Productivity in Europe

Trends and drivers in a service-based economy

FACTSHEET - SWEDEN (SE)
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Key messages

- In the Swedish business service sector, the level of entry rate is the lowest for larger-than-micro firms in Europe. The level of entry rate is also well below the average for all firms. This evidence implies there is room to improve productivity growth by stimulating business entry and business dynamism in general in Sweden.

- The share of zombie firms in Sweden in both the manufacturing and services sectors is rather higher relative to other economies in the EU. Further investigation of the root causes for this is needed, as the Swedish banking system is considered to be one of the best functioning in the EU.

- Labour hoarding appears to be present in the Swedish manufacturing sector during the years 2012 and 2015. Here an increase in the enterprise churn rate is associated to a rise in labour productivity growth in correspondence with a falling GVA growth rate.

1 Impact of structural change and productivity in services

Table 1. SE – Average labour productivity growth in the period 1910-2017 computed using the 1-digit sector nominal value added weights prevailing in each base year, including and excluding services (%).

<table>
<thead>
<tr>
<th>Base year</th>
<th>All industries (including services)</th>
<th>All excluding services</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>1.97</td>
<td>2.85</td>
</tr>
<tr>
<td>1980</td>
<td>1.76</td>
<td>2.78</td>
</tr>
<tr>
<td>1990</td>
<td>1.72</td>
<td>2.73</td>
</tr>
<tr>
<td>2000</td>
<td>1.81</td>
<td>2.96</td>
</tr>
<tr>
<td>2010</td>
<td>1.67</td>
<td>2.69</td>
</tr>
<tr>
<td>2017</td>
<td>1.57</td>
<td>2.61</td>
</tr>
<tr>
<td>Actual</td>
<td>1.80</td>
<td>2.80</td>
</tr>
</tbody>
</table>

Source: STAN and EU KLEMS, 2019.
Note: the real estate sector is excluded from these computations.

Swedish average real labour productivity growth in the 1970-2017 period would have been about 0.17 percentage points higher (about 9% higher) compared to the actual one if the economic structure prevailing in 1970 had remained the same (see Table 1).1 In addition, when excluding services from the computation of the counterfactual average labour productivity growth rates, the latter increase from 1.97% (services included) to 2.85% (services excluded) when using 1970 value added weights, and from 1.57% to 2.61% with 2017 weights. This implies that the servicification of the economy has been a drag to overall productivity performance.

Table 2 shows the drivers at the 1-digit level of such negative impact of structural change on productivity growth. Two main observations emerge. First, the weights of the agricultural and manufacturing sectors have shrunk from 1970 to 2017, by about 78% and 40%, respectively. Since these sectors have experienced relatively better performance in terms of productivity growth, the reduction in their shares has negatively affected economy-wide productivity growth. However, the percentage fall in the weight of the manufacturing

1 The difference between the 1970 base-year counterfactual and the actual growth rate in the first column of table 1 isolates the impact of structural change.
sector is one of the smallest among the countries analysed\(^2\), whereas its average labour productivity growth has been relatively high. Second, certain service sectors have increased their economic weight significantly while having performed relatively poorly in terms of productivity growth. These chiefly include the accommodation and food service activities and non-market services. All things considered, however, the impact of structural change is overall rather subdued in Sweden.

**Table 2.** SE – Value added shares and average labour productivity growth, 1970-2017 (%).

<table>
<thead>
<tr>
<th>Sector</th>
<th>Value added share 1970</th>
<th>Value added share 2017</th>
<th>Average labour productivity growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry and fishing</td>
<td>6.0</td>
<td>1.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>0.9</td>
<td>0.6</td>
<td>1.3</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>28.1</td>
<td>16.8</td>
<td>3.6</td>
</tr>
<tr>
<td>Electricity and water supply, waste management and others</td>
<td>2.4</td>
<td>3.1</td>
<td>0.9</td>
</tr>
<tr>
<td>Construction</td>
<td>8.3</td>
<td>6.9</td>
<td>1.1</td>
</tr>
<tr>
<td>Wholesale and retail trade; repair of motor vehicles and motorcycles</td>
<td>11.3</td>
<td>11.8</td>
<td>2.4</td>
</tr>
<tr>
<td>Transportation and storage</td>
<td>8.5</td>
<td>5.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Accommodation and food service activities</td>
<td>1.6</td>
<td>2.0</td>
<td>-1.3</td>
</tr>
<tr>
<td>Information and communication</td>
<td>3.2</td>
<td>7.4</td>
<td>3.7</td>
</tr>
<tr>
<td>Financial and insurance activities</td>
<td>4.2</td>
<td>4.4</td>
<td>1.9</td>
</tr>
<tr>
<td>Professional, administrative and other activities</td>
<td>4.1</td>
<td>12.9</td>
<td>0.6</td>
</tr>
<tr>
<td>Other services (community, social, and personal services)</td>
<td>21.3</td>
<td>27.1</td>
<td>0.0</td>
</tr>
<tr>
<td><strong>Services overall</strong></td>
<td><strong>54.2</strong></td>
<td><strong>71.3</strong></td>
<td><strong>1.2</strong></td>
</tr>
</tbody>
</table>

Note: the real estate sector is excluded.

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\(^2\) This includes all EU-15 Member States except EL, IE and PT.
2 Role of intangibles in productivity in services

Figure 1. Investment-to-capital ratio (left) and contribution of intangible capital growth to productivity growth (right) in 2015.

While Sweden ranks worse than average among EU-15 countries in terms of intangible investment-to-capital ratio, it is one of the leading countries based on the contribution from intangible capital growth to productivity growth (0.28% versus 0.19%, the average contribution). This is explained by one of the highest investment rate on non-National Accounts intangibles in services among EU-15 countries.

3 Role of firm demography in productivity growth

Figure 2. SE – Entry rates in business services (left-hand side) and in 1-digit industries⁴ (right-hand side), percentages

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⁴ One-digit industries include: Mining and quarrying (B); Manufacturing (C); Electricity, gas, steam and air conditioning supply (D); Water supply; sewerage, waste management and remediation activities (E); Construction (F); Wholesale and retail trade; repair of motor vehicles and motorcycles (G); Transportation and storage (H); Accommodation and food service activities (I); Information and communication (J); Financial and insurance activities (K); Real estate activities (L); Professional, scientific and technical activities (M); Administrative and support service activities (N); Education (P); Human health and social work activities (Q); Arts, entertainment and recreation (R); Other service activities (S).
Entry rates (without sole proprietorships) in services increased from 5.6 \% in 2008 to 6.2 \% in 2017. We do not observe a widespread decline or increase in entry between 2008 and 2017 across industries. However, a slight decline in entry rate is present for larger-than-micro firms in the business services sector (0.6 \% in 2008 versus 0.4 \% in 2017), a segment of the corporate sector where entry rates are shown to be relevant for aggregate productivity growth. The level of entry rate is the lowest for larger-than-micro firms in Europe (average in 2017: 1.5 \%). The level of entry rate is also well below the average for all firms (average in 2017: 9.1 \%, without sole proprietors). Thus there is room to improve productivity growth by stimulating business entry and business dynamism in general in Sweden.

4 Labour dynamics and productivity

We observe that current labour reallocation dynamics are in line with an economy that is increasing its allocative efficiency as at the top of the distribution relatively more jobs are created than destroyed. Furthermore, the opposite is true at the bottom.

In Sweden, we see that allocative efficiency increases in both the service and manufacturing sectors. In manufacturing, about 37 percent, in the service sector about 41 percent of the job creation is due to the most productive quarter of companies. For manufacturing this share is somewhat smaller than the EU average. At the same time in Sweden, the share of jobs created at the bottom of the productivity distribution is comparable to EU average in the case of Services, and lower for the manufacturing sector.
On the job destruction side, we find that in Sweden the share of job destruction at the bottom end of the productivity distribution is lower than the EU average, especially in the manufacturing sector, where, in addition we find that a higher share of destruction at the top compared to the EU average. Combined with higher than average job creation at the top, results indicate competition and or restructuring of market at the high end of the productivity distribution.

5 **Impact of zombie firms on productivity**

![Figure 5: Average share of Zombie firms between 2010 and 2015.](source)

Interestingly, Sweden seems to be affected by zombie firms between the years 2010-2015. Considering a sample of selected countries where this phenomenon is visible, Sweden presents a share of zombie firms in both manufacturing and services sectors belonging to the top-half of the distribution across all the countries considered. This result comes rather as a surprise since Swedish banks are considered to be in a healthy status with high-quality assets (Sweden European Semester country report, 2019).
6 Role of business cycle dynamics in productivity

Figure 6. SE – Manufacturing Cycle Decomposition (2008-2018).

Source: EU KLEMS and Eurostat – Structural Business Statistics (SBS), Business Demography, Annual National Accounts.

Note: Year-Over-Year Growth (%); HP-filtered values; Total Factor Productivity (TFP) measured as valued added based growth not accounted by labour and capital inputs; Labour Productivity (LP) measured as wage-adjusted labour productivity by average personnel costs; Enterprise Churn computed as the percentage of firm’s births+deaths over all active firms; Labour Utilisation (LU) defined as the ratio between hours worked and employees of all active firms in a given year.

Figure 7. SE – Professional Services Cycle Decomposition (2008-2018).

Source: EU KLEMS and Eurostat – Structural Business Statistics (SBS), Business Demography, Annual National Accounts.

Note: Year-Over-Year Growth (%); Professional, Scientific, Technical, Administrative and Support Service Activities; HP-filtered values; Total Factor Productivity (TFP) measured as valued added based growth not accounted by labour and capital inputs; Labour Productivity (LP) measured as wage-adjusted labour productivity by average personnel costs; Enterprise Churn computed as the percentage of firm’s births+deaths over all active firms; Labour Utilisation (LU) defined as the ratio between hours worked and employees of all active firms in a given year.
Overall in Sweden the rate of enterprise churn across all sectors and Gross Value Added (GVA) in Information and Communication show a much higher volatility with respect to the other indicators.

The presence of labour hoarding appears to be more evident in the Manufacturing sector during the years 2012 and 2015. Here an increase in the enterprise churn rate is associated to discrepancies in labour productivity and GVA. An overly high increase in business dynamism, however, appears to limit the increase in labour productivity during 2012 with respect to 2015 where the increase is more moderate.

The rate of business dynamism appears to play a role also for Professional Services in 2015, stimulating the recovery in labour productivity growth which was otherwise diverging in correspondence of positive developments in GVA.

The Information and Communication sector although presenting noticeable variations does not seem to show patterns that can be easily identified.

**Figure 8.** SE – Information and Communication Cycle Decomposition (2008-2018).

Source: EU KLEMS and Eurostat – Structural Business Statistics (SBS), Business Demography, Annual National Accounts.

Note: Year-Over-Year Growth (%); HP-filtered values; Total Factor Productivity (TFP) measured as valued added based growth not accounted by labour and capital inputs; Labour Productivity (LP) measured as wage-adjusted labour productivity by average personnel costs; Enterprise Churn computed as the percentage of firm’s births+deaths over all active firms; Labour Utilisation (LU) defined as the ratio between hours worked and employees of all active firms in a given year.

7 Policies for addressing low productivity growth

Swedish national strategies and policy programs are mainly focused on innovation, market testing and launch. For example, the national agency for innovation systems VINNOVA does not focus explicitly on scaling up and achieving high growth and productivity. There are however some policy programs that contribute to increasing value added, productivity and growth also within VINNOVA. One such example is Vinnväxt, which is a policy program that focuses on stimulating sustainable growth in regions by focusing on developing international competitiveness within specific growth areas and sectors. Support is given to cluster organizations, networks, and RD&I milieus. Such policy initiatives have long-term effects on firm productivity.

When analyzing the increasingly negative development of Swedish productivity growth, Eklund & Thulin5 (2018) point to two avenues for policy. Firstly, to stimulate innovation and entrepreneurship and secondly to reduce inefficiencies, in particular related to matching problems on the labour market. The matching problem

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is illustrated by the fact that 40% of employers experience hiring difficulties (OECD Skills Strategy, 2019). The former policy avenue is addressed by RD&I policies such as the Vinnväxt program, but also those policy measures described elsewhere in this report. The second avenue, related to matching, is currently mainly addressed for example at the regional level by retraining and upgrading of skills. This is mainly done by regional actors (e.g. municipalities) and the Swedish Public Employment Services (Arbetsförmedlingen). While the problem of matching has been hotly debated for a long time in Sweden, substantial challenges remain.
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