

## THE RECENT SLOWDOWN IN ACTIVITY FROM A SECTORAL PERSPECTIVE

In early 2018, global economic activity began clearly to slow. This slowdown has been manifest essentially in a marked worsening in international trade and manufacturing activity indicators, but also in a certain loss of momentum in the services sector. Given the relatively sizeable weight of manufactures in global trade, the comparatively greater loss of buoyancy in the sector is consistent with the increase in trade tensions observed in this period. Thus, in the euro area for instance, gross value added in the manufacturing industry, after having posted a year-on-year growth rate of over 4% in early 2018, has shrunk to a rate of close to 1% in 2019 Q2. The same variable in the services sector has only fallen by 1 pp, from 3% to 2%, over this period (see Chart 1). A wide range of indicators suggests that, in the Spanish economy, the manufacturing sector has in recent quarters also trended less favourably than the services sectors (see Chart 2 and 3.1).

The production of any good or service is characterised by increasingly complex customer-supplier relationships across the different sectors of the economy. In this

connection, this box analyses to what extent the recent slowdown in services in the Spanish economy is related to the more marked weakness witnessed in the manufacturing industry. To conduct this analysis we use the world input-output tables (WIOD), which offer detailed information on the uses and destinations of production for a broad set of countries and sectors.<sup>1</sup> This information enables the “manufacturing orientation” of each of the sub-sectors of activity under services to be calculated, proxied by the proportion of their invoicing intended for the manufacturing sector.<sup>2</sup> This measure thus reflects the sensitivity of each of the services sub-sectors to a downturn in industrial activity.

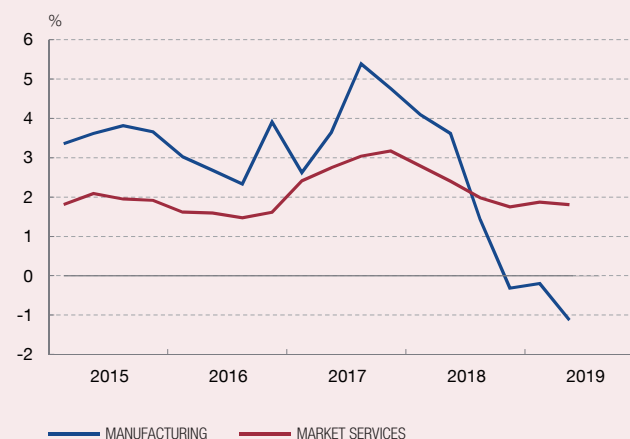
In aggregate terms, the manufacturing orientation of services in the Spanish economy stands at around 8%, below the related figures observed in Germany and Italy, it is in line with the level of manufacturing exposure recorded in the French services sector (see Chart 4.1). As to the geographical source of this exposure, the invoicing of the Spanish services sector stemming from foreign

Chart 1  
INTERNATIONAL TRADE AND SLOWDOWN IN MANUFACTURING

1 WORLD IMPORTS EXCLUDING EURO AREA 2012 Q3 (a)



2 GROSS VALUE ADDED (EURO AREA) (b)  
Year-on-year growth



SOURCES: CPB and Eurostat.

- a CPB. Latest observation: September.  
b Eurostat. Latest observation: June.

- For more details on this database, see Timmer, M., E. Dietzenbacher, B. Los, R. Stehrer and G. de Vries (2015) “An Illustrated User Guide to the World Input–Output Database: the Case of Global Automotive Production”, *Review of International Economics*, 23.
- Note that this proportion includes not only the direct invoicing of services to manufacturing but also the indirect exposure through third sectors that act as services customers and manufacturing suppliers.

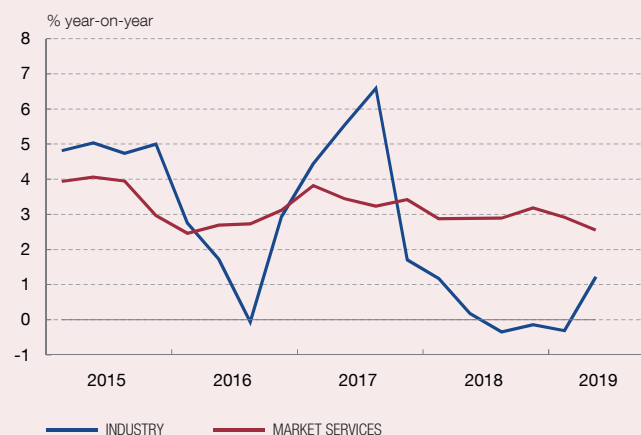
**THE RECENT SLOWDOWN IN ACTIVITY FROM A SECTORAL PERSPECTIVE (cont'd)**

manufacturing industry is relatively small. Aside from these aggregate figures, there is high heterogeneity across the different services sub-sectors. Hence, whereas land transport and wholesale trade-related services evidence a manufacturing orientation of over 20%, this measure is below 2% for the R+D, human health activities

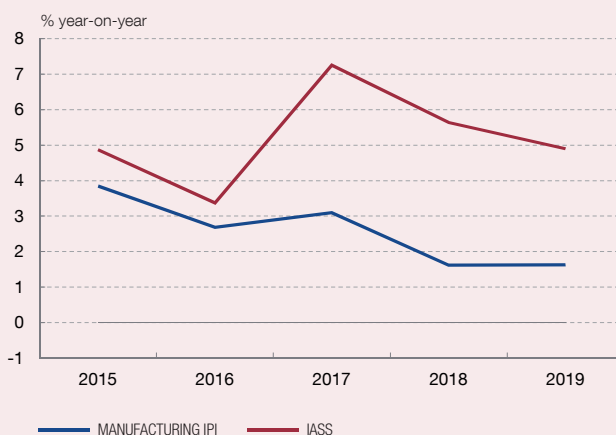
and accommodation and food service activities sub-sectors (see Chart 5.1). Also, although the exposure of services to foreign manufacturing industry is limited in aggregate terms, in the case of the maritime transport and air transport sub-sectors this exposure is as or more significant than that to domestic industry.

Chart 2  
RECENT ACTIVITY BY SECTOR IN SPAIN

1 GVA BY SECTOR



2 IPI (INDUSTRIAL PRODUCTION INDEX) AND IASS (SERVICES BUSINESS ACTIVITY INDEX)



SOURCE: INE.

Chart 3  
RECENT ACTIVITY

1 SOCIAL SECURITY REGISTRATIONS BY SECTOR IN SPAIN (a)



2 MOTOR VEHICLE PRODUCTION IN SPAIN AND GERMANY (3-m moving average) (b)



SOURCES: Ministerio de Trabajo, Banco de España and Eurostat.

a Ministerio de Trabajo and Banco de España. Latest observation: September.  
b Eurostat. Latest observation: September.

### THE RECENT SLOWDOWN IN ACTIVITY FROM A SECTORAL PERSPECTIVE (cont'd)

On the basis of the manufacturing orientation of the various services sub-sectors, it is possible to assess to what extent the recent slowdown in services activity may have been linked to the deceleration in the manufacturing sector. In particular, the loss of momentum is expected to have been potentially sharper in those services sub-sectors with a greater manufacturing orientation. Indeed, when changes in the activity of the services sub-sectors are proxied by the change in the average year-on-year rate of job creation from 2018 to 2019 (in terms of Social Security registrations),<sup>3</sup> a negative relationship is observed between the manufacturing orientation of services and the degree of dynamism of services activity (see Chart 6.1).<sup>4</sup> A simple linear regression model confirms that this association is not only statistically significant but also economically relevant. In particular, the estimated relationship suggests that, for each percentage point of services sector invoicing from the manufacturing sector, the slowdown in the latter would have reduced the pace of job creation in the services sub-sectors by 0.06 pp, on average.

In the specific case of the car industry, which plays a most significant role in the Spanish economy and, in particular,

in terms of its export capacity, some loss of momentum has been witnessed since the start of 2018. However, this diminished dynamism is much less acute than that in Germany, for example (see Chart 3.2). In aggregate terms, the percentage of sales of Spanish services intended for the motor vehicle manufacturing sector (which might be called “car orientation”) is in line with what is observable in France and Italy, but is far behind the related figures for German services (see Chart 4.2). Further, as in the case of manufacturing orientation, there is high heterogeneity within services as regards exposure to the car sector. Hence, while services associated with the sale of motor vehicles show an orientation above 5% and advertising and engineering services evidence orientations close to 2%, accommodation and food and R+D-related services show exposures to the car sector close to zero (see Chart 5.2). Once again, resorting to this heterogeneity, it is possible to estimate a negative correlation between the car orientation of each services sub-sector and the change between 2018 and 2019 in the attendant average year-on-year rate of job creation (see Chart 6.2).<sup>5</sup> This statistically significant correlation means that, for each

Chart 4  
MANUFACTURING ORIENTATION OF SERVICES



SOURCE: Banco de España calculations based on WIOD 2016.

<sup>3</sup> The rate for 2019 refers to the January-October period compared with the same months of the previous year.

<sup>4</sup> The number of Social Security registrations is used because it is the sole high-frequency indicator available with a sufficient breakdown by services sector.

<sup>5</sup> See footnote 3.

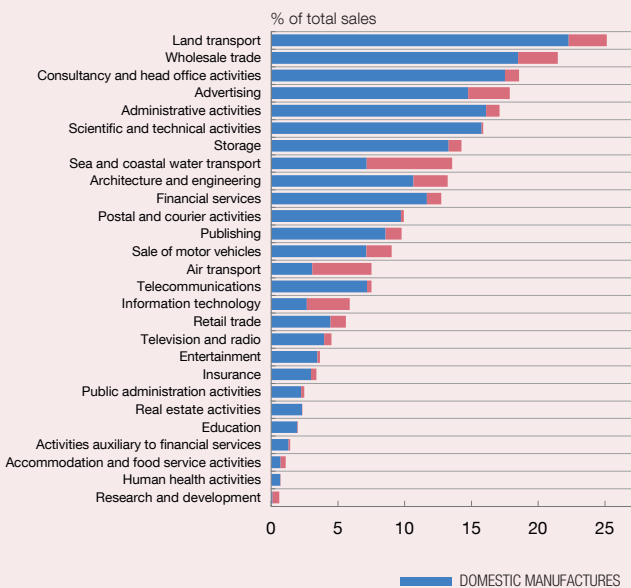
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percentage point of services sector invoicing from the car sector, the slowdown in the latter is expected to have reduced, on average, the rate of job creation in the related services activities by 0.4 pp.

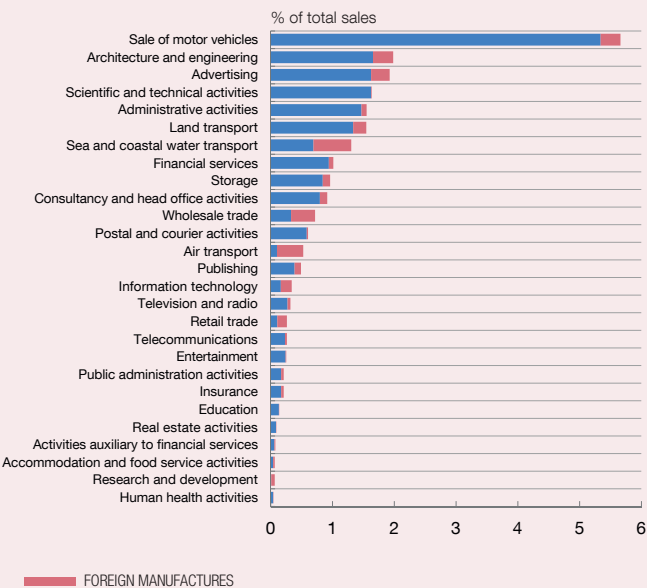
In conclusion, according to the analysis set out in this box, a significant portion of the slowdown in services since early 2018 is estimated to be linked to the sharper slowdown in manufacturing. Moreover, the fact that the

Chart 5  
MANUFACTURING ORIENTATION OF SERVICES

1 PERCENTAGE OF THE SERVICES SECTOR'S INVOICING TO THE DOMESTIC AND FOREIGN MANUFACTURING INDUSTRY



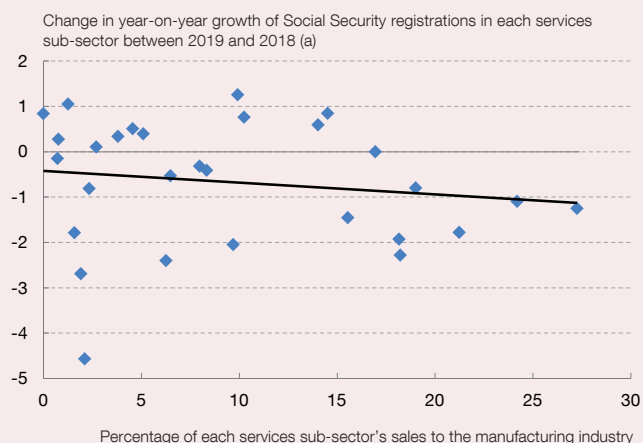
2 PERCENTAGE OF THE SERVICES SECTOR'S INVOICING TO THE DOMESTIC AND FOREIGN CAR INDUSTRY



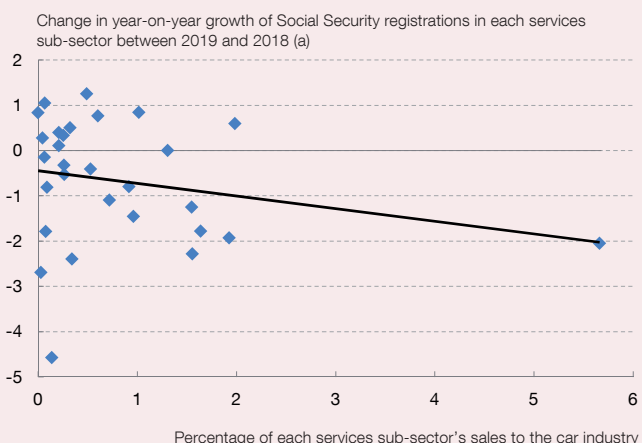
SOURCE: Banco de España calculations based on WIOD 2016.

Chart 6  
SLOWDOWN OF SOCIAL SECURITY REGISTRATIONS AND MANUFACTURING ORIENTATION

1 MANUFACTURING INDUSTRY



2 CAR INDUSTRY



SOURCE: Banco de España calculations.

a 2019 growth only for the first ten months of the year.

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Spanish services sector's exposure to industry, in general, and to the car sector, in particular, is less than that observed in Germany (and, to a lesser extent, Italy), has

contributed to the knock-on effect from manufacturing on the economy as a whole proving comparatively less acute in Spain's case.