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Process innovation rate, by sector groups and employment size classes¹²

		Share in %				
	Economic activity/Employment size class	2019	2020	2021	2022	2023
B 05-09	Mining and quarrying	40.8	36.1	39.8	45.1	49.8
C 10-33	Manufacturing	53.2	54.3	52.1	51.2	48.0
C 10-12	Manufacture of food products, beverages and tobacco products	43.0	42.1	41.4	42.4	33.2
C 13-15	Manufacture of textiles, wearing apparel and of leather and related products	47.1	48.8	49.4	49.3	53.2
C 16-18	Manufacture of wood (except furniture), paper and paper products; printing and reproduction of recorded media	45.1	57.9	50.0	52.5	51.7
C 19	Manufacture of coke and refined petroleum products	81.8	73.9	92.2	82.9	77.0
C 20	Manufacture of chemicals and chemical products	65.7	70.9	66.9	65.7	67.1
C 21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	69.1	69.0	65.8	71.6	67.9
C 22	Manufacture of rubber and plastic products	55.4	63.2	55.1	58.0	53.6
C 23	Manufacture of other non-metallic mineral products	57.2	47.6	51.1	45.9	44.9
C 24	Manufacture of basic metals	66.2	66.5	58.6	60.8	49.2
C 25	Manufacture of fabricated metal products, except machinery and equipment	52.4	56.2	56.8	47.5	43.2
C 26	Manufacture of computer, electronic and optical products	67.1	67.4	59.1	62.9	57.0
C 27	Manufacture of electrical equipment	64.6	68.7	65.7	52.2	55.1
C 28	Manufacture of machinery and equipment n.e.c.	64.0	60.2	57.8	66.7	62.2
C 29	Manufacture of motor vehicles, trailers and semi-trailers	45.0	62.7	54.3	54.6	51.3
C 30	Manufacture of other transport equipment	58.1	76.8	65.7	81.1	55.8
C 31-32	Manufacture of furniture; other manufacturing	55.5	48.8	48.5	45.5	54.2
C 33	Repair and installation of machinery and equipment	50.4	49.5	42.7	44.1	40.8
D 35, E 36-39	Electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities	40.6	44.3	38.4	36.5	40.4
D 35	Electricity, gas, steam and air conditioning supply	45.4	53.8	38.7	39.2	35.7
E 36-37	Water collection, treatment and supply; sewerage	33.6	36.4	38.2	28.7	45.9
E 38-39	Waste collection, treatment and disposal activities; materials recovery; remediation activities and other waste management services	41.8	43.1	38.3	38.8	40.3
G 46; H 49-53; J 58-63; K 64-66; M 69/70.2, 71-74; N 78-82	Business-related services	48.1	47.5	46.9	43.2	47.5
G 46	Wholesale trade (except of motor vehicles and motorcycles)	41.2	43.1	47.5	39.7	41.0
H 49-53	Transportation and storage	33.6	31.1	29.3	33.2	37.7
J 58-60	Publishing activities; motion picture, video and television programme production, sound recording and music publishing activities; programming and broadcasting activities	52.3	56.1	51.3	54.1	48.0
J 61-63	Telecommunications; computer programming, consultancy and related activities; information service activities	68.8	65.8	65.6	66.0	69.7
K 64-66	Financial and insurance activities	56.2	61.9	57.5	51.8	53.6
M 69/70.2	Legal and accounting activities; management consultancy activities	57.7	49.2	48.6	44.0	47.7
M 71-72	Architectural and engineering activities; technical testing and analysis; scientific research and development	53.0	56.6	59.5	45.9	50.1
M 73-74	Advertising and market research; other professional, scientific and technical activities	65.0	68.3	52.5	55.0	72.4
N 78-82	Other business services	44.3	45.9	39.9	37.9	45.7

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		Share in %				
Economic activity/Employment size class		2019	2020	2021	2022	2023
Enterprises with employees						
5	to 9	44.2	41.0	44.9	38.3	41.6
10	to 19	47.7	47.2	41.2	40.6	44.9
20	to 49	50.1	54.9	51.5	50.0	51.1
50	to 99	57.7	63.5	61.0	60.9	55.8
100	to 249	66.0	66.0	61.1	63.7	61.1
Subtotal		48.6	48.6	47.3	44.4	46.6
250	to 499	74.5	70.8	71.4	68.0	68.5
500	to 999	79.1	75.7	78.6	80.7	79.1
1,000	and more	87.1	88.0	88.7	87.4	87.4
Subtotal		77.8	75.0	76.1	74.4	74.4
Total		49.5	49.4	48.2	45.4	47.5

1 Process innovation rate: the share of all enterprises that implement process innovations. All data are projected on the population of enterprises with 5 or more employees.

2 Classification of Economic Activities - 2008 edition (based on NACE 2008 - Nomenclature statistique des activités économiques dans la Communauté européenne).

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Source: ZEW - Leibniz Centre for European Economic Research - Mannheim Innovation Panel, special evaluation

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<https://www.govdata.de/dl-de/by-2-0>