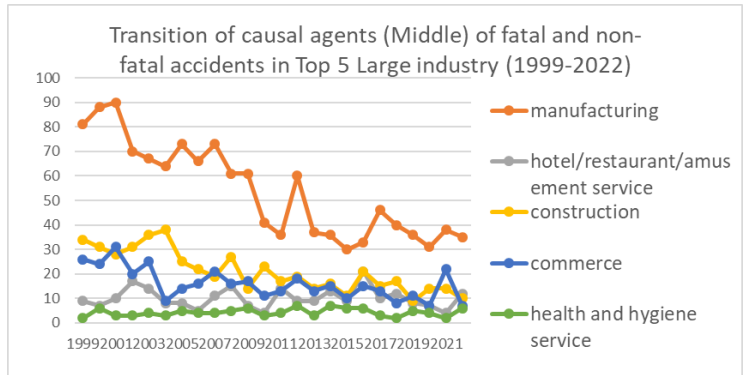
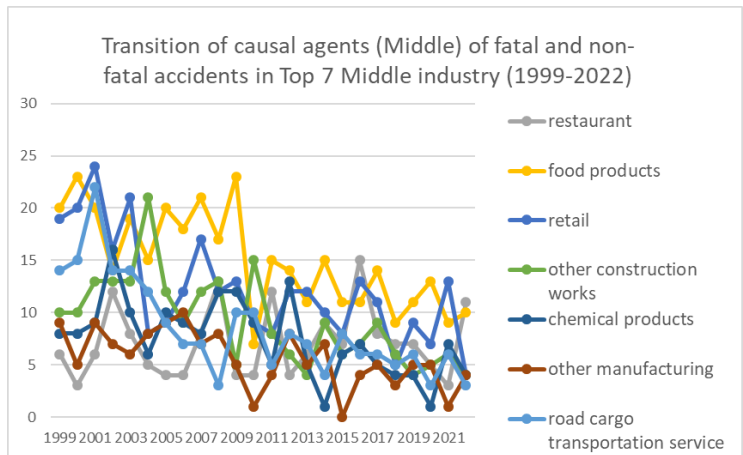


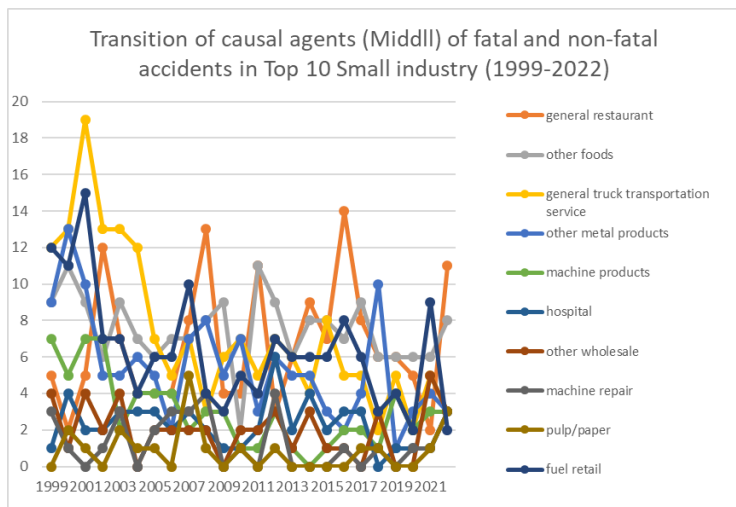
Transition of causal agents (Middle) of fatal and non-fatal accidents as code no. 31 pressure vessel (1999-2022)



Transition of causal agents (Middle) of fatal and non-fatal accidents as code no. 31 pressure vessel in Large industry (1999-2022)



Transition of causal agents (Middle) of fatal and non-fatal accidents as code no. 31 pressure vessel in Middle Industry (1999-2022)



Transition of causal agents (Middle) of fatal and non-fatal accidents as code no. 31 pressure vessel in Middle Industry (1999-2022)

Transition of causal agents (Middle) of fatal and non-fatal accidents as code no. 31 pressure vessel in Large industry (1999-2022)

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	2022	total	Large industry
01	manufacturing	81	88	90	70	67	64	73	66	73	61	61	41	36	60	37	36	30	33	46	40	36	31	38	35	1,293	manufacturing
14	hotel/restaurant/amusement service	9	7	10	17	14	8	8	5	11	15	7	4	14	9	9	13	9	21	10	12	8	7	4	12	243	hotel/restaurant/amusement service
03	construction	34	31	28	31	36	38	25	22	19	27	14	23	17	19	14	16	11	21	15	17	9	14	14	10	505	construction
08	commerce	26	24	31	20	25	9	14	16	21	16	17	11	13	18	13	15	10	15	13	8	11	7	22	7	382	commerce
13	health and hygiene service	2	6	3	3	4	3	5	4	4	5	6	3	4	7	3	7	6	6	3	2	5	4	2	6	103	health and hygiene service
04	transportation service	14	15	22	16	14	13	10	7	7	4	10	10	5	9	7	6	8	6	6	5	7	4	6	4	215	transportation service
15	commercial cleaning and livestock process	10	7	11	4	5	6	5	3	7	6	7	5	8	6	12	3	3	3	2	1	2	2		1	119	commercial cleaning and livestock process
17	others	3	3	10	5	9	4	7	4	3	3	3	2	6	4	6	1	3	3	3	6	3	4	1	1	97	others
10	movie/play service											1				1	1						1	1	5	movie/play service	
12	education/research service	3	2	1		1	3	1		1		2			2					1		1		1		19	education/research service
05	cargo handling service	2	1	4		1			1	1		2					1				1	1		1		16	cargo handling service
07	livestock/fishery	3			1				1		1			1		2	2			2						13	livestock/fishery
06	agriculture						1	1								1	1	1	1			1	1			8	agriculture
02	mining							1					1					1			1					4	mining
09	financial business/advertisement		1									1					1									3	financial business/advertisement
16	public office	1																								1	public office
11	telecommunication service																										telecommunication service
	total	188	185	210	167	176	149	150	129	147	138	130	101	104	134	104	103	83	109	101	93	84	74	90	77	3,026	total

Transition of causal agents (Middle) of fatal and non-fatal accidents as code no. 31 pressure vessel in Middle industry (1999-2022)

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	2022	total	Middle industry
1402	restaurant	6	3	6	12	8	5	4	4	8	13	4	4	12	4	6	9	7	15	8	7	7	5	3	11	171	restaurant

0101	food products	20	23	20	14	19	15	20	18	21	17	23	7	15	14	11	15	11	11	14	9	11	13	9	10	360	food products
0802	retail	19	20	24	16	21	8	9	12	17	12	13	9	8	12	12	10	8	13	11	5	9	7	13	4	292	retail
0303	other construction works	10	10	13	13	13	21	12	9	12	13	5	15	8	6	4	9	6	7	9	6	4	5	6	4	220	other construction works
0108	chemical products	8	8	9	16	10	6	10	9	8	12	12	9	5	13	5	1	6	7	5	4	4	1	7	4	179	chemical products
0117	other manufacturing	9	5	9	7	6	8	9	10	7	8	5	1	4	8	5	7		4	5	3	5	5	1	4	135	other manufacturing
0403	road cargo transportation service	14	15	22	14	14	12	9	7	7	3	10	10	5	8	7	4	8	6	6	5	6	3	6	3	204	road cargo transportation service
0302	construction work	14	15	12	11	13	14	12	8	4	12	6	6	9	10	9	3	3	11	4	7	3	6	6	3	201	construction work
0112	metal products	9	14	11	5	6	8	6	2	7	9	5	7	3	6	6	6	3	3	4	10	1	3	4	3	141	metal products
0113	machine products	8	5	8	8	5	5	7	5	3	3	4	2	1	3	1		1	2	3	3	6	2	4	3	92	machine products
0301	civil engineering work	10	6	3	7	10	3	1	5	3	2	3	2		3	1	4	2	3	2	4	2	3	2	3	84	civil engineering work
1301	medical treatment service	1	4	2	2	3	3	5	2	3	2	1	3	4	7	2	5	2	4	3	1	4	3	1	3	70	medical treatment service
0801	wholesale	5	1	5	3	4		3	2	2	3	1	2	2	4	1	3	1	1	1	3			5	3	55	wholesale
0106	pulp/paper processing products		2	2		3	1	1		5	1		1	1	1				1	1	1			2	3	26	pulp/paper processing products
0115	transport equipment products	4	6	5	6	4	4	5	1	3	3	2	1	1	2	2	1			5	1	4		2	2	64	transport equipment products
0109	sand and stone products		4	4	2	2	3	3	3	5		1			1		1	2			1	1	1		2	36	sand and stone products
1302	social welfare facility	1	2	1	1	1			2	1	2	1				1	1	2	1			1			2	20	social welfare facility
1501	commercial cleaning and livestock process	10	7	11	4	5	6	5	3	7	6	7	5	8	6	12	3	3	3	2	1	2	2		1	119	commercial cleaning and livestock process
0102	textile products	13	12	14	6	7	4	5	3	2	4	3	6	1	4		1	4	2	6	1	2	5	5	1	111	textile products
1702	others	1	3	10	5	9	4	7	4	3	3	2	2	6	4	6	1	3	3	3	6	3	4	1	1	94	others
1403	other amusement service	2	2	1	2	3	1	2	1		2	2		1	5	3		1	1	1	3		2		1	36	other amusement service
0104	wood products	4	1	3	1		3		1	3	1	1	2	1		2	2	2	1	1	1	1		1	1	33	wood products
0103	fiber products	3	1	1			2		4	3		2		1							1	1			1	20	fiber products
1303	other health and hygiene service										1	4					1	2	1		1		1	1	1	13	other health and hygiene service
0105	furniture				1	1		1	2	1							1					1			1	9	furniture
0402	road passenger transport service				2			1			1				1							1			1	7	road passenger transport service
1001	movie/play service												1				1	1						1	1	5	movie/play service
1401	hotel	1	2	3	3	3	2	2		3		1		1			4	1	5	1	2	1		1		36	hotel
0116	electric/gas/water service	1		1	2	3	1	2	4	2		2	2		1	1	1		1	1	1		1	3		30	electric/gas/water service
0804	other commerce	2	3	1	1		1	2	2			3		3	2		2	1	1	1		2		3		30	other commerce
0114	electrical equipment products		4		2	1	2		3		1	1	3	1	4	2		1								25	electrical equipment products
1201	education/research service	3	2	1		1	3	1		1		2			2						1		1		1	19	education/research service

0110	steel making		2	1			2	2	1	1	1			2	1	1			1	3					18	steel making	
0501	land cargo handling service	2	1	4		1			1	1		2					1			1			1		15	land cargo handling service	
0111	nonferrous metal making	1	1	2				1		2	1				2		1		1						12	nonferrous metal making	
0701	livestock	3			1				1					1		1	2			2					11	livestock	
0601	agriculture						1	1								1	1					1	1		6	agriculture	
0803	haircut/beauty salon			1						2	1													1	5	haircut/beauty salon	
0202	quarrying							1						1					1						4	quarrying	
0401	railroad/water transportation/airline service						1										2								3	railroad/water transportation/airline service	
1701	dispatch service	2															1								3	dispatch service	
0107	printing/bookbinding	1						1																	2	printing/bookbinding	
0602	forestry																		1	1					2	forestry	
0702	fishery										1						1								2	fishery	
0901	financial business																1								2	financial business	
0404	other transportation service																						1		1	other transportation service	
0502	harbor transportation service																							1	1	harbor transportation service	
0902	advertisement and mediator		1																						1	advertisement and mediator	
1601	public office	1																							1	public office	
0201	coal mining																									coal mining	
0203	other mining																									other mining	
1101	telecommunication service																									telecommunication service	
	total	188	185	210	167	176	149	150	129	147	138	130	101	104	134	104	103	83	109	101	93	84	74	90	77	3,026	total

Transition of causal agents (Middle) of fatal and non-fatal accidents as code no. 31 pressure vessel in Middle industry (1999-2022)

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	2022	total	Small industry
140201	general restaurant	5	2	5	12	7	4	4	4	8	13	4	4	11	3	6	9	7	14	8	6	6	5	2	11	160	general restaurant
010109	other foods	9	11	9	6	9	7	6	7	7	8	9	2	11	9	6	8	8	7	9	6	6	6	6	8	180	other foods
040301	general truck transportation service	12	13	19	13	13	12	7	5	7	3	6	7	5	7	6	4	8	5	5	2	5	2	5	3	174	general truck transportation service
011209	other metal products	9	13	10	5	5	6	5	2	7	8	5	7	3	6	5	5	3	2	4	10	1	3	4	3	131	other metal products
011301	machine products	7	5	7	7	2	4	4	4	2	3	3	1	1	3	1		1	2	2	1	4	2	3	3	72	machine products
130101	hospital	1	4	2	2	3	3	3	2	3	2	1	1	2	6	2	4	2	3	3		1	1	1	3	55	hospital
080109	other wholesale	4	1	4	2	4		2	2	2	2		2	2	3	1	3	1	1		3			5	3	47	other wholesale
011702	machine repair	3	1		1	3		2	3	3	4		1		4				1		1		1	1	3	32	machine repair
010601	pulp/paper		2	1		2	1	1		5	1		1		1					1	1			1	3	21	pulp/paper
080204	fuel retail	12	11	15	7	7	4	6	6	10	4	3	5	4	7	6	6	6	8	6	3	4	2	9	2	153	fuel retail
030302	machinery/apparatus setting	6	7	7	5	8	14	5	4	4	6	2	5	5	3	2	3	3	3	4	5	1	4	4	2	112	machinery/apparatus setting

	work																									work	
080209	other retails	4	5	6	4	10	4	3	4	5	5	9	4	3	4	6	4	2	4	4	1	4	5	3	2	105	other retails
030309	other construction works	3	3	6	7	5	5	7	4	7	7	3	9	3	3	2	6	3	4	4	1	3	1	2	2	100	other construction works
010806	rubber products	1	2	2	1	3	2	3	2	2	7	1	1	1	2	1		4	2		1			2	40	rubber products	
010101	meat/dairy products	3	2	3	2	2	2	2	2	2	1	3			1	2	1	2	1	1				2	35	meat/dairy products	
011502	auto mobile products		2		2	3	3	2		3	2	2		1	1	1				1			1	2	26	auto mobile products	
130201	social welfare facility	1	2	1	1	1			2	1	2	1				1	1	2	1		1			2	20	social welfare facility	
010909	other sand and stone products		1	2			1			1							1						1		2	9	other sand and stone products
010204	dyeing	11	11	12	4	6	4	4	2	2	4	3	6		2		1	2		5	1	1	4	5	1	91	dyeing
170209	others	1	2	9	5	9	4	7	4	3	3	1	2	5	4	6	1	3	3	3	6	3	4	1	1	90	others
030209	other building construction work	4	7	4	5	5	4	4	3	1	6	3	4	5	3	4	2	2	6	3	3	1	3	2	1	85	other building construction work
010801	non organic or organic chemical products	2	1	1	6	4	2	1	7	3	3	5	5	1	6	1	1	1	2		1	1		1	1	56	non organic or organic chemical products
030203	building facility construction work	5	2	5	3	4	5	5	4	1	1	1	1		2	3	1		1		4	2	1	3	1	55	building facility construction work
030201	steel frame/reinforced concrete house construction work	5	5	2	3	2	4	1		2	4	2		3	4	2		1	2	1			2	1	1	47	steel frame/reinforced concrete house construction work
011701	auto mobile servicing	5	2	5	4	3	4	2	1	3	1	3			1	1	2		1	3	1	1	1		1	45	auto mobile servicing
030199	other civil engineering work	5	4	3	4	7	2	1	2	3		1	1		1		2			1	2		2		1	42	other civil engineering work
150102	industrial waste management service	2	3	1		2	1	2			2		1	5	2	2	1	2	3	1			1		1	32	industrial waste management service
010401	lumbering	3			1		1			3		1	1	1		2				1				1	1	16	lumbering
030106	road construction work	1				2	1		1		2						1	1			2	2			1	14	road construction work
130301	bathhouse											4					1	2	1		1		1	1	1	12	bathhouse
010309	other fiber products	2					1		3					1							1				1	9	other fiber products
140301	golf course				1	1					1	1		1		1					1		1		1	9	golf course
030111	port/seaside construction work											1				1			1					1	1	5	port/seaside construction work
010501	wood furniture				1	1				1															1	4	wood furniture
040202	bus service							1			1										1				1	4	bus service
100102	movie theatre												1				1	1							1	4	movie theatre
010804	petroleum/coal products					1		1																	1	3	petroleum/coal products
150101	building maintenance service	4	2	8	3	3	3	3	2	4		5	4	2	1	8	2			1		1	1			57	building maintenance service
010104	bread/cake products	2	3	3	2	2	2	4	3	3	3	6	1				3		3		1	1	3			45	bread/cake products
140101	hotel	1	2	3	3	3	2	2		3		1		1		4	1	5	1	2	1		1			36	hotel
010102	fishery products	3	2	2	2	2		1	2	4	4	1	3	1	2	1		1		1	1		1	1		35	fishery products
011709	other manufacturing	1	1	2	2		3	4	3	1	2	1		1	2	4	2				1	2	2			34	other manufacturing
010106	soft drinks	2	3		2	2		3	2	2		1		1	2		2			2		2		1		27	soft drinks
010899	other chemical products	1	3	1	4		1	1		1	1	1	3		1	2		1		3		1		1		26	other chemical products
140309	other amusement service	2	2	1		2	1	1	1		1	1			5	2		1	1	1	2		1			25	other amusement service
011501	ship building	2	2	2	3	1		1	1		1		1			1	1			4	1	2		1		24	ship building



011109	products	1		1				1	2				1	1							7	products		
011403	electronics equipment and telecommunications apparatus							1			3		1	2								7	electronics equipment and telecommunications apparatus	
011601	electric utility service	1		1						1	1			1			1	1				7	electric utility service	
080101	all kinds of wholesale	1		1	1					1	1						1					7	all kinds of wholesale	
080401	warehousing	1	1		1					1							1			1		7	warehousing	
060101	agriculture					1	1							1	1					1	1		6	agriculture
010602	paper processing products			1		1						1					1					1	5	paper processing products
010808	painting products	2		2							1												5	painting products
011401	heavy electrical equipment		1		1	1							1										5	heavy electrical equipment
080302	beauty salon			1					2	1											1		5	beauty salon
011101	nonferrous metals/rolling products		1	1						1													4	nonferrous metals/rolling products
011204	metal plating products					1	1							1	1								4	metal plating products
011402	electrical appliance				1		1							1									4	electrical appliance
011609	other electric/gas/water service					1															1		4	other electric/gas/water service
030102	tunnel construction work	1				1															1		4	tunnel construction work
130102	general clinic												1			1						1	4	general clinic
170201	security service		1	1							1		1										4	security service
010202	cotton-spinning				1	1								1									3	cotton-spinning
010509	other furniture								2														3	other furniture
010802	chemical fiber				1								1									1	3	chemical fiber
010902	glass products		1								2												3	glass products
011002	casting products		1																		2		3	casting products
011201	western tableware/cutting tool products					1	1													1			3	western tableware/cutting tool products
011203	metal press products		1	1								1											3	metal press products
030109	land consolidation civil engineering work		2																		1		3	land consolidation civil engineering work
040201	taxi service					2								1									3	taxi service
150105	livestock process service	1		1										1									3	livestock process service
170101	dispatch service	2											1										3	dispatch service
010201	silk-reeling			1	1																		2	silk-reeling
010502	metal furniture																					1	2	metal furniture
010701	printing service	1											1										2	printing service
010807	leather products												1										2	leather products
010905	other ceramic products																					2	2	other ceramic products
011302	measuring instruments																					1	2	measuring instruments
020201	quarrying																						2	quarrying
020202	gravel digging																						2	gravel digging
030104	railway construction work	1																					2	railway construction work





