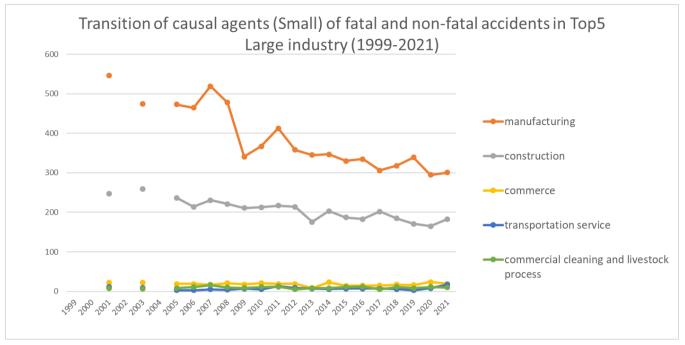
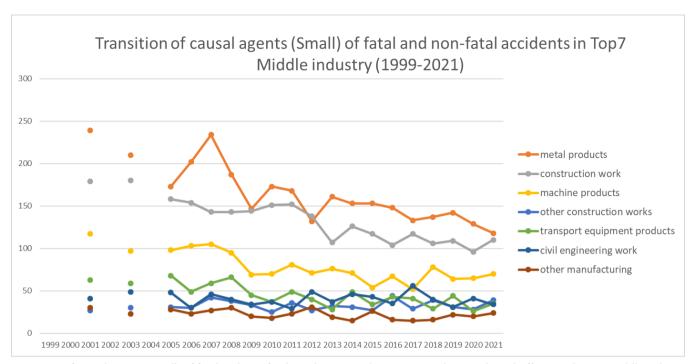
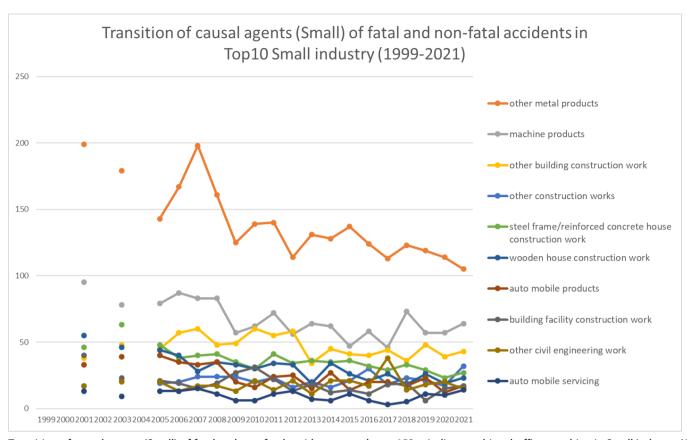
Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine (1999-2021)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine in Large industry (1999-2021)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine in Middle Industry (1999-2021)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine in Small Industry (1999-2021)

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine in Large industry (1999-2021)

code	Large industry	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Large industry
01	manufacturing			546		475		473	465	519	478	341	367	413	358	345	347	330	335	306	318	339	295	301	7,351	manufacturing
03	construction			247		259		237	214	231	221	211	213	217	214	176	203	187	183	202	185	171	165	183	3,919	construction
08	commerce			22		22		19	19	17	21	18	21	19	19	9	23	14	15	15	17	16	24	19	349	commerce
04	transportation service			12		9		3	3	5	4	7	5	13	9	7	6	7	7	7	6	3	8	17	138	transportation service
15	commercial cleaning and			Q		7		8	11	16	10	9	11	12	5	8	8	11	12	5	11	Q	11	10	181	commercial cleaning and
	livestock process																		12						101	livestock process
17	others			2		10		7	3	13	5	2	5	5	6	7	6	3	7	6	8	11	3	8	117	others
07	livestock/fishery			4		2		3	2	3	4	3	2	2	1	1	2	5	2	4	6		4	4	54	livestock/fishery

06	agriculture		1	1	2	1	1	1	3	2	5		2	4	3	2	1	7	3	5	4	48	agriculture
14	hotel/restaurant/amusement		2	5	1	3	1	2		4	2	2	1	3	4	2	1	1	R	2	4	48	hotel/restaurant/amusement
	service																	<u> </u>					service
13	health and hygiene service			2	2		2	1	1			1			1	4	2	1		1	2	20	health and hygiene service
12	education/research service		1			2	4	1	2	2		3	1								1	17	education/research service
16	public office						1													1	1	3	public office
05	cargo handling service		2	2		2	2		2	1			1					1	1			14	cargo handling service
02	mining		2	1		1	1	1			1	2	3					1				13	mining
09	financial													1						1		4	financial
09	business/advertisement													ľ								4	business/advertisement
10	movie/play service																			1		1	movie/play service
11	telecommunication service																						telecommunication service
	total		849	797	755	726	816	749	599	633	689	620	561	603	565	569	549	562	560	521	554	12,277	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine in Middle industry (1999-2021)

code	Middle industry	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Middle industry
0112	metal products			239		210		173	202	234	187	147	173	168	132	161	153	153	148	133	137	142	129	118	3,139	metal products
0302	construction work			179		180		158	154	143	143	144	151	152	138	107	126	117	104	117	106	109	96	110	2,534	construction work
0113	machine products			117		97		98	103	105	95	69	70	81	71	76	71	54	67	52	78	64	65	70	1,503	machine products
0303	other construction works			27		30		31	30	42	38	33	25	36	27	32	31	27	44	29	39	31	28	39	619	other construction works
0115	transport equipment products			63		59		68	49	59	66	45	37	49	40	28	49	34	43	41	29	44	26	35	864	transport equipment products
0301	civil engineering work			41		49		48	30	46	40	34	37	29	49	37	46	43	35	56	40	31	41	34	766	civil engineering work
0117	other manufacturing			30		23		28	23	27	30	20	18	23	31	19	15	26	16	15	16	22	20	24	426	other manufacturing
0403	road cargo transportation service			9		9		3	2	4	4	4	5	10	7	7	3	6	7	5	5	1	6	15	112	road cargo

																							transportation servic
0110	steel making	3	35	21	30	28	34	35	14	25	24	28	16	18	20	17	19	15	20	17	14	430	steel making
0111	nonferrous metal making	9)	6	14	16	7	10	8	7	9	8	6	9	8	8	12	7	7	3	11	165	nonferrous metal making
1501	commercial cleaning and livestock process	8	3	7	8	11	16	10	9	11	12	5	8	8	11	12	5	11	8	11	10	181	commercial cleaning
0114	electrical equipment products	1	18	16	18	10	15	19	14	7	18	12	7	10	7	10	6	6	10	9	8	220	electrical equipmen
0109	sand and stone products	1	12	20	16	12	13	18	13	11	12	11	16	6	10	10	14	4	10	11	7	226	sand and stone products
1702	others	2	2	9	6	3	13	5	2	5	5	6	7	5	3	5	6	7	11	3	7	110	others
0801	wholesale	5	5	7	4	6	4	4	3	8	3	7	2	3	4	6	4	7	6	6	7	96	wholesale
0802	retail	1	15	13	14	10	8	13	10	12	11	9	5	16	8	6	8	6	8	13	6	191	retail
0804	other commerce	2	2	2	1	3	5	4	5	1	5	3	2	4	2	3	3	4	2	5	6	62	other commerce
0108	chemical products	7	7	7	11	14	12	7	4	4	9	9	6	9	6	8	10	6	7	5	5	146	chemical products
0101	food products	5	5	3	4	2	5	3	2	10	8	8	6	4	3	3	2	13	3	5	5	94	food products
0701	livestock	3	3	2	3	2	2	4	2	2	2	1	1	1	3	1	4	5		4	4	46	livestock
0601	agriculture	1	I	1	1	1	1	1	3	2	4		2	3	3	2	1	5	3	4	4	42	agriculture
1403	other amusement service	1	ı	2		3	1	2		3	2	1	1	3	4	1		1	6		3	34	other amusement service
0105	furniture			1	7	2	4	2	1		3	1		3	2			1	1	2	2	32	furniture
1302	social welfare facility			1			2	1				1				3	2	1		1	2	14	social welfare facili
0103	fiber products			1	1	1	1				2	1									2	9	fiber products
1201	education/research service	1				2	4	1	2	2		3	1								1	17	education/research
1401	hotel	1	ı	3	1					1		1					1		2	2	1	13	hotel
0402	road passenger transport service	1	ı			1			2		2			3							1	10	road passenger

																							transport service
1701	dispatch service			1	1									1		2		1			1	7	dispatch service
1601	public office						1													1	1	3	public office
0404	other transportation service																			1	1	2	other transportation service
0104	wood products		5	3	4	1	2	4	2	2	5	4	1		2	3	2	3	7	1		51	wood products
0106	pulp/paper processing products		2	2	1	1		1	1	1		1	2					1	2			15	pulp/paper processing products
0401	railroad/water transportation/airline service		2				1		1		1	2			1		2	1	2	1		14	railroad/water transportation/airline service
0107	printing/bookbinding		2	3			1	1			1				2			2		1		13	printing/bookbinding
0202	quarrying		2	1		1	1	1			1	2	2					1				12	quarrying
0102	textile products		1	2					1		1		1		2	1				1		10	textile products
0116	electric/gas/water service		1	1		1				2		1			1	1						8	electric/gas/water service
0502	harbor transportation service		2	1		1	2		1				1									8	harbor transportation service
0702	fishery		1				1		1					1	2	1		1				8	fishery
0501	land cargo handling service			1		1			1	1								1	1			6	land cargo handling
0602	forestry				1						1			1				2		1		6	forestry
1301	medical treatment service			1	2				1							1						5	medical treatment service
0902	advertisement and mediator			2										1						1		4	advertisement and mediator
0203	other mining												1									1	other mining
1001	movie/play service																			1		1	movie/play service

1303	other health and hygiene service														1							1	other health and
1402	restaurant															1						1	restaurant
0201	coal mining																						coal mining
0803	haircut/beauty salon																						haircut/beauty salon
0901	financial business																						financial business
1101	telecommunication service																						telecommunication
	telecommunication service																						service
	total		849	797	755	726	816	749	599	633	689	620	561	603	565	569	549	562	560	521	554	12,277	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine in Small industry (1999-2021)

code	Small industry	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	total	Small industry
011209	other metal products			199		179		143	167	198	161	125	139	140	114	131	128	137	124	113	123	119	114	105	2,659	other metal products
011301	machine products			95		78		79	87	83	83	57	62	72	56	64	62	47	58	46	73	57	57	64	1,280	machine products
030209	other building construction work			38		48		45	57	60	48	49	60	55	58	34	45	41	40	44	36	48	39	43	888	other building construction work
030309	other construction works			17		21		19	20	24	24	24	20	23	16	20	16	21	30	18	23	21	17	32	406	other construction works
	steel frame/reinforced concrete house construction work			46		63		48	38	40	41	35	30	41	34	36	35	36	32	29	33	29	23	27	696	steel frame/reinforced concrete house construction work
030202	wooden house construction work			55		46		44	40	28	35	33	30	34	33	19	34	26	21	26	18	26	19	23	590	wooden house construction work
011502	auto mobile products			33		39		40	35	33	35	20	16	24	25	15	27	14	20	20	17	23	12	17	465	auto mobile products
030203	building facility construction work			40		23		21	19	15	19	27	31	22	13	18	12	14	11	18	19	6	15	17	360	building facility construction work
030199	other civil engineering work			17		20		20	13	17	17	13	21	14	21	11	21	21	17	38	14	18	20	15	348	other civil engineering work

011701	auto mobile servicing	13		9	13	13	15	11	6	6	11	13	7	6	11	6	3	5	11	10	14	183	auto mobile servicing
011501	ship building	19		15	17	10	19	21	17	14	19	10	10	15	12	12	11	9	11	6	13	260	ship building
011002	casting products	27	,	18	23	21	18	27	10	21	19	16	12	15	15	14	14	14	18	13	12	327	casting products
040301	general truck transportation service	9		7	2	2	4	4	3	5	6	7	5	3	6	7	5	5	1	3	10	94	general truck transportation service
150102	industrial waste management service	3		5	3	3	8	8	3	3	5	3	1	5	7	7	2	7	6	9	8	96	industrial waste management service
030106	road construction work	6		6	7	5	7	5	4	2	4	9	5	6	7	4	5	9	5	6	7	109	road construction work
170209	others	2		9	5	3	13	5	2	5	5	6	6	5	3	5	6	7	11	2	7	107	others
030110	water supply/sewage construction work	8		11	13	7	10	6	6	7	6	10	15	7	4	7	5	4	3	4	6	139	water supply/sewage construction work
080109	other wholesale	3		5	4	4	4	3	3	7	3	7	2	3	4	4	4	7	5	5	6	83	other wholesale
080409	other commerce	2		2	1	3	5	3	5	1	5	3	2	3	2	3	3	3	2	3	6	57	other commerce
011203	metal press products	15		12	9	16	14	9	5	12	5	3	10	14	8	8	4	4	11	5	5	169	metal press products
011201	western tableware/cutting tool products	14	ļ	11	11	7	14	8	6	10	14	5	11	4	3	8	6	6	8	4	5	155	western tableware/cutting tool products
030302	machinery/apparatus setting work	7		5	9	6	13	12	5	3	11	6	9	11	6	12	9	10	9	7	5	155	machinery/apparatus setting work
011709	other manufacturing	10		10	7	7	6	10	6	7	9	11	7	5	8	8	7	9	7	5	5	144	other manufacturing
011409	other electrical equipment	9		10	7	5	6	9	7	5	5	8	6	7	1	4	2	5	5	1	5	107	other electrical equipment
011102	nonferrous metals casting products	8		2	8	10	4	5	5	5	6	3	3	6	4	4	7	4	6	2	5	97	nonferrous metals casting products
011702	machine repair	7		4	7	3	5	9	7	5	3	7	5	4	7	2	5	2	4	5	5	96	machine repair
011109	other nonferrous metal products			3	5	5	2	5	3	2	2	4	3	2	3	3	5	3	1	1	5	57	other nonferrous metal products
011305	other precision machine products	16		15	15	13	19	12	10	6	6	13	9	7	7	5	3	3	3	7	4	173	other precision machine products
	land consolidation civil																						land consolidation civil

030109	engineering work		5	2	5	2	5	5	7	4	1	6	2	2	6	3	2	6	2	6	4	75	engineering work
070101	livestock		3	2	3	2	2	4	2	2	2	1	1	1	3	1	4	5		4	4	46	livestock
060101	agriculture		1	1	1	1	1	1	3	2	4		2	3	3	2	1	5	3	4	4	42	agriculture
010102	fishery products			1	1					2	4	3	1	1	1		1	4	2		4	25	fishery products
040302	specific truck transportation service			1							2		1							3	4	11	specific truck transportation service
080209	other retails		9	10	10	3	7	8	4	9	5	6	2	9	6	5	6	5	7	8	3	122	other retails
011509	other transport equipment products		8	3	11	4	6	9	6	6	5	5	2	5	8	8	6	3	9	7	3	114	other transport equipment products
010901	cement products		6	6	4	6	4	6	6	4	6	6	12	3	3	6	5		7	5	3	98	cement products
010909	other sand and stone products		4	10	8	2	6	8	7	6	5	2	1	2	6	2	4	3	3	4	3	86	other sand and stone
010805	plastics products		4	3	7	9	6	3	2	2	3	3	3	5	3	3	5	4	4	5	3	77	plastics products
080202	auto mobile retail		3		2	3	1	2	3	2	4	3	1	5	2		1	1		5	3	41	auto mobile retail
030301	electricity/telecommunication work		3	4	3	4	5	2	4	2	2	5	3	4		2	2	6	1	4	2	58	electricity/telecommunication work
011001	steel/iron/rolling products		3	2	2	4	7	1	2	2	3	7	3	1	1	1	2			1	2	44	steel/iron/rolling products
011202	screw products		3	1	2	4	3	2	3	4	2	2	3	1	2			1		1	2	36	screw products
150101	building maintenance service		2	2	3	2		1	4	1	3		4	2	2	3		1	1	1	2	34	building maintenance service
011503	railway vehicle products		3	2			1	1	2	1	1		1	2		3	4		1	1	2	25	railway vehicle products
011303	optical instruments		3		2	2			1	2	1		1			4	1	1	2	1	2	23	optical instruments
011401	heavy electrical equipment		3	1	2	1					1			3	4	2			1	3	2	23	heavy electrical equipment
130201	social welfare facility			1			2	1				1				3	2	1		1	2	14	social welfare facility
140309	other amusement service			1						2		1		1	1	1			1		2	10	other amusement service
011204	metal plating products		8	7	8	8	5	7	8	8	7	8	6	6	3	8	10	3	4	5	1	120	metal plating products
011403	electronics equipment and telecommunications		5	3	8	2	5	6	6	2	7	2	1		2	3	4		3	4	1	64	electronics equipment and telecommunications

	apparatus																						apparatus
010806	rubber products		1	1	3	4	5			1	4	3	2	2	1		2	1	2		1	33	rubber products
030105	bridge construction work		2	5			2	2	1	1	1	2	4	1	2	1	2	2	1	2	1	32	bridge construction work
140301	golf course		1	1		2	1	2		1	1		1	1	3			1	5		1	21	golf course
030107	river civil engineering work		2	1	1	2	1	2		1	1			3	1		1			1	1	18	river civil engineering work
120109	other education/research service		1			2	4	1	2	1		3	1								1	16	other education/research
010903	pottery products				2	2	3	1					1				2	1		1	1	14	pottery products
140101	hotel		1	3	1					1		1					1		2	2	1	13	hotel
010509	other furniture				3	1	2	1			2				1					1	1	12	other furniture
011101	nonferrous metals/rolling products		1	1	1	1	1				1	1		1	1	1					1	11	nonferrous metals/rolling products
010104	bread/cake products		1	1			1	1		1						1		1			1	8	bread/cake products
080102	furniture/fittings wholesale		2	2						1						1			1		1	8	furniture/fittings wholesale
010309	other fiber products			1		1	1				2	1									1	7	other fiber products
170101	dispatch service			1	1									1		2		1			1	7	dispatch service
010809	chemical fertilizer products							2	1							2					1	6	chemical fertilizer products
040309	other land cargo transportation service			1					1		2		1								1	6	other land cargo transportation service
040202	bus service								1		1			1							1	4	bus service
010503	fittings				1		1														1	3	fittings
160101	public office						1													1	1	3	public office
010301	over/under wear				1																1	2	over/under wear
040409	other transportation service																			1	1	2	other transportation service
011009	other steel products		5	1	5	3	9	7	2	2	2	5	1	2	4	2	3	1	2	3		59	other steel products
010109	other foods		3		2	1	3	2	1	6	4	2	4	2	2	2	1	3	1	4		43	other foods
	other lumber and wood																						other lumber and wood

010409	products		3	2	3		2	3	1	2	1	3			1	2	1	2	5		31	products
150103	other waste disposal service		1		1	5	3		2	4	2	1		1	1	1	2	2		1	27	other waste disposal service
011402	electrical appliance		1	2	1	2	4	4	1		5	2				1		1	1	1	26	electrical appliance
011302	measuring instruments		2	4	2	1	2		1		2	1	2	2			2	1	2		24	measuring instruments
150109	other cleaning and livestock process service		2		1	1	5	1		3	2	1	2		1	1	1	1	1		23	other cleaning and livestock process service
010401	lumbering		2	1	1	1		1	1		4	1	1		1	1	1	1	2	1	20	lumbering
080204	fuel retail		1	1	2	2		2	2		2		1	1		1	1		1		17	fuel retail
030104	railway construction work			1	1		1	1	1	1				5	1			2	1		15	railway construction work
010902	glass products		1	4	2	1				1			1			1				1	12	glass products
010905	other ceramic products							2			1	2	1	1	1	1	2				11	other ceramic products
010501	wood furniture				2	1	1	1	1					1	1			1	1		10	wood furniture
030108	sand collapse prevention civil engineering work			1			1	1	1		1				1	1		2		1	10	sand collapse prevention civil
030111	port/seaside construction work		1	1			1	1	1			1		1		1	1	1			10	port/seaside construction work
010602	paper processing products		1	2		1		1	1				2						1		9	paper processing products
010899	other chemical products		1	1	1		1	1			1		1			1	1				9	other chemical products
040101	railroad service		1				1		1		1	2			1		1		1		9	railroad service
010701	printing service		2	2			1								2			1			8	printing service
020201	quarrying		2				1	1				2	2								8	quarrying
010101	meat/dairy products				1	1			1					1				2		1	7	meat/dairy products
010209	other textile products			1					1		1		1		2					1	7	other textile products
010502	metal furniture			1	1						1	1		2						1	7	metal furniture
010801	non organic or organic chemical products			1				1			1	2			1		1				7	non organic or organic chemical products
010807	leather products		1	1		1						1			1	1		1			7	leather products

]													
040201	taxi service		1			1			1		1			2								6	taxi service
050101	land cargo handling service			1		1			1	1								1	1			6	land cargo handling service
080201	all kinds of retail			2		1			1				1	1								6	all kinds of retail
010103	agricultural food products			1			1					2	1									5	agricultural food products
010601	pulp/paper		1		1					1		1							1			5	pulp/paper
010904	fire resisting products		1			1		1				1					1					5	fire resisting products
040102	water transportation service		1														1	1	1	1		5	water transportation service
050202	port cargo handling service		1	1		1			1				1									5	port cargo handling service
070209	other fishery								1					1	1	1		1				5	other fishery
080101	all kinds of wholesale					2		1								1				1		5	all kinds of wholesale
080401	warehousing							1						1				1		2		5	warehousing
010709	other printing and			1							1							1		1		4	other printing and
	bookbinding																						bookbinding
010803	pharmaceuticals								1	1				1					1			4	pharmaceuticals
011609	other electric/gas/water		1			1				1						1						4	other electric/gas/water
	service																						service
030101	hydroelectric plant			1	1		1									1						4	hydroelectric plant
	construction work																						construction work
060201	lumbering				1									1				1		1		4	lumbering
080203	furniture/fittings retail		1			1		1		1												4	furniture/fittings retail
090209	other advertisement and			2										1						1		4	other advertisement and
	mediator													ľ						•			mediator
130101	hospital			1	2											1						4	hospital
010105	alcoholic drinks		1															2				3	alcoholic drinks
010106	soft drinks									1		1						1				3	soft drinks
011304	watch products		1				1					1										3	watch products

011703	cleaning				1		1		1												3	cleaning
020202	gravel digging					1					1							1			3	gravel digging
030102	tunnel construction work										1						1			1	3	tunnel construction work
030103	subway construction work					1											1		1		3	subway construction work
050201	general harbor transportation service		1				2														3	general harbor transportation service
070201	fishery		1				1								1						3	fishery
140302	park and amusement park					1					1			1							3	park and amusement park
010204	dyeing		1	1																	2	dyeing
011603	city water service											1			1						2	city water service
060209	other forestry										1							1			2	other forestry
170201	security service												1							1	2	security service
010202	cotton-spinning															1					1	cotton-spinning
010609	other pulp/paper processing products																	1			1	other pulp/paper processing products
010702	bookbinding							1													1	bookbinding
010802	chemical fiber													1							1	chemical fiber
010804	petroleum/coal products															1					1	petroleum/coal products
010808	painting products																1				1	painting products
011601	electric utility service			1																	1	electric utility service
011602	city gas service									1											1	city gas service
020209	other quarrying			1																	1	other quarrying
020309	other mining												1								1	other mining
040303	cargo/ light automobile transportation service				1																1	cargo/ light automobile transportation service
080205	newspaper retail		1																		1	newspaper retail
100109	other movie/play service																			1	1	other movie/play service

120101	auto mobile practical training							1							1	auto mobile practical training
130109	other medical treatment service						1								1	other medical treatment service
130309	other health and hygiene service										1				1	other health and hygiene service
140201	general restaurant											1			1	general restaurant
150105	livestock process service									1					1	livestock process service
170202	information processing service				1										1	information processing service
010201	silk-reeling															silk-reeling
010203	weaving															weaving
010402	plywood															plywood
011704	tobacco products															tobacco products
020101	general coal mining															general coal mining
020109	other coal mining															other coal mining
020301	metal mining															metal mining
020302	petroleum mining															petroleum mining
040103	airline service															airline service
040209	other passenger transport service															other passenger transport service
050209	other harbor transportation service															other harbor transportation service
080301	haircut															haircut
080302	beauty salon															beauty salon
090101	banking/trust business															banking/trust business
090102	stock/commodity trade business															stock/commodity trade business

090103	insurance business																						insurance business
090109	other financial business																						other financial business
090201	traveling service																						traveling service
100101	movie production and																						movie production and
100101	delivery service																						delivery service
100102	movie theatre																						movie theatre
110101	telecommunication service																						telecommunication service
120102	software service																						software service
130102	general clinic																						general clinic
130301	bathhouse																						bathhouse
140209	other restaurants																						other restaurants
150104	cremation service																						cremation service
	total		849	797	755	726	816	749	599	633	689	620	561	603	565	569	549	562	560	521	554	12,277	total

Data source: https://anzeninfo.mhlw.go.jp/user/anzen/tok/anst00.htm (MHLW, Japan)

https://www.jisha.or.jp/english/statistics/202212 03.html