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Process innovation rate with cost reduction, by sector groups and employment size classes¹²

		Share in %				
	Economic activity/Employment size class	2017	2018	2019	2020	2021
B 05-09	Mining and quarrying	10.2	9.4	17.4	8.2	16.7
C 10-33	Manufacturing	13.3	17.3	16.7	15.7	18.2
C 10-12	Manufacture of food products, beverages and tobacco products	8.2	5.4	12.9	7.3	12.2
C 13-15	Manufacture of textiles, wearing apparel and of leather and related products	9.4	22.0	16.2	11.1	16.7
C 16-18	Manufacture of wood (except furniture), paper and paper products; printing and reproduction of recorded media	10.8	16.3	10.6	13.3	20.8
C 19	Manufacture of coke and refined petroleum products	35.2	51.4	53.5	51.2	70.4
C 20	Manufacture of chemicals and chemical products	18.2	31.0	19.7	25.3	26.9
C 21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	31.5	26.0	28.5	25.0	31.5
C 22	Manufacture of rubber and plastic products	17.0	20.6	21.3	24.7	20.2
C 23	Manufacture of other non-metallic mineral products	12.9	18.0	14.5	14.5	20.5
C 24	Manufacture of basic metals	19.6	23.7	16.2	23.4	27.8
C 25	Manufacture of fabricated metal products, except machinery and equipment	11.1	17.3	19.6	17.7	19.4
C 26	Manufacture of computer, electronic and optical products	23.9	26.8	26.9	17.9	27.7
C 27	Manufacture of electrical equipment	15.7	29.0	27.8	18.2	27.4
C 28	Manufacture of machinery and equipment n.e.c.	16.6	23.6	15.6	17.5	23.3
C 29	Manufacture of motor vehicles, trailers and semi-trailers	30.2	24.9	25.6	32.0	32.8
C 30	Manufacture of other transport equipment	34.5	34.5	22.7	25.9	20.3
C 31-32	Manufacture of furniture; other manufacturing	11.0	14.2	14.4	14.8	8.2
C 33	Repair and installation of machinery and equipment	13.2	12.0	10.5	12.5	7.8
D 35, E 36-39	Electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities	10.0	9.9	8.1	9.1	9.4
D 35	Electricity, gas, steam and air conditioning supply	13.5	14.3	10.7	18.5	10.9
E 36-37	Water collection, treatment and supply; sewerage	10.3	5.5	6.1	3.3	12.9
E 38-39	Waste collection, treatment and disposal activities; materials recovery; remediation activities and other waste management services	7.9	10.0	7.8	7.0	6.8
G 46; H 49-53; J 58-63; K 64-66; M 69/70.2, 71-74; N 78-82	Business-related services	8.5	11.0	12.6	10.3	11.4
G 46	Wholesale trade (except of motor vehicles and motorcycles)	5.0	13.5	14.7	9.7	10.7
H 49-53	Transportation and storage	9.4	7.2	11.9	4.5	8.2
J 58-60	Publishing activities; motion picture, video and television programme production, sound recording and music publishing activities; programming and broadcasting activities	9.7	6.4	11.0	12.4	16.6
J 61-63	Telecommunications; computer programming, consultancy and related activities; information service activities	22.0	16.0	17.5	19.3	22.0
K 64-66	Financial and insurance activities	16.2	19.8	22.2	19.9	18.0
M 69/70.2	Legal and accounting activities; management consultancy activities	4.1	7.5	10.5	11.1	12.1
M 71-72	Architectural and engineering activities; technical testing and analysis; scientific research and development	6.5	10.5	10.4	10.0	14.5
M 73-74	Advertising and market research; other professional, scientific and technical activities	12.0	22.1	15.4	13.9	18.4
N 78-82	Other business services	7.5	9.1	9.8	8.9	4.8

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						Share in %				
Economic activity/Employment size class			2017	2018	2019	2020	2021			
Enterprises with employees										
5	to	9	7.5	9.8	11.2	7.1	11.1			
10	to	19	7.7	10.4	11.9	9.7	8.5			
20	to	49	10.6	13.6	13.1	13.6	15.8			
50	to	99	13.1	19.1	16.2	19.0	18.6			
100	to	249	19.4	23.0	25.8	25.0	21.4			
Subtotal			9.2	12.2	12.9	11.0	12.5			
250	to	499	28.6	25.7	35.3	29.5	33.4			
500	to	999	38.0	40.6	40.2	39.0	43.1			
1,000	and more		61.7	63.7	64.4	64.0	62.9			
Subtotal			36.4	35.9	41.5	37.7	40.8			
Total			10.1	12.9	13.8	11.9	13.4			

1 As of 2018, data are only partially comparable to previous years' data due to changes in the definition and measurement of innovations (according to the Oslo Manual, 4th edition). Data from 2019 onwards are only partially comparable with data up to 2018, as the reporting scope of the innovation survey increased due to a definition change in the corporate register (definition of employee size classes is based on employees instead of employees subject to social insurance, which has increased the number of companies with 5 or more employees). 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>