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Euro Area Slowdown – a Country-Sector Analysis

Contents

Euro Area Slowdown – a Country-Sector Analysis

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Abstract

During the second half of 2018 and first half of 2019, euro area growth has been slower than in previous years. Surveys of growth imply that the manufacturing sector has led this slowdown, with German manufacturing being particularly affected. This Article uses granular measures of output and the labour market to examine whether the slowdown is concentrated in a small number of sectors or regions, or is more broadly evident. Examining data at the level of pairs of euro area countries and economic sectors, we find evidence for a small, broad-based, weakening of growth rates across countries and sectors. However, the dominant contribution to lower output growth comes from manufacturing in a small number of European countries, most notably Germany. Growth in other sectors and countries, and in the labour market, remains relatively robust but faces a risk of weakness subsequently spilling over from the manufacturing sector.

[1] The authors work in the Monetary Policy Division. The views expressed in this article are those of the authors only, and do not necessarily reflect the views of the Central Bank of Ireland. The authors would like to thank Mark Cassidy, Sarah Holton, Reamonn Lydon, Gillian Phelan and Terry Quinn for their helpful comments and suggestions.

1. Introduction

The euro area economy has grown consecutively for six years, recovering from the previous recession, and entering a broader expansionary phase. Since the second half of 2018, however, growth rates have weakened. Much attention has focused on whether this slowdown is broad-based across the euro area economy, or if it is being driven by idiosyncratic, or one-off, factors in a number of sectors or countries.

To address this question, we examine the growth rates of gross value added (output) for pairs of euro area countries and sectors. We show that there is some evidence of a slowdown across country-sector pairs, but also find evidence for large, negative, contributions from a small number of these pairs. Examining measures of dispersion in growth, we do not find strong evidence that euro area growth has fragmented across countries and sectors.

To gain a broader sense of euro area economic performance, we also examine developments in wage and employment growth in the euro area country-sector pairs. We find that employment growth remains elevated, albeit at a slightly lower rate than in previous years. Employment growth is widespread across countries and sectors. Euro area wages are growing at the fastest rate since the global financial crisis, with an increase in dispersion driven by particularly strong growth from a small number of sectors.

2. Background

During the second half of 2018, growth rates in economic activity were markedly weaker than those that were observed in the preceding years. The scale and scope of this slowdown, and its causes, have since received much attention from economic commentators and policymakers.

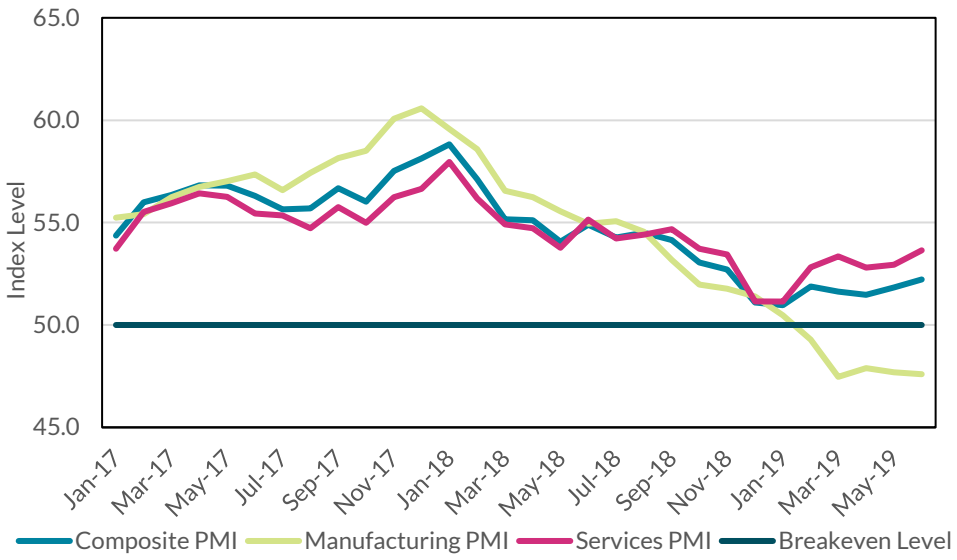
In particular, there has been debate about how widespread the slowdown has been and whether it is temporary or likely to be more sustained. Growth in measures of manufacturing output have performed particularly poorly, especially in Germany. Whether the slowdown is specific and contained to this sector is important for interpreting its effects and the appropriate policy response. A broad-based slowdown could signal that economy has entered the late phase in the economic cycle. A slowdown driven by sector-specific effects could instead unwind if it were driven by transitory factors.

Another important consideration is whether a slowdown currently localised in the manufacturing sector could subsequently spill over to other sectors. The current weakness in the manufacturing sector may thus

represent a downside risk to the path of overall economic growth. Indicators such as employment and wage growth continue to imply that labour market is resilient and continues to expand. Labour market indicators typically lag developments in the business cycle, however, and may not provide timely evidence of spreading weakness in growth.

From a monetary policy point of view, it is important to understand drivers of the current growth outcomes. The implications for price stability may differ depending on what is causing the slowdown. If, for instance, labour market indicators show evidence of a slowdown, this could delay convergence of inflation toward target. Employment and wage growth have been the major drivers of consumption growth over this economic expansion phase. They also play a key role in the projected path of inflation (ECB, 2019). Continued resilient growth in labour market indicators could thus maintain support for inflation in spite of the downturn in other sectors and indicators.

Figure 1: Manufacturing has driven the slowdown in the euro area, Services have shown resilience

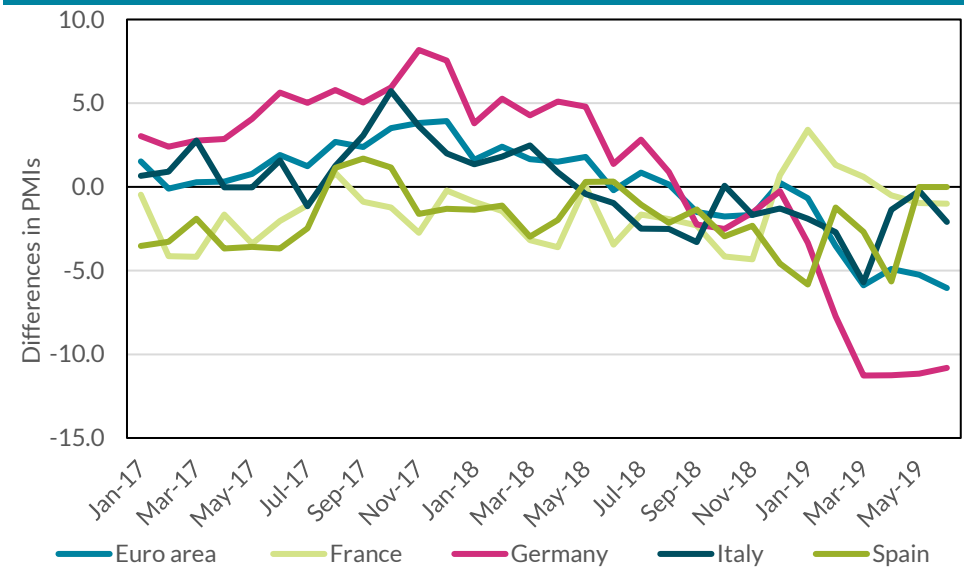


Source: IHS Markit. Note: 50 = no change.

The recent dynamics in economic activity can be seen in the trends in the IHS Markit Composite Purchasing Managers' Index (PMI). This is a monthly measure of euro area output, which has a strong correspondence with quarterly measures such as GDP. Figure 1 shows the Composite PMI, alongside the indices for the Manufacturing and Services sectors. Since 2018, the Composite PMI has been on a downward trend, indicating positive but declining output growth rates. More strikingly, the Manufacturing PMI, which had been growing more strongly than the Services and Composite PMIs, began to indicate negative growth in February 2019. Growth in manufacturing has remained negative

thereafter, while increasing growth rates in the Services PMI have caused some recovery in the Composite PMI.

Figure 2: Manufacturing has weakened relatively more in Germany than in other countries



Source: IHS Markit. Note: difference in Manufacturing and Services PMIs.

Figure 2 shows developments across euro area countries. We show the difference in the levels of the Manufacturing and Service PMIs for Germany, France, Italy, Spain and the euro area. Negative values indicate that manufacturing is growing at a slower rate than services.

The largest divergence is found in Germany, where negative manufacturing growth is countered by robust growth in services. German manufacturing had been growing at faster rates than services from January 2017 until September 2018. By comparison, France, Italy and Spain have roughly balanced growth rates across their manufacturing and services sectors. The Manufacturing PMI in Italy has shown negative growth rates during 2019, but to a smaller degree than the German PMI. In late 2018 and early 2019, the French PMIs showed some negative growth rates, but each returned to growth in the second quarter of 2019.

These survey data suggest a divergence in growth between the manufacturing and services sectors in the euro area. Furthermore, they suggest that the weakness in manufacturing growth is particularly evident in Germany. This motivates further examination of these differences in hard data, taking into account divergences between countries and sectors.

3. Overview of the literature

Dossche and Martinez-Martin (2018) highlight the German automobile industry as the particular source of weakness in manufacturing in Germany

and ultimately in the euro area. They argue that this weakness was caused by temporary factors relating to weather conditions and industrial actions. They conclude that the disruption should be temporary and should not affect employment and wage growth outcomes, despite affecting output.

Duma et al. (2019) examine "soft patches" in euro area growth, in the context of developments since the second half of 2018. Soft patches describe periods in which the output growth rate reduces compared to the recent prior history. A key consideration is whether a soft patch is temporary or is a signal of further weakness or a recession. They conclude that soft patches are not a reliable indicator of a turning point in the business cycle, and are much more common than recessions.

Buti et al. (2019) note that euro area domestic demand remains robust, and highlight the disconnect between the performance of the manufacturing and services sectors. They do not find evidence for a lead-lag relationship between survey indicators of the manufacturing and services sectors, and thus conclude that weakness in manufacturing need not necessarily spill over to services. In particular, they highlight the examples of 1999 and 2005 where spillovers were limited and domestic demand growth remained resilient.

This Article is related to a literature on examining euro area growth at a granular level, looking across countries and sectors. However, much of the previous literature focus on dispersion across countries or across sectors, and not across both dimensions, as we do.

The most similar previous work is ECB (2017), where the share of sectors with positive growth and the dispersion of value added growth were analysed using pairs of NACE sectors and euro area countries. At the time, the authors found an increasing number of pairs had positive growth rates, with the standard deviation of growth falling over time. This pointed towards a broadening of economic growth across the euro area towards the latter half of 2016.

On a country-level basis, Andersson et al. (2008) examine wage growth dispersion across euro area countries. The authors found that at the time, dispersion of wage growth across euro area countries was greater than the dispersion of wage growth within regions of Germany, USA, Italy and Spain.

Similarly, Martinez-Martin et al. (2018) show an increased level of synchronisation between GDP growth rates in euro area countries since the founding of the euro area. The authors examine business cycle correlations across the euro area, and show that there was an increase in synchronicity of growth during the financial crisis, and a fall in synchronicity during the recovery period, with an increase in 2018. We

build on this measure by looking at country-sector pairs, to achieve a broader measure of growth synchronicity.

On a sectoral basis, Benelal et al. (2006) examine the breakdown of dispersion of value added growth across euro area countries at a sectoral level. They find that the weighted standard deviation of growth was highest in construction and lowest in the service sector in 2006. They noted that the dispersion of manufacturing growth fell markedly post monetary union, suggesting that manufacturing became more synchronised.

4. Data and Methodology

To gain an understanding of recent growth developments in the euro area, we examine measures of output and labour market indicators across NACE[2] sectors and euro area countries. We take annual growth rates in Gross Value Added (GVA), Employment, and Wages . This allows us to examine both the sectoral and geographic composition of recent euro area growth patterns. Our sample begins in the first quarter of 2009. Complete data are available to Q1 2019 for GVA and to Q4 2018 for employment and wages.

To acknowledge the degree of variation in euro area countries and economic sectors, we weight each country-sector pair by its share, in levels, in the relevant aggregate for the euro area. We can thus calculate the weighted contribution of the growth rate of each country-sector pair to the overall euro area growth rate.

To examine how broad-based an economic expansion or slowdown is, we calculate some measures of dispersion. We examine the share of country-sector pairs with positive growth rates. In addition, we calculate the standard deviation of weighted growth rates, which shows the dispersion in sectoral growth (see ECB, 2017). The former measure shows what share of the economy is experiencing growth at each point, while the latter measure shows how closely distributed the growth rates are over time.

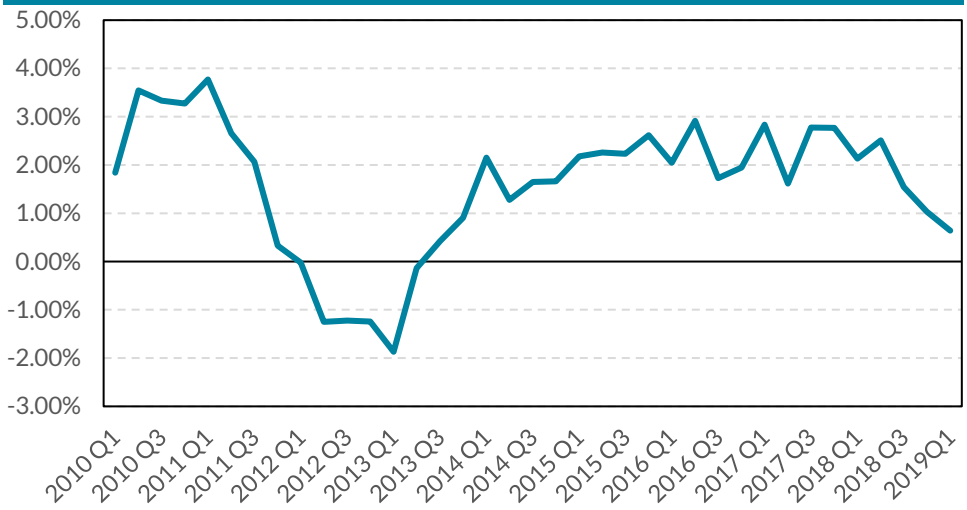
5. Results

(i) Gross Value Added

As can be seen in Figure 3, in the second half of 2018 and first quarter of 2019, GVA grew at a slower rate than the highs of 2016-17. This is consistent with the PMI survey data (Figure 1).

[2] NACE is the statistical classification of economic activities in the European Union, see here for further details.

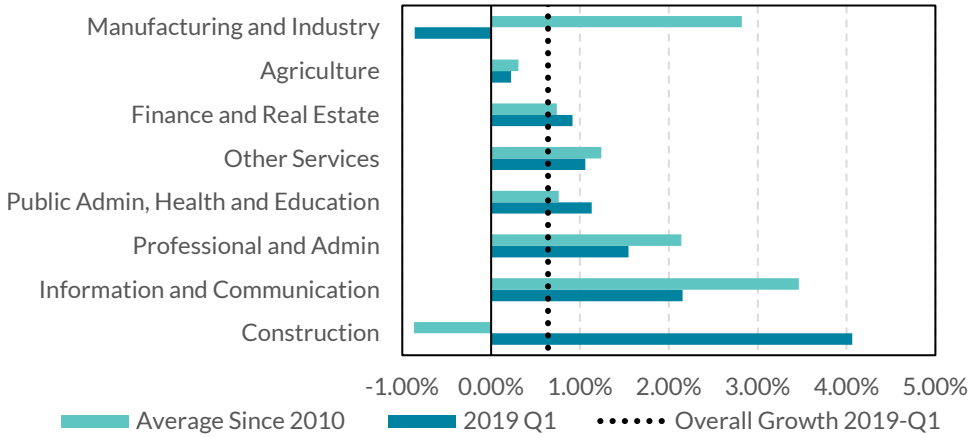
Figure 3: Annual euro area growth in value added



Source: Eurostat

Figure 4 shows developments at a euro area sectoral level. We show the annual growth rates in GVA across sectors in 2019 Q1, the average annual sectoral growth rates since 2010 Q1, and the overall GVA growth rate in 2019 Q1 (dotted line). We note that the Manufacturing and Industry sector had a negative growth rate in 2019 Q1, contrasting with its series average of 2.82 per cent. Information and Communication, Construction and Professional and Administration Activities were the three best-performing sectors in the year to 2019 Q1.

Figure 4: Sectoral GVA Growth Rates



Source: Eurostat

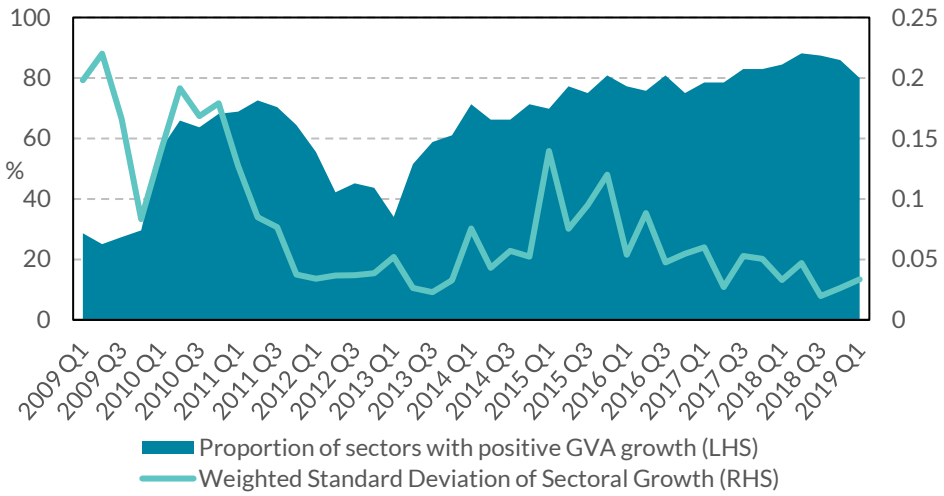
The euro area sectoral level data show a degree of heterogeneity in growth rates. Figure 4 does not show us the relative contributions of these sectors to the overall growth rate, however, nor does it tell us whether the negative growth rate in euro area manufacturing is widespread across the euro area countries or localised in one country, or a few countries.

To address these questions, we take the growth rates of pairs of sectors and countries. Figure 5 shows the proportion of euro area country-sector pairs with positive year-on-year GVA growth, from 2009 Q2 to 2019 Q1. It also depicts the weighted standard deviation of the growth rates, where the pairs are weighted by their overall contribution to euro area GVA.

From Figure 5, we note that the proportion of growing country-sector pairs has fallen marginally but remains relatively elevated. It has fallen to 80 per cent, from 88 per cent in the second quarter of 2018. That was the highest share observed over the series. The weighted standard deviation of sectoral growth has not increased by much in the second half of 2018. There is thus little evidence for an increase in the dispersion of growth across sectors.

Taken together with Figure 3, we conclude that a large majority of country-sector pairs are continuing to grow, albeit at a slower rate. There appears to be an adjustment on the intensive margin of growth (growth per country-sector), rather than the extensive margin (share of growing country-sectors).

Figure 5: Dispersion of growth across country-sector pairs



Source: Eurostat

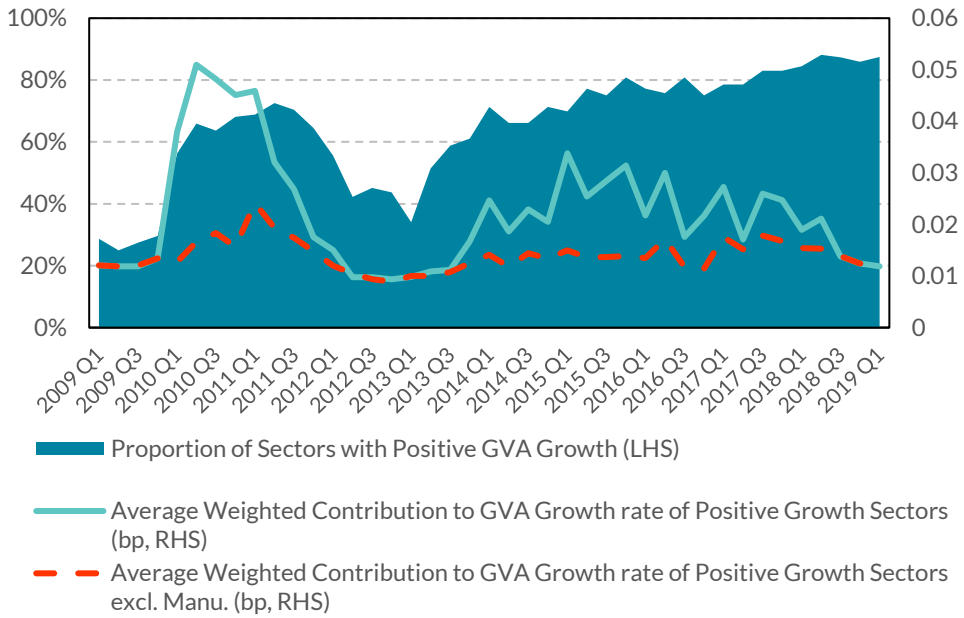
In Figure 6, we plot the weighted average contribution to GVA growth of the positive-growth pairs, and of the pairs when excluding the Manufacturing and Industry sector. We observe that, between the second half of 2013 and the second half of 2018, manufacturing made a large positive contribution. Since the second half of 2018, manufacturing's contribution has fallen and these two series have converged.

This is consistent with two stylised facts:

1. The manufacturing sector is growing at a much slower rate than other sectors are. This has lowered aggregate GVA growth to a considerable degree. The weighted standard deviation remains largely unchanged because manufacturing was previously outperforming other sectors, and is now underperforming them.

2. There has been a broad decrease in the average growth contributions from the other country-sector pairs, excluding manufacturing, to aggregate GVA growth. This decrease, however, is considerably smaller in magnitude than the decrease in the manufacturing contribution.

Figure 6: Contribution of positive growth sectors to growth rate



Source: Eurostat

Turning to specific country-sector pairs, in Tables 1 and 2 we show the GVA growth rates, and weighted contributions to the overall euro area GVA growth rate, of the 10 weakest and 10 strongest sectors in 2019 Q1. Three of the four weakest-performing country-sector pairs are based in the Manufacturing and Industry sector, covering Germany, Italy and France. German manufacturing is particularly weak, which is consistent with the PMI figures in Figure 2. Its -2.4 per cent growth rate reduces the euro area weighted figure by 30 basis points, given the size of this country-sector pair.

It is also notable that four of the 10 weakest sectors are based in Italy, which is consistent with the subdued Italian growth dynamics indicated from PMIs (Figure 2). The 10 strongest performing pairs are mainly based in

the services sector, and are distributed across Germany, France and Spain. They are growing at rates that are relatively tightly dispersed, consistent with the low standard deviation observed in Figure 5.

Table 1: 10 Weakest Performing Sectors in 2019 Q1

Country	Sector	Growth Rate	Weighted Contribution to Euro Area Growth
Germany	Manufacturing and Industry	-2.39%	-0.30%
Italy	Manufacturing and Industry	-0.77%	-0.04%
Italy	Professional and Admin	-2.79%	-0.03%
France	Manufacturing and Industry	-0.33%	-0.02%
Italy	Information and Comms	-2.54%	-0.01%
Italy	Other Services	-0.27%	-0.01%
France	Construction	-0.68%	-0.01%
Finland	Finance and Real Estate	-2.65%	-0.01%
Greece	Finance and Real Estate	-1.41%	-0.01%
Greece	Public Admin, Health and Education	-1.41%	0.00%
Source: Eurostat			

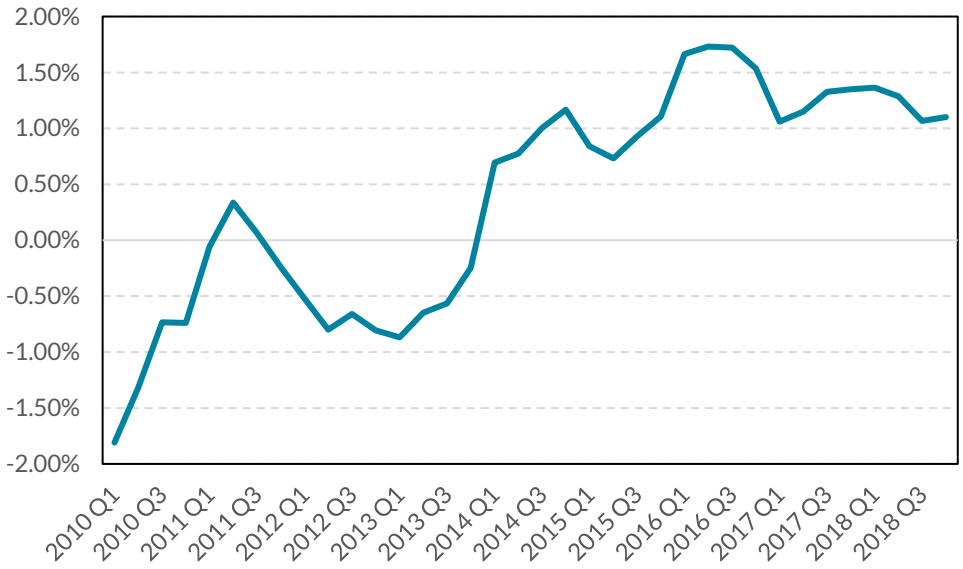
Table 2: 10 Strongest Performing Sectors in 2019 Q1

Country	Sector	Growth Rate	Weighted Contribution to Euro Area Growth
Germany	Other Services	1.56%	0.08%
Spain	Other Services	2.58%	0.07%
Germany	Public Admin, Health and Education	1.49%	0.07%
France	Finance and Real Estate	1.92%	0.06%
Spain	Public Admin, Health and Education	2.85%	0.05%
Spain	Professional and Admin	5.35%	0.05%
Germany	Information and Comms	3.12%	0.05%
France	Professional and Admin	1.62%	0.04%
Germany	Construction	4.57%	0.04%
Spain	Construction	6.13%	0.04%
Source: Eurostat			

(ii) Employment

Figure 7 shows the recent patterns in employment growth. It should be noted that while in 2018 Q4, employment growth was at a marginally slower rate than at the start of 2018 and the highs of 2015-16, it remains elevated relative to previous years. Employment growth was at 1.1% in 2018 Q4.

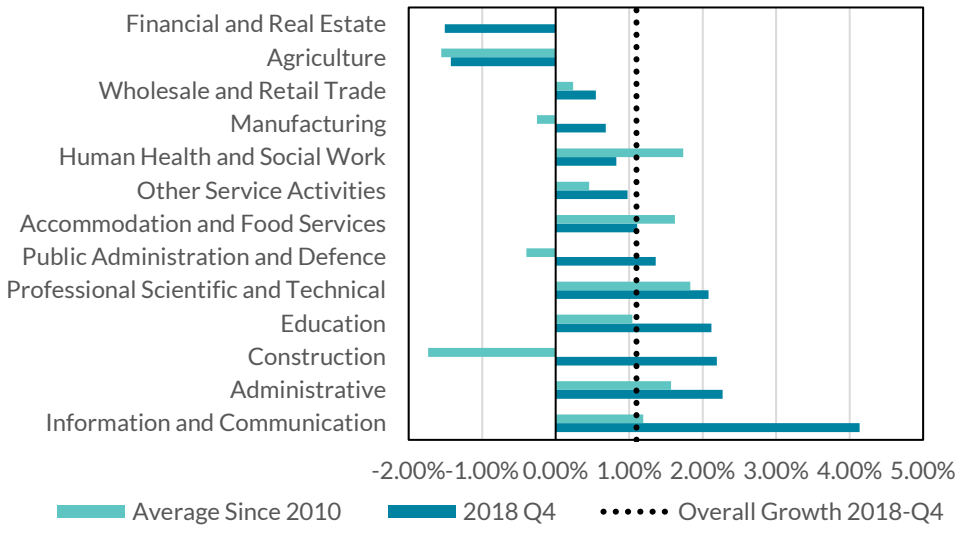
Figure 7: Annual euro area employment growth



Source: Eurostat

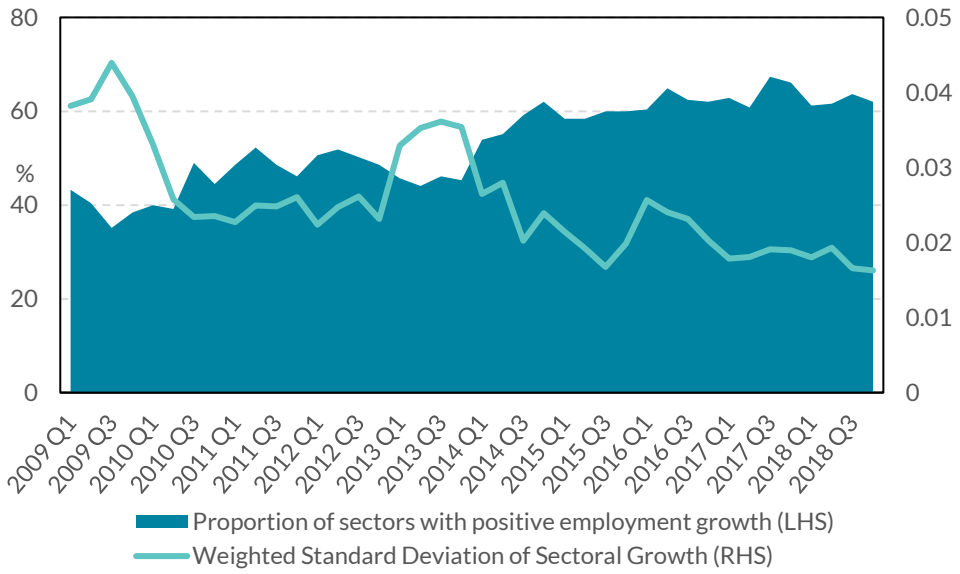
Once again, we consider the performance of broader sectors in the euro area. This is shown in Figure 8. In contrast with the GVA measure, we note that employment growth is still positive in manufacturing. It is possible that this is due to employment growth dynamics lagging output dynamics, however. The Agriculture and Financial/Real Estate sectors both had negative employment growth rates. Once again, Information and Communication and Administration related activities are the fastest growing sectors, further highlighting the resilience of economic activity in the service sector. This is consistent with domestic demand growth remaining robust, as was shown by Buti et al. (2019).

Figure 8: Annual euro area sectoral growth in employment



Source: Eurostat

Figure 9: Dispersion of employment growth across country-sector pairs



Source: Eurostat

Figure 9 plots the proportion of sectors with positive employment growth and the weighted standard deviation of country-sector employment growth. The proportion of sectors with positive growth is currently at 62 per cent, not far behind the post-crisis high of 67 per cent recorded in 2017 Q3. The weighted standard deviation of employment growth is also relatively low.

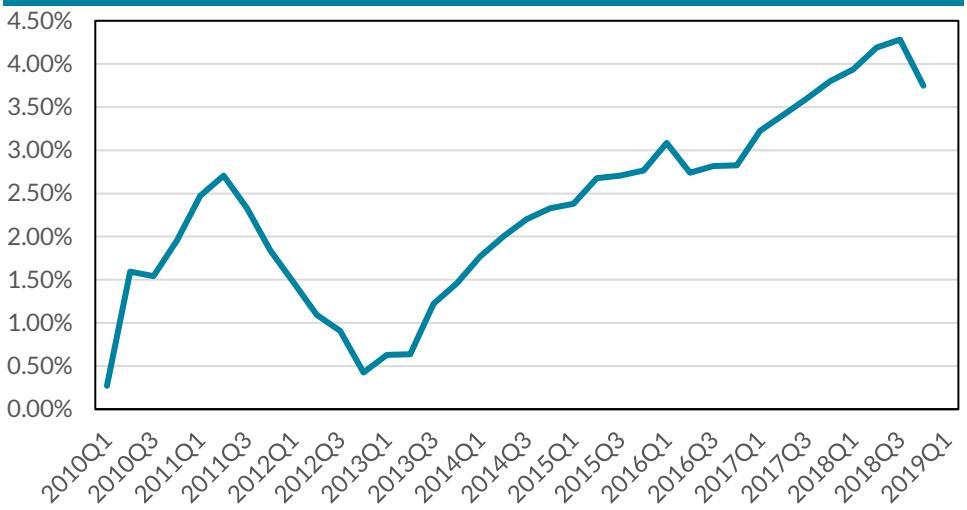
(iii) Wages and salaries

Turning to wages, Figure 10 shows the recent pattern in annual growth of euro area wages. As can be seen, wage growth has been accelerating in recent times. The latest data show an annual growth rate of approximately 3.75 per cent, close to the highest annual rate of increase since the global financial crisis (which was recorded in 2018 Q3).

These wage growth dynamics are driven by the tightening labour market (Byrne and Zekaite, 2019), and underpin projections of consumption and domestic demand (ECB, 2019). The pass-through of the recent stronger euro area wage growth to inflation should be supportive of the path of inflation over the medium term.[3]

[3] Bobeica et al. (2019) show that increases in labour costs pass through to higher inflation in the euro area, but that the degree of pass-through is state-dependent. Pass-through occurs to a greater degree when inflation is stably on a sustainable path.

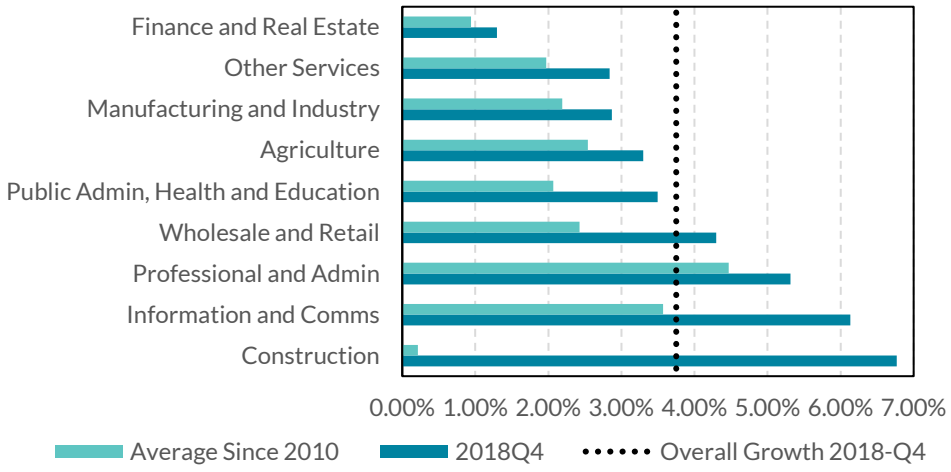
Figure 10: Euro area wages and salaries (compensation of employees) annual growth rate



Source: Eurostat

From a sectoral perspective, all growth rates are consistently above their average since the financial crisis (Figure 11).

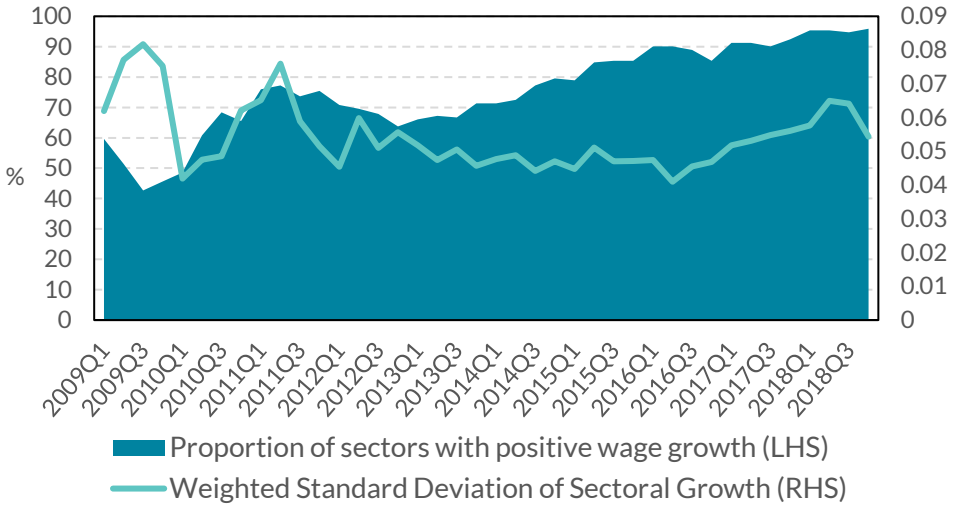
Figure 11: Euro area wages and salaries – sectoral growth rates



Source: Eurostat

Interestingly here, there is no clear pattern in growth across sectors. Construction, Information and Communications and Professional and Administrative sectors have particularly strong growth. Manufacturing wage growth was only slightly below its series average.

Figure 12: Euro area wages and salaries – sectoral growth rates



Source: Eurostat

If we look at the country-sector breakdown of growth, we note that 96 per cent of country-sector pairs saw positive wage growth in 2018 Q4 (Figure 12). This is the highest share observed in the series. The standard deviation rose toward the end of 2018 due to a small number of sectors having higher growth rates.

6. Conclusions

This Article looks across euro area countries and economic sectors to investigate whether the recent slowdown in headline growth is broad-based across countries and sectors, or is relatively contained.

Using GVA as an overall growth measure, we show that the manufacturing sector is the source of the largest decrease in growth. In particular, the manufacturing sector in Germany made a large, negative, contribution to euro area growth in the second half of 2018 and the first quarter of 2019.

There is some evidence that idiosyncratic factors, particularly relating to the German automobile industry, have played a large role in this recent slowdown. Whether there are more sustained negative dynamics in German manufacturing, and if these could spill over to other euro area countries and sectors, is an important area for ongoing research.

While the manufacturing sector has played a large part in the overall slowdown in euro area growth, it does not fully account for these developments. Rather, the slowdown is also accounted for, in part, by a smaller broad-based weakening in growth across countries and sectors of the euro area economy. While the share of country-sectors pairs that are growing remains near to the highest-recorded level, investigation of further slowing in growth rates, or spillovers from manufacturing, is warranted.

We further investigate the state of the euro area economy by examining the recent pattern in sectoral wage and employment growth. We find employment growth has remained robust, albeit at a slower rate than previously. The best performing sectors are mainly services-related. The proportion of country-sector pairs experiencing positive employment growth remains elevated, and there is no evidence of higher dispersion in growth rates.

From a wage perspective, growth is at its highest post-crisis level, with a high proportion of sectors experiencing positive wage growth. A small number of sectors are experiencing particularly high growth, leading to a marginally increased dispersion in growth rates. There is no evidence of weakening growth in manufacturing wages.

Taking wages and employment together, the euro area labour market appears to be relatively resilient. The labour market is thus providing support to consumption, domestic demand and ultimately to inflation dynamics. Developments in the labour market follow other developments in the economy with a lag, however. The risk thus remains that the slowdown in the manufacturing sector may spill over to the labour market, as well as to other sectors of the economy.

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