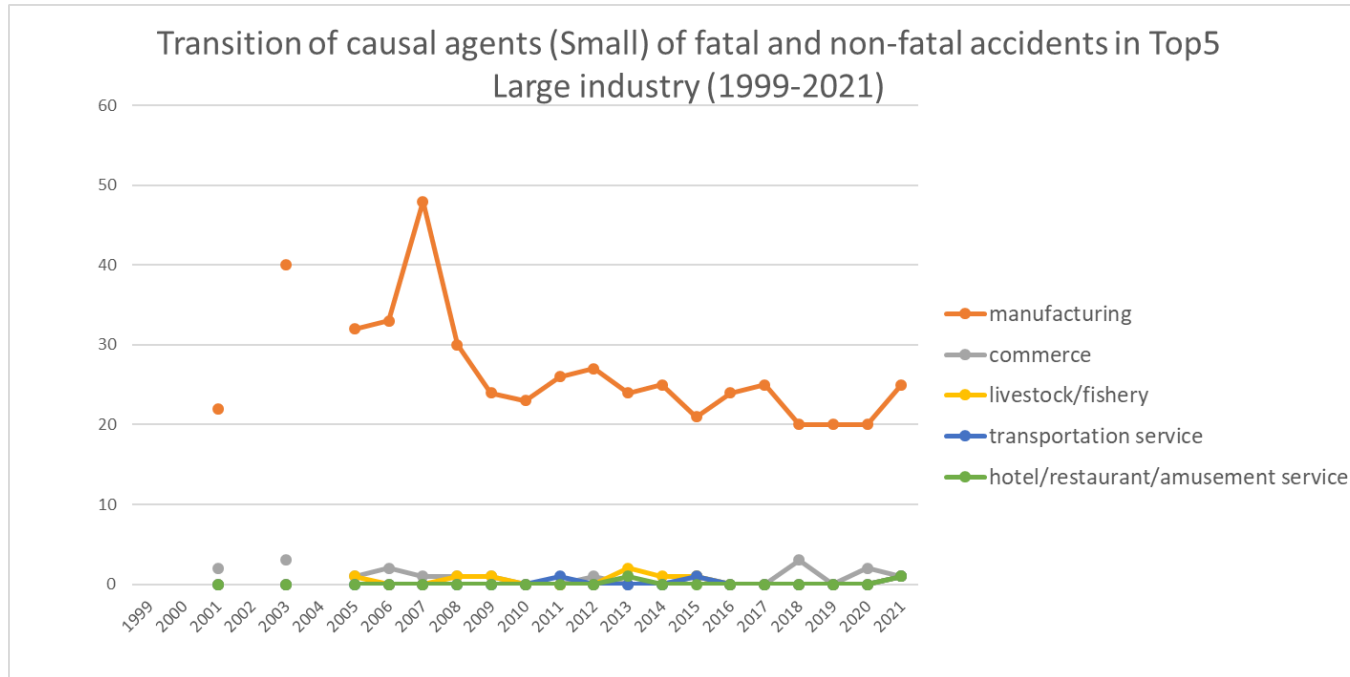
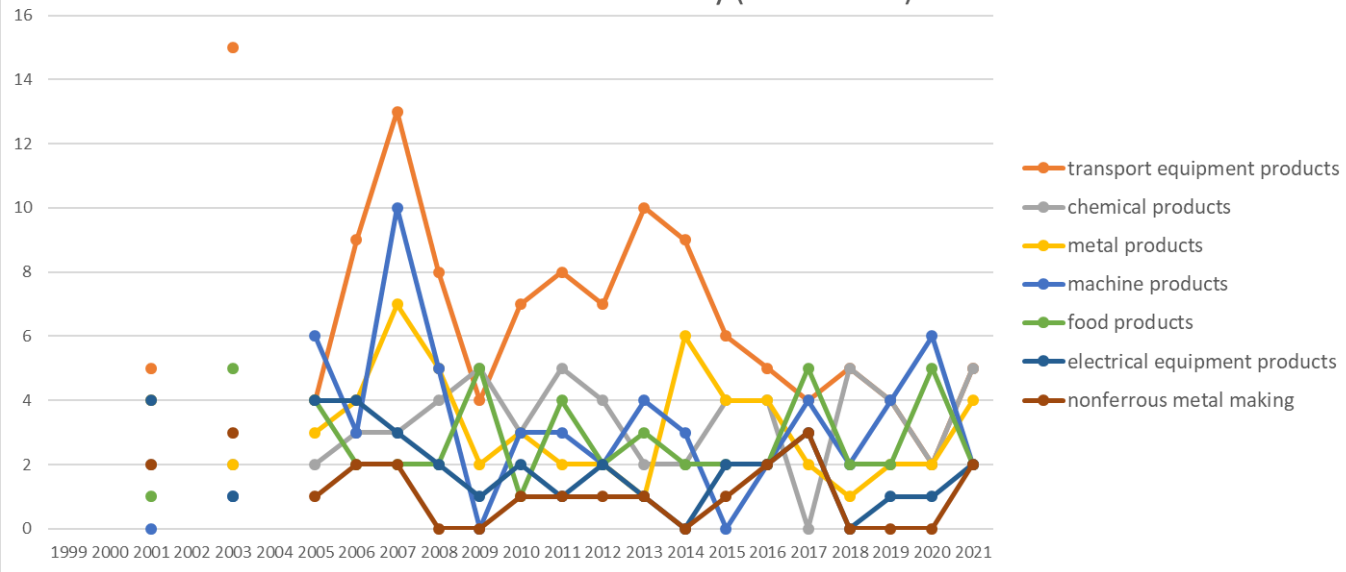


Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 167 industrial robot (1999-2021)



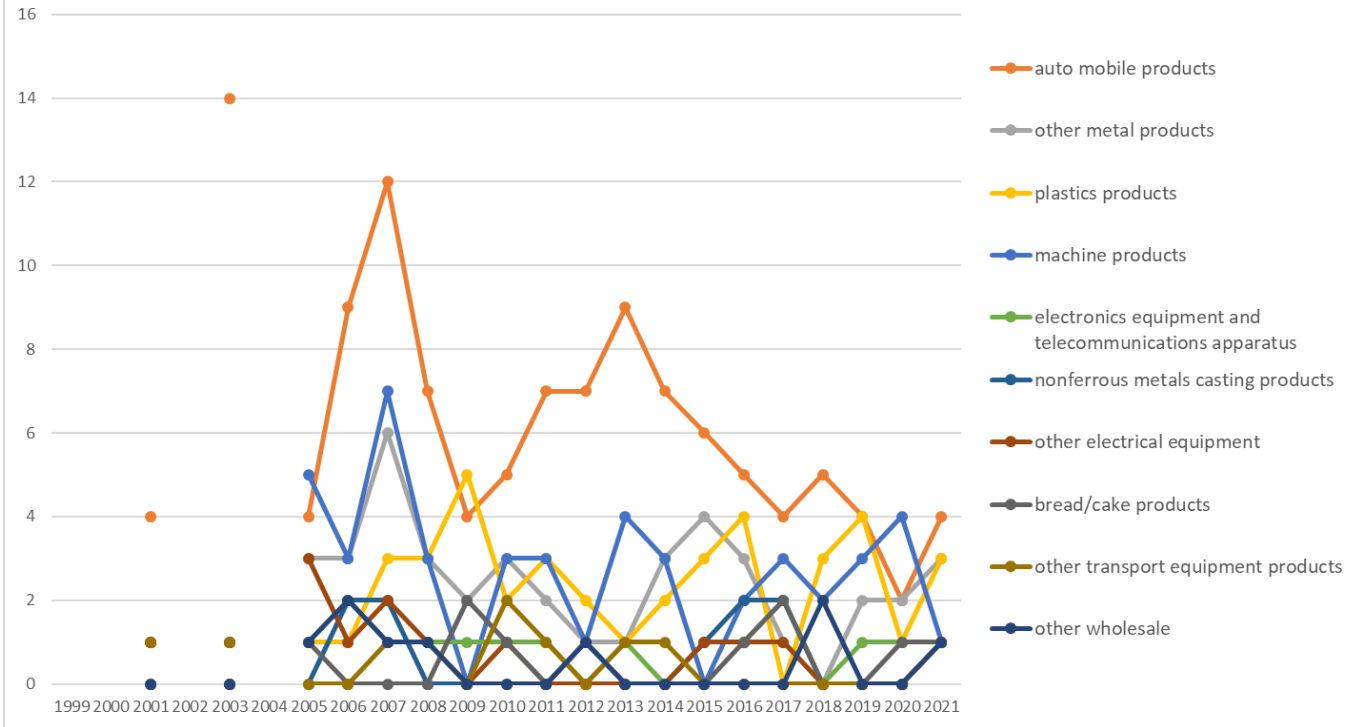
Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 167 industrial robot in Large industry (1999-2021)

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. 167 industrial robot 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. 167 industrial robot in Small Industry (1999-2021)

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 167 industrial robot 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			22		40		32	33	48	30	24	23	26	27	24	25	21	24	25	20	20	20	25	509	manufacturing
08	commerce			2		3		1	2	1	1	1			1			1			3		2	1	19	commerce
07	livestock/fishery							1			1	1				2	1	1						1	8	livestock/fishery
04	transportation service												1					1						1	3	transportation service
14	hotel/restaurant/amusement service															1								1	2	hotel/restaurant/amusement service
03	construction					2			1		1	2		1		1	1	1			1	1	1		13	construction
17	others					1					2														8	others

06	agriculture			1								1								1	1			7	agriculture	
05	cargo handling service			1		1							1							1			1		6	cargo handling service
15	commercial cleaning and livestock process														1	1									4	commercial cleaning and livestock process
13	health and hygiene service																								2	health and hygiene service
02	mining																								1	mining
09	financial business/advertisement																									financial business/advertisement
10	movie/play service																									movie/play service
11	telecommunication service																									telecommunication service
12	education/research service																									education/research service
16	public office																									public office
	total			26		47		36	36	51	34	29	26	30	31	30	29	26	24	26	26	22	24	29	582	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 167 industrial robot 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
0115	transport equipment products			5		15		4	9	13	8	4	7	8	7	10	9	6	5	4	5	4	2	5	130	transport equipment products
0108	chemical products			2		2		2	3	3	4	5	3	5	4	2	2	4	4		5	4	2	5	61	chemical products
0112	metal products			4		2		3	4	7	5	2	3	2	2	1	6	4	4	2	1	2	2	4	60	metal products
0113	machine products					1		6	3	10	5		3	3	2	4	3		2	4	2	4	6	2	60	machine products
0101	food products			1		5		4	2	2	2	5	1	4	2	3	2	2	2	5	2	2	5	2	53	food products
0114	electrical equipment products			4		1		4	4	3	2	1	2	1	2	1		2	2	3		1	1	2	36	electrical equipment products
0111	nonferrous metal making			2		3		1	2	2			1	1	1	1		1	2	3				2	22	nonferrous metal making

0109	sand and stone products			1		5		3	2	6	1	1	1		2	2	2	2	2		1	1		1	33	sand and stone products
0801	wholesale							1	2	1	1				1						2			1	9	wholesale
0701	livestock							1			1	1				2	1	1						1	8	livestock
0104	wood products								1			1			1									1	4	wood products
0403	road cargo transportation service													1					1					1	3	road cargo transportation service
1402	restaurant														1									1	2	restaurant
0102	textile products																							1	1	textile products
0117	other manufacturing			1		5		4	1		2	1			2					2	2	1	1		22	other manufacturing
0106	pulp/paper processing products							1	2	1	1	3	2		1				1		1		1		14	pulp/paper processing products
0303	other construction works					1			1		1	1				1	1				1	1	1		9	other construction works
1702	others					1				2			1	1	1		2								8	others
0501	land cargo handling service			1		1		1					1						1				1		6	land cargo handling service
0601	agriculture			1				1					1		2							1			6	agriculture
0802	retail			2		2												1					1		6	retail
0107	printing/bookbinding									1				2	1						1				5	printing/bookbinding
0105	furniture											1									2		1		4	furniture
0804	other commerce					1						1									1		1		4	other commerce
1501	commercial cleaning and livestock process										1	1				1		1							4	commercial cleaning and livestock process
0110	steel making			1		1											1								3	steel making
0301	civil engineering work					1								1											2	civil engineering work
0302	construction work										1							1							2	construction work



																									service	
1302	social welfare facility																								social welfare facility	
1303	other health and hygiene service																								other health and hygiene service	
1401	hotel																								hotel	
1403	other amusement service																								other amusement service	
1601	public office																								public office	
1701	dispatch service																								dispatch service	
	total			26		47		36	36	51	34	29	26	30	31	30	29	26	24	26	26	22	24	29	582	total

Transition of causal agents (Small) of fatal and non-fatal accidents as code no. 167 industrial robot 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
011502	auto mobile products			4		14		4	9	12	7	4	5	7	7	9	7	6	5	4	5	4	2	4	119	auto mobile products
011209	other metal products			1		1		3	3	6	3	2	3	2	1	1	3	4	3	1		2	2	3	44	other metal products
010805	plastics products			1		1		1	1	3	3	5	2	3	2	1	2	3	4		3	4	1	3	43	plastics products
011301	machine products					1		5	3	7	3		3	3	1	4	3		2	3	2	3	4	1	48	machine products
011403	electronics equipment and telecommunications apparatus			1				1	2	1	1	1	1		1			1	1	2		1	1	1	17	electronics equipment and telecommunications apparatus
011102	nonferrous metals casting products			1		1			2	2					1			1	2	2				1	13	nonferrous metals casting products
011409	other electrical equipment			1				3	1	2	1		1					1	1	1				1	13	other electrical equipment
010104	bread/cake products							1				2	1		1				1	2			1	1	10	bread/cake products
011509	other transport equipment products			1		1				1	1		2	1		1	1							1	10	other transport equipment products

080109	other wholesale							1	2	1	1									2			1	9	other wholesale
011109	other nonferrous metal products			1		2		1					1	1									1	8	other nonferrous metal products
011204	metal plating products			1						1					1		3		1				1	8	metal plating products
070101	livestock							1			1	1											1	8	livestock
011305	other precision machine products										1	1									1	2	1	7	other precision machine products
010903	pottery products					1				2		1											1	5	pottery products
010105	alcoholic drinks					1					1												1	4	alcoholic drinks
010899	other chemical products													1									1	3	other chemical products
040301	general truck transportation service												1										1	3	general truck transportation service
010409	other lumber and wood products													1									1	2	other lumber and wood products
140201	general restaurant																						1	2	general restaurant
010202	cotton-spinning																						1	1	cotton-spinning
010802	chemical fiber																						1	1	chemical fiber
010109	other foods					1		2	1	2		3		4		2		1	1		2	2	1	22	other foods
011709	other manufacturing			1		4		3	1		2	1			2					2	2	1		19	other manufacturing
010909	other sand and stone products					3			2		1					1	1	2			1			11	other sand and stone products
010602	paper processing products							1	1	1	1	2	2		1								1	10	paper processing products
170209	others					1				2			1	1	1		2							8	others
010905	other ceramic products					1		1		1			1		2				1					7	other ceramic products
030302	machinery/apparatus setting work					1			1			1				1	1				1	1		7	machinery/apparatus setting work
010101	meat/dairy products					2									1	1			1			1	6	meat/dairy products	



010106	soft drinks							1	1		1							1	1			1		6	soft drinks	
011402	electrical appliance			2		1			1					2											6	electrical appliance
050101	land cargo handling service			1		1		1					1						1			1		6	land cargo handling service	
060101	agriculture			1				1				1		2							1			6	agriculture	
010701	printing service								1				2	1							1			5	printing service	
010901	cement products							1																5	cement products	
010103	agricultural food products			1																				4	agricultural food products	
010609	other pulp/paper processing products								1															4	other pulp/paper processing products	
010803	pharmaceuticals					1								1	1									4	pharmaceuticals	
010806	rubber products								1				1	1										4	rubber products	
011203	metal press products			1								2												4	metal press products	
010809	chemical fertilizer products			1					1					1										3	chemical fertilizer products	
010902	glass products			1											1	1								3	glass products	
011202	screw products			1		1																		3	screw products	
011303	optical instruments							1			1	1												3	optical instruments	
011703	cleaning					1		1																3	cleaning	
080201	all kinds of retail			2		1																		3	all kinds of retail	
080209	other retails					1																		3	other retails	
080401	warehousing					1																		3	warehousing	
010401	lumbering								1				1											2	lumbering	
010501	wood furniture																							2	wood furniture	
010801	non organic or organic chemical products																							2	non organic or organic chemical products	
010904	fire resisting products							1																2	fire resisting products	
011002	casting products			1																				2	casting products	

011302	measuring instruments							1										1				2	measuring instruments	
030199	other civil engineering work				1									1									2	other civil engineering work
030209	other building construction work									1									1				2	other building construction work
130101	hospital												1							1			2	hospital
010102	fishery products				1																		1	fishery products
010301	over/under wear			1																			1	over/under wear
010502	metal furniture																					1	1	metal furniture
010503	fittings																					1	1	fittings
010804	petroleum/coal products								1														1	petroleum/coal products
011001	steel/iron/rolling products				1																		1	steel/iron/rolling products
011101	nonferrous metals/rolling products																					1	1	nonferrous metals/rolling products
011201	western tableware/cutting tool products								1														1	western tableware/cutting tool products
011503	railway vehicle products														1								1	railway vehicle products
020209	other quarrying												1										1	other quarrying
030301	electricity/telecommunication work									1													1	electricity/telecommunication work
030309	other construction works																					1	1	other construction works
060209	other forestry																					1	1	other forestry
080409	other commerce												1										1	other commerce
150101	building maintenance service										1												1	building maintenance service
150102	industrial waste management service															1							1	industrial waste management service
150103	other waste disposal service																	1					1	other waste disposal service
	other cleaning and livestock																							other cleaning and livestock



020101	general coal mining																						general coal mining
020109	other coal mining																						other coal mining
020201	quarrying																						quarrying
020202	gravel digging																						gravel digging
020301	metal mining																						metal mining
020302	petroleum mining																						petroleum mining
020309	other mining																						other mining
030101	hydroelectric plant construction work																						hydroelectric plant construction work
030102	tunnel construction work																						tunnel construction work
030103	subway construction work																						subway construction work
030104	railway construction work																						railway construction work
030105	bridge construction work																						bridge construction work
030106	road construction work																						road construction work
030107	river civil engineering work																						river civil engineering work
030108	sand collapse prevention civil engineering work																						sand collapse prevention civil engineering work
030109	land consolidation civil engineering work																						land consolidation civil engineering work
030110	water supply/sewage construction work																						water supply/sewage construction work
030111	port/seaside construction work																						port/seaside construction work
030201	steel frame/reinforced concrete house construction work																						steel frame/reinforced concrete house construction work
030202	wooden house construction																						wooden house construction





130301	bathhouse																									bathhouse
130309	other health and hygiene service																									other health and hygiene service
140101	hotel																									hotel
140209	other restaurants																									other restaurants
140301	golf course																									golf course
140302	park and amusement park																									park and amusement park
140309	other amusement service																									other amusement service
150104	cremation service																									cremation service
150105	livestock process service																									livestock process service
160101	public office																									public office
170101	dispatch service																									dispatch service
170201	security service																									security service
170202	information processing service																									information processing service
	total			26	47		36	36	51	34	29	26	30	31	30	29	26	24	26	26	22	24	29	582	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](https://www.jisha.or.jp/english/statistics/202212_03.html)