

Research on Overseas Operations by ^{1/27} Member Companies (FY2021)

Purpose of the survey:

① <u>To generate statistical data showing the contribution to the global economy</u> of Member companies (Japanese automotive parts manufacturer)

2 To identify common issues and reflecting them in JAPIA projects from overseas business development of member companies

③ To reduce direct questions to individual companies

by addressing in published materials with overseas business trends in the auto parts industry in general and general questions

Japan Auto Parts Industries Association

International Committee

December 12, 2022

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Supplementary material

- <Overseas expansion of member companies >
- <Global sales of automobiles (2020) >



1. Overview of the survey for this fiscal year



OEM	Automakers		Current year	Previous year
Tier1	JAPIA member companies	Time of survey	June to September 2022	June to September 2021
	434 companies (as of July 2022)	Number of compani es surveyed	434 companies	427 companies
Tier2	Component parts Forging & Casting Injection molding	Survey period	FY2021	FY2020
Tier3	Raw material etc.	Respons e rate	90.2% 250/277companies ^(*) , among which 99 are small and medium- sized companies and 178 are large companies	84.5% 236/279 companies ^(*) , among which 98 are small and medium- sized companies and 181 are large companies

(*) The denominator is the number of member companies with overseas corporations.

2. Key points of the survey results for this fiscal year



4/27 Overseas production volume of Japanese automobile manufacturers

- The overseas production volume of Japanese automobile manufacturers in 2021 was 16.46 million units, up 7% from the previous year. (Domestic production: 2.7%.)
- Overseas expansion of JAPIA members (trend in the number of overseas subsidiaries)
 - The number of overseas subsidiaries is 2,646, a decrease for the second consecutive year (▲ 50 from the previous year).
 - The decrease is particularly large in North America (▲ 17 subsidiaries) and Europe (▲ 14 subsidiaries).

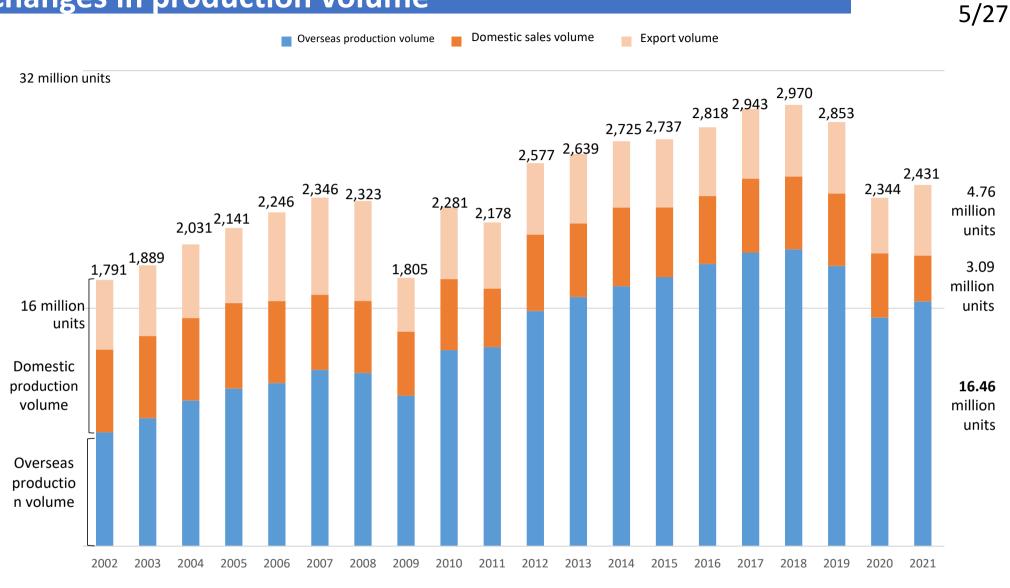
Trends of production function subsidiaries

- Sales increased from a decrease in the previous year to 22.5 trillion yen (+34.7% y/y). The largest increases were in North America, China, and ASEAN, in that order.
- The number of employees increased by 50,000 from the previous year to 1.6 million (+3% y/y).
- > A growing trend toward local production for local consumption.
- The ratio of profitable subsidiaries and profitability are improving in ASEAN, India, and South America. This is due to the strong performance of the automobile manufacturers, and reductions in fixed costs.
- The local procurement rate remains at a high level of 70-80%; challenges include competitiveness of local manufacturers and local cost increases due to soaring energy costs.

Topics survey

Surveyed the status of passing on of increased costs, the impact of increased energy/materials costs, logistics disruptions (fixed point observations), requests in utilizing economic partnership agreements, and responses to economic security.

3. Japanese automobile manufacturers Changes in production volume



Data: JAMA

- Overseas production volume increased +7% to 16.46 million units after two consecutive years of decline.
- Domestic production volume was $\triangle 2.7\%$.

4. Changes in the number of overseas subsidiaries of JAPIA members



Number of overseas subsidiaries

	North America			оре	Chi			AN		dia	Oth	iers	To	tal	
	Number of overseas subsidiaries	Number of changes	Number of overseas subsidiaries	Number of changes	Number of overseas subsidiaries	Number of changes	Number of overseas subsidiaries	Number of changes	Number of overseas subsidiaries	Number of	Number of overseas subsidiaries	Number of	OVARCAGO	Number of changes	
2021	521	▲17	341	▲14	642	+2	710	▲12	138	±0	294	▲9	2,646	▲50	
2020	538	▲2	355	▲12	640	▲16	722	▲1	138	+2	303	▲6	2,696	▲35	
2019	540		367		656		723		136		309		2,731		

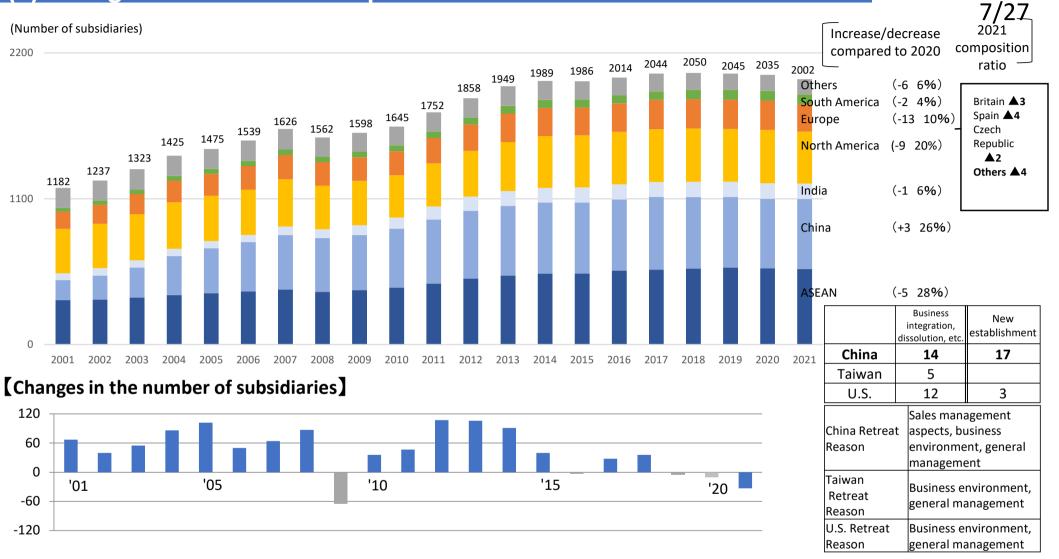
Breakdown by function of overseas subsidiaries (total operation sites 2,646)

		North America	Europe	China	ASEAN	India	Others	Total	Number of changes
Production function	2021	393	208	528	570	116	187	2002	22
	2020	402	221	525	575	117	195	2035	-33
Sales function	2021	133	127	154	190	40	127	771	86
	2020	126	122	119	167	35	116	685	00
Management and control	2021	41	39	30	30	5	11	210	60
functions	2020	42	36	29	28	5	10	150	
Design and development	2021	30	44	46	27	13	0	160	0
functions	2020	29	38	39	29	10	15	160	
Marketing functions	2021	13	8	13	10	5	12	61	0
	2020	11	15	12	8	4	12	61	
Other functions	2021	11	16	16	9		10	62	-22
	2020	15	22	21	11	3	12	84	-22

Note: All functions were surveyed for each subsidiary (multiple answers allowed)

- The number of overseas subsidiaries decreased for the second consecutive year by \blacktriangle 50.
- Decreases in North America (\blacktriangle 17) and Europe (\blacktriangle 14) were significant.

5. Overseas production function subsidiaries of JAPIA members (1) Changes in the number of production function subsidiaries



- The number of production function subsidiaries peaked in 2018 and has declined for three consecutive years, with the decline increasing each year (▲5 in 2019, ▲10 in 2020, and ▲33 in 2021).
- In European country, the UK (\blacktriangle 3), Spain (\bigstar 4), and the Czech Republic (\bigstar 2), with no new establishments.
- In China, 17 companies were newly established to support electrification, etc., but there were also significant comings and goings, including business mergers, dissolutions, and withdrawals (▲14 companies).

5. Overseas production function subsidiaries of JAPIA members (1) Changes in the number of production function subsidiaries



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Overseas production subsidiaries Top countries in terms of increase from previous year

	1998	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1	China (+16)	China (+10)	China (+28)	China (+38)	China (+31)	Mexico (+16)	Mexico (+15)	Mexico (+6)	Indonesia (+8)	China (+13)	Indonesia	Philippines (+5)	Mexico (+5)	China (+3)
2	U.S. (+14)	India (+9)	Thailand (+10)	India (+15)	Indonesia (+20)	China (+14)	Thailand (+11)	India	Thailand (+6)	-	Mexico (+5)	Brazil (+3)		Philippines (+2)
3	India (+9)	Thailand (+7)	Indonesia (+9)	Indonesia (+14)	Mexico (+15)	Indonesia (+13)	China (+8)	Indonesia (+2)		Thailand Vietnam Brazil (+3)	Brazil (+4)	Thailand Britain	(Reference) China▲8 Thailand▲1	
4	Indonesia Korea	Indonesia	Vietnam	Thailand (+4)	India (+8)	U.S. (+8)	Vietnam (+5)		Mexico Philippines Cambodia		Thailand	(+2)	Indonesia▲2	
5	(+4)		Germany Morocco	Brazil (+7)	Vietnam (+6)	Russia (+6)	U.S. (+4)	Malausia	China (+3)	Mawing	France Morocco (+3)			
6	Thailand (+4)	U.S. (+2)	(+3)	Mexico (+6)	Thailand (+4)	Thailand (+5)	Brazil (+2)	Malaysia Vietnam Laos		Mexico UK Italy		Indonesia		
7			France (+2)	Germany (+4)	Russia (+4)	Brazil (+5)	Russia (+2)	Paraguay France Moldova (+1)		(+2)	India (+2)	Canada Spain Germany		
8	2008 f	financial cri	isis	Malauria	Malauria	India		(+1)			Philippines			
9				Malaysia Vietnam Poland (+3)	Malaysia U.S. Turkey (+3)	Germany Czech Republic					Colombia El Salvador Paraguay Serbia	Turkey (+1)		
10	Gi	reat East Ja Earthquak	-	(+3)	(+3)	(+4)					(+1)	COV	/ID-19	

• In 2021, only China and the Philippines increase, while all other countries decrease.

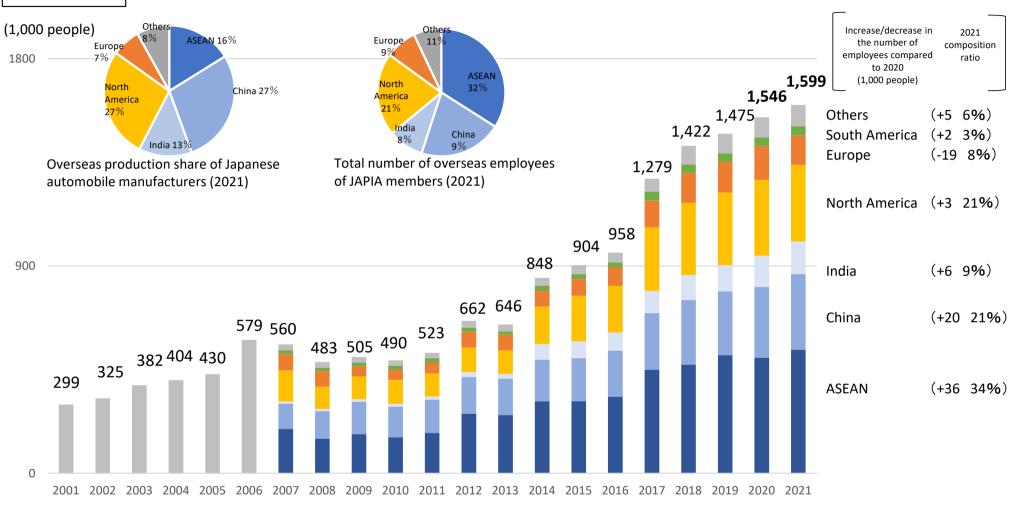
• The reasons given for the increase in locations are new business expansion and increased global production.

5. Overseas production function subsidiaries of JAPIA members (2) Changes in the number of employees



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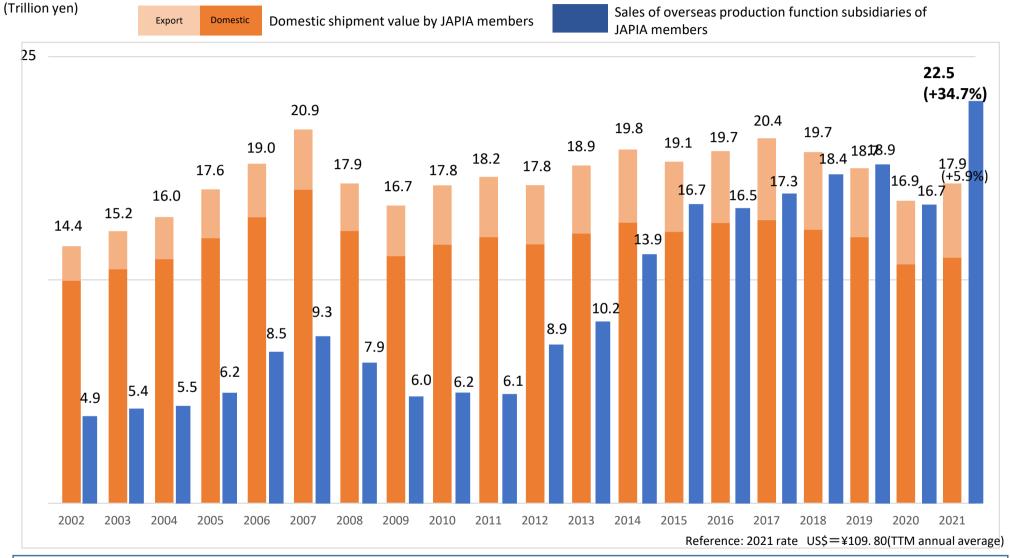
By region



- The number of employees in overseas production function subsidiaries exceeded 1.5 million in 2020, +3% y/y in 2009.
- By region, Europe saw a decrease for the first time since 2011 (▲19 thousand).
- In other regions, the number of production subsidiaries increased due to the establishment of new ones, although some withdrew from the market.

5. Overseas production function subsidiaries of JAPIA members (3) Changes in sales





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- Total sales of overseas production function subsidiaries were 22.5 trillion yen
- Up 5.8 trillion yen (+34.7%) from the previous year, larger than the increase in domestic shipments (+5.9%).
- The recovery in overseas production volume was the main factor.

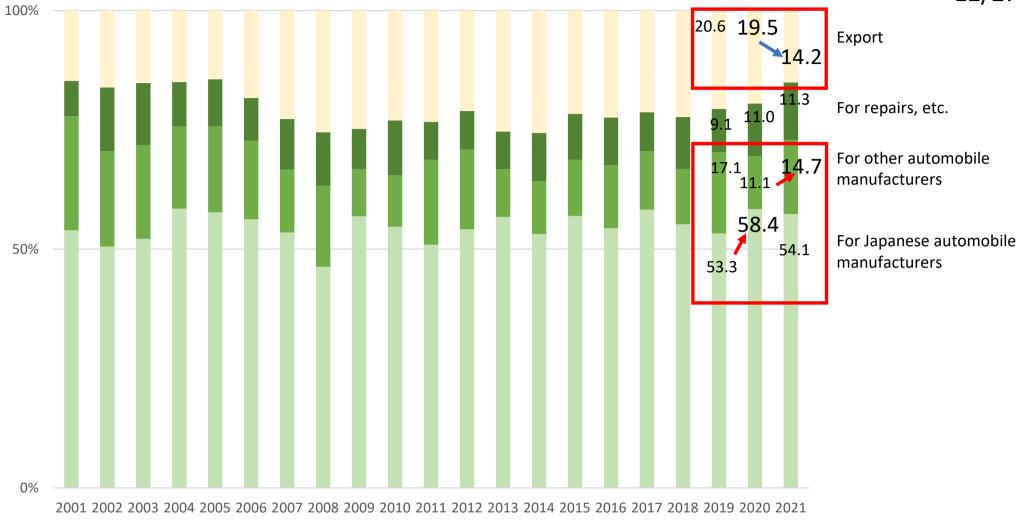
5. Overseas production function subsidiaries of JAPIA members (3) Changes in sales

11/27 By region Others 8% Others Europe 11 Increase/decrease (Trillion yen) 2021 Europe 7% ASEAN 16% 9% compared to 2020 composition 25.0 ASEAN 32% (Trillion yen) ratio — North America North America 22.5 21% 27% China 27% (+0.2 2%) Others South America (+0.2 2%) China India 19% India 13 Europe (+0.4 8%) 18.4 19.3 Japanese automobile manufacturers JAPIA members overseas sales (2021) 17.3 16.5 overseas production share (2021) 16.7 16.7 (+1.9 North America 33%) 13.9 12.5 India (+0.4 7%) 10.2 8.9 9.3 8.5 7.3 (+1.4 China 6.2 6.0 6.1 27%) 6.2 5.3 5.5 4.9 3.7 (+1.4 ASEAN 20%) 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2,021

- 2021 sales of overseas production subsidiaries increased in all regions.
- The largest increases were seen in North America, China, and ASEAN, in that order.

5. Overseas production function subsidiaries of JAPIA members(4) Sales ratio by customer

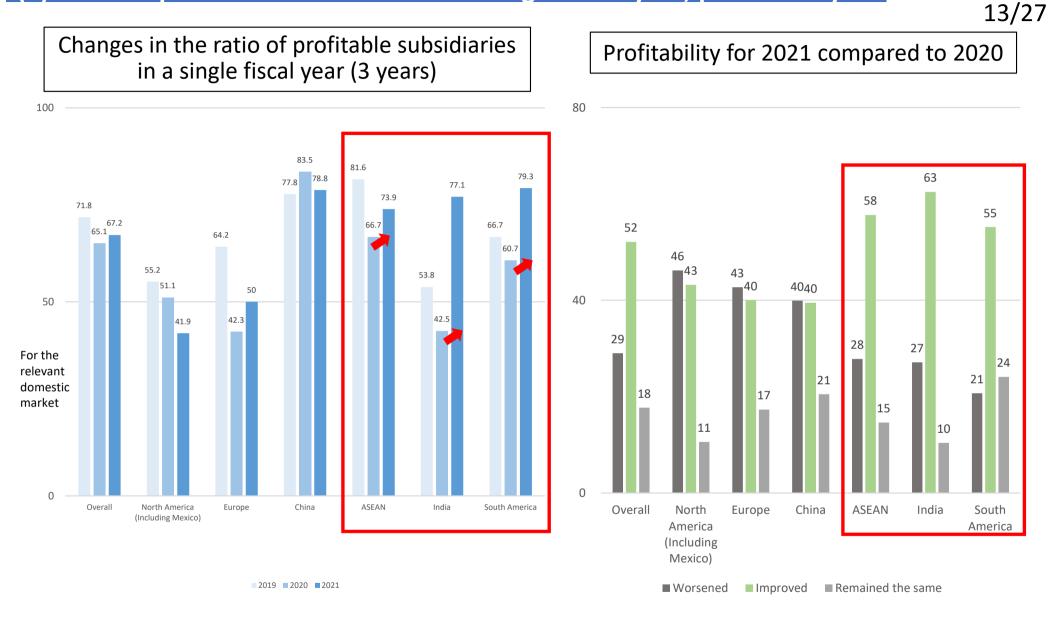




- The export ratio was 19.5% in 2020 and 14.2% in 2021, a trend of increasing local production for local consumption of automobile parts is increasing.
- Last year, the dependence on Japanese automobile manufacturers increased amid a decline in overall sales, but this year, the ratio of exports to other automobile manufacturers will increase due to a recovery in sales to non-Japanese automobile manufacturers.

5. Overseas production function subsidiaries of JAPIA members (5) Ratio of profitable subsidiaries in a single fiscal year, profitability





- ASEAN, India, and South America are profitable and improving.
- Reasons cited include strong performance by automobile manufacturers and reductions in fixed costs.

5. Overseas production function subsidiaries of JAPIA members (6) Local procurement rate

100.0



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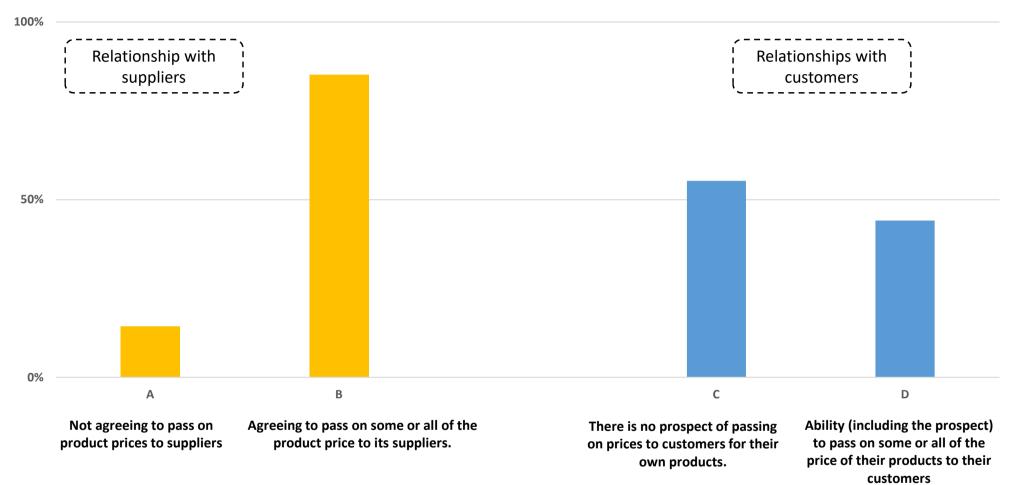
<Problems with local procurement (Survey response comments, in no particular order) >

Local manufacturers are not competitive	China, U.S., Mexico, Taiwan, Thailand, Malaysia, India, Vietnam, Canada, Czech Republic
Increase in local costs due to rising energy costs, etc.	U.S., Mexico, Thailand, Indonesia, Philippines, India, Brazil, U.K., Czech Republic, Turkey
No equipment or processing manufacturer	Thailand, Indonesia, China, Korea, Brazil, Turkey
Soaring labor costs, hiring difficulties	U.S., Turkey
Logistics delays and rate hikes	Indonesia, Mexico
Others (customer requests, etc.)	Thailand, Vietnam

- The local procurement rate remained at a high level of 70-80% in all countries/regions.
- Challenges include lack of competitiveness among local manufacturers, increased local costs due to rising energy costs, and lack of equipment and processing manufacturers.



Status of passing on of energy/materials costs, logistics costs and sudden yen depreciation



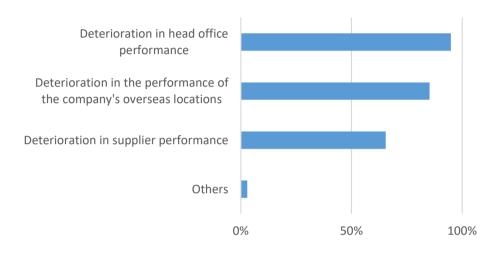
- Many companies have approved requests from their suppliers to pass on the increased costs.
- Many companies do not expect to pass on the increased costs to their clients.

6. Topics survey for this fiscal year

(2) Impact of increased energy/materials costs (as of July 2022)

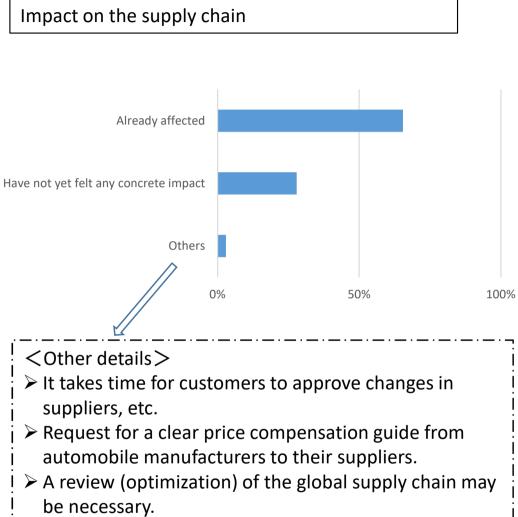
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Concerns about energy/material cost increases (multiple responses allowed)



Activities being undertaken (and will be undertaken in the future) to reduce the impact on the supply chain

Review of suppliers (diversify/concentrate)	72%
Review and restructuring of BCP	39%
Restructuring of communication system with overseas locations	31%
Review company's overseas expansion policy and strategy	25%



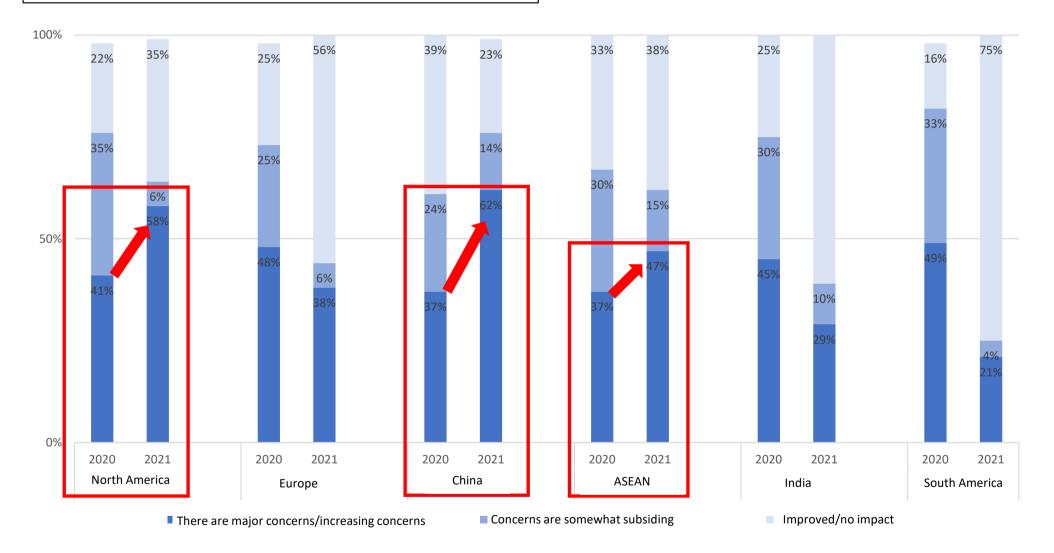
- The weak yen may necessitate a review of overseas procurement.
- Increased energy/materials costs have a significant impact on management and supply chains.
- To reduce the impact, more than 70% of companies are reviewing their suppliers (or will do so in the future).

6. Topics survey for this fiscal year

(3) Logistics disruption (fixed-point observation) (as of July 2022)

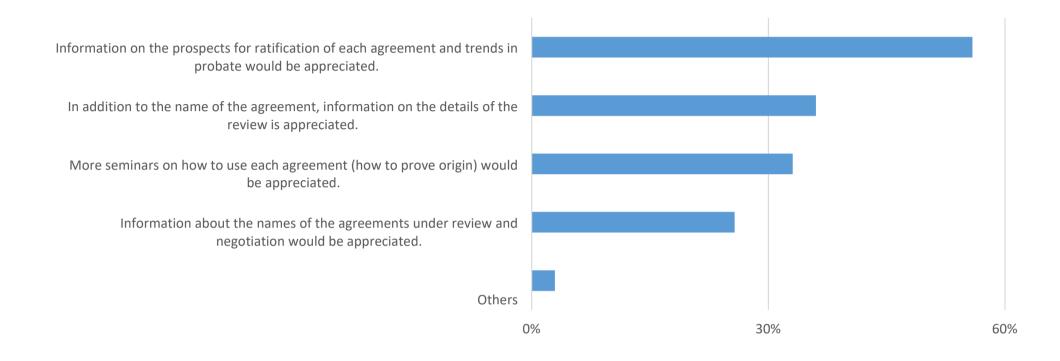


Logistics disruption (fixed point observation)

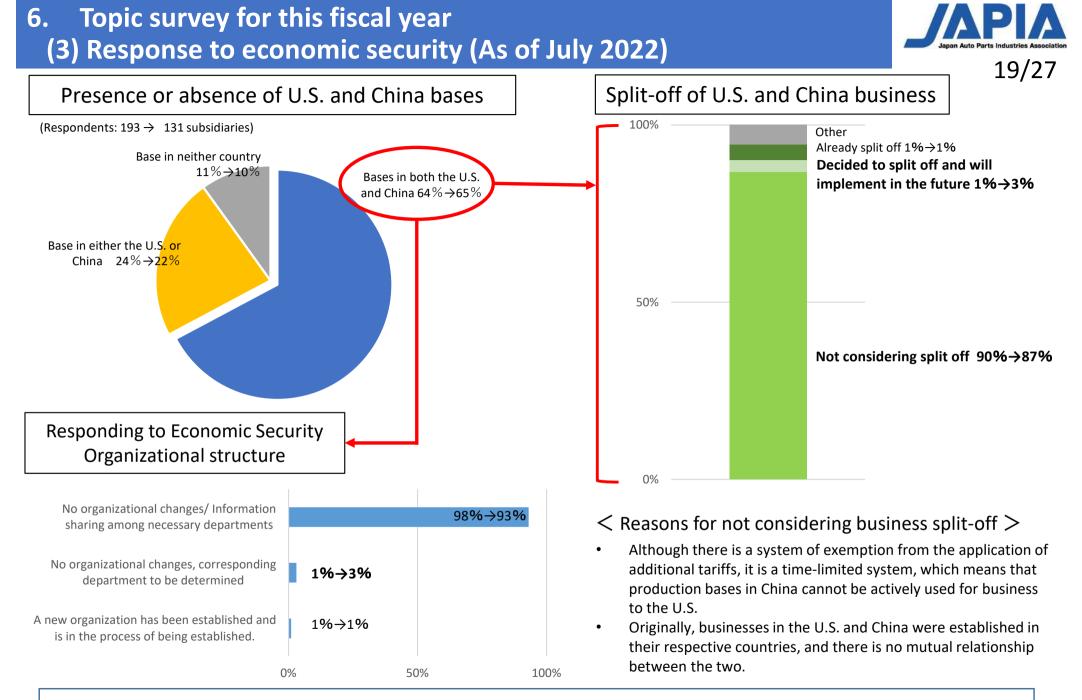


- Logistics disruptions in North America, China, and ASEAN remain unresolved and remain a concern.
- Factors include China's zero-corona policy and the U.S. West Coast port strike.





- For the government, information on the prospects for ratification of the agreement, etc., is requested to be shared at an early stage.
- For JAPIA, sharing of information on trends in probate is requested.



- The same questions as in the previous survey were used to conduct a two-year fixed-point observation.
- Signs of change, as companies that had not considered splitting their U.S.-China business decided to do so, and companies that had not changed their organizational structure decided to set up corresponding departments.



We are deeply grateful to the member companies that cooperated with our survey. We will use this information as reference in our future operations, and we hope that it contributes to the further growth of the automotive parts industry as well as smoother business activities of our member companies.



Supplementary material

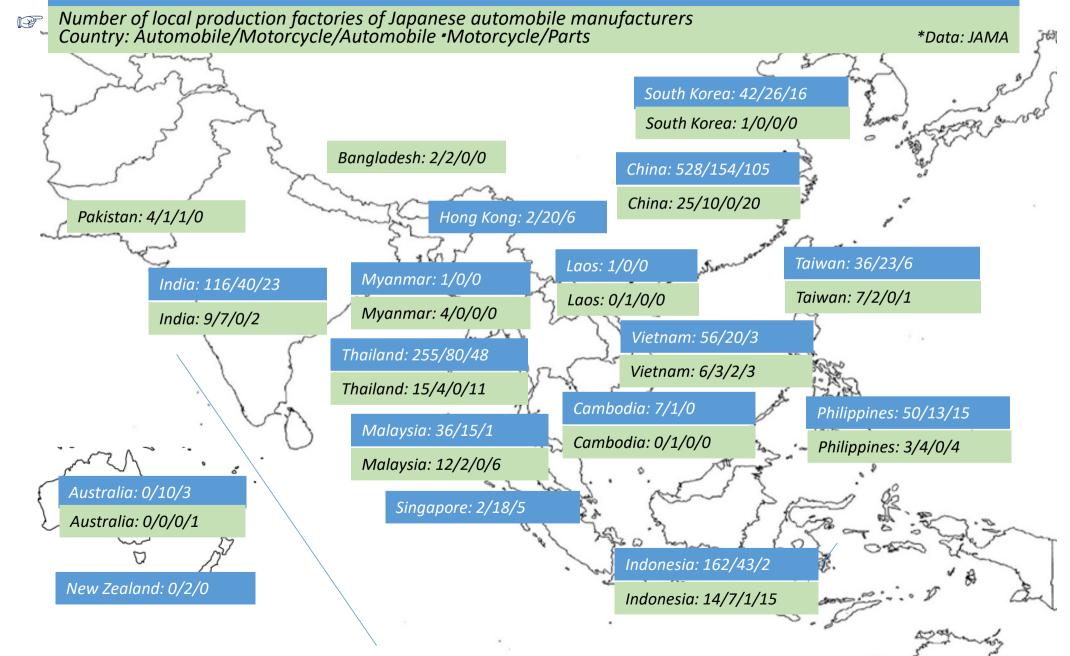
<Overseas expansion of member companies > <Global sales of automobiles (2021) >

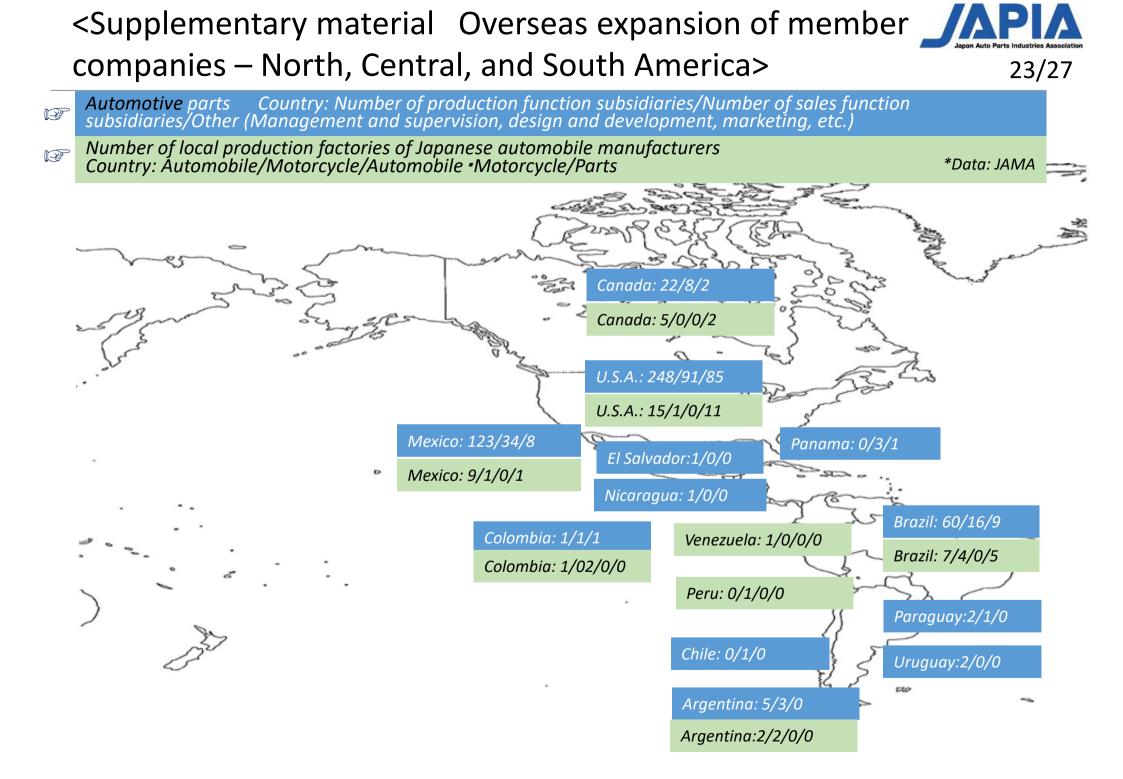
<Supplementary material Overseas expansion of member companies –Asia>



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Automotive parts Country: Number of production function subsidiaries/Number of sales function subsidiaries/Other (Management and supervision, design and development, marketing, etc.)

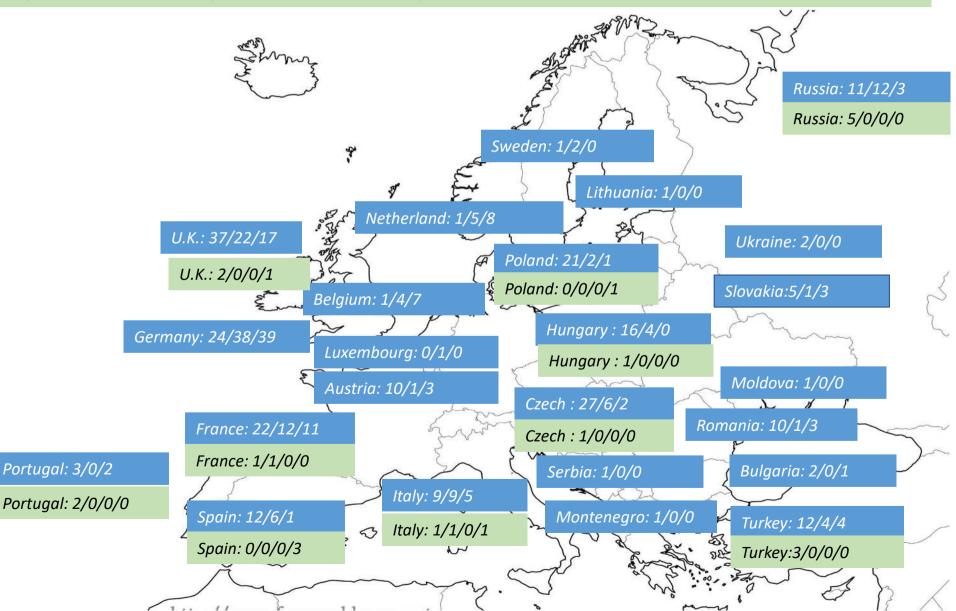




Supplementary material Overseas expansion of member _________2

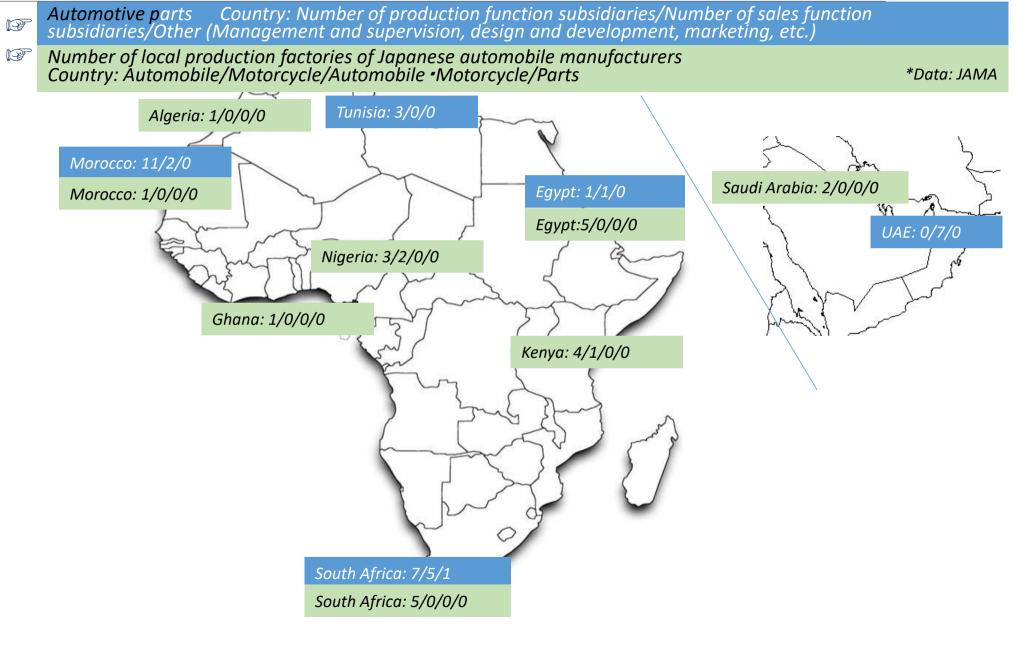
Automotive parts Country: Number of production function subsidiaries/Number of sales function subsidiaries/Other (Management and supervision, design and development, marketing, etc.)

Number of local production factories of Japanese automobile manufacturers Country: Automobile/Motorcycle/Automobile •Motorcycle/Parts



*Data: JAMA

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<Supplementary material Global sales of automobiles >



Change in global sales

Source : MarkLines

(2021 source: MarkLines)

[Global sales]

Global sales]													Unit: thousand
		January	February	March	April	May	June	July	August	September	October	November	December	Total
2020	Light vehicle	6,161	4,794	5,183	3,802	4,926	6,227	6,467	6,210	7,444	7,213	7,229	7,893	73,549
	Buses/trucks	199	159	210	187	191	229	219	201	234	224	227	214	2,494
	Total	6,360	4,953	5,393	3,989	5,118	6,456	6,686	6,411	7,678	7,437	7,456	8,106	76,043
	Year-on-year comparison	89%	79%	61%	56%	68%	85%	95%	91%	103%	101%	98%	102%	86%
2021	Light vehicle	6,282	5,475	8,045	6,760	6,558	6,672	6,020	5,468	5,845	5,974	6,398	7,012	76,510
	Buses/trucks	214	199	309	247	234	252	180	160	166	161	172	180	2,474
	Total	6,496	5,674	8,354	7,007	6,792	6,924	6,200	5,627	6,012	6,135	6,571	7,192	78,984
	Year-on-year comparison	102%	115%	155%	176%	133%	107%	93%	88%	78%	82%	88%	89%	104%

[Sales by region]

North Ameri sho <u>wn in Ap</u>	ica (Breakdown is pendix 1)	January	February	March	April	May	June	July	August	September	October	November	December	Total
2020	Light vehicle	1,380	1,620	1,194	814	1,288	1,341	1,483	1,587	1,621	1,627	1,463	1,856	17,273
	Buses/trucks	17	17	18	14	11	16	16	20	22	21	20	24	217
	Total	1,397	1,637	1,212	828	1,299	1,356	1,499	1,607	1,643	1,648	1,483	1,880	17,489
	Year-on-year comparison	100%	107%	62%	50%	67%	73%	87%	81%	103%	99%	86%	103%	84%
2021	Light vehicle	1,305	1,405	1,899	1,774	1,847	1,587	1,551	1,341	1,254	1,301	1,255	1,439	17,958
	Buses/trucks	18	17	25	22	21	23	19	20	19	19	19	27	250
	Total	1,323	1,422	1,924	1,796	1,868	1,610	1,570	1,362	1,274	1,320	1,273	1,466	18,208
	Year-on-year comparison	95%	87%	159%	217%	144%	119%	105%	85%	78%	80%	86%	78%	104%
Quarterly				26%			0%			0%			0%	
	,													
Europe (*Bro shown in Ap		January	February	March	April	May	June	July	August	September	October	November	December	Total
2020	Light vehicle	1,381	1,337	1,138	385	807	1,436	1,591	1,168	1,651	1,453	1,371	1,560	15,279
	Buses/trucks	34	33	31	22	25	34	36	33	38	42	41	37	407
	Total	1,415	1,370	1,169	406	833	1,470	1,627	1,201	1,688	1,495	1,412	1,598	15,685
	Year-on-year comparison	94%	94%	53%	24%	46%	78%	98%	86%	103%	94%	89%	97%	78%
2021	Light vehicle	1,064	1,114	1,762	1,361	1,399	1,634	1,237	951	1,236	1,055	1,125	1,232	15,169
	Buses/trucks	29	32	43	37	35	41	34	30	30	32	32	33	407
	Total	2,777	1,770	2,915	2,619	2,484	2,368	2,167	2,129	2,437	2,709	2,937	3,237	30,547
	Year-on-year comparison	196%	129%	249%	645%	298%	161%	133%	177%	144%	181%	208%	203%	195%
ASEAN		January	February	March	April	May	June	July	August	September	October	November	December	Total
2020	Light vehicle	250	242	209	76	94	145	179	188	214	220	224	239	2,280
	Buses/trucks	11	14	12	5	8	11	13	12	14	13	13	15	143
	Total	261	256	221	82	102	156	192	200	228	233	238	255	2,424
	Year-on-year comparison	85%	100%	70%	30%	34%	61%	66%	70%	81%	79%	85%	99%	71%
2021	Light vehicle	214	195	270	233	211	177	151	175	207	223	251	266	2,574
	Buses/trucks	13	12	16	14	14	12	11	9	12	14	15	15	158
	Total	227	207	287	247	225	190	161	184	220	237	267	281	2,731
	Year-on-year comparison	87%	81%	130%	302%	220%	121%	84%	92%	96%	102%	112%	110%	113%



China		January	February	March	April	May	June	July	August	September	October	November	December	Total
2020	Light vehicle	1,860	286	1,361	1,967	2,097	2,207	2,036	2,118	2,485	2,497	2,692	2,771	24,379
	Buses/trucks	67	24	69	103	96		76			76			889
	Total	1,927	310	1,430	2,070	2,194	2,300	2,112	2,186	2,565	2,573	2,770	2,831	25,268
	Year-on-year comparison	81%	21%	57%	105%	115%	112%	117%	112%	113%	113%	113%	107%	98%
2021	Light vehicle	2,415	1,388	2,401	2,152	2,041	1,927	1,827	1,775	2,038	2,307	2,495	2,757	25,524
	Buses/trucks	88	66	125	100	87	88	37	24	29	25	27	29	725
	Total	2,503	1,455	2,526	2,252	2,128	2,015	1,864	1,799	2,067	2,333	2,522	2,786	26,248
	Year-on-year comparison	130%	469%	177%	109%	97%	88%	88%	82%	81%	91%	91%	98%	104%
	companson													
India		January	February	March	April	May	June	July	August	September	October	November	December	Total
2020	Light vehicle	347	319	158	0	46	139	183	276	346	310	349	332	2,805
	Buses/trucks	5	4	2	0	0		0		2	0		1	16
	Total	352	323	160	0	46	139	183	277	348	310	350	333	2,821
	Year-on-year comparison	96%	90%	40%	0%	15%	47%	71%	111%	123%	88%	107%	110%	74%
2021	Light vehicle	277	373	394	262	116	299	264	316	223	226	310	316	3,376
	Buses/trucks	0	2	2	0	0	0	0	1	0	0	1	1	7
	Total	277	375	396	262	116	299	264	317	223	226	312	317	3,384
	Year-on-year comparison	78%	116%	248%	#DIV/0!	253%	215%	145%	114%	64%	73%	89%	95%	120%
	peripulsen	1								1				
South		Januany	February	March	April	May	June	July	August	September	October	November	December	Total
America		January	,					•	-	•				
2020	Light vehicle	277	264	206	65	93		219	234		298		338	2,756
	Buses/trucks	12	10 274	9	5 70	7 100	13 192	14	13 247		<u>13</u> 311			140 2,896
	Total Year-on-year	289		216				233				315		
	comparison	91%	95%	71%	22%	30%		67%	72%		91%	99%		74%
2021	Light vehicle	249	231	267	241	246		253	246		239			3,018
	Buses/trucks	12	12	16	14	16		17	18		16			190
	Total Year-on-year	261	243	283	255	262		270	264		255			3,208
	comparison	90%	89%	131%	363%	262%	144%	116%	107%	86%	82%	85%	90%	111%
Japan		January	February	March	April	May	June	July	August	September	October	November	December	Total
2019	Light vehicle	371	395	463	614	366		432	441	369	529	305		5,040
	Buses/trucks	16 387	12 408	<u>16</u> 479	26 640	<u>13</u> 378		18 450			19 548			194
2020	Total Light vehicle	387	408	<u>479</u> 557	259	208		450	314			315		5,234 4,429
2020	Buses/trucks	11	15	24	239	10		13	12		12			4,429
	Total	360	430	581	270	218		396	326		407	411	379	4,595
	Year-on-year	93%	105%	121%	42%	58%		88%	71%		74%	131%	98%	88%
2021	comparison Light vehicle	373	418	589	339	308		364	306		268		325	4,284
2021	Buses/trucks	373	14	24	11		15	13	13		200			4,204
	Total	384	432	612	350	319		377	319		279			4,445
	Year-on-year	107%	101%	105%	129%	146%		95%			69%			97%
	comparison	107/1	1017	100%	120%	1-10/0	100%	00%		00%	00/1	00%	041047017	07/10
Other		January	February	March	April	May	June	July	August	September	October	November	December	Total
2020	Light vehicle	177	196		72	117		211	176		234			2,286
	Buses/trucks	31	33	27	7	19		35			33			351
	Total	208	229	209	79	136		245			267			2,637
	Year-on-year	76%	83%	62%	30%	45%		89%			81%	81%	78%	72%
2021	comparison Light vehicle	208	206	266	214	218		193	208		193			2,553
-021	Buses/trucks	33	34	43	35	38		37	31	40	38		34	445
	Total	241	240	308	249	256		230			231		224	2,998
	Year-on-year	116%	105%	148%	317%	188%		94%			87%			114%
	comparison				0.770			01/0					51%	