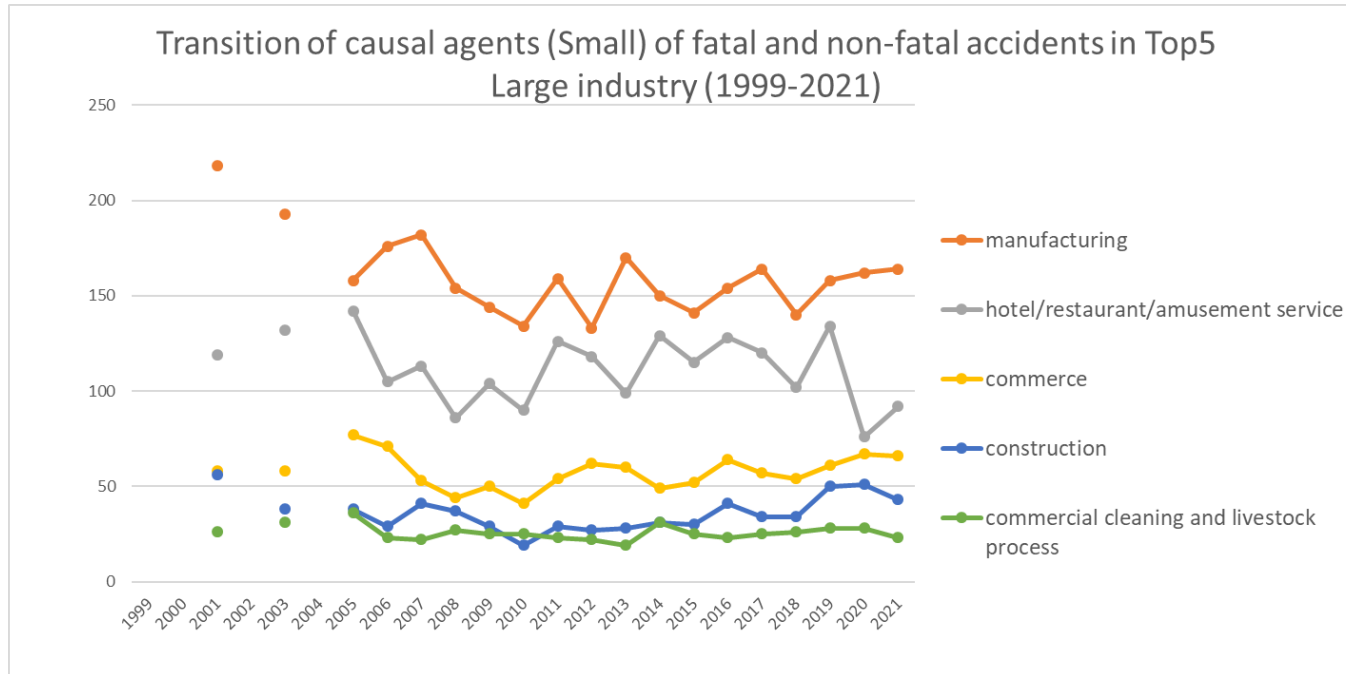
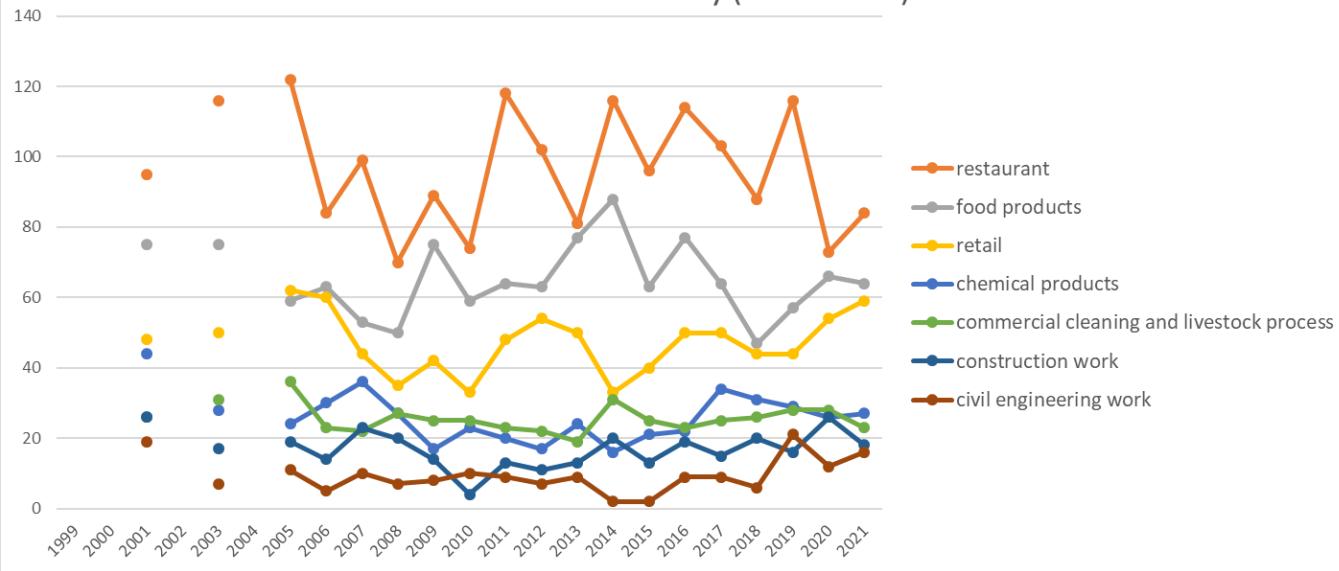


Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 519 other hazards, harmful substances (1999-2021)



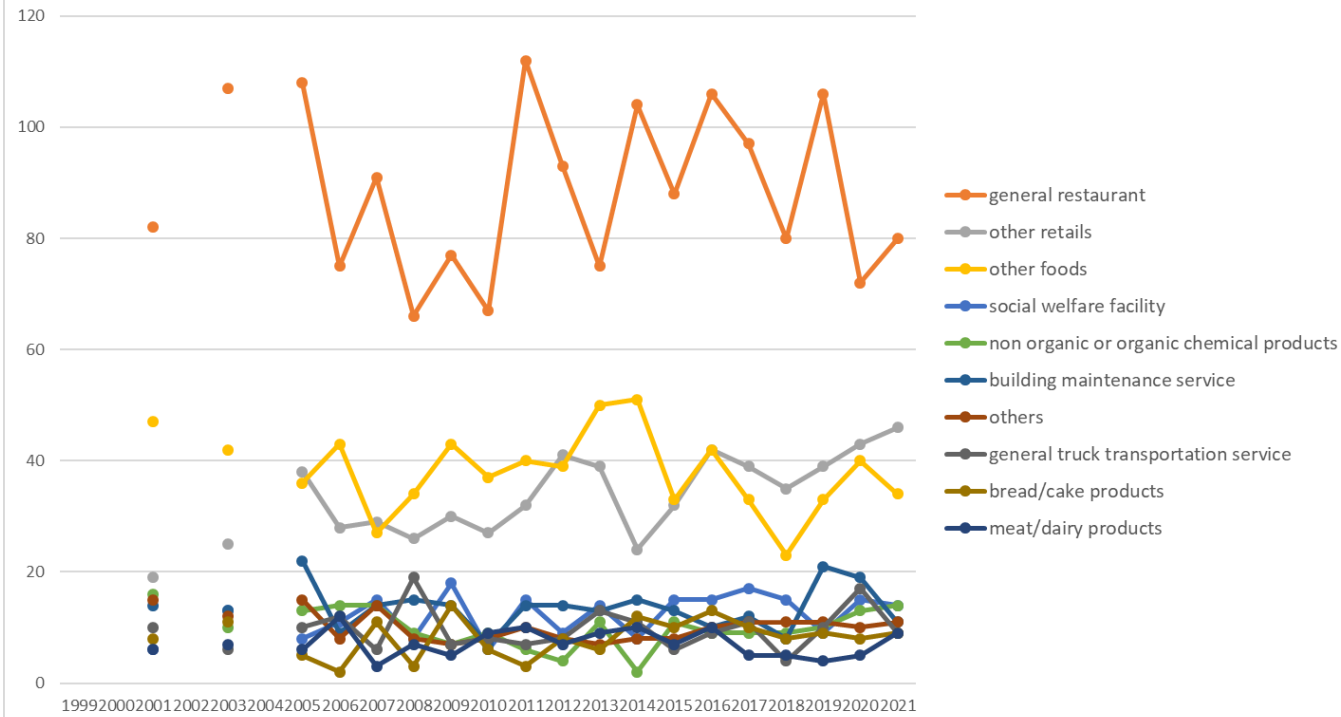
Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 519 other hazards, harmful substances in Large industry (1999-2021)

Transition of causal agents (Small) of fatal and non-fatal accidents in Top7 Middle industry (1999-2021)



Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 519 other hazards, harmful substances 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. 519 other hazards, harmful substances in Small Industry (1999-2021)

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 519 other hazards, harmful substances 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			218		193		158	176	182	154	144	134	159	133	170	150	141	154	164	140	158	162	164	3,054	manufacturing
14	hotel/restaurant/amusement service			119		132		142	105	113	86	104	90	126	118	99	129	115	128	120	102	134	76	92	2,130	hotel/restaurant/amusement service
08	commerce			58		58		77	71	53	44	50	41	54	62	60	49	52	64	57	54	61	67	66	1,098	commerce
03	construction			56		38		38	29	41	37	29	19	29	27	28	31	30	41	34	34	50	51	43	685	construction
15	commercial cleaning and livestock process			26		31		36	23	22	27	25	25	23	22	19	31	25	23	25	26	28	28	23	488	commercial cleaning and livestock process
13	health and hygiene service			13		25		17	21	19	23	27	12	24	15	23	16	23	22	28	23	16	20	17	384	health and hygiene service

04	transportation service			17	11	19	24	16	24	13	9	12	11	16	13	10	11	20	6	12	20	12	276	transportation service
17	others			16	13	17	11	14	12	8	9	10	9	8	9	10	12	11	12	12	13	11	217	others
07	livestock/fishery			1	4	4	1	1	3	8	8	4	8	3	6		7	6	3	2	13	7	89	livestock/fishery
06	agriculture			1	4	2	3	1	1		2	2	3	1		1		3	3	3	2	6	38	agriculture
05	cargo handling service			1		3		1	2			1	2	1	4	2	1		1	1	1	5	26	cargo handling service
12	education/research service			4	9	9	6	4	4	1		7	5	3	4	5	2	4	3	2	3	3	78	education/research service
16	public office			1	1							1					1	1	1	1		2	9	public office
09	financial business/advertisement			2			1		1	2	1			1	2			1	1			1	13	financial business/advertisement
02	mining			1					1						1		3	1	2	1			10	mining
11	telecommunication service					2	1										1						4	telecommunication service
10	movie/play service				1								1			1							3	movie/play service
	total			534	520	524	472	467	419	411	350	452	416	432	445	415	470	475	411	481	456	452	8,602	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 519 other hazards, harmful substances 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
1402	restaurant			95		116		122	84	99	70	89	74	118	102	81	116	96	114	103	88	116	73	84	1,840	restaurant
0101	food products			75		75		59	63	53	50	75	59	64	63	77	88	63	77	64	47	57	66	64	1,239	food products
0802	retail			48		50		62	60	44	35	42	33	48	54	50	33	40	50	50	44	44	54	59	900	retail
0108	chemical products			44		28		24	30	36	27	17	23	20	17	24	16	21	22	34	31	29	26	27	496	chemical products
1501	commercial cleaning and livestock process			26		31		36	23	22	27	25	25	23	22	19	31	25	23	25	26	28	28	23	488	commercial cleaning and livestock process
0302	construction work			26		17		19	14	23	20	14	4	13	11	13	20	13	19	15	20	16	26	18	321	construction work
0301	civil engineering work			19		7		11	5	10	7	8	10	9	7	9	2	2	9	9	6	21	12	16	179	civil engineering work
0112	metal products			28		25		16	17	21	19	7	16	14	16	23	14	16	15	16	11	22	15	15	326	metal products
1302	social welfare facility			6		13		8	11	15	8	18	6	15	9	14	8	15	15	17	15	9	15	14	231	social welfare facility

0113	machine products			7		5		4	12	8	8	1	5	4	5	8	8	7	4	3	7	5	5	12	118	machine products
1702	others			16		12		17	10	14	10	7	9	10	8	7	8	9	11	11	11	12	11	11	204	others
0403	road cargo transportation service			13		7		14	13	7	21	8	8	7	8	13	12	6	10	13	5	10	17	10	202	road cargo transportation service
0114	electrical equipment products			9		3		9	10	9	8	7	5	10	5	7	2	4	5	6	6	5	5	10	125	electrical equipment products
0303	other construction works			11		14		8	10	8	10	7	5	7	9	6	9	15	13	10	8	13	13	9	185	other construction works
0117	other manufacturing			11		9		9	9	13	13	11	4	16	6	8	3	5	7	13	5	10	10	7	169	other manufacturing
0115	transport equipment products			3		8		9	12	13	3	5	5	6	2	6	6	7	5	7	3	6	8	7	121	transport equipment products
1401	hotel			17		12		12	13	10	10	10	12	7	7	11	7	9	10	10	5	11	2	6	181	hotel
0109	sand and stone products			9		7		2	5	5	7	3	2	5	1	2	4	3	3	2	8	6	6	6	86	sand and stone products
0701	livestock			1		2		4	1	1	3	7	8	4	8	3	5		6	5	3	2	12	6	81	livestock
0501	land cargo handling service			1				1			1			1	2	1	3	1			1	1	1	5	19	land cargo handling service
0110	steel making			9		10		4	6	5	4	2	2	3	6	5	3	4	4	7	14	4	2	4	98	steel making
0601	agriculture			1		2			3		1		1	1	2	1		1		3	3	2	2	4	27	agriculture
1301	medical treatment service			7		11		8	8	2	12	8	6	9	6	7	7	8	7	10	7	7	5	3	138	medical treatment service
0801	wholesale			5		6		9	7	2	3	3	6	1	6	6	10	6	9	1	5	4	4	3	96	wholesale
1201	education/research service			4		9		9	6	4	4	1		7	5	3	4	5	2	4	3	2	3	3	78	education/research service
0102	textile products			5		2		5	1	3	4	4	2	3	2	4	2	3	3	1	2	2	4	3	55	textile products
0803	haircut/beauty salon			2					2	5	2	1	1	2	1	1		5	4	1	2	5	2	3	39	haircut/beauty salon
1403	other amusement service			7		4		8	8	4	6	5	4	1	9	7	6	10	4	7	9	7	1	2	109	other amusement

																											service
0111	nonferrous metal making			4		6		4	7	6	4	3	3	7	7	2	1	4	5	4	5	4	4	2	82	nonferrous metal making	
0106	pulp/paper processing products			5		6		5	1	3	4	3	3	3			1	1	2	3		7	2	2	51	pulp/paper processing products	
0103	fiber products					1		1		1	1		2	1		2		1						2	12	fiber products	
0116	electric/gas/water service					1				1	2	1	1	1					1				2	2	12	electric/gas/water service	
0602	forestry					2		2		1			1	1	1							1		2	11	forestry	
1601	public office			1		1								1					1	1	1	1		2	9	public office	
0804	other commerce			3		2		6	2	2	4	4	1	3	1	3	6	1	1	5	3	8	7	1	63	other commerce	
0402	road passenger transport service			4		4		2	9	5	1	3	1	2	2	2		1		2		2	3	1	44	road passenger transport service	
0401	railroad/water transportation/airline service							2	2	4	2	2		3	1	1	1	2	1	5	1			1	28	railroad/water transportation/airline service	
0107	printing/bookbinding			4		2		1				1	1	1	1	1		1		1			6	1	21	printing/bookbinding	
0702	fishery					2							1				1		1	1			1	1	8	fishery	
0902	advertisement and mediator										1	2						1					1		6	advertisement and mediator	
0104	wood products			2		1		1	3	4		3		1	1		1	1	1	2	1	1	1		24	wood products	
0105	furniture			3		4		5		1		1	1		1	1		1							19	furniture	
1303	other health and hygiene service					1		1	2	2	3	1				2	1		1	1					15	other health and hygiene service	
1701	dispatch service					1			1		2	1			1	1	1	1	1		1		2		13	dispatch service	
0202	quarrying			1													1		3	1	1	1			8	quarrying	
0502	harbor transportation service							2		1	1						1	1	1						7	harbor transportation	

030201	steel frame/reinforced concrete house construction work			7		7		4	3	7	6	2	2	2	4	2	9	3	5	3	6	3	7	9	91	steel frame/reinforced concrete house construction work
030199	other civil engineering work			3		2		3	3	2	4	1	5	3	2	3		1	5	3	2	2	4	9	57	other civil engineering work
011301	machine products			6		4		2	10	7	6	1	4	3	5	5	8	4	3	2	6	3	4	8	91	machine products
080201	all kinds of retail			18		20		20	27	12	7	10	6	14	8	7	3	6	7	9	5	3	7	7	196	all kinds of retail
030309	other construction works			3		10		7	7	6	7	3	2	2	4	6	5	7	9	8	5	6	9	7	113	other construction works
140101	hotel			17		12		12	13	10	10	10	12	7	7	11	7	9	10	10	5	11	2	6	181	hotel
070101	livestock			1		2		4	1	1	3	7	8	4	8	3	5		6	5	3	2	12	6	81	livestock
150102	industrial waste management service			3		6		5	10	3	9	8	7	4	1	3	11	4	5	7	9	3	3	5	106	industrial waste management service
011502	auto mobile products			1		5		6	5	10	1		2	5	1	3	5	5	3	2	2	4	4	5	69	auto mobile products
011409	other electrical equipment			2		3		1	3	6	4	1	3	7	1	1			2	1	2	1	3	5	46	other electrical equipment
050101	land cargo handling service			1				1			1			1	2	1	3	1			1	1	1	5	19	land cargo handling service
011209	other metal products			16		11		10	7	11	11	1	8	7	9	13	8	12	10	8	5	15	7	4	173	other metal products
140209	other restaurants			13		9		14	9	8	4	12	7	6	9	6	12	8	8	6	8	10	1	4	154	other restaurants
030209	other building construction work			11		2		6	4	7	9	6	2	6	4	5	10	8	5	6	10	9	8	4	122	other building construction work
010102	fishery products			5		9		3	2	5	4	5	3	8	6	6	9	9	5	5	5	4	6	4	103	fishery products
010899	other chemical products			8		6		3	6	9	4	4	3	5	4	4	4	3	5	10	7	5	7	4	101	other chemical products
010103	agricultural food products			4		5		6	2	3	1	5	1	2	2	3	3	3	4	7	3	3	3	4	64	agricultural food products
010803	pharmaceuticals			4		4		2	2	2	4	2	3	2	2	2	2	2	2	3	3	7		4	52	pharmaceuticals
150103	other waste disposal service			4		5		2		2	2	1	6	1	4	1	1	3	1	2	3	1	4	4	47	other waste disposal service
080204	fuel retail			11		3		2	3	1	1			1	4		2			1	2	1	2	4	38	fuel retail
010901	cement products			1		2		1	2	1	5		2	4	1		1		1		4	3	3	4	35	cement products
011702	machine repair			3		2		1	4	2	2	1	1	5		3		2		1			1	4	32	machine repair
060101	agriculture			1		2			3		1		1	1	2	1		1		3	3	2	2	4	27	agriculture

011305	other precision machine products			1	1	2	2		1		1			3			1				1	4	17	other precision machine products
080109	other wholesale			5	5	8	4	2	3	3	6	1	5	6	8	5	7	1	5	4	4	3	85	other wholesale
120109	other education/research service			4	9	8	6	4	4	1		7	5	3	4	4	2	4	3	2	3	3	76	other education/research service
150109	other cleaning and livestock process service			4	7	6	4	3	1	1	5	4	3	2	4	4	6	4	5	2	2	3	70	other cleaning and livestock process service
030203	building facility construction work			3	6	2	4	3	2	3		1		5	1		8	4	3	2	7	3	57	building facility construction work
011703	cleaning			2	2	2	1	2	4	3		3	2	1		2	3	5	2	5	1	3	43	cleaning
080302	beauty salon			2			1	3	2	1		2	1	1		4	4	1	2	5	1	3	33	beauty salon
130101	hospital			5	10	5	8	2	10	4	5	8	4	5	5	5	4	8	5	4	4	2	103	hospital
140309	other amusement service			7	3	6	5	1	5	3	4	1	5	5	5	4	1	4	5	6	1	2	73	other amusement service
011403	electronics equipment and telecommunications apparatus			3		7	5	2	4	4	2	3	3	5	1	3	2	2	4	3	1	2	56	electronics equipment and telecommunications apparatus
030202	wooden house construction work			5	2	7	3	6	3	3		4	3	1		2	1	2	1	2	4	2	51	wooden house construction work
010805	plastics products			5		2	2	3	4	2	2	4	2	2	1		1	8	6	1	2	2	49	plastics products
011001	steel/iron/rolling products			4	3	1	1		1	1	1		1	2		1	1	1	8	2	1	2	31	steel/iron/rolling products
011101	nonferrous metals/rolling products				1	1	2	3	1	1	1	1	2	1		2	3	1	3	3	2	2	30	nonferrous metals/rolling products
080202	auto mobile retail				2	2	2	2	1	2		1	1	2	3	2	1	1	2	1	2	2	29	auto mobile retail
010105	alcoholic drinks			4		2	1	2		2	2			1	2		1	2	1	4	1	2	27	alcoholic drinks
010106	soft drinks			1	1	1	1	2	1	1	1	1	1	2	1	1	2	2	2		3	2	26	soft drinks
010601	pulp/paper			2	5	3	1	2	2	2	1	1			1	1		1		1		2	25	pulp/paper
030102	tunnel construction work			3		1	1	2	1	1	2									2	2	2	17	tunnel construction work

011402	electrical appliance			3				1	2			2			1	1			1		1	1	2	15	electrical appliance		
010309	other fiber products					1				1	1		2	1			1						2	9	other fiber products		
160101	public office			1		1								1			1	1	1	1			2	9	public office		
060209	other forestry					1							1	1							1		2	6	other forestry		
030302	machinery/apparatus setting work			6		4		1	3		2	4	3	2	4		3	6	4	1	3	6	4	1	57	machinery/apparatus setting work	
011002	casting products			4		6		2	4	4	2	1	1	3	2	3	2	3	2	6	5	1	1	1	53	casting products	
080409	other commerce			3		2		6	2	1	4	3		3	1	3	5	1	1	3	3	3	6	1	51	other commerce	
010204	dyeing			2				3	1	2	4	4	2	3	2	4	1	1	2	1	1	2	4	1	40	dyeing	
030106	road construction work			6		3		1		2	1	3		2	3	2	1	1	2	3	2	4	1	1	38	road construction work	
011501	ship building			1		2		1	5	2		3	2	1		2	1	2		5	1	1	3	1	33	ship building	
040202	bus service			2		2		2	2	4	1	3		2	2	2		1		2		1	2	1	29	bus service	
030105	bridge construction work			1				1		3		1	1						1	2	1	11	2	1	25	bridge construction work	
010806	rubber products			3		3			1	2	3					2	2	1	1	1	1	1	1	2	1	24	rubber products
010909	other sand and stone products			1		2		1	1	3	1	1		1		2		2		2	4	1	1	1	24	other sand and stone products	
010808	painting products					1		1	2	2	1	2	1	1	2	1		1	2	1		2	1	1	22	painting products	
010809	chemical fertilizer products			2						2				3	1		1	2	1	2		2		1	1	18	chemical fertilizer products
030110	water supply/sewage construction work			3				3			1	1		1	2	2			1			2	1	1	18	water supply/sewage construction work	
130109	other medical treatment service			1				1					2		1	1		2		3	2	1	2		1	17	other medical treatment service
030301	electricity/telecommunication work			2						2	1				3	1		1	2		1		1		1	15	electricity/telecommunication work
011009	other steel products			1		1		1	1	1	1				3		1		1		1	1		1	14	other steel products	
011203	metal press products			1		2								1	1			1	1	2	1	2		1	13	metal press products	
011401	heavy electrical equipment			1						1							1	1		3				1	8	heavy electrical equipment	

040302	specific truck transportation service					1									1										2	1									1	7	specific truck transportation service				
010905	other ceramic products					3				1																1										1	6	other ceramic products			
011202	screw products					1		1	1	1																										1	5	screw products			
011602	city gas service									1		1		1													1									1	5	city gas service			
011603	city water service					1																													1	1	5	city water service			
030109	land consolidation civil engineering work					1		1																												1	5	land consolidation civil engineering work			
011503	railway vehicle products														1													1	1							1	4	railway vehicle products			
030107	river civil engineering work																											1	1							1	4	river civil engineering work			
070209	other fishery					1																															1	4	other fishery		
090209	other advertisement and mediator																																			1	4	other advertisement and mediator			
010709	other printing and bookbinding																																				1	3	other printing and bookbinding		
040102	water transportation service																																					1	3	water transportation service	
010201	silk-reeling																																					1	2	silk-reeling	
010202	cotton-spinning																																					1	1	cotton-spinning	
011701	auto mobile servicing			5		1		1	3	6	2	1	2	5	2	4	2	1	2	3	2	1	4																47	auto mobile servicing	
011709	other manufacturing			1		4		5	1	3	5	6	1	3	2		1		2	4	1	4	4																47	other manufacturing	
010804	petroleum/coal products			6		2		2	2	2	1		1		3		1	1		1	3	3																	28	petroleum/coal products	
011109	other nonferrous metal products			1		3		3	2		2	2	2	4	4	1	1	2			1																		28	other nonferrous metal products	
140301	golf course																																						26	golf course	
011102	nonferrous metals casting products			3		2																																		24	nonferrous metals casting products
010602	paper processing products			2		1		2		1	1	1	1	2																										22	paper processing products

010701	printing service			4	2	1				1	1	1		1				6		18	printing service		
130102	general clinic			1	1	2			2	2	1		1	2		3		1	1	1	18	general clinic	
011509	other transport equipment products			1	1	2	2	1	2	2	1		1			2					15	other transport equipment products	
040201	taxi service			1	2			7	1			1							1	1	14	taxi service	
010902	glass products			5						1					3	1	1			1	1	13	glass products
040103	airline service					1	1	4	2			1						3	1			13	airline service
170101	dispatch service				1			1		2	1			1	1	1	1		1		2	13	dispatch service
040101	railroad service					1	1			2		2			1	2	1	2				12	railroad service
040309	other land cargo transportation service			3			4	1	1	1	1						1					12	other land cargo transportation service
080401	warehousing								1		1	1			1			2		5	1	12	warehousing
010409	other lumber and wood products				1		1		2		1				1	1	1	2		1		11	other lumber and wood products
130301	bathroom				1		1	2	2	2				1	1			1				11	bathroom
010209	other textile products			2	2		1		1						1	2			1			10	other textile products
010402	plywood			2				2	2		1		1	1							1	10	plywood
080101	all kinds of wholesale				1		1	3							2	1	2					10	all kinds of wholesale
140302	park and amusement park				1			2	3	1				1				1		1		10	park and amusement park
170201	security service			1				2		2		1				1	1			1	1	10	security service
010501	wood furniture			2	2		4							1								9	wood furniture
010802	chemical fiber				1		1			1		1	1		2	1		1				9	chemical fiber
010509	other furniture			1			1		1		1	1			1		1					7	other furniture
150105	livestock process service			1			1				1				1	1		1	1			7	livestock process service
020201	quarrying			1												3	1	1				6	quarrying
080301	haircut							1	2			1				1					1	6	haircut
	western tableware/cutting																						western tableware/cutting

011201	tool products								1		2	1									1			5	tool products		
011302	measuring instruments									1	1						1		1					5	measuring instruments		
011303	optical instruments													1					2			1	1		5	optical instruments	
030111	port/seaside construction work			2						1							1						1		5	port/seaside construction work	
060201	lumbering					1		2		1						1									5	lumbering	
010609	other pulp/paper processing products			1							1		1										1		4	other pulp/paper processing products	
010903	pottery products			1						1													1	1		4	pottery products
010904	fire resisting products			1						1		1	1													4	fire resisting products
030104	railway construction work							1					1	1		1										4	railway construction work
030108	sand collapse prevention civil engineering work			1								1				1										4	sand collapse prevention civil engineering work
050202	port cargo handling service							1			1						1	1								4	port cargo handling service
070201	fishery					1						1						1						1		4	fishery
090101	banking/trust business								1				1						1							4	banking/trust business
110101	telecommunication service						2	1										1								4	telecommunication service
130309	other health and hygiene service										1	1				1							1			4	other health and hygiene service
010301	over/under wear						1									2										3	over/under wear
010401	lumbering								1			1											1			3	lumbering
010807	leather products					1			1							1										3	leather products
090103	insurance business			2												1										3	insurance business
010203	weaving			1				1																		2	weaving
010502	metal furniture					1									1											2	metal furniture
011609	other electric/gas/water												1											1		2	other electric/gas/water

	service																						service
030101	hydroelectric plant construction work				1																1	2	hydroelectric plant construction work
040409	other transportation service					1																2	other transportation service
050209	other harbor transportation service							1														2	other harbor transportation service
080203	furniture/fittings retail													2								2	furniture/fittings retail
090201	traveling service									1												2	traveling service
170202	information processing service																					2	information processing service
010503	fittings				1																	1	fittings
020202	gravel digging																				1	1	gravel digging
020209	other quarrying																					1	other quarrying
020302	petroleum mining									1												1	petroleum mining
020309	other mining																				1	1	other mining
040209	other passenger transport service			1																		1	other passenger transport service
050201	general harbor transportation service																					1	general harbor transportation service
080102	furniture/fittings wholesale																					1	furniture/fittings wholesale
080205	newspaper retail																					1	newspaper retail
100101	movie production and delivery service																					1	movie production and delivery service
100102	movie theatre																					1	movie theatre
100109	other movie/play service				1																	1	other movie/play service
120101	auto mobile practical training																					1	auto mobile practical training
120102	software service																					1	software service

