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THE PROMISE OF SERVICES-LED DEVELOPMENT IN POLAND

POLICY NOTE
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POLICY NOTE
JUNE 2022
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BACKGROUND

This policy note was prepared as a background paper in support of the Poland Green Growth Country Economic Memorandum (CEM) and was further adapted in support of the “Technological readiness and management skills—Productivity growth drivers in Poland” project led by Łukasz Marć (Senior Economist) and co-led by Magda Malec (Consultant), conducted in collaboration with the European Commission (EC) Directorate-General for Structural Reform Support (DG REFORM). The project aims to support Poland’s Ministry of Economic Development and Technology with enhancing the effectiveness of firms’ support systems by providing evidence based on firms’ capabilities, context, and barriers to productivity growth.

AUTHOR’S NOTE

This policy note was prepared by Gaurav Nayyar (Lead Economist) and Elwyn Davies (Senior Economist). The authors are also the authors of the World Bank’s (2021) flagship report “At Your Service?: The Promise of Services-Led Development” that this policy note is based on. The authors would like to thank Łukasz Marć, Magda Malec and Cristina Savescu for their comments, suggestions and feedback.

ABBREVIATIONS AND ACRONYMS

- **BPO**: business process outsourcing
- **CAGR**: compound annual growth rate
- **DG REFORM**: Directorate-General for Structural Reform Support
- **EC**: European Commission
- **EU**: European Union
- **HIC**: high-income country
- **ICT**: information and communication technology
- **LMICs**: low- and middle-income countries
- **ML**: machine learning
- **SMEs**: small and medium enterprises
- **WBG**: World Bank Group
KEY FINDINGS

1 The services sector has played an important role in the structural transformation of Poland, providing employment opportunities and creating productivity growth. Close to 60 percent of employees now work in the services sector. Nevertheless, the sector’s productivity lags behind that of other countries, and Poland’s service sector is dominated more by low-skilled, intensive services and less by “global innovator” services (e.g., ICT and financial and other professional services). The services sector in Poland is dominated by smaller, less productive firms, highlighting a potential area for improvement.

2 Linkages between the services sector and the manufacturing sector appear weaker in Poland than in other EU countries. A high share of services (42 percent) are produced for domestic households rather than for other firms. Targeting the growth of enabling service sectors to allow spillovers into other sectors offers another area for improvement.

3 Thanks to its relatively low level of restrictions on services trades, Poland has scope to leverage services as a pathway to further economic growth, in line with how other EU countries have grown. A key approach to improvement is to upgrade worker skills and firm competencies to raise sector productivity and increase the quality of services offered.
THE RISE OF SERVICES: BENCHMARKING POLAND

Services providing employment and growth opportunities

The service sector has played a large role in driving Poland’s structural transformation, absorbing much of the employment coming out of agriculture. Much like trends seen across low- and middle-income countries (LMICs), on average, the industrial sector’s share of total employment in Poland has remained almost unchanged since the 1990s, averaging 30 percent. As a result, the increase in the services sector’s share of total employment — from 46 percent in 1995 to close to 60 percent in 2018 — offset almost the entire decline in the agriculture sector’s share (Figure 1.1).

**FIGURE 1.1** While the industrial employment share has remained constant since 1995, the decrease in agricultural employment shares was offset by increases in services employment.

Share of employment, 1995–2018

![Graph showing employment share trends from 1995 to 2018](image)

*Note: Industry includes mining, manufacturing, construction, and utilities.*

*Source: World Bank WDI.*
The move out of agriculture has led to an aggregate increase in productivity, as services sectors are more productive than agriculture and continue to become more productive over time. Despite many policy makers’ focus on industrial sectors, employment has increased and grown more productive in all services subsectors (Figure 1.2). While manufacturing created 0.5 million jobs between 1995 and 2018, business and financial services created 1.1 million jobs, commerce and hospitality created 0.9 million jobs, transport and ICT created 0.6 million jobs, and other services created 0.9 million jobs. With the exception of other services (which includes personal services), these services subsectors also saw increases in labor productivity.

**FIGURE 1.2** The movement of employment out of agriculture led to increased employment in more productive sectors, raising productivity over time.

Labor productivity and employment, 1995–2017

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**Labor productivity growth in Poland’s services sector has matched that of manufacturing, and it has been the highest in Europe.** Labor productivity in the services sector grew by 2.6 percent per annum in Poland, exceeding that of the industrial sectors. Poland’s experience is in line with that of many LMICS,
where the growth of the services sector has also been accompanied by robust
growth in labor productivity, matching that of industrial sectors, but it differs
from many other European countries, where industrial sectors have grown more
than services. Also striking is that labor productivity growth in services in Po-
land between 1995 and 2018 exceeded that of higher-income EU countries (Fig-
ure 1.3). These narrowing productivity gaps provide encouraging evidence that
services growth can contribute to the ability of lower-income countries to catch
up. Nevertheless, Poland’s labor productivity levels remain lower than those of
EU countries with the highest-income levels; for example, in 2017 labor produc-
tivity of the services sector in Poland was at a similar level as that of Germany
in 1991, but 32 percent lower than the German level in 2017.\footnote{The PPP-adjusted labor productivity of the Polish services sector was US$56,922 in 2017 (measured in 2011 PPP-adjusted US dollars), while in Germany this was US$83,210 in 2017 (and US$96,209 in 1991).}

\section*{FIGURE 1.3} Average annual labor productivity growth of services has been positive, and
among the highest in the EU, and at similar levels of industry.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{figure13.png}
\caption{Average annual growth in value added per worker (% CAGR, 1995 – 2018)}
\end{figure}

\begin{flushleft}
\textbf{Note:} CAGR = compound annual growth rate
\textbf{Source:} Calculations based on World Bank WDI indicators.
\end{flushleft}

Despite the growth of the services sector, the share of services sector employ-
ment is among the lowest in the European Union. The share of services in Po-
land’s total employment in 2018 — at 58 percent — was the second-lowest among
countries in the European Union (Figure 1.4). This is not surprising because high-income countries in the EU, such as those in Western Europe, are at more advanced stages of structural transformation, where the share of services in total employment is overwhelmingly large. Part of this low share reflects that a relatively high share of Poland’s economy is devoted to manufacturing, which represents 21 percent of jobs and 16 percent of value added, putting it in the eighth-highest place in the European Union.

**FIGURE 1.4** Despite this growth, the employment share (58 percent) in services is the second-lowest in the European Union.

Source: World Bank WDI.
Importantly, the services sector is not monolithic and covers a wide range of economic activities. Services differ in the extent to which they are traded, their labor intensity, the skills they use, and whether they are linked to other sectors. These characteristics, which enabled the scale, innovation, and spillovers associated with the manufacturing-led model in the past, allow categorization of the services sector into the following four groups, as illustrated in Figure 2.1.

- **Global innovator services** (including ICT, finance, and professional services) are relatively highly traded internationally and offshorable, require intensive R&D, and share linkages with other sectors, but they are typically skill intensive. On average, across countries, global innovator services are more productive than is manufacturing.

- **Low-skill domestic services** (including arts, entertainment, and recreation; administrative and support; retail trade; and personal services) employ a large share of low-skilled workers but provide little by way of productivity-enhancing potential through international trade and linkages. On average, across countries, low-skill domestic services are less productive than is manufacturing.

- **Low-skill tradable services** (including accommodation, transportation, and wholesale trade) are relatively highly traded internationally and share linkages with other sectors, while also employing a large share of low-skilled workers. On average, across countries, the productivity of low-skill, tradable services is almost at a par with manufacturing.
- **Skill-intensive social services** (including health and education) are relatively less traded internationally, share few linkages with other sectors, and employ a large share of skilled workers.

**FIGURE 2.1** Services differ to the extent they are traded, their labor intensity, the skills they use, and whether they are linked to other sectors.

**Classification of services by pro-development characteristics**

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**Among EU countries, Poland sees a relatively low share of global innovator services (17 percent).** Services employment in LMICS concentrates in less productive subsectors that have the least scope for scale, innovation, and spillovers. A positive relationship exists between per capita income and the share of global innovator services (Figure 2.2, panel a). Global innovator services (finance, ICT, and professional services) account for around 16 percent of services employment in Poland. The corresponding share in high-income EU countries ranges between 15 and 20 percent. Among global innovator services, the share of professional services is lower than in many EU countries, at 7 percent (Figure 2.2, panel b).
Conversely, Poland has a high share of employment in low-skilled domestic services (34 percent). Across countries, we see a negative relationship between per capita income and the share of low-skill domestic services (Figure 2.3 panel a). Low-skill domestic services (retail; personal services; arts, entertainment, and recreation; and administrative and support services) represent about 32 percent of services employment in Poland, which is slightly higher than the average of 30 percent in high-income EU countries. Roughly one in six services jobs is in retail (17 percent), the fourth-highest of the EU countries (Figure 2.3, panel b).

Low-skilled tradable services provide 22 percent of services jobs, and social services employ 26 percent of services jobs. Low-skilled tradable services include wholesale trade, transportation, and hospitality (traded through tourism). Social services include education and health services. Both shares are close to the European Union average (respectively, 23 and 28 percent).
Global innovator services make up a relatively low share of services exports. Although generally the share of global innovators in total services exports is lower for countries with lower income levels, many LMICs have successfully diversified their export baskets by specializing in offshore business services: computer programming, software development, business process outsourcing (BPO), accounting, and architectural and engineering services. For example, in 2017, global innovator services accounted for more than half of all services exports in Costa Rica, Ghana, India, Pakistan, and the Philippines—a share considerably higher than the average for their levels of per capita income (Figure 2.4). The corresponding share in Poland, at 38 percent, conforms to the average for its level of per capita income and is therefore lower than that of many high-income EU countries, including Germany, Ireland, Italy, the Netherlands, and Spain. However, Poland’s share is notably higher than that in several other EU countries, including some with higher levels of per capita income (Bulgaria, Croatia, Denmark, Greece, Latvia, Lithuania, Portugal, and Slovenia).

Source: Elaboration based on Nayyar, Hallward-Driemeier, and Davies (2021), based on ILO employment data.
Tourism-related exports contributed to 40 percent of services exports from Poland. International specialization in tourism-related transportation services and accommodation and food services has enabled several lower-income countries to diversify their exports away from volatile primary sectors. While these tourism-related services make up larger shares of total services exports in lower-income countries than in high-income countries, countries at all levels of per capita income have benefitted (Figure 2.5). For example, this share was also particularly high (at more than three-fourths), relative to levels of per capita income, for island economies across regions and income levels in 2017. The corresponding share for Poland, at 37 percent, conforms to the average for its level of per capita income. Several other EU countries, however, have a distinctly higher share of tourism-related services in their total services exports at similar levels of per capita income. This includes Bulgaria, Croatia, Greece, Latvia, and Lithuania.
FIGURE 2.5 Accommodation and food and transportation services exports—related to tourism—contributed 40 percent to Poland’s services exports.

Share of accommodation and food and transportation services in total services exports

Source: Nayyar, Hallward-Driemeier, and Davies (2021), based on WTO Trade in Service by Mode of Supply (TiSMoS) data.
The manufacturing sector has been characterized by the important role of scale, innovation, and spillovers in productivity growth. These factors allowed the manufacturing sector to employ workers at large scale in productive activities. These channels have traditionally played smaller roles in the services sector, but digital technologies now allow new opportunities for scale, innovation, and spillovers to increase services sector productivity.

In terms of scale, services firms in Poland appear to operate at a smaller scale compared to countries at similar income levels. Although in almost all countries, services firms are smaller than manufacturing firms, in Poland the average size of a services firm is even smaller than would be expected given Poland’s income level (Figure 3.1). This indicates potential economies of scale could be achieved in the services sector.

Furthermore, the productivity of small services firms in Poland is relatively low. When looking at Germany or other high-income countries, it becomes clear that even a small services firm can be as productive as a large services firm (Figure 3.2). In Poland, firms with fewer than 10 employees see labor productivity levels that are roughly a third (38 percent) of that of firms with more than 10 employees.

**FIGURE 3.1** The average size of a services firm in Poland is smaller than expected given its income level.

Average size of a services and manufacturing establishment, most recent year

This indicates that a relatively large segment of small firms are not particularly productive. Poland has a relatively large share of SMEs compared to many other European countries.

Scale in the services sector can manifest itself differently than in manufacturing. Generally in manufacturing, in both HICs and LMICs, the larger the firm, the more productive it is; but for services, this is not necessarily the case. Scale can also be achieved by means other than increasing the size of an establishment; for example, services firms can operate at multiple locations by branching or franchising, or they can increase revenue by offering higher quality.

The second channel, innovation, also operates differently for many services sectors than it does in manufacturing. Unlike in manufacturing, for many services sectors (apart from some, such as telecommunications, warehousing, and transportation), physical capital plays only a small role. Instead, more intangible forms of capital — such as software, intellectual property, brand value, and organizational know-how — are more important. Innovation in the services sector could target these intangible forms of capital, an approach that must be reflected in policy.

The third channel, linkages and spillovers, is particularly important for services, as many services are inputs to other firms. At an aggregate level, services sectors selling to other firms rather than to final consumers (that is, most global innovator services) tend to be more productive. This is also the case in Poland (Figure 3.3). Many global innovator services — such as information technology, telecommunications, computer programming, and consultancy services — mostly sell to other firms and see high levels of productivity.
However, linkages appear weaker in Poland than in other EU countries. A high share of services (42 percent) are being produced for domestic households, a level much higher than is the case for services output in Germany or the Czech Republic (Figure 3.4). Linkages between services firms, especially, appear to be weaker: the share of output being sold to other services firms is 33 percent in Poland against 38 percent in Germany. This could, in part, be due to the sectoral composition of Poland’s services sector. As discussed earlier, the share of global innovator services, which mostly supply other firms, is lower in Poland than in other EU countries. In addition, input-output table data also suggests that, within these sectors, the linkages to other firms might be less strong than in Germany, for example (Figure 3.5). Expanding sectoral linkages within services could be another channel for boosting productivity.
FIGURE 3.4 A relatively high share of services are being sold to final consumers rather than to other firms.

Output sold by customer type, 2018

Source: Calculations based on the World Input-Output Database (WIOD).

FIGURE 3.5 Some sectors see weaker sectoral linkages than in Germany.

Share of services used as inputs for other production, 2018

Source: Calculations based on the World Input-Output Database (WIOD).
HARNESSING THE POTENTIAL OF SERVICES: BENCHMARKING POLAND

The 4Ts: Trade and investment, Technology, Training, and Targeting spillovers

Technological advancement and the expanding role of services as enabling sectors are expanding opportunities for development through scale, innovation, and spillovers. New opportunities for scale can be realized either through digital technologies that enable remote delivery of services or through branching and franchising that enable services providers to reach consumers in multiple locations. With a relatively limited role for physical capital, more intangible forms of capital — such as software, knowledge embedded in intellectual property, brand value, and organizational know-how and managerial practices — drive innovation. Services are increasingly important inputs for all sectors and therefore have spillover effects in boosting economy-wide productivity.

Policy makers should focus on increasing trade and investment, fostering technology adoption, training workers and firms, and targeting spillovers between services and other sectors — the 4 Ts. With technology reducing the need for physical proximity between producers and consumers, lowering services trade barriers — to make what is increasingly tradable more widely traded — could enable economies to reach greater scale. Expanded access to digital technologies and training and skills development for workers and managers is necessary to realize the innovation potential that ICTs and associated intangible capital can bring. Recognizing the potential for their linkages with other sectors, targeting the growth of enabling services can maximize spillover effects.
Countries can be benchmarked along each of the 4T policy dimensions to highlight their relative reform priorities. Figure 4.1 (panels a and b) — in which the axes represent the summary measures of countries’ technology and training landscape and trade and targeting landscape, respectively — highlight how the 4Ts vary across countries. The four dimensions are measured as follows:

- **Trade and investment** refers to a country’s preparedness to engage in international trade in services (including investment, which makes up the largest share of services trade for many sectors) and combines measures of the STRI, the ease of doing business, and restrictions on cross-border data flows.

- **Technology** refers to a country’s capabilities to support technology diffusion and innovation; it includes the extent of internet use among the wider population and email use in firms.

- **Training** refers to a country’s capabilities to respond to the rising demand for skills and combines measures of tertiary education enrollment, digital skills, and management practices in firms.

- **Targeting** combines the share of forward linkages in the output of ICT/professional/financial services, multiplied by share of these services in total employment, and the share of forward linkages in the output of wholesale/retail and transportation services, multiplied by the share of manufacturing in GDP.

**Poland scores high on the technology dimension, but low on the training dimension.** All but four EU countries are in the high technology–high training (upper right) quadrant in Figure 4.1, panel a. These four countries include Poland alongside Croatia, Italy, and Romania, who are in the high technology–low training quadrant (upper left). Poland appears above the median country in the world on its performance in ICT adoption and is therefore better placed than most countries to harness the promise of digital transformation in the services sector. Yet it fares worse than most EU countries, except for Hungary, Italy, and Portugal. On the training metric, Poland’s performance is below the median country in the world (in the EU, also true only of Croatia, Italy, and Romania). This shows that improving digital skills, tertiary education enrollment, and firms’ management practices requires particular emphasis in Poland.
FIGURE 4.1 Compared to other EU countries, Poland scores low on the training dimension, average on the technology dimension, and higher on the trade and targeting dimensions, highlighting a potential for services-led development.

a. Training and technology

b. Trade and targeting

Note: For each summary measure, the scales of the relevant indicators are normalized and then averaged.
Source: Nayyar, Hallward-Driemeier, and Davies (2021).
Poland scores high on the trade dimension, suggesting few restrictions, but it underperforms on the targeting dimension compared to neighboring countries. All EU countries are in the high trade–high targeting quadrant (upper right) quadrant in Figure 15, panel b. This implies that relative to the median country in the world, Poland’s performance on reducing services trade restrictions and targeting linkages between enabling services and other sectors makes it relatively well placed to harness the sector’s trade potential and downstream spillover effects. Performance on services trade restrictions is relatively good, with Poland imposing fewer restrictions than many other EU countries, including higher-income countries. Along the targeting index, the magnitude of linkages between enabling services and other sectors in Poland is among the average in Europe, but it underperforms several countries, including in the immediate region Bulgaria, the Czech Republic, Germany, Italy, Slovenia, and Slovakia.
IMPLICATIONS FOR SERVICES SUBSECTORS

Not every policy dimension matters equally for each sector. The services sector is changing due to increased opportunities due to (a) increased scale through remote delivery, (b) innovation through automation and diffusion of intangible capital, and (c) spillovers through forward linkages with other sectors. However, services subsectors are differently affected by these trends, meaning that not all of the 4Ts are similarly relevant for each subsector. Table 5.1 shows how policy priorities shaped by the 4Ts can vary across services subsectors: those affected by all forward-looking trends have an interest in the full 4Ts policy agenda, whereas those with scope to address only one or two trends will benefit most from the policies that focus on those trends. Countries’ current performance in the 4Ts space indicates where further progress may be needed to exploit the potential of different services to expand jobs and achieve economic transformation.

For global innovator services, all four dimensions are important, as is catching up on the training dimension. Given the amenability of ICT, finance, and professional, scientific, and technical services to remote delivery, high suitability for machine learning, high levels of intangible capital per worker, and high incidence of forward linkages to other sectors, strong performance on each of the 4Ts is needed for countries to leverage their potential. For Poland, this will require some catch-up, particularly on training to improve workers’ and managers’ skills, an area in which its performance lies below the median country in the world.

Worker and firm competencies are also important for skill-intensive social services. In this area of services, technology, training, and trade are the most important policy dimensions. In the education and health services subsectors, given their reduced need for physical proximity, moderately high levels of intangible
capital, ML-related automation, and few intersectoral linkages, some emphasis on technology adoption and training, and at least some trading, would be beneficial. Here too, Poland has space to catch up, particularly regarding training to improve workers’ and managers’ skills, where, as noted, its performance lies below the median country in the world.

For low-skilled tradable services, Poland scores above the average on the relevant policy dimensions. For low-skilled tradable services, technology, trade, and targeting are the most important policy dimensions. Transportation, wholesale trade, and administrative and support services are characterized by relatively

**TABLE 5.1** Mapping the impacts of trends—reduced proximity, increased automation, intangible capital, and forward linkages—by services subsectors can inform the priorities in the 4Ts agenda.

<table>
<thead>
<tr>
<th>Impact of future trends</th>
<th>Priority within 4Ts agenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced proximity (scope for home-based work)</td>
<td>Potential for automation (suitability for machine learning, data analytics)</td>
</tr>
<tr>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>High</td>
<td>Medium</td>
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<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Low</td>
<td>High</td>
</tr>
</tbody>
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Note: H/M = high or medium, ICT = information and communication technology. Source: Nayyar, Hallward-Driemeier, and Davies (2021).
low levels of intangible capital, but they require only moderate physical proximity between producers and consumers and are characterized by moderately high suitability to AI-related automation and high forward linkages with other sectors. Focus on the technology, targeting, and trade policy dimensions therefore matter most for leveraging the potential of these services subsectors. Poland’s performance here places it above the average country in the world. Yet competition with other services providers in the EU — where several countries perform better than Poland — means greater effort is needed.

**For low-skilled domestic services, technology adoption is the key policy dimension.** In accommodation and food services; retail trade; arts, entertainment, and recreational services; and other social, community, and personal services, physical proximity between producers and consumers remains important. These subsectors also have few intersectoral linkages and hitherto have had little intangible capital. At the same time, they are highly exposed to ML (such as through platforms that facilitate matching and automated checkouts). Under this scenario, therefore, the dimension of technology adoption becomes the most relevant. And while competition in international markets is less relevant for these largely domestic services, Poland still has substantial room to improve productivity in this area.