

Innovation activities of enterprises in Poland in the years 2019-2021

28.10.2022

↑ 21.5%

An increase in expenditures on innovation activities in service enterprises

↓ 6.6%

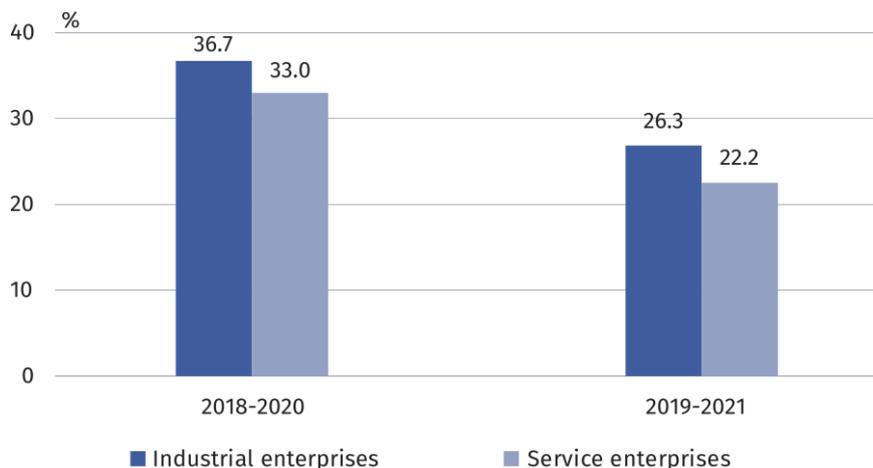
A decrease in expenditures on innovation activities in industrial enterprises

In the years 2019-2021, 26.3% of industrial enterprises and 22.2% of service enterprises performed innovation activities. Expenditures on innovation activities incurred in 2021 in industrial enterprises amounted to PLN 19041.5 million, and in service enterprises – PLN 22348.6 million. In 2021, the share of revenue from sales of new or improved products introduced to the market between 2019 and 2021 in total revenues from sales in industrial enterprises was 8.9%, and in service enterprises – 3.1%.

An innovation-active enterprise is one that in the period under review introduced at least one product or business process innovation or carried out in that period at least one innovation project, which was interrupted or abandoned during the period under review (not successfully completed), has not been completed by the end of that period (i.e. is ongoing) or has been completed, but the innovation has not yet been implemented.

In the years 2019-2021, the share of innovation-active enterprises in the industrial enterprise sector amounted to 26.3% and in services 22.2%.

Chart 1. Innovation-active enterprises

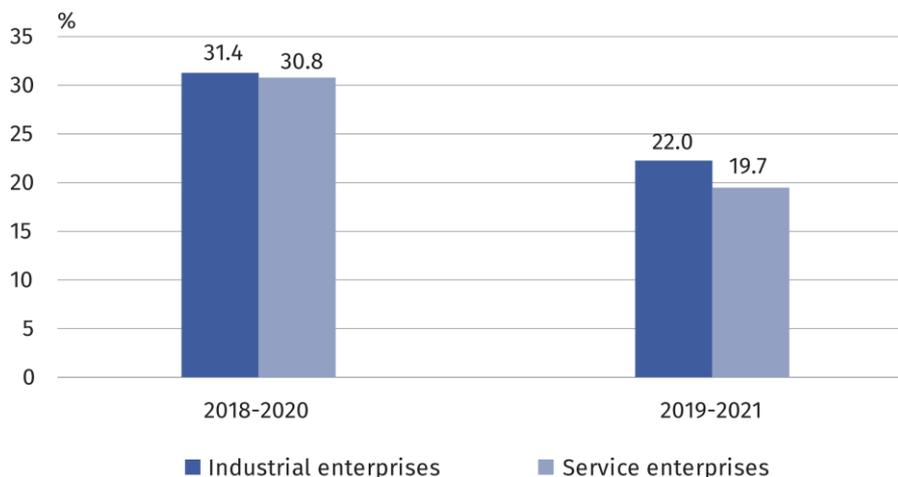


An innovative enterprise is one that has introduced one or more innovations during the observation period.

In the years 2019-2021, 22.0% of industrial enterprises and 19.7% of service enterprises introduced innovations (new or improved products or business processes), i.e. fewer than in the years 2018-2020, when innovations were introduced by 31.4% and 30.8% of surveyed enterprises, respectively.

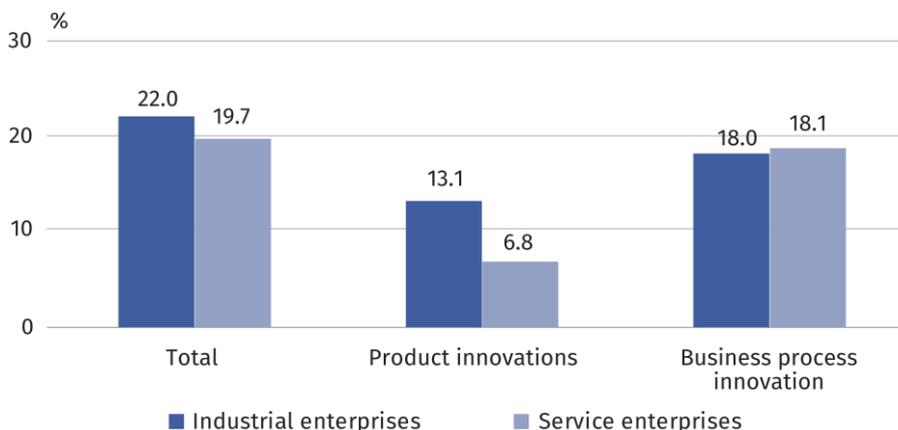
The share of enterprises that introduced innovations in the years 2019-2021 was higher in industry than in services

Chart 2. Enterprises that introduced innovations



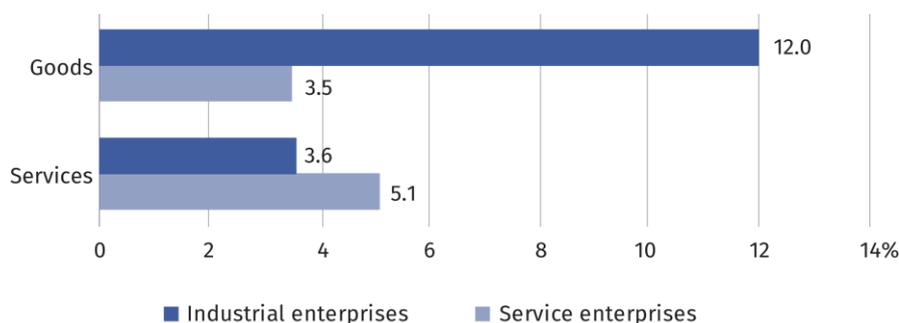
Product innovations were introduced more often by industrial enterprises than service enterprises (13.1% and 6.8%, respectively), whereas in the case of business process innovations, the shares of enterprises implementing them were at a similar level (18.0% and 18.1%, respectively).

Chart 3. Enterprises that introduced innovations in the years 2019-2021



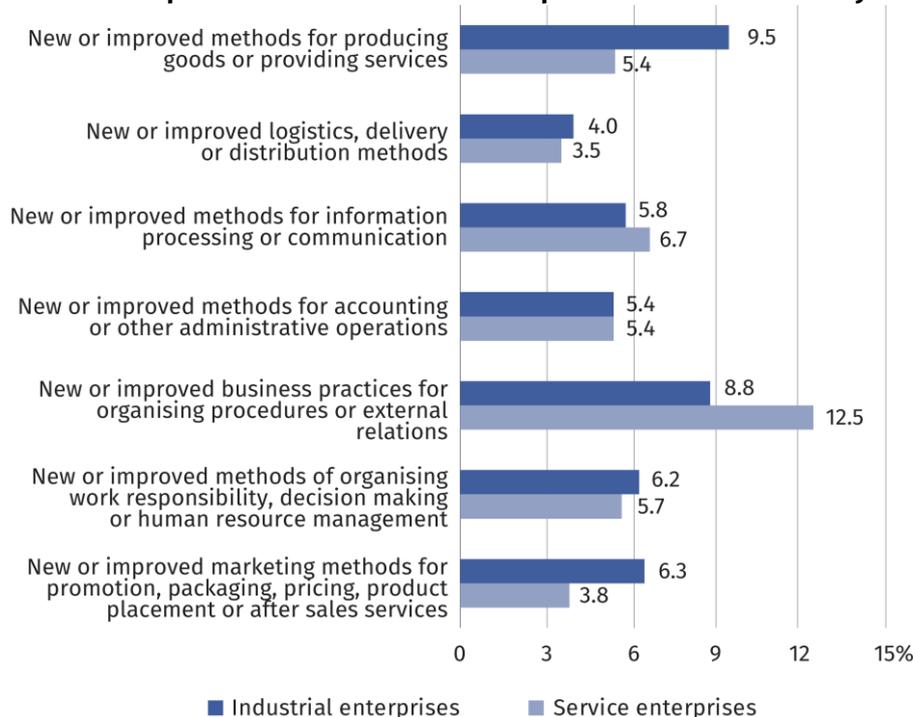
In the period 2019-2021, under product innovation, new or improved products were introduced by 12.0% of industrial enterprises and 3.5% of service enterprises, while new or improved services were introduced by 3.6% of industrial enterprises and 5.1% of service enterprises.

Chart 4. Enterprises that introduced product innovations in the years 2019-2021



Among the types of business process innovations, industrial enterprises most often introduced new or improved methods for producing goods or providing services (9.5%), while service entities introduced new or improved business practices for organising procedures or external relations (12.5%).

Chart 5. Enterprises that introduced business process innovations in the years 2019-2021



The highest percentage of industrial enterprises that introduced product or business process innovations was noted in the divisions: Extraction of crude petroleum and natural gas (75.0%), Mining of coal and lignite (68.8%) and Manufacture of basic pharmaceutical substances and medicines and other pharmaceutical products (63.6%), while in services – in the divisions Insurance, reinsurance and pension funding, excluding compulsory social security (81.3%) and Scientific research and development (56.0%).

Table 1. Innovative enterprises in the years 2019-2021 by selected types of activities (divisions of the Polish Classification of Activities)

Specification	Enterprises that introduced innovations		
	total	product	business process
	in %		
Industrial enterprises	22.0	13.1	18.0
Mining of coal and lignite	68.8	18.8	56.3
Extraction of crude petroleum and natural gas	75.0	50.0	75.0
Manufacture of food products	15.0	9.1	12.2

Table 1. Innovative enterprises in the years 2019-2021 by selected types of activities (divisions of the Polish Classification of Activities) (cont.)

Specification	Enterprises that introduced innovations		
	total	product	business process
	in %		
Industrial enterprises (cont.)			
Manufacture of wearing apparel	6.5	3.6	4.4
Manufacture of leather and related products	13.0	8.3	10.0
Manufacture and processing of coke and refined petroleum products	55.6	44.4	53.7
Manufacture of chemicals and chemical products	44.9	30.3	38.6
Manufacture of basic pharmaceutical substances and medicines and other pharmaceutical products	63.6	47.7	54.5
Manufacture of computer, electronic and optical products	50.8	39.1	39.0
Service enterprises	19.7	6.8	18.1
Wholesale trade, excluding motor vehicles	17.1	4.4	15.9
Land transport and transport via pipelines	6.6	0.4	6.5
Water transport	6.7	–	6.7
Computer programming, consultancy and related activities	48.4	26.4	43.5
Information service activities	44.8	22.1	43.3
Insurance, reinsurance and pension funding, excluding compulsory social security	81.3	60.9	76.6
Scientific research and development	56.0	40.2	50.6

Taking into account the number of persons employed, units with 250 or more persons employed had the largest share in the total number of enterprises introducing innovations. Both in industry and in services, enterprises of this size class most often introduced business process innovations (62.1% and 58.4% respectively).

Among enterprises introducing innovations, the largest share was held by entities with 250 or more persons employed

Table 2. Innovative enterprises in the years 2019-2021 by number of persons employed

Specification	Enterprises that introduced innovations	
	product	business process
	in %	
Industrial enterprises	13.1	18.0
numer of persons employed:		
10-49	6.8	9.4
50-249	25.9	36.0
250 and more	47.4	62.1
Service enterprises	6.8	18.1
numer of persons employed:		
10-49	5.1	14.1
50-249	12.8	33.1
250 and more	24.5	58.4

Expenditures on innovation activities

Expenditures on innovation activities in industrial enterprises in 2021 amounted to PLN 19041.5 million (by 6.6% less than a year ago), while in service enterprises they amounted to PLN 22348.6 million (by 21.5% more).

Expenditures on research and development predominated in both industrial and service enterprises (they accounted for 50.9% and 60.7%, of all expenditures on innovation activities, respectively); expenditures on investment in fixed assets and intangible assets had also a significant share (36.0% and 14.3%, respectively).

In the structure of expenditures on innovative activities by source of funds, own funds had the highest share in industrial and service enterprises (76.3% and 87.9%, respectively); a much lower proportion was accounted for by funds obtained from abroad (9.7% and 5.6%, respectively), credits, loans and other financial liabilities from financial institutions (6.0% and 2.1%, respectively) and domestic funds received from institutions with public funds (3.8% and 2.5%, respectively).

Expenditures on innovative activities in service enterprises were higher by 17.4% than in industrial enterprises

Table 3. Expenditures on innovation activities

Specification	2019	2020	2021
	in PLN millions		
Industrial enterprises	23178.8	20378.2	19041.5
Service enterprises	15400.8	18399.2	22348.6

Revenues from sales

In 2021, the share of revenues from sales of new or improved products introduced to the market between 2019 and 2021 in total revenues from sales amounted to 8.9% in industrial enterprises and 3.1% in service enterprises. The largest share of these revenues, both in industrial and service enterprises was recorded in enterprises with 250 or more persons employed (11.5% and 5.2% respectively).

Table 4. The share of revenues from sales of new or improved products in total revenues from sales

Specification	Products introduced to the market					
	total		new to the market		only new to the enterprise	
	2018-2020	2019-2021	2018-2020	2019-2021	2018-2020	2019-2021
	in %					
Industrial enterprises	10.0	8.9	4.8	3.3	5.2	5.6
numer of persons employed:						
10-49	3.7	2.3	1.4	1.0	2.4	1.3
50-249	5.7	4.4	2.4	1.9	3.2	2.5
250 and more	12.6	11.5	6.2	4.1	6.4	7.4
Service enterprises	4.6	3.1	2.2	1.2	2.4	1.9
numer of persons employed:						
10-49	4.0	0.8	2.6	0.3	1.3	0.5
50-249	3.2	2.4	1.9	0.8	1.3	1.5
250 and more	5.9	5.2	2.1	2.0	3.8	3.1

In 2021, the share of revenues from sales of products new or improved to the market in revenues from sales of innovative products amounted to 36.9% in industry and 38.3% in services.

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Related information

[Innovation activities of enterprises in the years 2018-2020](#)

Data available in databases

[Local Data Bank – Science and technology. Information Society – Innovation activities](#)

Terms used in official statistics

[Innovation activities](#)

[Innovation](#)

[Product innovation](#)

[Business process innovation](#)

[Innovative enterprise](#)