

Innovation 2006

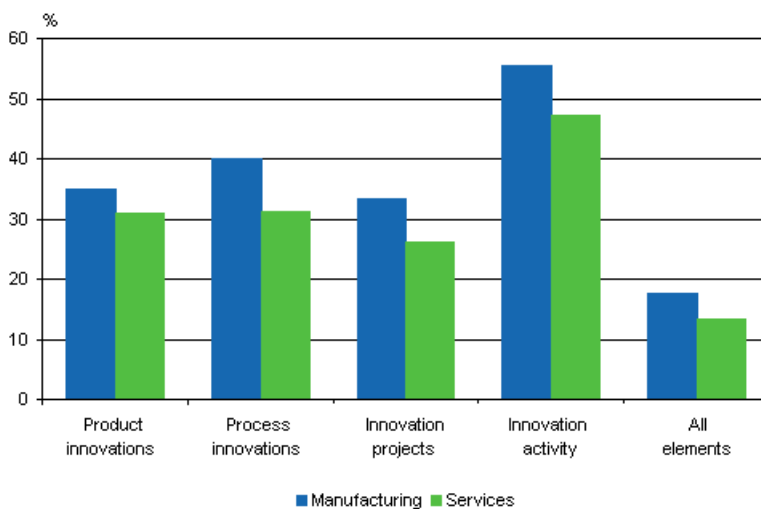
Innovation activity more widespread than before among enterprises

Between 2004 and 2006, altogether 51 per cent of enterprises had activity connected with product or process innovations. In manufacturing, the share of enterprises with innovation activity was 55¹⁾ per cent and in services 47 per cent. The vast majority of the enterprises having engaged in this activity reported that they had made product or process innovations. The data derive from a survey of Statistics Finland concerning innovation activity among enterprises. The survey covered enterprises employing at least 10 persons in manufacturing, inclusive of mining and quarrying, and electricity, gas and water supply, and in certain service industries.

Enterprises now reported activities connected with product or process innovations more frequently than in the previous survey round of 2002-2004, when 43 per cent of enterprises reported that they had engaged in such activities and 39 per cent said they had made product or process innovations.

An innovation is a new or essentially improved good or service launched by an enterprise on the market, or a new or essentially improved process introduced by an enterprise. Besides enterprises having made innovations, also enterprises with projects aimed at innovations that continued from the previous examination period or were terminated during this examination period were counted in the survey as enterprises having practiced innovation activity.

Prevalence of innovation activity connected with products or processes in manufacturing and services 2004-2006, share of enterprises



Among manufacturing industries, innovation activity was most widespread in the 2004-2006 period in the manufacture of chemicals and chemical products, and in the manufacture of computers and telecommunications

¹⁾Corrected on 15 February 2008. Figure was previously 51.

equipment. Three out of four enterprises in these industries had engaged in innovation activity. Among service industries, innovation activity was most widespread in technical testing and analysis, where 80 per cent of enterprises reported having had innovation activity in 2004-2006. In computer and related activities, the respective share was 74 per cent.

Altogether 58 per cent of the enterprises having had innovation activity connected with the development of product or process innovations had engaged in related co-operation. Their partners in such co-operation were most often equipment or material suppliers, customers, or enterprises belonging to the same group. Almost all of the enterprises had co-operated with domestic partners, while more than half had partners in other European countries, one in five in the United States and one in ten had co-operative partners in China.

Concept of innovation extended to marketing and organisational innovations

The concepts used in the innovation survey previously only covered product or process innovations, but a review of the concept of innovation means that it now also extends to non-technological innovations. Thus this survey round included for the first time questions concerning enterprises' organisational or marketing innovations in addition to the questions about product or process innovations and related projects and actions.

Altogether 34 per cent of enterprises reported having made organisational innovations between 2004 and 2006; in manufacturing the share was 32 per cent and in services slightly higher at 36 per cent. Approximately 28 per cent of enterprises had made marketing innovations; 27 per cent in manufacturing and 28 per cent in services.

If innovation activity is examined inclusive of product or process innovations and related projects, as well as marketing or organisational innovations, the share of enterprises with innovation activity among the enterprises employing at least 10 persons in the studied industries was 57 per cent in the 2004-2006 period.

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Tables

Table 1. Prevalence of innovation activity by size category of personnel, 2004-2006, share of enterprises

	Number of enterprises	Product innovations (goods and services)	Process innovations	Product or process innovations	Innovation projects	Innovation activity	All elements
		%	%	%	%	%	%
Total	8221	33,0	35,6	46,4	29,8	51,4	15,5
Manufacturing, total¹	4224	34,9	39,9	50,4	33,2	55,4	17,6
10 - 19	1554	23,2	27,3	35,8	19,7	40,1	9,3
20 - 49	1465	37,1	40,9	52,3	32,2	58,5	17,2
50 - 99	565	35,0	46,0	58,1	39,2	62,0	17,6
100 - 249	375	50,8	54,9	69,0	52,9	73,7	26,9
250 - 499	140	60,7	65,7	76,6	70,2	81,4	46,7
500 -	126	78,9	81,5	89,0	85,8	95,3	65,9
Services, total	3996	30,9	31,1	42,1	26,2	47,3	13,3
10 - 19	1913	27,2	26,9	36,9	22,8	41,8	11,1
20 - 49	1296	33,7	32,0	44,2	25,2	49,2	13,4
50 - 99	375	32,1	32,4	46,2	27,0	50,5	12,2
100 - 249	254	29,4	38,0	48,8	36,0	56,7	13,9
250 - 499	83	51,4	60,7	66,2	58,2	71,5	40,3
500 -	75	55,9	58,7	71,2	57,8	77,9	40,2

1) Including mining and quarrying, electricity, gas and water supply.

Table 2. Prevalence of innovation activity by industry, 2004-2006, share of enterprises

	Number of enterprises	Product innovations (goods and services)	Process innovations	Product or process innovations	Innovation projects	Innovation activity	All elements
		%	%	%	%	%	%
Total	8221	33,0	35,6	46,4	29,8	51,4	15,5
Manufacturing, total	4224	34,9	39,9	50,4	33,2	55,4	17,6
Mining and quarrying	52	6,1	32,9	32,9	17,6	35,8	6,1
Food industry	350	50,3	48,1	61,6	36,4	63,4	26,6
Textiles	69	37,5	42,7	51,5	42,7	56,7	27,0
Manufacture of wearing apparel	76	34,9	36,5	44,7	21,6	51,4	0,0
Leather products	28	35,2	4,3	35,2	4,3	35,2	4,3
Wood and wood products	300	29,6	39,6	45,5	25,1	48,5	14,0
Pulp, paper and paper products	76	42,2	48,5	60,2	47,6	70,2	22,3
Publishing and printing	373	18,5	34,2	40,0	24,5	43,4	9,2
Chemicals and chemical products	110	51,2	45,6	65,4	58,1	77,1	28,0
Rubber and plastic products	186	51,1	55,5	65,5	47,3	69,1	31,5
Other non-metallic mineral products	161	39,1	35,5	52,3	39,1	54,3	16,7
Basic metals	64	27,3	34,4	36,1	30,7	49,0	16,1
Metal products	824	22,2	34,9	40,7	25,8	47,5	10,8
Machinery and equipment	564	45,7	39,2	55,7	37,4	63,1	21,6
Electrical machinery and apparatus	148	55,7	51,0	66,8	45,1	68,9	26,5
Computers and communication equipment	85	65,3	52,9	75,7	57,2	75,7	33,4
Instruments	117	62,0	33,2	63,4	40,5	67,8	28,4
Motor vehicles	71	43,9	55,0	55,0	49,8	57,5	42,3
Other transport equipment	84	19,2	26,6	35,5	22,5	39,9	9,2
Other manufacturing	256	35,0	43,4	52,3	35,7	56,7	18,4
Electricity, gas, steam and hot water supply	165	13,4	34,3	40,6	26,7	44,9	7,2
Collection, purification and distribution of water	65	4,6	40,8	40,8	11,5	50,0	0,0
Services, total	3996	30,9	31,1	42,1	26,2	47,3	13,3
Wholesale trade	1324	36,4	33,8	48,6	24,8	53,3	11,5
Transport	1202	12,1	20,5	24,4	13,9	28,9	4,5
Post and telecommunications	120	46,0	56,0	61,5	45,0	70,6	34,0
Financial intermediation	282	30,6	23,4	36,1	17,4	44,7	6,9
Insurance and pension funding	62	37,0	30,8	38,6	27,4	42,3	20,5
Activities auxiliary to financial intermediation	74	58,9	51,1	63,0	35,4	65,7	31,4
Computer and related activities	445	64,0	48,6	70,1	56,7	73,7	37,4
Technical consultancy services	452	20,1	27,0	35,5	28,1	43,1	10,2
Technical testing and analysis	35	70,5	54,9	80,3	70,5	80,3	45,1

Table 3. Co-operation in innovation activity by significance of co-operating partner, 2004-2006, share of enterprises with innovation activity

	Importance of co-operation partner			
	High	Medium	Low	No co-operation
	%	%	%	%
All enterprises				
Other enterprises within own enterprise group ¹	23,4	19,3	12,7	44,6
Suppliers of equipment, materials, components or software	11,4	22,9	16,2	49,5
Clients or customers	16,4	23,8	12,4	47,4
Competitors or other enterprises in your sector	2,4	12,4	20,8	64,4
Consultans, commercial labs or private R&D institutes	3,0	11,8	22,3	62,9
Universities or other higher education institutions	4,3	13,2	18,5	64,0
Government or public research institutes	3,3	8,1	16,4	72,1
Manufacturing²				
Other enterprises within own enterprise group	22,5	22,3	15,8	39,4
Suppliers of equipment, materials, components or software	11,7	26,2	16,8	45,3
Clients or customers	17,8	24,0	14,3	43,9
Competitors or other enterprises in your sector	2,2	11,4	23,8	62,6
Consultans, commercial labs or private R&D institutes	3,2	14,2	23,5	59,1
Universities or other higher education institutions	5,5	17,0	18,9	58,7
Government or public research institutes	3,3	9,7	18,1	69,0
Services				
Other enterprises within own enterprise group	24,3	16,1	9,5	50,2
Suppliers of equipment, materials, components or software	11,1	18,7	15,5	54,7
Clients or customers	14,7	23,6	10,0	51,7
Competitors or other enterprises in your sector	2,7	13,6	17,0	66,6
Consultans, commercial labs or private R&D institutes	2,7	8,7	20,9	67,7
Universities or other higher education institutions	2,9	8,5	18,0	70,6
Government or public research institutes	3,4	6,1	14,4	76,1

1) Enterprise groups and enterprises belonging to the group (also in manufacturing and in services).

2) Including mining and quarrying, electricity, gas and water supply.

Table 4. Co-operation in innovation activity by location of co-operating partner, 2004-2006, share of enterprises with innovation activity

	Location of co-operation partner						
	Finland	Other Europe	United States	China	India	All other countries	Co-operation
	%	%	%	%	%	%	%
All enterprises							
Other enterprises within own enterprise group ¹	37,7	25,5	8,5	3,0	1,1	3,5	55,4
Suppliers of equipment, materials, components or software	42,7	18,8	6,0	2,7	1,4	2,3	50,5
Clients or customers	47,5	18,6	6,4	3,0	1,6	5,9	52,6
Competitors or other enterprises in your sector	28,5	15,8	4,6	2,8	1,3	2,8	35,6
Consultans, commercial labs or private R&D institutes	35,2	7,2	2,0	0,6	0,2	0,7	37,1
Universities or other higher education institutions	35,7	4,8	1,3	0,2	0,1	0,4	36,0
Government or public research institutes	27,3	3,6	0,8	0,0	0,0	0,3	27,9
Manufacturing²							
Other enterprises within own enterprise group	44,4	28,0	8,0	4,2	1,1	3,5	60,6
Suppliers of equipment, materials, components or software	47,5	21,9	5,9	3,6	1,5	1,7	54,7
Clients or customers	48,7	23,2	7,5	3,0	1,7	7,1	56,1
Competitors or other enterprises in your sector	29,3	16,7	4,3	3,4	1,2	3,5	37,4
Consultans, commercial labs or private R&D institutes	39,2	8,2	1,8	0,3	0,4	0,8	40,9
Universities or other higher education institutions	41,1	5,2	0,8	0,3	0,1	0,7	41,3
Government or public research institutes	30,6	4,4	0,6	0,1	0,1	0,5	31,0
Services							
Other enterprises within own enterprise group	30,5	22,9	9,0	1,8	1,2	3,5	49,8
Suppliers of equipment, materials, components or software	36,6	15,0	6,2	1,5	1,3	3,1	45,3
Clients or customers	45,9	12,9	5,1	3,1	1,5	4,4	48,3
Competitors or other enterprises in your sector	27,5	14,8	5,0	1,9	1,5	2,1	33,4
Consultans, commercial labs or private R&D institutes	30,3	6,0	2,4	1,0	0,0	0,6	32,3
Universities or other higher education institutions	29,0	4,3	1,8	0,0	0,0	0,1	29,4
Government or public research institutes	23,2	2,7	1,1	0,0	0,0	0,0	23,9

1) Enterprise groups and enterprises belonging to the group (also in manufacturing and in services).

2) Including mining and quarrying, electricity, gas and water supply.

Table 5. Co-operation in innovation activity by location of co-operating partner and size category of personnel, 2004-2006, share of enterprises with innovation activity

	Number of enterprises	Co-operation	Location of co-operation partner					
			Finland	Other Europe	United States	China	India	All other countries
			%	%	%	%	%	%
Total	4229	57,7	57,3	32,9	12,7	7,3	3,7	9,2
Manufacturing, total¹	2340	61,6	61,0	36,8	13,5	8,5	3,7	10,5
10 - 19	623	52,3	51,5	23,6	5,9	4,6	1,6	6,6
20 - 49	856	58,6	58,6	27,9	10,1	6,1	3,3	9,1
50 - 99	350	66,4	65,8	39,3	11,4	7,6	2,4	3,8
100 - 249	276	63,6	60,9	57,0	21,2	14,2	5,4	16,3
250 - 499	114	81,1	81,1	65,6	32,5	15,3	6,5	24,3
500 -	120	94,9	93,9	89,0	47,5	28,6	13,7	33,5
Services, total	1889	52,9	52,8	28,0	11,7	5,8	3,7	7,6
10 - 19	801	55,8	55,8	26,3	13,3	7,9	5,6	10,6
20 - 49	638	46,0	46,0	25,0	8,0	3,9	1,6	3,3
50 - 99	189	50,7	50,7	23,0	10,7	2,9	2,7	5,0
100 - 249	144	51,3	49,5	35,0	13,9	4,6	1,5	7,8
250 - 499	59	76,9	76,9	56,9	26,5	12,3	11,9	15,9
500 -	58	76,6	76,6	51,8	13,1	4,7	2,4	13,0

1) Including mining and quarrying, electricity, gas and water supply.

Table 6. Prevalence of marketing and organisational innovations by size category of personnel, 2004-2006, share of enterprises

	Number of enterprises	Organisational innovations	Marketing innovations	Marketing or organisational innovations	Innovation activity, broadly defined	All elements ¹
		%	%	%	%	%
Total	8221	33,8	27,6	41,9	57,0	9,8
Manufacturing, total²	4224	32,1	27,4	41,3	59,9	10,0
10 - 19	1554	18,4	20,1	29,0	45,5	4,3
20 - 49	1465	33,9	26,8	42,4	62,3	9,0
50 - 99	565	39,4	32,3	47,3	66,6	11,1
100 - 249	375	41,9	34,2	52,2	77,9	16,9
250 - 499	140	60,9	44,6	70,0	83,0	28,0
500 -	126	84,7	64,7	89,2	98,2	48,3
Services, total	3996	35,6	27,7	42,6	53,9	9,5
10 - 19	1913	30,4	22,3	36,3	48,0	7,0
20 - 49	1296	35,7	30,3	44,2	54,2	10,7
50 - 99	375	43,3	33,8	50,8	62,7	8,6
100 - 249	254	42,9	34,2	52,9	67,7	10,3
250 - 499	83	66,9	48,5	71,5	77,6	31,8
500 -	75	68,6	44,7	70,4	82,9	29,2

1) Product and process innovations and related projects, and organisational and marketing innovations.

2) Including mining and quarrying, electricity, gas and water supply.

Table 7. Prevalence of marketing and organisational innovations by industry, 2004-2006, share of enterprises

	Number of enterprises	Organisational innovations	Marketing innovations	Marketing or organisational innovations	Innovation activity, broadly defined	All elements ¹
		%	%	%	%	%
Total	8221	33,8	27,6	41,9	57,0	9,8
Manufacturing, total	4224	32,1	27,4	41,3	59,9	10,0
Mining and quarrying	52	43,8	14,5	49,9	52,7	6,1
Food industry	350	31,4	42,4	51,4	67,8	14,7
Textiles	69	20,1	32,6	39,3	61,9	9,9
Manufacture of wearing apparel	76	32,2	28,3	45,6	62,0	0,0
Leather products	28	4,3	32,4	32,4	51,4	4,3
Wood and wood products	300	23,7	31,1	39,6	52,9	8,6
Pulp, paper and paper products	76	39,5	31,0	49,0	75,1	14,8
Publishing and printing	373	25,3	23,5	35,2	48,9	4,5
Chemicals and chemical products	110	34,5	41,2	48,5	78,2	14,8
Rubber and plastic products	186	43,4	33,4	49,3	74,0	23,7
Other non-metallic mineral products	161	31,2	29,6	42,6	59,7	8,0
Basic metals	64	32,6	12,6	34,4	49,0	7,4
Metal products	824	25,3	14,8	29,9	51,0	5,2
Machinery and equipment	564	39,5	32,3	47,0	68,6	15,5
Electrical machinery and apparatus	148	53,5	31,7	53,5	73,6	15,6
Computers and communication equipment	85	64,7	45,0	75,2	82,7	12,5
Instruments	117	37,6	48,0	52,1	71,2	18,7
Motor vehicles	71	38,0	23,6	41,3	57,5	20,3
Other transport equipment	84	27,5	21,9	33,7	44,3	5,7
Other manufacturing	256	28,8	27,1	39,5	59,0	6,4
Electricity, gas, steam and hot water supply	165	31,2	12,6	31,2	45,5	5,1
Collection, purification and distribution of water	65	18,5	16,2	30,0	54,6	0,0
Services, total	3996	35,6	27,7	42,6	53,9	9,5
Wholesale trade	1324	38,9	35,6	47,8	60,4	8,6
Transport	1202	20,0	12,7	25,2	34,1	3,5
Post and telecommunications	120	50,0	52,2	61,7	70,6	32,9
Financial intermediation	282	43,0	31,0	51,8	59,9	4,7
Insurance and pension funding	62	42,3	20,5	42,3	52,9	12,7
Activities auxiliary to financial intermediation	74	69,5	58,9	72,2	76,2	31,4
Computer and related activities	445	58,9	43,8	66,7	78,5	22,9
Technical consultancy services	452	29,0	15,5	33,4	49,8	6,8
Technical testing and analysis	35	45,1	32,4	54,9	80,3	22,5

1) Product and process innovations and related projects, and organisational and marketing innovations.

Figures

Figure 1. Prevalence of innovation activity by size category of personnel, 2004-2006, share of enterprises

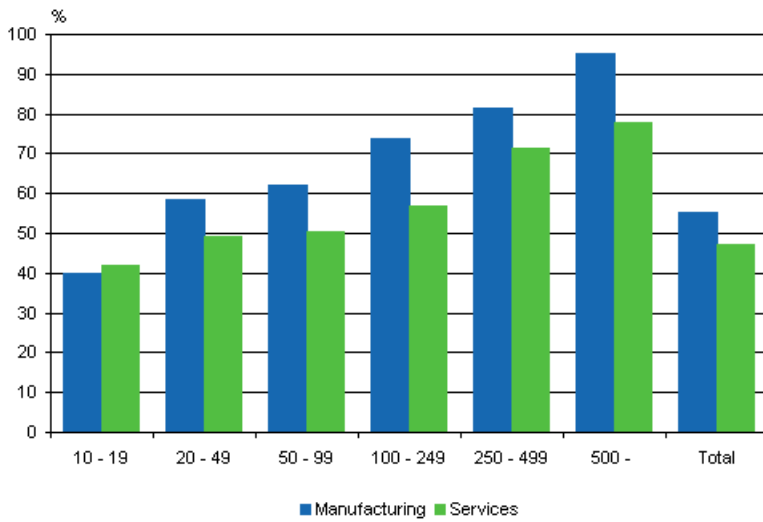


Figure 2. Prevalence of innovation activity in manufacturing by industry, 2004-2006, share of enterprises

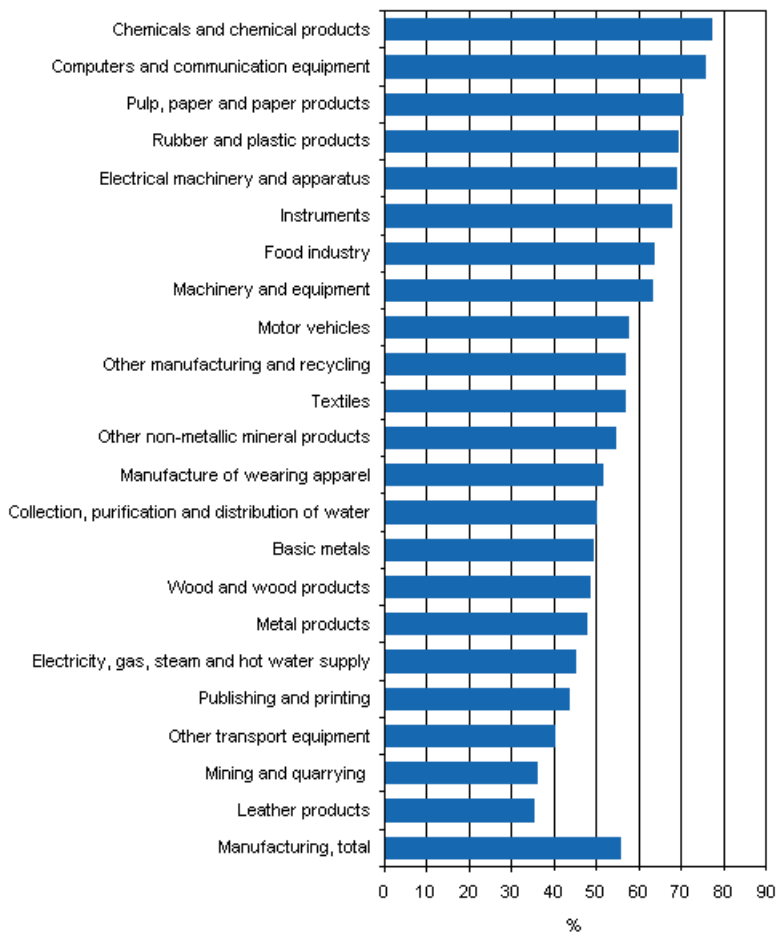


Figure 3. Prevalence of innovation activity in services by industry, 2004-2006, share of enterprises

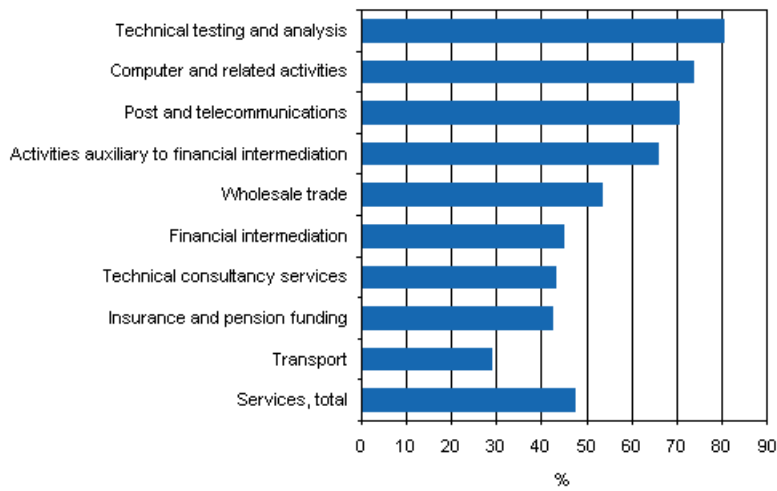


Figure 4. Co-operation in innovation activity by size category of personnel, 2004-2006, share of enterprises with innovation activity

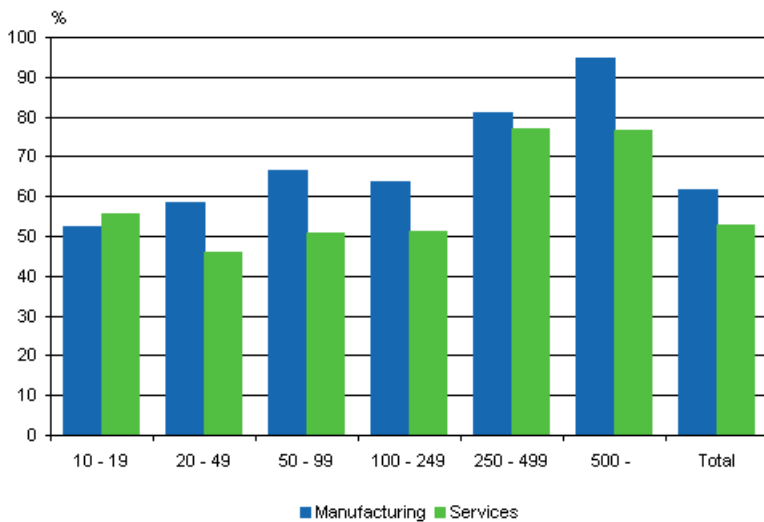


Figure 5. Co-operation in innovation activity by type of co-operating partner, 2004-2006, share of enterprises with innovation activity

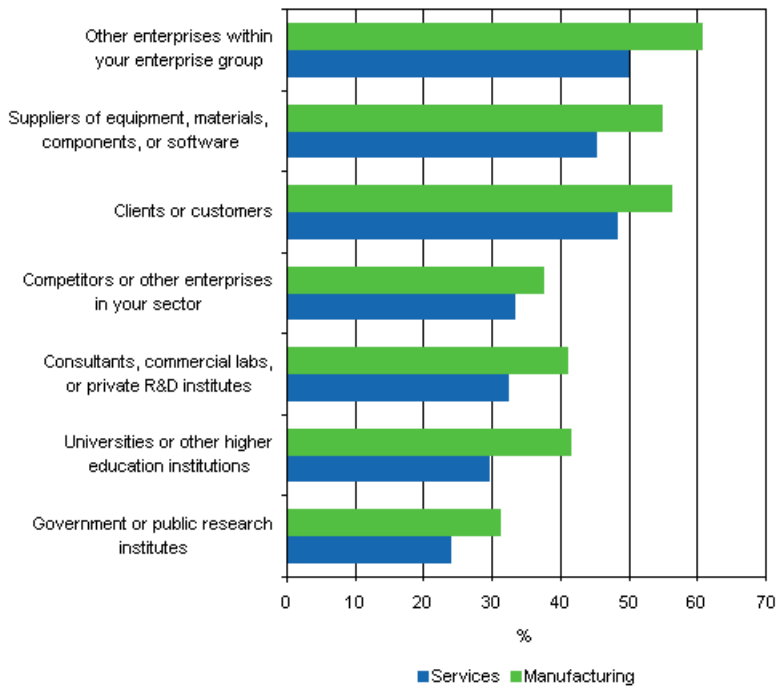
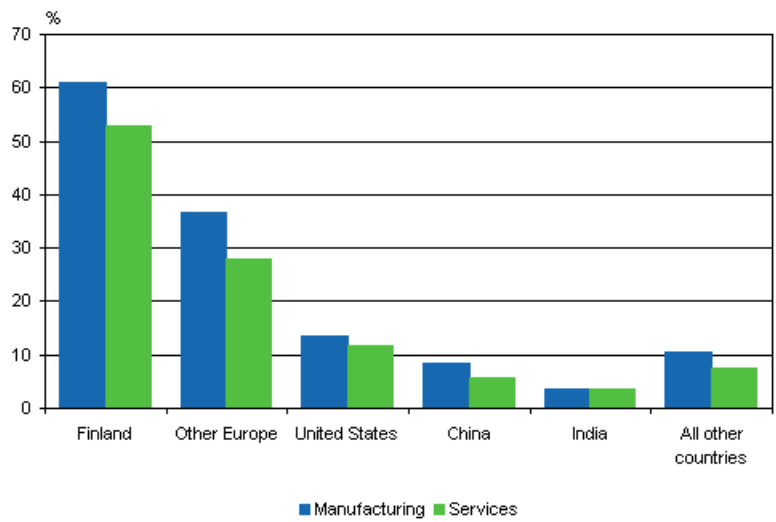


Figure 6. Co-operation in innovation activity by location of co-operating partner, 2004-2006, share of enterprises with innovation activity



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Inquiries

Mervi Niemi (09) 1734 3263
Director in charge:
Kaija Hovi

tiiede.teknologia@stat.fi

www.stat.fi