The rise of services and the transmission of monetary policy

Geneva,
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Services account for the lion’s share of economic activity in advanced economies

Share of services in gross value added
(percentages)


Notes: Euro area-5 refers to Germany, France, Italy, Spain and the Netherlands. Data for Germany prior to 1991 have been backcasted using growth rates for West Germany. Consistent data across advanced economies are only available up to 2010.
Three in four persons in the euro area are employed in the service sector.

Share of services in total employment
((percentages)


Notes: Euro area-5 refers to Germany, France, Italy, Spain and the Netherlands. Data for Germany prior to 1991 have been backcasted using growth rates for West Germany. Consistent data across advanced economies are only available up to 2010.
Households spend a growing share of their consumption expenditure on services.

**Share of services in household final consumption expenditures**
(percentages)

Sources: Haver Analytics, ECB calculations and OECD Annual National Accounts.

Notes: Euro area-3 refers to Germany, France and Italy. Sector classification according to ISIC Rev.4. For Italy, data prior to 1995 have been backcasted using data according to ISIC Rev. 3. Data for Germany prior to 1991 have been backcasted using growth rates for West Germany.
The relative price of services rises with income

**Gross value added deflator of services over manufacturing**
(indices: 1970 = 1)


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The flipside of the rise of services: a decline in manufacturing jobs

Share of manufacturing in total employment
((percentages)

<table>
<thead>
<tr>
<th>Year</th>
<th>Euro area-5</th>
<th>Japan</th>
<th>United States</th>
</tr>
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<td>1970</td>
<td>30</td>
<td>25</td>
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<td>2010</td>
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Notes: Euro area-5 refers to Germany, France, Italy, Spain and the Netherlands. Data for Germany prior to 1991 have been backcasted using growth rates for West Germany. Consistent data across advanced economies are only available up to 2010.
Structural transformation has shifted the weights in the HICP basket

**Share of services in core inflation**

(percentages)


Notes: For the euro area, data refer to the HICP excluding energy and food. For the United States, data refer to the share of services, less energy services, in the CPI excluding energy and food.
Services deepening has tended to increase the level of core inflation

Euro area HICP excluding energy and food
(annual percentage change)

Sources: Eurostat, Haver and ECB calculations.
Notes: The counterfactual has been computed holding the share of services and non-energy industrial goods constant at their 1996 levels.
The rise of services increases the lag of monetary policy transmission

**Inflation response to an easing of monetary policy**
(y-axis: percent; x-axis: quarters)


Notes: Calibrated to match the sectoral reallocation experienced by the five largest euro area economies (Germany, France, Italy, Spain and the Netherlands) from 1970 to 2010. The standard deviation of the monetary policy shock is calibrated such that the response of inflation in the 1970 steady-state equals 1%. All other structural parameters of the model are kept constant.

**Output response to an easing of monetary policy**
(y-axis: percent; x-axis: quarters)
The service sector may be subject to transformation itself

**Difference between euro area services and NEIG inflation**
(percentage per annum)

Sources: Haver and ECB calculations.
Notes: Solid line refers to fitted exponential trend.
Services are also increasingly used as input to production

**Services input in the production of final services and goods**
(percentages)

Sources: Bureau of Economic Analysis and ECB calculations.
The input channel may delay the transmission of policy further

Response of US inflation to an easing of monetary policy
(y-axis: percent; x-axis: quarters)


Notes: Calibrated to match the sectoral reallocation experienced by the United States from 1970 to 2010. The standard deviation of the monetary policy shock is calibrated such that the response of inflation in the 1970 steady-state equals 1%. All other structural parameters of the model are kept constant.
Thank you for your attention