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SELECTED ISSUES

September 2025

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August 26, 2025

Approved By:
European Department

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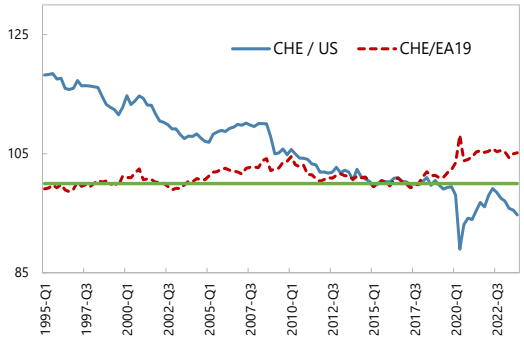
A FIRM LEVEL ANALYSIS OF LABOR PRODUCTIVITY IN SWITZERLAND[1]

Switzerland's labor productivity is generally higher than that in other advanced economy peers, although with significant variation across sectors and firm sizes. Multinational enterprises drive average productivity upwards, while small firms and the services sector lag. Adapting to the evolving global structure and ensuring sustained labor productivity growth require policies to support firm scale-up, address labor shortages, and enhance competition.

1. Switzerland's labor productivity ranks at or near the top among OECD countries. This performance is predicated on strong research and development (R&D), innovation, infrastructure, education, and an open and competitive business environment. Switzerland is highly integrated into global value chains, specializing in high-value-added activities and hosting many large multinational enterprises (MNEs).

2. Swiss real GDP per capita has recently increased relative to its European peers, but has declined compared to the U.S. (Figure 1). The decline versus the U.S. reflected diverging trends of working hours (Figure 2) and Switzerland's lagging labor productivity growth relative to the U.S. since the mid-1990s. This declining trend stabilized during the 2010s but picked up after the pandemic (Figure 3).

Figure 1. Real GDP per Person Employed of Switzerland vs. U.S. and Europe
(Percent)



Sources: OECD and IMF Staff calculations.

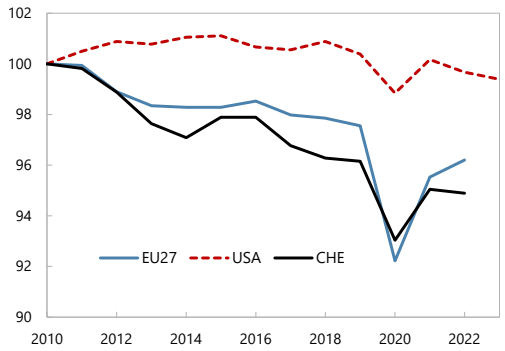
3. This paper analyzes Swiss labor productivity from a firm-level perspective and examines factors influencing recent trends. It first situates Switzerland in the international context, highlighting its top performance in areas such as innovation, R&D, and access to finance, as identified by IMF (2024a). It then uses firm-level data from Compustat and Orbis to assess labor productivity from a more granular perspective, and documents performance variations across sectors and firms over time.[2] Building on the findings of

[1] Prepared by Tianxiao Zheng (EUR). The author would like to thank Gabriel Di Bella, S. Pelin Berkmen, Mark Horton, and seminar participants at Federal Department of Finance for helpful comments and suggestions, and also thank Xin Tang (EUR) for valuable discussions. Mahika Gandhi provided useful research assistance.

[2] The Orbis dataset covers 459,884 firms in Switzerland. However, due to limited reporting quality, only 1,129 firms provide relatively complete financial information; the rest report only sales and employment data. That said, the dataset remains useful and broadly representative, as analyses of firm distribution and labor productivity primarily rely on these two variables. The Compustat sample includes 282 Swiss firms over the same period. Financial and insurance companies are excluded from both datasets.

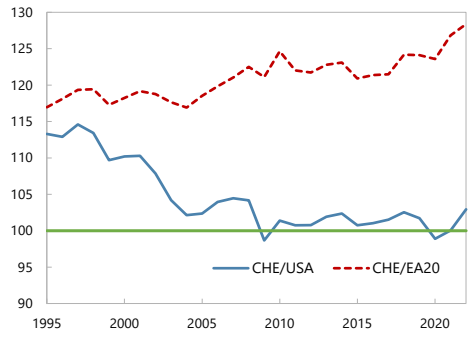
the analysis, it concludes by offering policy recommendations geared at sustaining Switzerland's high productivity growth edge.

Figure 2. Number of Working Hours
(Per year per person employed)



Sources: OECD; and IMF Staff calculations.

Figure 3. Hourly Labor Productivity of Switzerland vs U.S. and Europe
(Percent)



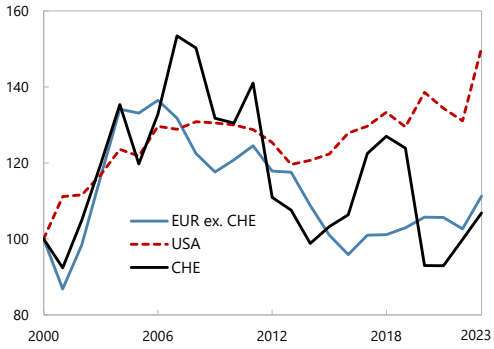
Sources: OECD; and IMF Staff calculations.

Performance Compared with Other Advanced Economy Peers

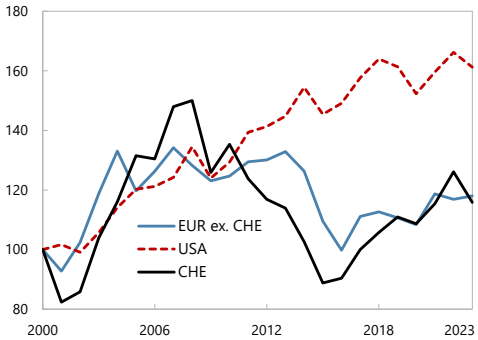
4. Swiss labor productivity growth has generally outperformed European peers in high-tech sectors, but has lagged the U.S. since the Global Financial Crisis (GFC) (Figure 4A). In the early 2000s, Swiss firms in high-tech sectors outperformed both European and U.S. counterparts. However, since the GFC, Swiss productivity growth has trended down, diminishing Switzerland's edge with respect to peers, especially the U.S. In lower-tech sectors, Swiss firms tracked U.S. performance until the GFC, after which labor productivity growth similarly declined, reducing their advantage over European peers and widening the gap with U.S. firms (Figure 4B).

Figure 4. Labor Productivity by Sector and Region
(Normalized 2000=100)

A. High-Tech Sector



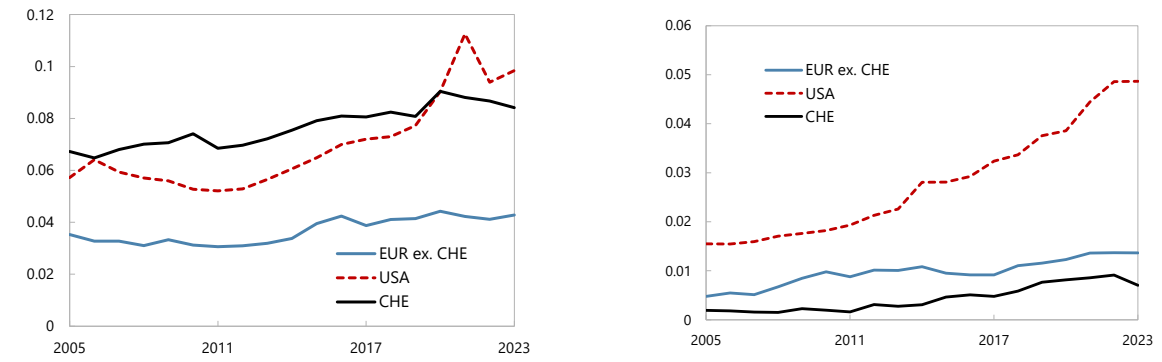
B. Low-Tech Sector



Sources: Compustat; and IMF Staff calculations.
Note: Labor productivity is measured as total sales over the number of employees. The classification of high-tech and low-tech sectors follows IMF 2024a.

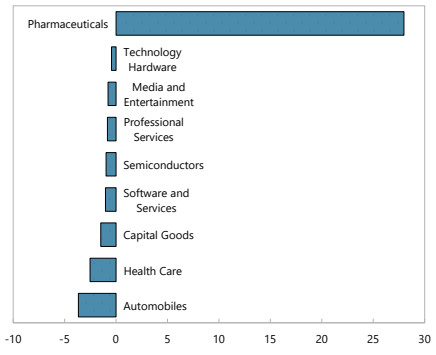
5. Swiss R&D as a share of GDP is higher than in most OECD peers. Swiss manufacturing sector firms allocated 8 percent of their sales to R&D in 2005–23, double the European average of 4 percent and ahead of the U.S. average of 7 percent (Figure 5A). Swiss manufacturing firms' R&D has also increased over time. However, Swiss services sector firms invest less in R&D than their European and U.S. peers (Figure 5B). This gap reflects differences both across industry composition and within industry R&D intensity. Switzerland has a larger share of firms in high-R&D manufacturing, such as pharmaceuticals, capital goods, technology hardware, and auto components, while the U.S. has a larger share in high R&D services like software, healthcare, professional services and semiconductors (Figure 7). Comparing individual sectors, Swiss firms surpass their U.S. counterparts in R&D intensity only in pharmaceuticals and lag behind in most other sectors (Figure 6). These patterns suggest an imbalance in the Swiss innovation landscape, with R&D activity heavily concentrated in certain manufacturing sectors.

Figure 5. R&D Intensity
(Percent of sales)



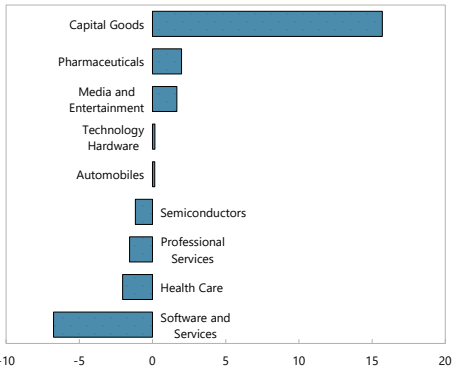
Sources: Compustat; and IMF Staff calculations.

Figure 6. R&D Intensity Difference Between Swiss and U.S. Firms in High-R&D Sectors
(Percent of sales)



Sources: Compustat; and IMF Staff calculations.

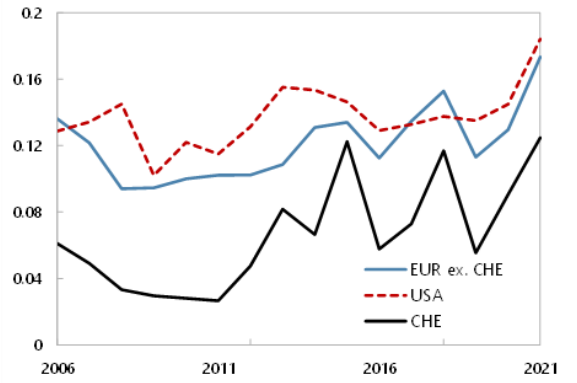
Figure 7. Difference in Firm Share Between Switzerland and U.S in High-R&D Sectors
(Percent)



Sources: Compustat; and IMF Staff calculations.

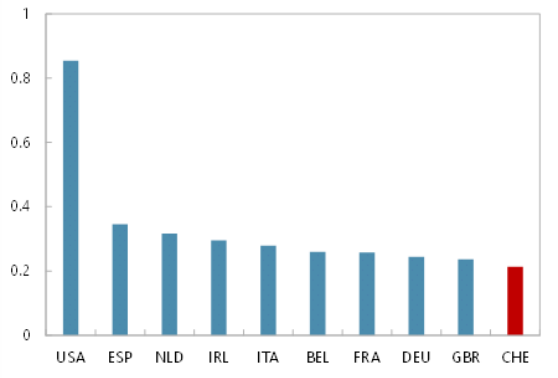
6. Swiss firms benefit from resilient corporate finance and a well-established banking system. With one of the lowest corporate leverage ratios in Europe, Swiss firms rely less on borrowed funds due to a revealed preference for conservative financial approach and lower risk appetite (Figure 9). Furthermore, Swiss firms tap capital markets less than peers in the U.S. and Europe, resulting in relatively low equity issuance, even among publicly listed Swiss companies (Figure 8). The limited reliance on both equity and debt financing is broad-based, with Swiss firms exhibiting lower gross issuance and leverage ratios than those in the U.S. in most industries (Figure 10 and 11). This may reflect strong internal cash flows, particularly among MNEs, reducing the need for external financing. However, such an environment may pose challenges for startups and small- and medium-sized enterprises (SMEs), which typically have less access to retained earnings and may face financing constraints that hinder their growth and scalability.

Figure 8. Gross Issuance of Equity by Region
(Percent of lagged assets)



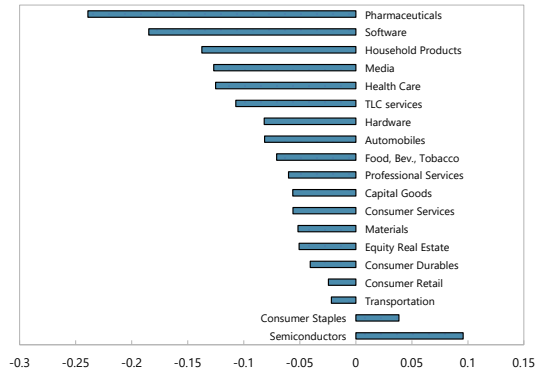
Sources: Compustat; and IMF Staff calculations.

Figure 9. Corporate Leverage by Region
(Long-term and current liabilities over assets; avg. 2001–21)



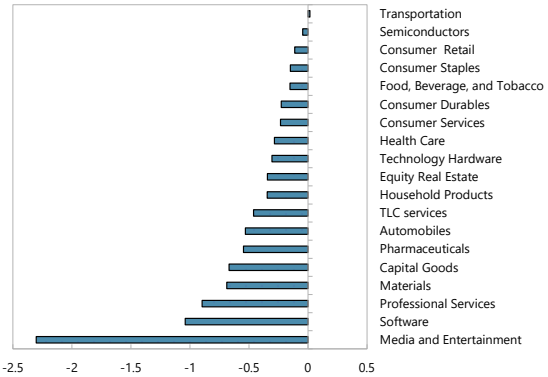
Sources: Compustat; and IMF Staff calculations.

Figure 10. Difference in Gross Issuance of Equity Between Switzerland and the United States
(Percent of lagged assets)



Sources: Compustat; and IMF Staff calculations.

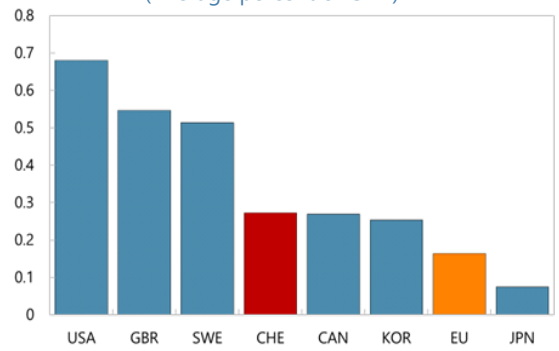
Figure 11. Difference in Leverage Between Switzerland the United States
(Long-term and current liabilities over assets)



Sources: Compustat; and IMF Staff calculations.

7. Swiss start-ups benefit from a well-developed venture capital (VC) industry. VC investment averaged 0.3 percent of GDP in 2013–23, above the EU average (Figure 10). However, the Swiss VC market still lags global leaders (e.g., U.S., UK) in terms of scale and depth. Key constraints include limited availability of late-stage funding and the relatively small allocations that domestic institutional investors actively assign to VC. These limitations hamper the scalability of innovative firms and constrain the full commercialization of Switzerland's strong R&D output.

Figure 12. Venture Capital Investments, 2013–23
(Average percent of GDP)



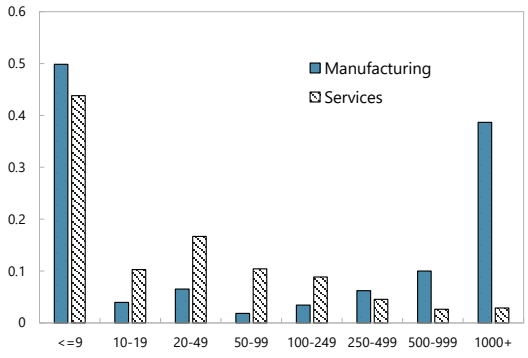
Source: Arnold, Claveres and Frie (2024)

Large MNEs in Manufacturing Pull up Both Average Productivity Growth and Overall Productivity Levels.

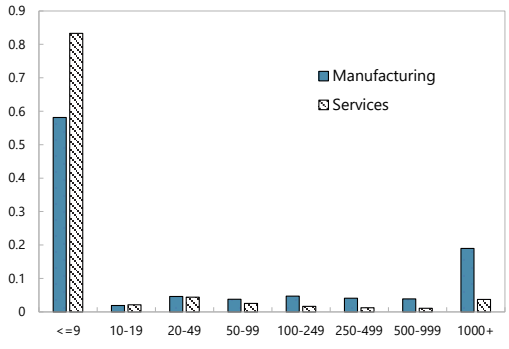
8. Micro firms represent 50 percent of the Swiss manufacturing sector and about 45 percent of the services sector. The distribution of firm sizes has remained relatively stable over time. Over 1998–2021 approximately 50 percent of firms in manufacturing had fewer than 9 employees, compared to 45 percent in the services sector. While manufacturing features a substantial number of large companies (1000+ employees), medium-sized companies are more common in services. (Figure 13A). Compared to the U.S., Switzerland has a similar overall firm size distribution, but a higher share of large firms in manufacturing. In the U.S., around 60 percent of manufacturing firms and over 80 percent of services firms have fewer than 9 employees, with large firms (1,000+ employees) representing only about 20 percent in manufacturing and less than 10 percent in services (Figure 13B).

Figure 13. Firm Size Distribution
(Number of employees)

A. Switzerland



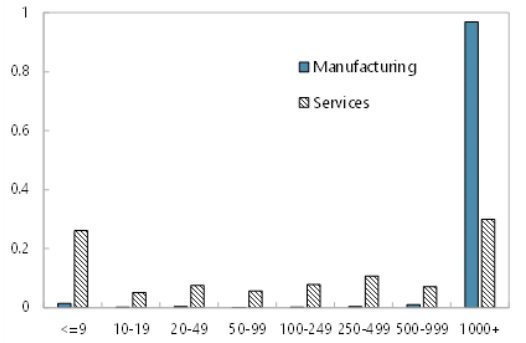
B. United States



Sources: Orbis; and IMF Staff calculations.

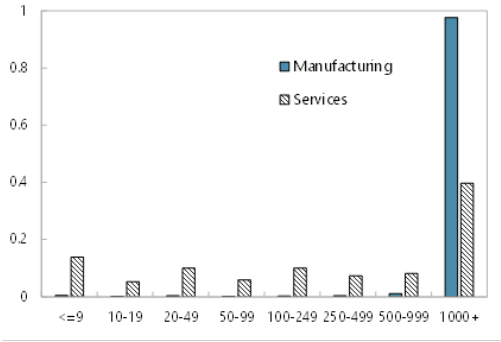
9. Economic activity and employment in Switzerland are strongly concentrated in the largest firms. In the Swiss manufacturing sector, nearly 100 percent of employment and production occurs in firms with more than 1000 employees. The concentration in the services sector is significantly lower, with large firms accounting for 35 percent of production and 40 percent of employment. Despite their smaller size, firms with fewer than 9 employees contribute a substantial 30 percent to overall production in the services sector (Figure 14 and 15).

Figure 14. Production Share Distribution
(Average between 1998–2021)



Sources: Orbis; and IMF Staff calculations.

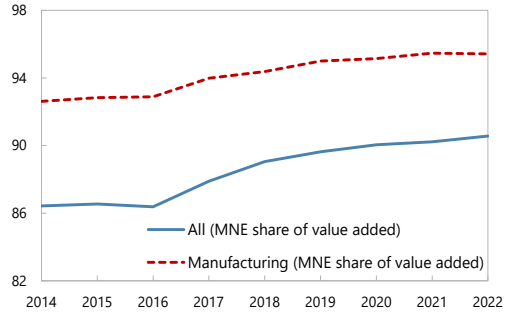
Figure 15. Employment Share Distribution
(Average between 1998–2021)



Sources: Orbis; and IMF Staff calculations.

10. MNEs play a crucial role in the Swiss economy. MNEs mainly specialize in trade, finance, pharmaceuticals, and mechanical engineering/metals. They account for over 85 percent of gross value added, with this share exceeding 90 percent in the manufacturing sector. Their contribution and importance for the Swiss economy have steadily increased over time (Figure 16).[3] Around these firms, an ecosystem of innovation has emerged, supported by incubators and science parks that host young and innovative companies, specialized suppliers, niche technology firms, and spin-offs. In the biotech industry, for example, key clusters include BioValley in Basel, Biopôle in Lausanne, and Bio-Technopark Zurich, each fostering R&D in its respective field. These clusters contribute to industry growth and help maintain Switzerland's position as a leading innovation hub. MNEs make a crucial contribution to labor productivity. Swiss manufacturing exhibits higher labor productivity than services. This is largely attributable to high-productivity industries like pharmaceuticals, healthcare, and materials, where MNEs are concentrated. Notably, the level of labor productivity in manufacturing excluding leading

Figure 16. Share of Gross Value Added of MNEs by Sector (Percent)

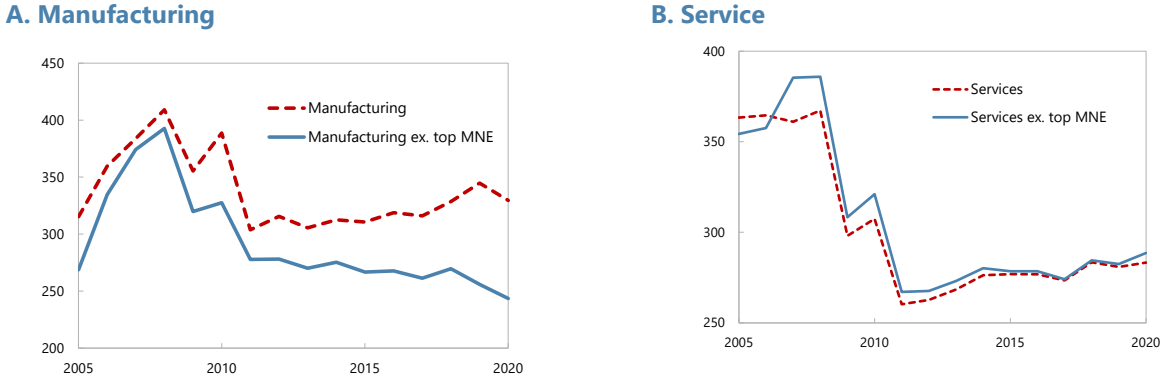


Sources: Federal Statistics Office; and IMF Staff calculations.

[3] According to the European Commission, the number of large multinational enterprise (MNE) groups in Switzerland remained relatively stable between 2018 and 2023—rising slightly from 201 in 2018 to 220 in 2021, before declining to 197 in 2023.

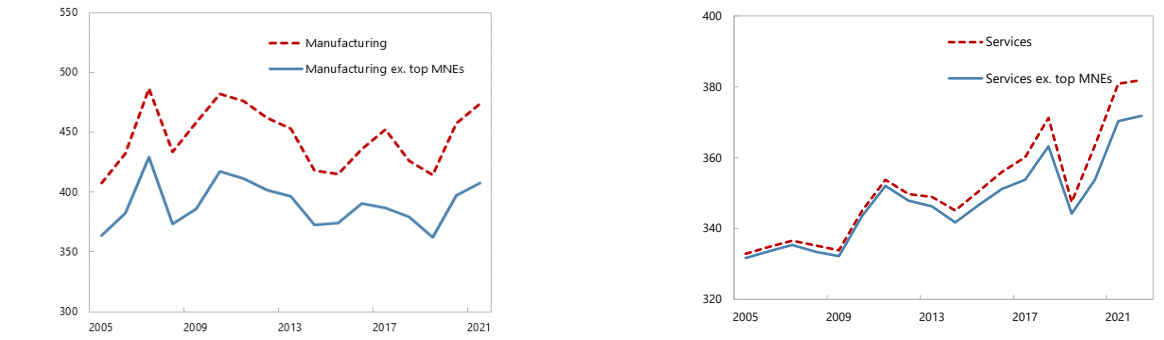
MNEs is lower than in services. The gap between highly productive manufacturing MNEs and the rest of manufacturing firms has widened over time (Figure 17A). MNEs have a relatively modest impact on labor productivity in services (Figure 17B).[4] This pattern is not unique to Switzerland: Excluding highly productive manufacturing MNEs in the U.S. also reveals lower productivity in the rest of the sector, though to a lesser extent than in Switzerland (Figure 18A). The impact on the services sector is more limited overall, but somewhat larger than in Switzerland, reflecting the prominent role of tech services in the U.S. economy.

Figure 17. Labor Productivity (w/o MNEs) in Switzerland
(Operating revenue per employee, thousands)



Sources: Orbis; and IMF Staff calculations.

Figure 18. Labor Productivity (w/o MNEs) in the United States
(Operating revenue per employee, thousands)



Sources: Orbis; and IMF Staff calculations.

11. More generally, large firms exhibit higher labor productivity growth compared to their smaller counterparts. Switzerland's large firms lead in productivity and innovation, particularly in

[4] Multiple factors contributed to the decline in labor productivity between 2008 and 2012. This drop reflects a combination of cyclical effects from the global crisis, structural shifts in the economy, a strong currency, and firms' decision to preserve jobs at the expense of short-term efficiency.

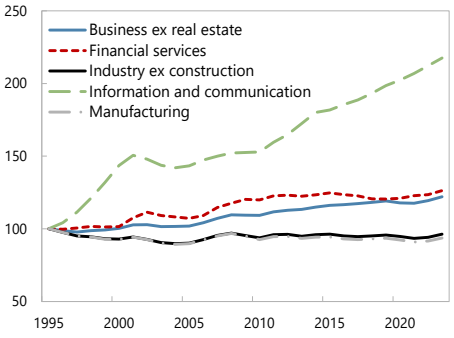
the manufacturing sector. According to a recent study by Lauter and Nussbaumer (2025), manufacturing firms with more than 250 employees saw an impressive productivity increase of 62 percent between 2009 and 2019, whereas productivity in services grew by 18 percent. Labor productivity growth tends to be associated with firm size, becoming slightly negative for micro-enterprises with fewer than 10 employees.

Labor Reallocation has not Consistently Improved Productivity in the Services Sector.

12. While the Swiss services sector has experienced significant employment growth, productivity growth has declined. Expansion in sectors such as media, professional, scientific, and technical services has been accompanied by a slowdown in productivity growth (Figure 20). Unexpectedly, the IT sector also ranks among the lowest performers. Over the past two decades, the employment shares of some low-performing sectors, particularly in IT and professional services, have increased (Figure 19). Conversely, sectors such as trade, finance, insurance, and chemicals have experienced a decline or relatively low growth in employment, while showing strong labor productivity growth.

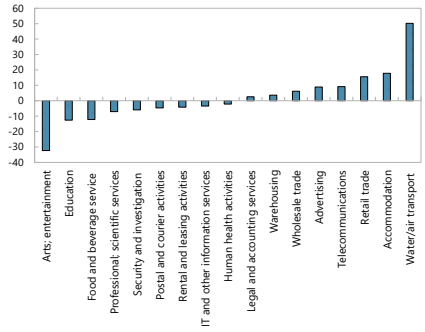
13. Labor reallocation has not yielded positive productivity outcomes for several reasons. One factor is the increasing concentration of high-skilled workers in large frontier firms, creating competition for skilled labor for young, emerging digital and IT companies (Autor et al, 2017). The concentration of high-skilled workers in large firms may reflect improved matching, as these firms typically offer higher wages, better career prospects, and greater stability, attracting top talent in an efficient labor market. However, this has created barriers for young or small firms.[5] If these firms cannot compete on wages or visibility, this may contribute to talent misallocation or slow firm dynamism. Moreover, a lack of economies of scale is constraining labor productivity growth in digital and IT. This underperformance may be associated with trade restrictions in computer services (OECD 2017), although measurement issues are also possible (Kaiser and Siengenthaler, 2015).

Figure 19. Employment by Industry
(1995=100)



Sources: OECD; Federal Statistics Office; and IMF staff calculations.

Figure 20. Labor Productivity: 2009–2019
(Growth rate, percent)



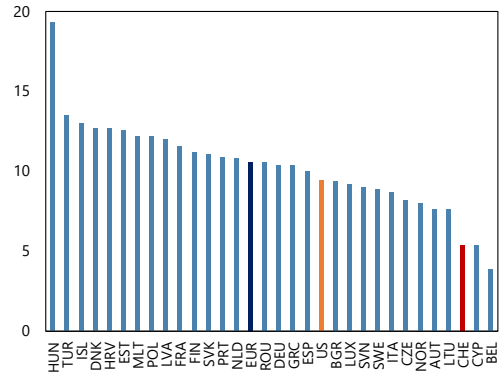
Sources: OECD; Federal Statistics Office; and IMF staff calculations.

[5] Small and young firms often rely more on stock options or other equity-based incentives to attract talent, especially when they cannot compete with larger firms on cash compensation or job stability.

Weak Business Dynamism and High Concentration of R&D Create Challenges

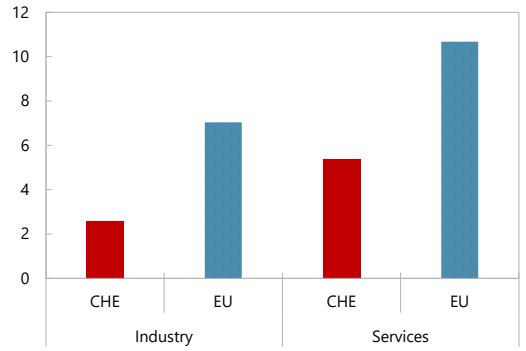
14. Swiss firms exhibit less dynamism than their U.S. and European counterparts. Entry rates for Swiss firms are significantly lower, almost 50 percentage points lower in both manufacturing and services compared to the EU (Figure 21 and 22). Schumpeterian growth models emphasize the importance of a continuous churn of young, innovative firms displacing older, less efficient incumbents (e.g., Aghion and Howitt 1992). When the rate of new firm entry is low, the reallocation mechanism weakens, ultimately hindering aggregate productivity growth. Fewer entrants also mean that incumbents face less threat of displacement and reduced competition, leading to a more concentrated industry and slower adjustment to shifts in consumer demand and technology.

Figure 21. Firm Entry Rates, 2019
(Percent; all companies)



Sources: OECD DynEmp; Business Dynamics Statistics; and IMF Staff calculations.

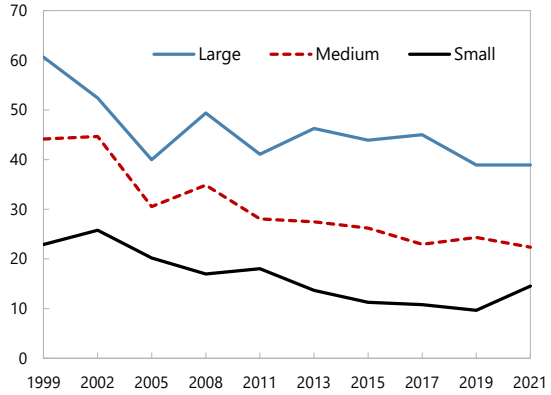
Figure 22. Firm Entry Rates
(Percent)



Sources: OECD DynEmp; Business Dynamics Statistics; and IMF Staff calculations.

15. While Switzerland excels in global R&D activities, these efforts are highly concentrated. Switzerland invests about 3.5 percent of GDP in R&D, the fourth highest in the world. The private sector is the primary contributor, accounting for approximately two-thirds. Three-quarters of this funding went to R&D-intensive sectors: pharmaceuticals and chemical industry (40 percent), metals and engineering industry (11 percent), research laboratories (13 percent) and new technologies (14 percent).[6] While there has been an increase in the share of small firms (fewer than 50 employees) doing R&D in recent periods,

Figure 23. R&D Activities by Firm Size
(Percentage of firm engaging R&D activities)



Sources: KOF; and IMF Staff calculations.

[6] Numbers quoted from Swiss Federal Authorities.

the proportion of R&D-active large companies (more than 250 employees) has remained more or less stable and that of the medium-sized firms has been declining over time (Figure 23; KOF 2023).

16. SMEs continue to face regulatory and competition-related challenges despite Switzerland's relatively streamlined business environment. Switzerland benefits from a comparatively efficient administrative framework, which underpins its attractiveness as a business location. Nonetheless, SMEs continue to face regulatory and administrative burdens. The Red Tape Monitor 2022 identified construction regulations, food hygiene standards, import and export procedures, permit requirements, and production facility expansions as areas where firms perceive the heaviest burden. In these areas, over half of the companies affected stated that these legal regulations cause a high or fairly high burden. In addition, barriers to entry remain, and the merger control framework is viewed as relatively permissive. Civil actions against cartels are rare, reflecting legal complexity and short statutes of limitation (OECD 2024). In this context, the partial revision of the Cartel Act represents an important step toward strengthening competition.

Conclusion and Policy Recommendations.

17. Switzerland enjoys strong labor productivity, supported by robust R&D, a high-quality education system, and deep global integration that fosters competition and innovation. However, significant disparities are evident across sectors and firms. Much of the strong performance is driven by MNEs in high-value-added manufacturing, while productivity in small firms and the services sector has lagged. Contributing factors include lower R&D intensity, limited access to financing, a small domestic market, and high skilled labor costs. These challenges are further compounded by a risk-averse financing environment and administrative frictions, which dampen business dynamism and constrain the innovative capacity of smaller firms.

18. The Swiss authorities are working on productivity-enhancing reforms. Ongoing efforts aim at boosting productivity through competition-friendly regulation and expanded market access, including the EU Single Market, are welcome. Key initiatives include the revision of the Cartel Act to align merger review standards with international practices and reform of the Vocational Training Act to strengthen higher vocational education. However, further measures are needed to alleviate business constraints and address labor shortages.

19. Advancing reforms in several key areas would support ongoing efforts. Consideration should be given to

- ***Further streamlining administrative procedures, especially for SMEs.*** Simplifying regulatory and compliance requirements to reduce the operational burden on SMEs would encourage entrepreneurship and allow firms to focus more resources on growth and innovation.
- ***Enhancing competition and spurring innovation by reducing entry barriers.*** Lowering regulatory and structural obstacles to market entry would enable new and innovative firms to challenge incumbents and drive productivity gains.

- ***Improving access to finance for SMEs and startups.*** Expanding financing options, such as deepening venture capital and alternative financing market, would help young and growing firms invest in R&D, scale up operations, and attract skilled workers.

- ***Deepening market integration to help firms scale up and benefit from cross-border knowledge flows.*** Facilitating access to larger markets and openness of the Swiss market to foreign market, particularly in services would boost firm competitiveness and encourage the diffusion of global frontier technologies.

- ***Addressing labor needs through upskilling and maintaining an open labor market.*** Investing in education and training systems, alongside policies that ensure access to international talent, would help alleviate labor constraints and support innovation-led growth.

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