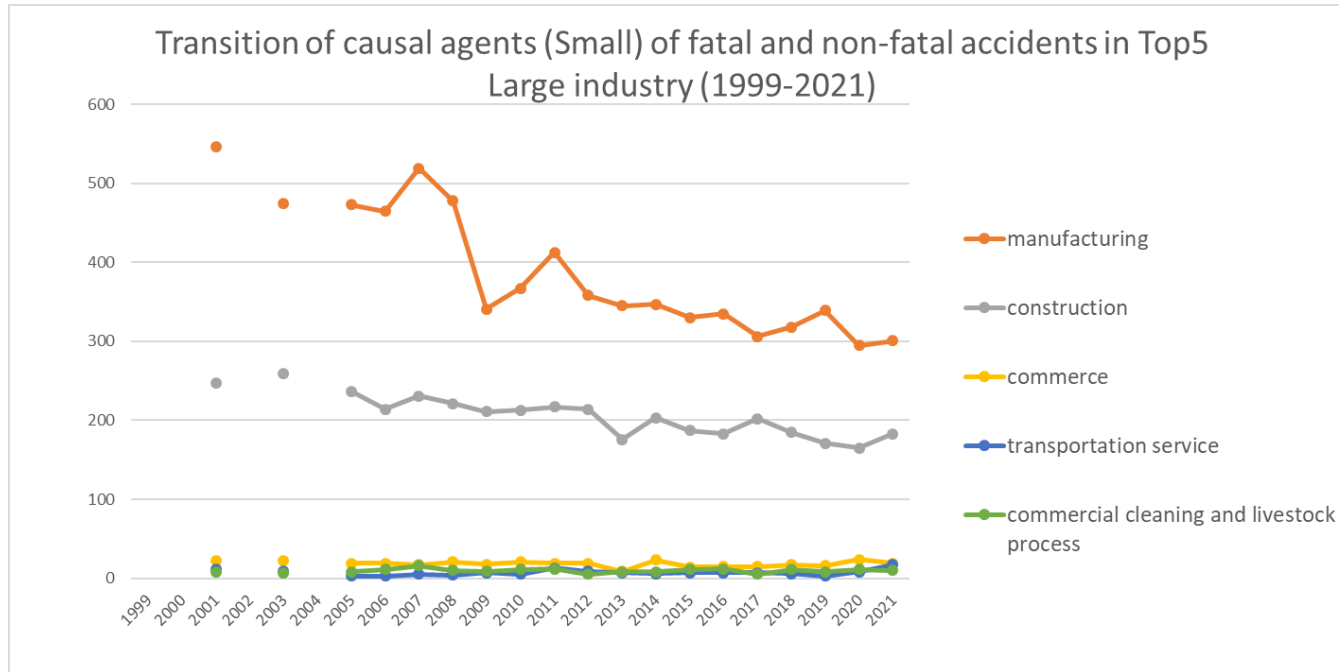
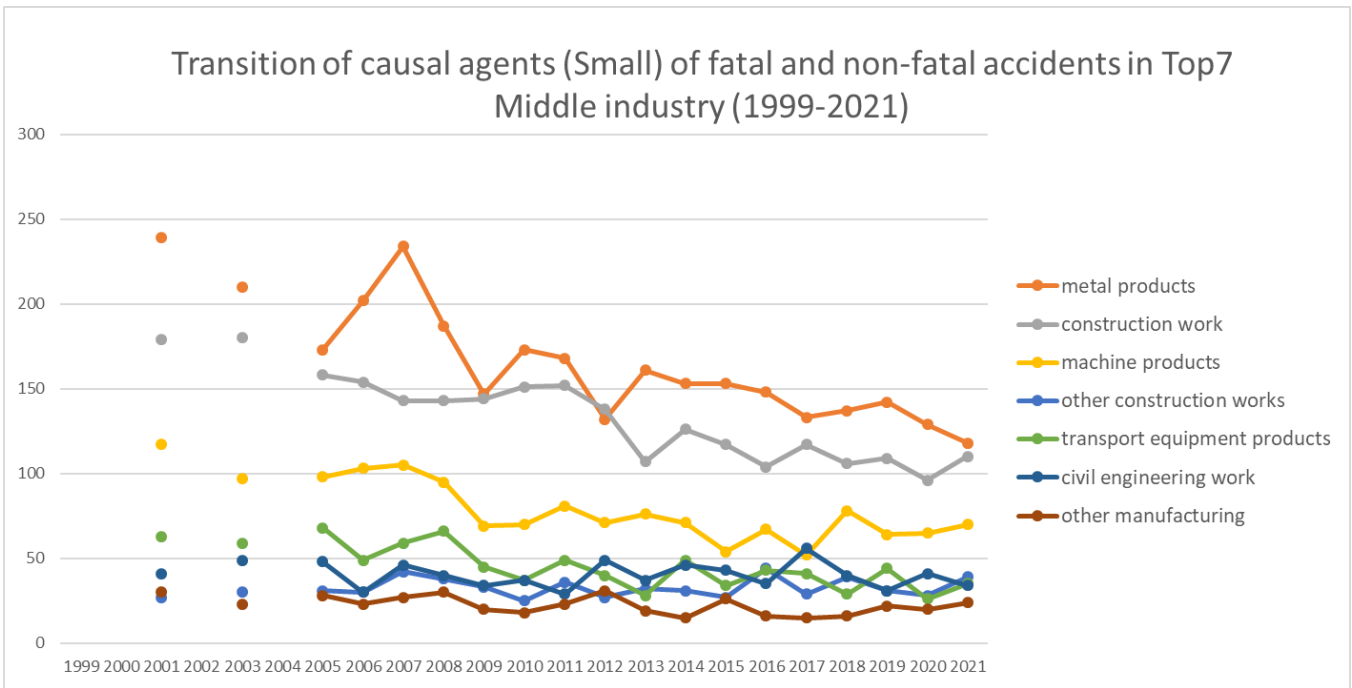


Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine (1999-2021)

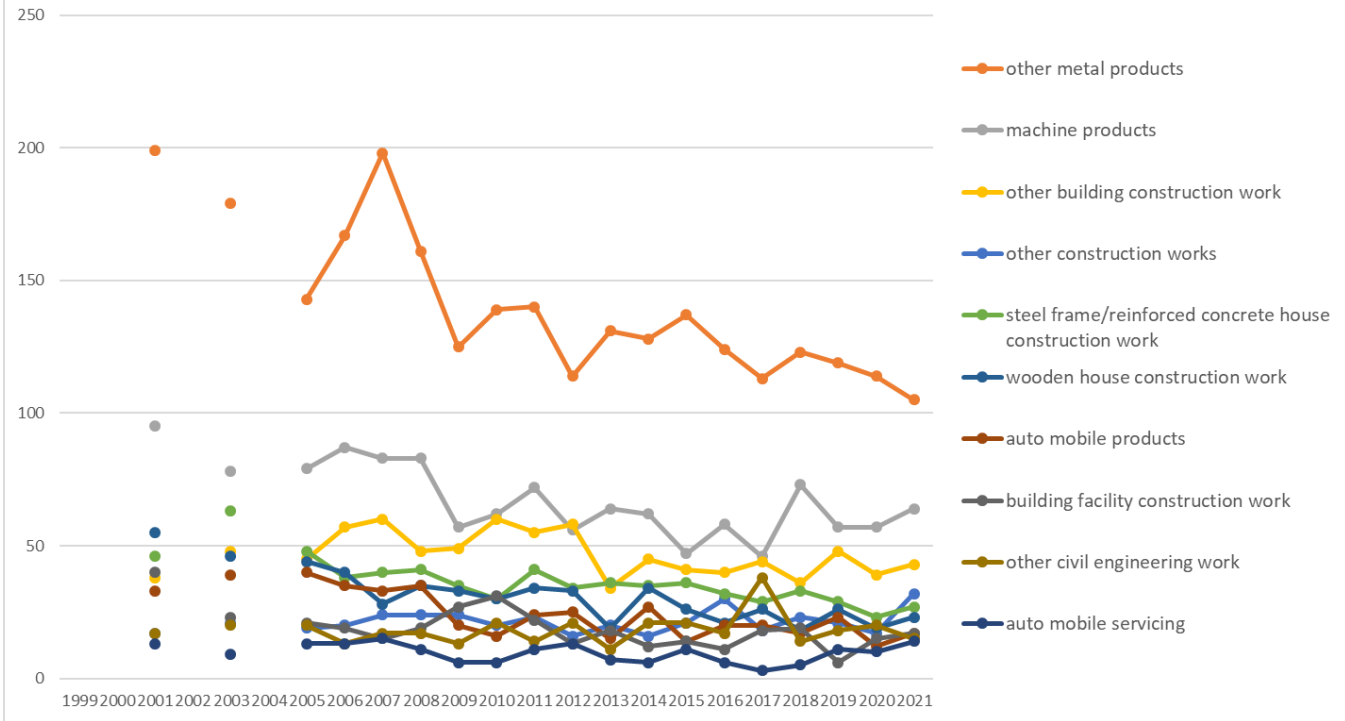


Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 153 grinding machine, buffing machine in Large industry (1999-2021)



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 in Top10 Small 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	6	3	8	17	138	transportation service	
15	commercial cleaning and livestock process			8		7		8	11	16	10	9	11	12	5	8	8	11	12	5	11	8	11	10	181	commercial cleaning and 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 service			2		5		1	3	1	2		4	2	2	1	3	4	2	1	1	8	2	4	48	hotel/restaurant/amusement 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 business/advertisement					2											1						1		4	financial 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 service		
0110	steel making			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		7		8	11	16	10	9	11	12	5	8	8	11	12	5	11	8	11	10	181	commercial cleaning and livestock process	
0114	electrical equipment products			18		16		18	10	15	19	14	7	18	12	7	10	7	10	6	6	10	9	8	220	electrical equipment products	
0109	sand and stone products			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		9		6	3	13	5	2	5	5	6	7	5	3	5	6	7	11	3	7	110	others	
0801	wholesale			5		7		4	6	4	4	3	8	3	7	2	3	4	6	4	7	6	6	7	96	wholesale	
0802	retail			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		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		11	14	12	7	4	4	9	9	6	9	6	8	10	6	7	5	5	146	chemical products	
0101	food products			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		2		3	2	2	4	2	2	2	1	1	1	3	1	4	5		4	4	46	livestock	
0601	agriculture			1		1		1	1	1	1	3	2	4		2	3	3	2	1	5	3	4	4	42	agriculture	
1403	other amusement service			1		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 facility
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 service	
1401	hotel			1		3		1					1		1					1		2	2	1	13	hotel	
0402	road passenger transport service			1					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 service
0602	forestry							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

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 products
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 service
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	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				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 engineering work
030111	port/seaside construction work			1		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							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	5	pulp/paper								
010904	fire resisting products							1		1									1	5	fire resisting products								
040102	water transportation service																		1	1	1	1	5	water transportation service					
050202	port cargo handling service																			1			5	port cargo handling service					
070209	other fishery																			1	1	1	1	5	other fishery				
080101	all kinds of wholesale								2											1			5	all kinds of wholesale					
080401	warehousing																			1			2	5	warehousing				
010709	other printing and bookbinding																						1	1	4	other printing and bookbinding			
010803	pharmaceuticals																						1	1	4	pharmaceuticals			
011609	other electric/gas/water service																						1		4	other electric/gas/water service			
030101	hydroelectric plant construction work																						1	1	1	4	hydroelectric plant construction work		
060201	lumbering																						1		1	1	4	lumbering	
080203	furniture/fittings retail																						1		1	1	4	furniture/fittings retail	
090209	other advertisement and mediator																							2		1	4	other advertisement and mediator	
130101	hospital																						1			1	4	hospital	
010105	alcoholic drinks																							1			2	3	alcoholic drinks
010106	soft drinks																								1		1	3	soft drinks
011304	watch products																							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		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		3	fishery
140302	park and amusement park								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	other pulp/paper processing products
010702	bookbinding											1										1	bookbinding
010802	chemical fiber																				1	1	chemical fiber
010804	petroleum/coal products																					1	petroleum/coal products
010808	painting products																					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	other quarrying
020309	other mining																					1	other mining
040303	cargo/ light automobile transportation service																					1	cargo/ light automobile transportation service
080205	newspaper retail																					1	newspaper retail
100109	other movie/play service																					1	other movie/play service

090103	insurance business																								insurance business	
090109	other financial business																								other financial business	
090201	traveling service																								traveling service	
100101	movie production and delivery service																								movie production and 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