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**Process innovation rate, by sector groups and employment size classes<sup>12</sup>**

		Share in %				
Economic activity/Employment size class		2017	2018	2019	2020	2021
<b>B 05-09</b>	<b>Mining and quarrying</b>	22.9	34.9	40.8	36.1	39.8
<b>C 10-33</b>	<b>Manufacturing</b>	27.9	54.4	53.2	54.3	52.1
C 10-12	Manufacture of food products, beverages and tobacco products	19.9	39.7	43.0	42.1	41.4
C 13-15	Manufacture of textiles, wearing apparel and of leather and related products	28.6	57.9	47.1	48.8	49.4
C 16-18	Manufacture of wood (except furniture), paper and paper products; printing and reproduction of recorded media	29.4	57.3	45.1	57.9	50.0
C 19	Manufacture of coke and refined petroleum products	60.5	70.3	81.8	73.9	92.2
C 20	Manufacture of chemicals and chemical products	40.3	70.2	65.7	70.9	66.9
C 21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	54.7	60.2	69.1	69.0	65.8
C 22	Manufacture of rubber and plastic products	35.8	60.2	55.4	63.2	55.1
C 23	Manufacture of other non-metallic mineral products	32.2	54.9	57.2	47.6	51.1
C 24	Manufacture of basic metals	39.5	67.1	66.2	66.5	58.6
C 25	Manufacture of fabricated metal products, except machinery and equipment	24.8	52.9	52.4	56.2	56.8
C 26	Manufacture of computer, electronic and optical products	42.7	72.7	67.1	67.4	59.1
C 27	Manufacture of electrical equipment	29.0	66.6	64.6	68.7	65.7
C 28	Manufacture of machinery and equipment n.e.c.	33.2	64.2	64.0	60.2	57.8
C 29	Manufacture of motor vehicles, trailers and semi-trailers	46.4	66.6	45.0	62.7	54.3
C 30	Manufacture of other transport equipment	62.0	66.1	58.1	76.8	65.7
C 31-32	Manufacture of furniture; other manufacturing	20.4	57.0	55.5	48.8	48.5
C 33	Repair and installation of machinery and equipment	27.4	37.8	50.4	49.5	42.7
<b>D 35, E 36-39</b>	<b>Electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities</b>	18.4	45.2	40.6	44.3	38.4
D 35	Electricity, gas, steam and air conditioning supply	27.3	48.3	45.4	53.8	38.7
E 36-37	Water collection, treatment and supply; sewerage	15.4	38.2	33.6	36.4	38.2
E 38-39	Waste collection, treatment and disposal activities; materials recovery; remediation activities and other waste management services	15.2	47.1	41.8	43.1	38.3
<b>G 46; H 49-53; J 58-63; K 64-66; M 69/70.2, 71-74; N 78-82</b>	<b>Business-related services</b>	22.3	52.3	48.1	47.5	46.9
G 46	Wholesale trade (except of motor vehicles and motorcycles)	18.1	45.6	41.2	43.1	47.5
H 49-53	Transportation and storage	19.1	46.8	33.6	31.1	29.3
J 58-60	Publishing activities; motion picture, video and television programme production, sound recording and music publishing activities; programming and broadcasting activities	30.9	49.9	52.3	56.1	51.3
J 61-63	Telecommunications; computer programming, consultancy and related activities; information service activities	35.8	71.8	68.8	65.8	65.6
K 64-66	Financial and insurance activities	36.0	54.2	56.2	61.9	57.5
M 69/70.2	Legal and accounting activities; management consultancy activities	22.8	50.3	57.7	49.2	48.6
M 71-72	Architectural and engineering activities; technical testing and analysis; scientific research and development	26.2	56.2	53.0	56.6	59.5
M 73-74	Advertising and market research; other professional, scientific and technical activities	24.5	61.5	65.0	68.3	52.5
N 78-82	Other business services	18.3	53.4	44.3	45.9	39.9

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						Share in %					
Economic activity/Employment size class			2017	2018	2019	2020	2021				
Enterprises with employees											
5	to	9	19.0	48.6	44.2	41.0	44.9				
10	to	19	22.4	49.2	47.7	47.2	41.2				
20	to	49	25.0	53.6	50.1	54.9	51.5				
50	to	99	31.0	62.0	57.7	63.5	61.0				
100	to	249	37.3	70.2	66.0	66.0	61.1				
<b>Subtotal</b>			23.0	52.0	48.6	48.6	47.3				
250	to	499	49.1	72.3	74.5	70.8	71.4				
500	to	999	55.3	79.3	79.1	75.7	78.6				
1,000	and more		76.8	83.0	87.1	88.0	88.7				
<b>Subtotal</b>			55.3	75.9	77.8	75.0	76.1				
<b>Total</b>			<b>24.0</b>	<b>52.7</b>	<b>49.5</b>	<b>49.4</b>	<b>48.2</b>				

1 Process innovation rate: the share of all enterprises that implement process innovations. As of 2018, data are not 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>