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Innovation rate, by sector groups and employment size classes¹²

		Share in %				
	Economic activity	2016	2018	2019	2020	2021
B 05-09	Mining and quarrying	32.6	34.7	45.7	42.8	49.9
C 10-33	Manufacturing	62.7	64.6	58.5	62.2	58.9
C 10-12	Manufacture of food products, beverages and tobacco products	46.5	52.8	47.8	50.4	44.1
C 13-15	Manufacture of textiles, wearing apparel and of leather and related products	66.4	63.9	53.9	57.1	58.9
C 16-18	Manufacture of wood (except furniture), paper and paper products; printing and reproduction of recorded media	63.1	63.4	52.9	65.1	53.9
C 19	Manufacture of coke and refined petroleum products	85.8	80.4	90.4	79.0	92.2
C 20	Manufacture of chemicals and chemical products	82.7	82.5	73.8	78.5	76.0
C 21	Manufacture of basic pharmaceutical products and pharmaceutical preparations	82.4	74.0	79.0	78.9	73.6
C 22	Manufacture of rubber and plastic products	69.4	69.2	57.7	69.3	59.7
C 23	Manufacture of other non-metallic mineral products	56.3	61.2	60.5	52.1	57.6
C 24	Manufacture of basic metals	53.3	74.9	74.0	68.1	58.7
C 25	Manufacture of fabricated metal products, except machinery and equipment	58.7	59.2	55.9	58.2	60.4
C 26	Manufacture of computer, electronic and optical products	90.7	86.6	78.7	80.4	72.8
C 27	Manufacture of electrical equipment	76.2	77.0	67.5	77.0	73.5
C 28	Manufacture of machinery and equipment n.e.c.	77.9	80.9	73.1	75.3	70.6
C 29	Manufacture of motor vehicles, trailers and semi-trailers	68.1	71.3	55.3	72.6	65.2
C 30	Manufacture of other transport equipment	84.4	75.1	68.8	81.6	66.9
C 31-32	Manufacture of furniture; other manufacturing	56.4	66.1	60.1	60.4	61.7
C 33	Repair and installation of machinery and equipment	55.5	51.9	54.2	59.6	48.3
D 35, E 36-39	Electricity, gas, steam and air conditioning supply; water supply; sewerage, waste management and remediation activities	46.2	49.1	44.2	50.3	42.3
D 35	Electricity, gas, steam and air conditioning supply	60.1	56.0	52.0	55.9	40.5
E 36-37	Water collection, treatment and supply; sewerage	40.3	42.0	39.5	41.3	41.8
E 38-39	Waste collection, treatment and disposal activities; materials recovery; remediation activities and other waste management services	41.8	49.2	42.7	51.8	43.5
G 46; H 49-53; J 58-63; K 64-66; M 69/70.2, 71-74; N 78-82	Business-related services	53.6	59.1	53.2	52.9	52.8
G 46	Wholesale trade (except of motor vehicles and motorcycles)	55.6	52.2	45.1	49.5	50.8
H 49-53	Transportation and storage	35.2	50.3	35.7	33.3	31.4
J 58-60	Publishing activities; motion picture, video and television programme production, sound recording and music publishing activities; programming and broadcasting activities	71.8	57.6	59.2	63.2	57.9
J 61-63	Telecommunications; computer programming, consultancy and related activities; information service activities	69.7	84.4	77.4	76.0	78.5
K 64-66	Financial and insurance activities	70.3	57.6	64.2	68.0	61.0
M 69/70.2	Legal and accounting activities; management consultancy activities	49.5	58.2	60.0	55.8	58.3
M 71-72	Architectural and engineering activities; technical testing and analysis; scientific research and development	58.5	62.4	63.1	61.2	65.8
M 73-74	Advertising and market research; other professional, scientific and technical activities	66.2	68.5	73.1	76.8	63.9
N 78-82	Other business services	49.9	59.0	45.2	50.5	46.2

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		Share in %				
Employment size class		2016	2018	2019	2020	2021
Enterprises with employees						
5	to 9	51.8	56.7	50.0	46.6	51.3
10	to 19	51.6	56.9	51.8	54.9	47.7
20	to 49	57.8	61.1	55.7	60.5	56.8
50	to 99	68.4	70.8	62.2	69.6	65.7
100	to 249	74.9	76.9	70.9	70.3	68.8
Subtotal		55.4	59.8	53.7	54.7	53.5
250	to 499	81.0	78.1	77.7	77.7	76.5
500	to 999	86.8	84.8	84.6	80.5	82.4
1,000	and more	93.6	89.2	92.7	93.3	92.7
Subtotal		84.5	81.7	82.0	81.0	80.7
Total		56.3	60.5	54.6	55.6	54.3

1 Innovation rate: the share of all enterprises that implement product or process innovations. 2016, data can only be compared to a limited extent with the values from 2018 due to divergent questions in the questionnaire. No values were collected for 2017. Values as of 2019 can only be compared to the previous year 2018 to a limited extent, as the reporting group for the Innovation Survey has increased due to a change in the definition in the business 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 five or more employees). All data are projected on the population of enterprises with five 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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This table also appears in the Federal Report on Research and Innovation as Table 20.

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>