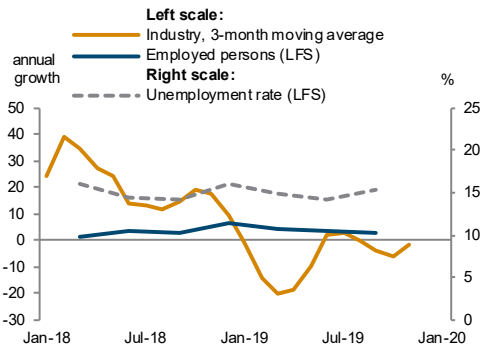
Montenegro

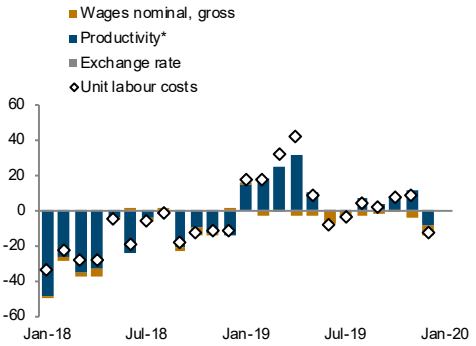
Real GDP growth and contributions
year-on-year



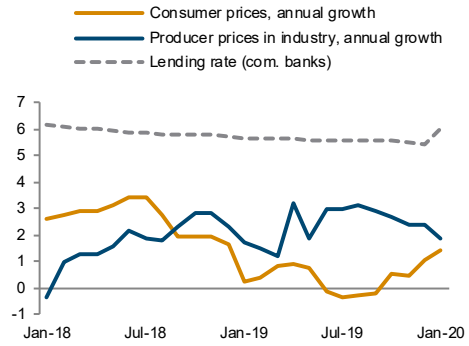
Real sector development
in %



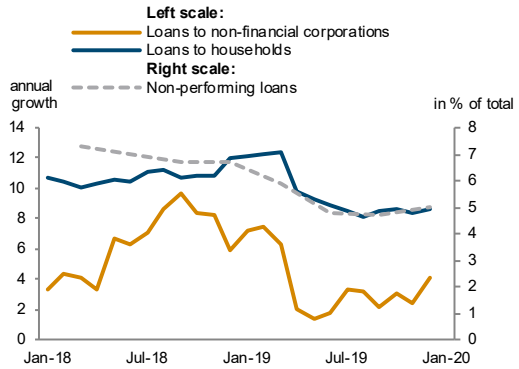
Unit labour costs in industry
annual growth rate in %



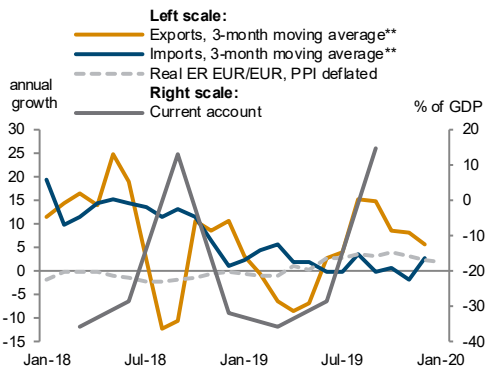
Inflation and lending rate
in %



Financial indicators
in %



External sector development
in %



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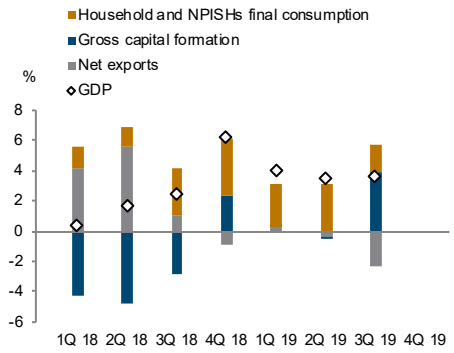
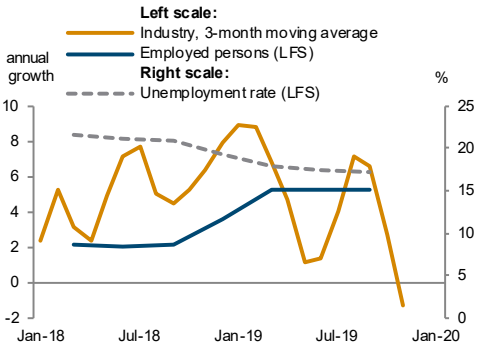
North Macedonia

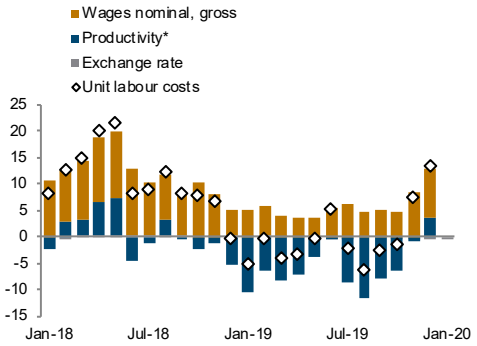
Real GDP growth and contributions
year-on-year



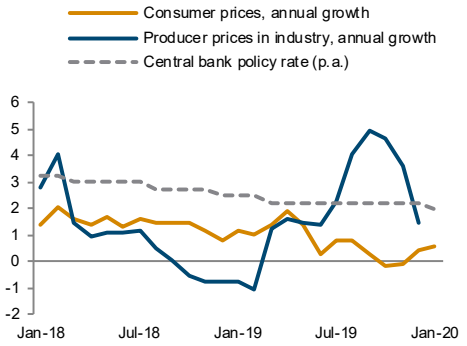
Real sector development
in %



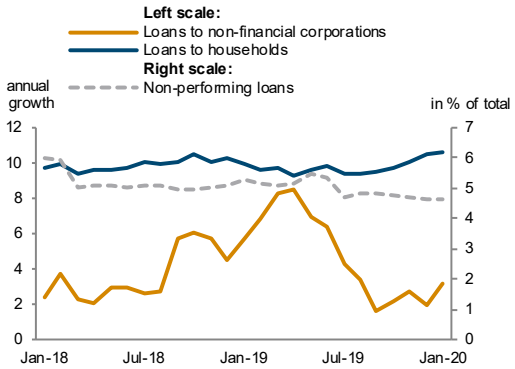
Unit labour costs in industry
annual growth rate in %



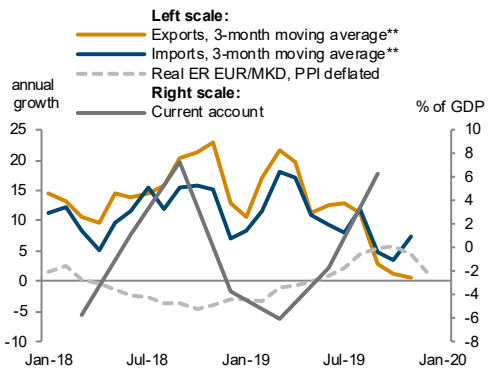
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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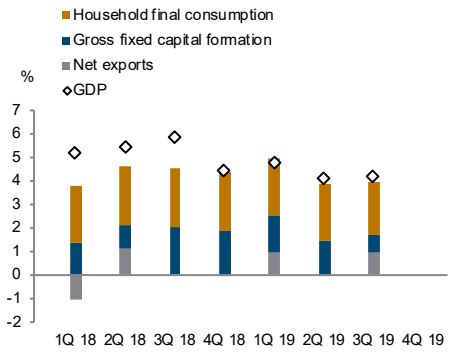
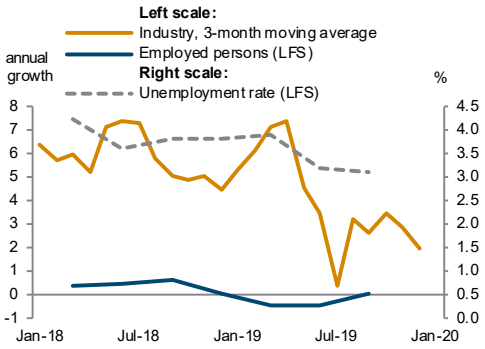
Poland

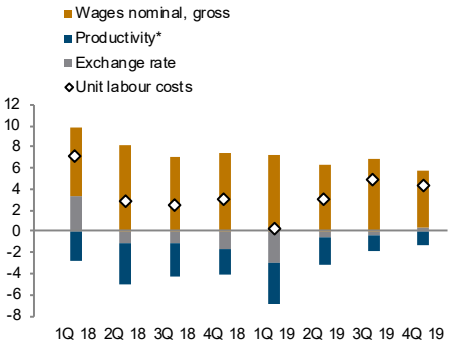
Real GDP growth and contributions
year-on-year



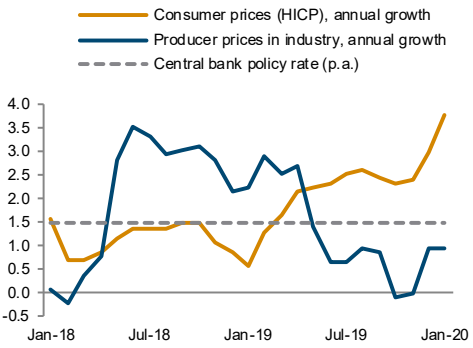
Real sector development
in %



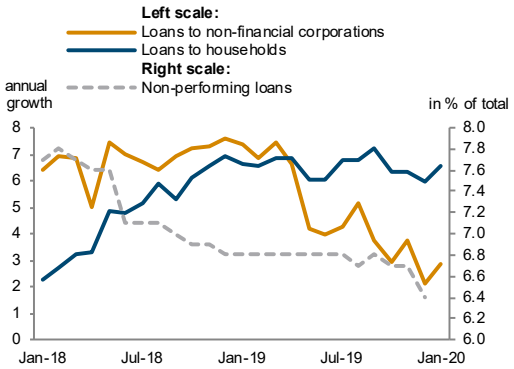
Unit labour costs in industry
annual growth rate in %



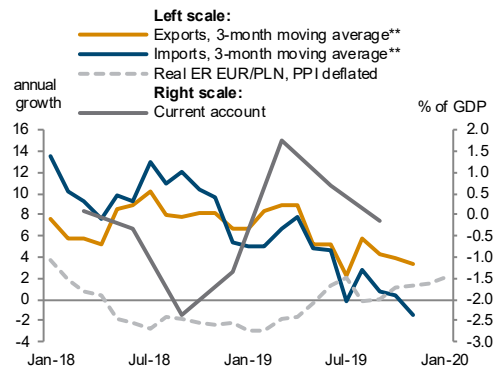
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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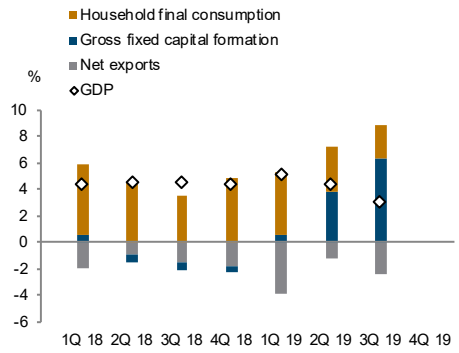
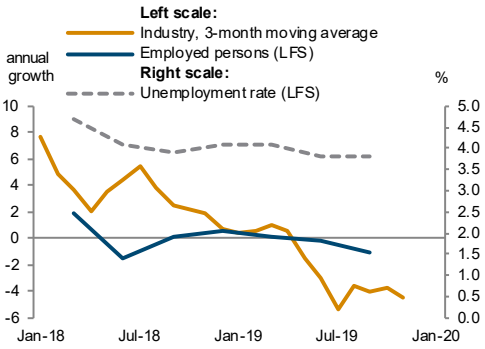
Romania

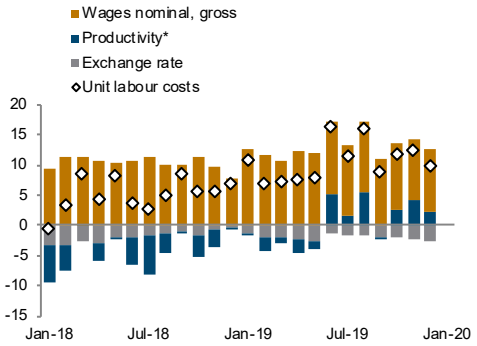
Real GDP growth and contributions
year-on-year



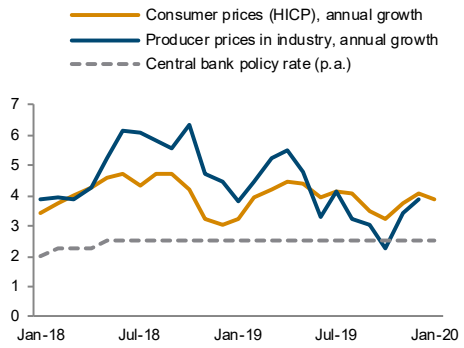
Real sector development
in %



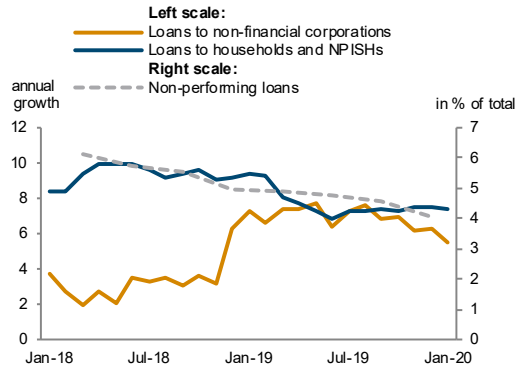
Unit labour costs in industry
annual growth rate in %



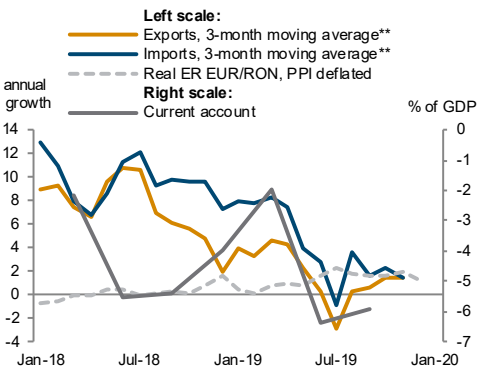
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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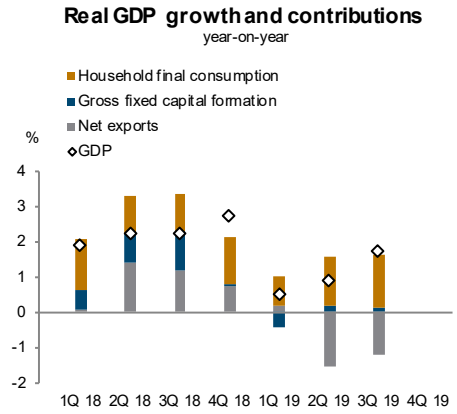
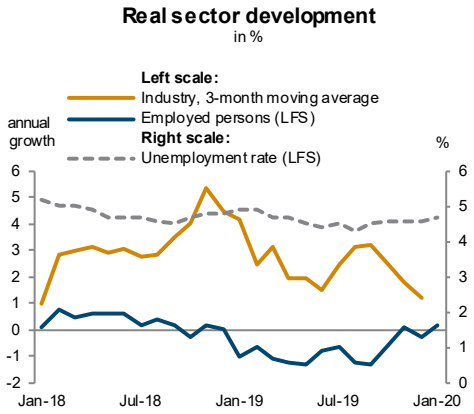
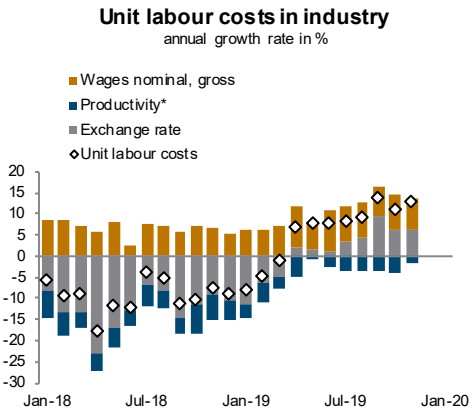
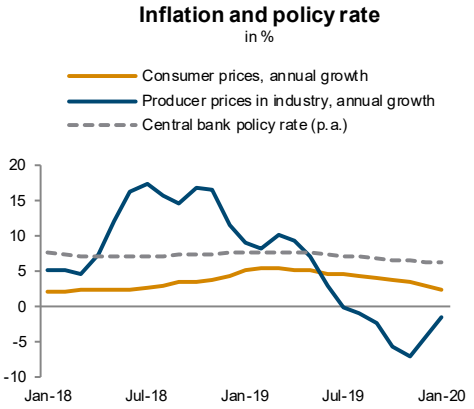
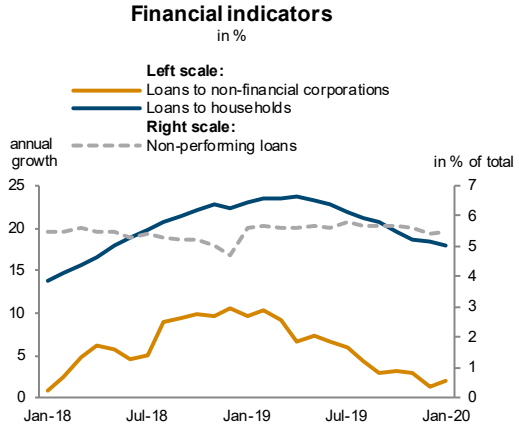
Russia

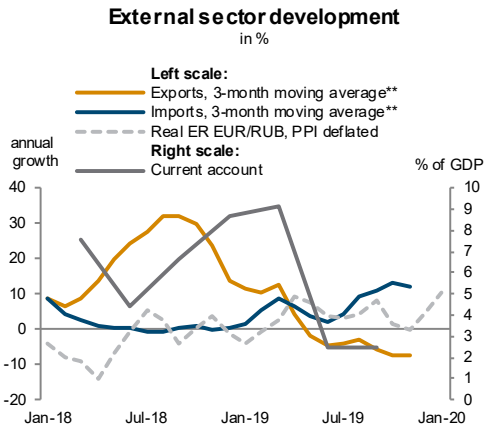












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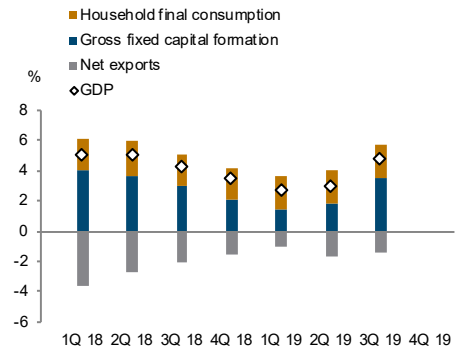
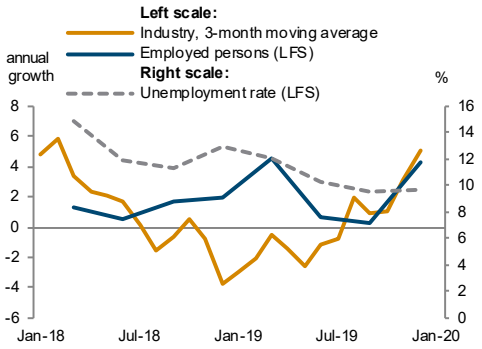
Serbia

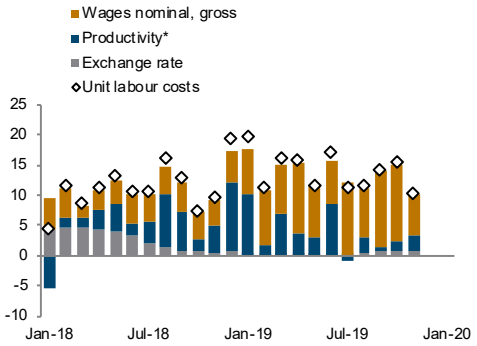
Real GDP growth and contributions
year-on-year



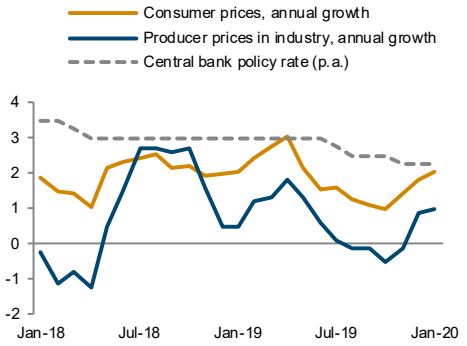
Real sector development
in %



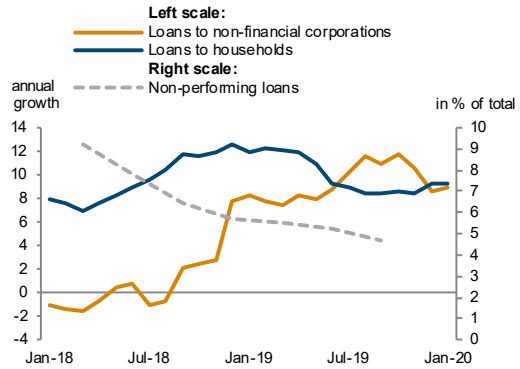
Unit labour costs in industry
annual growth rate in %



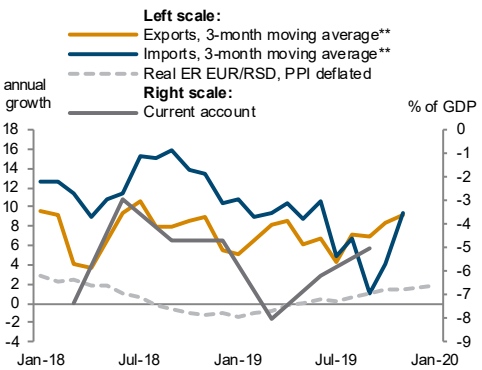
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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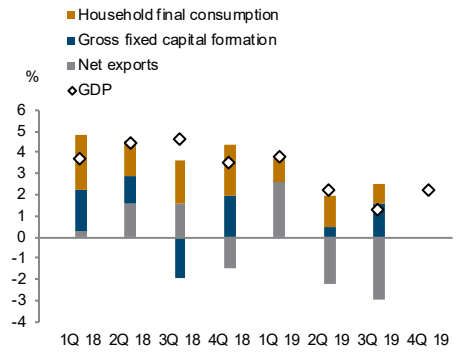
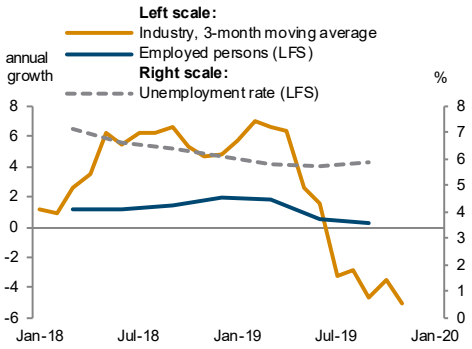
Slovakia

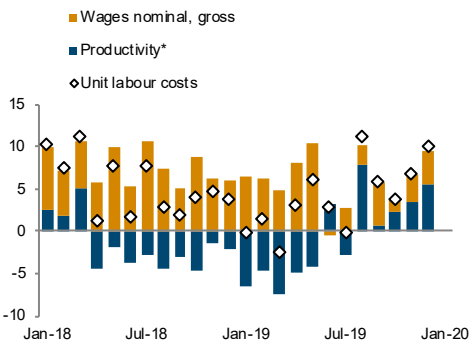
Real GDP growth and contributions
year-on-year



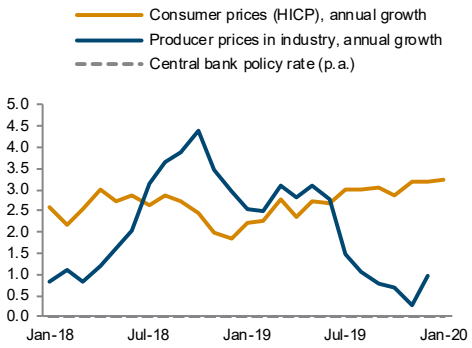
Real sector development
in %



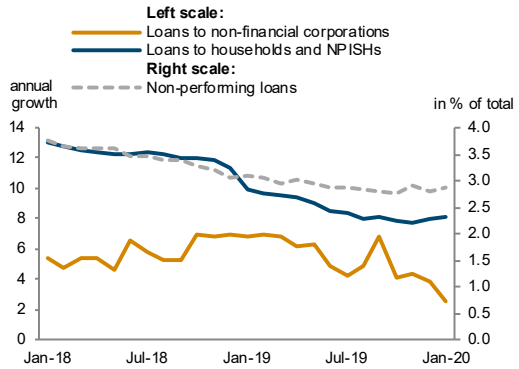
Unit labour costs in industry
annual growth rate in %



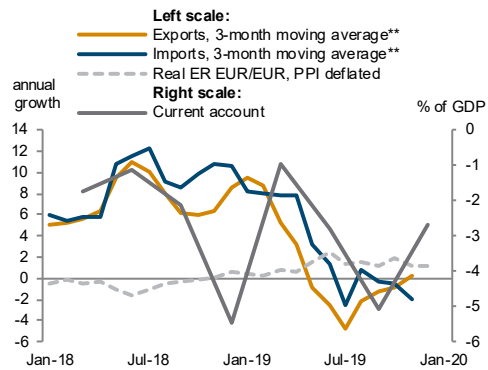
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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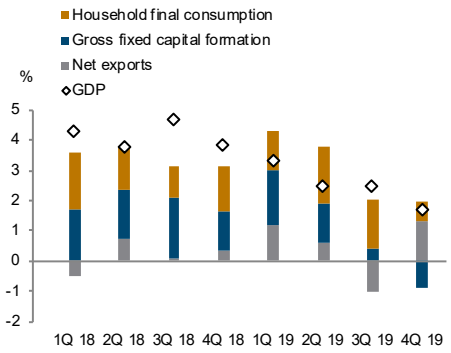
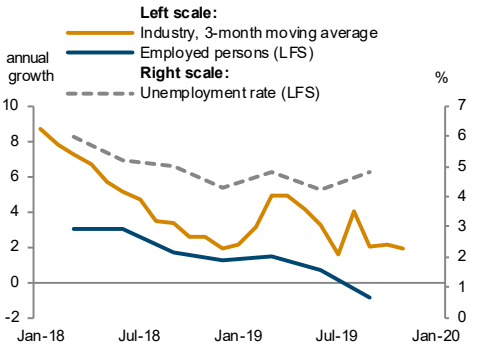
Slovenia

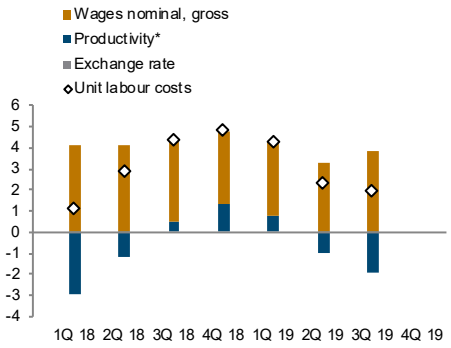
Real GDP growth and contributions
year-on-year



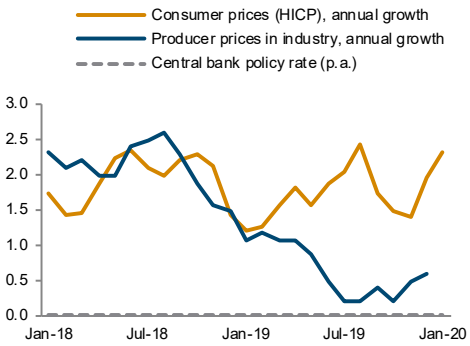
Real sector development
in %



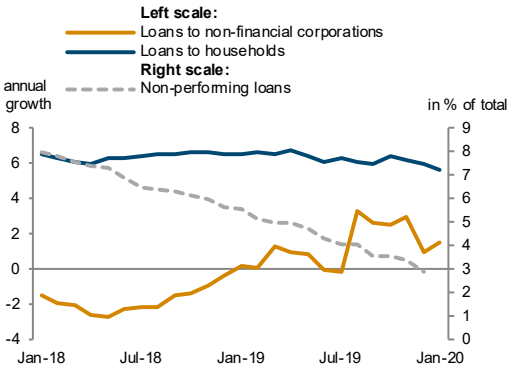
Unit labour costs in industry
annual growth rate in %



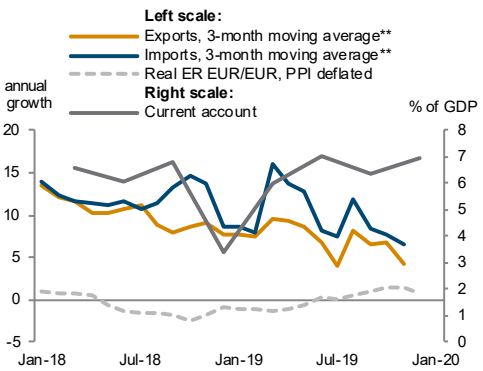
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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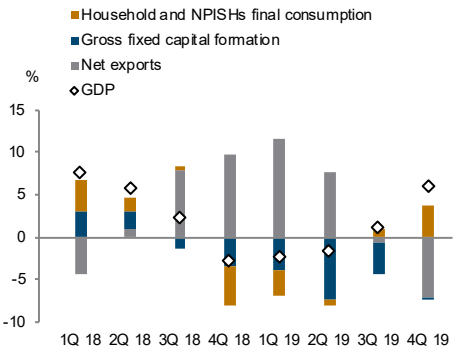
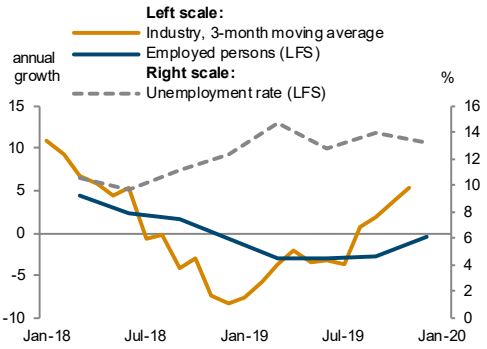
Turkey

Real GDP growth and contributions
year-on-year

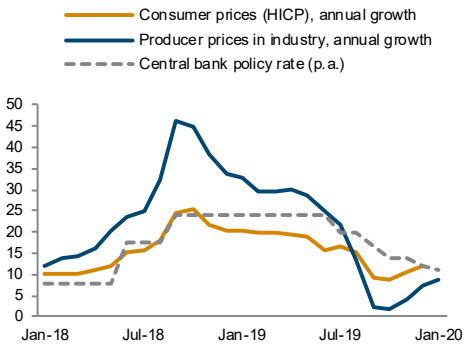


Real sector development
in %

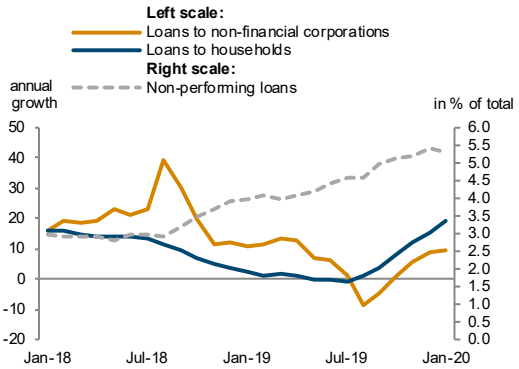


Unit labour costs in industry
annual growth rate in %

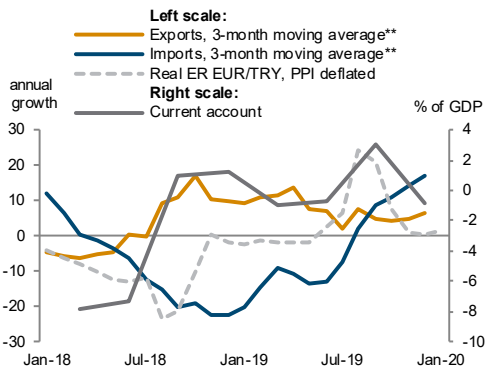
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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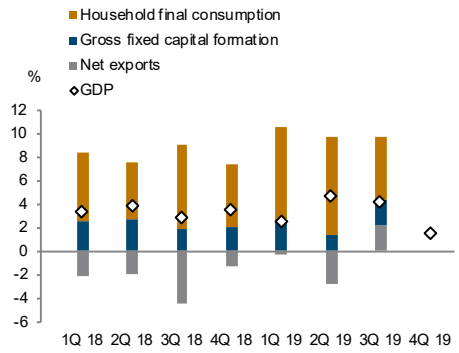
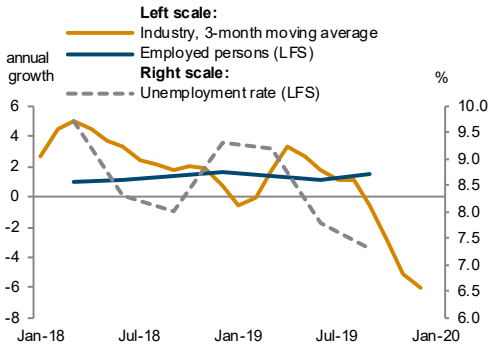
Ukraine

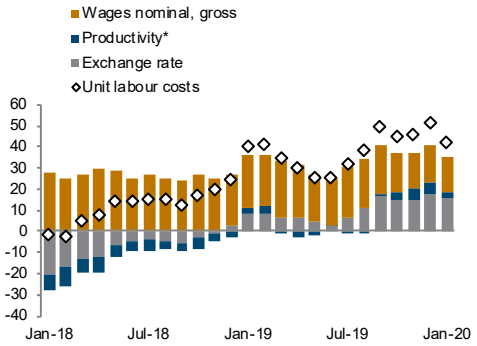
Real GDP growth and contributions
year-on-year



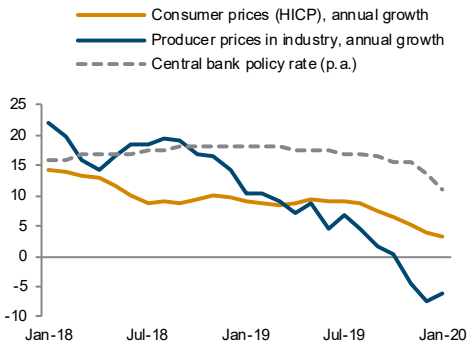
Real sector development
in %



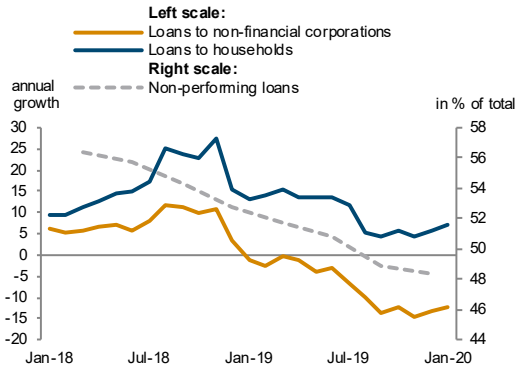
Unit labour costs in industry
annual growth rate in %



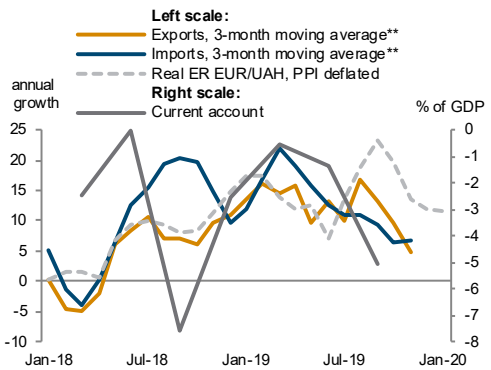
Inflation and policy rate
in %



Financial indicators
in %



External sector development
in %



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multi-country articles and statistical overviews

Economics editors: Vasily Astrov

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