Research on Overseas Operations by Member Companies for FY2020

<Survey objectives>

① **To generate statistical data showing the degree of contribution to the global economy** of member companies (= Japanese automotive parts manufacturers)

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

③ **To reduce direct questions to individual companies** by addressing overseas business trends in the overall components industry and general questions in published materials

Japan Auto Parts Industries Association

International Committee

December 17, 2021

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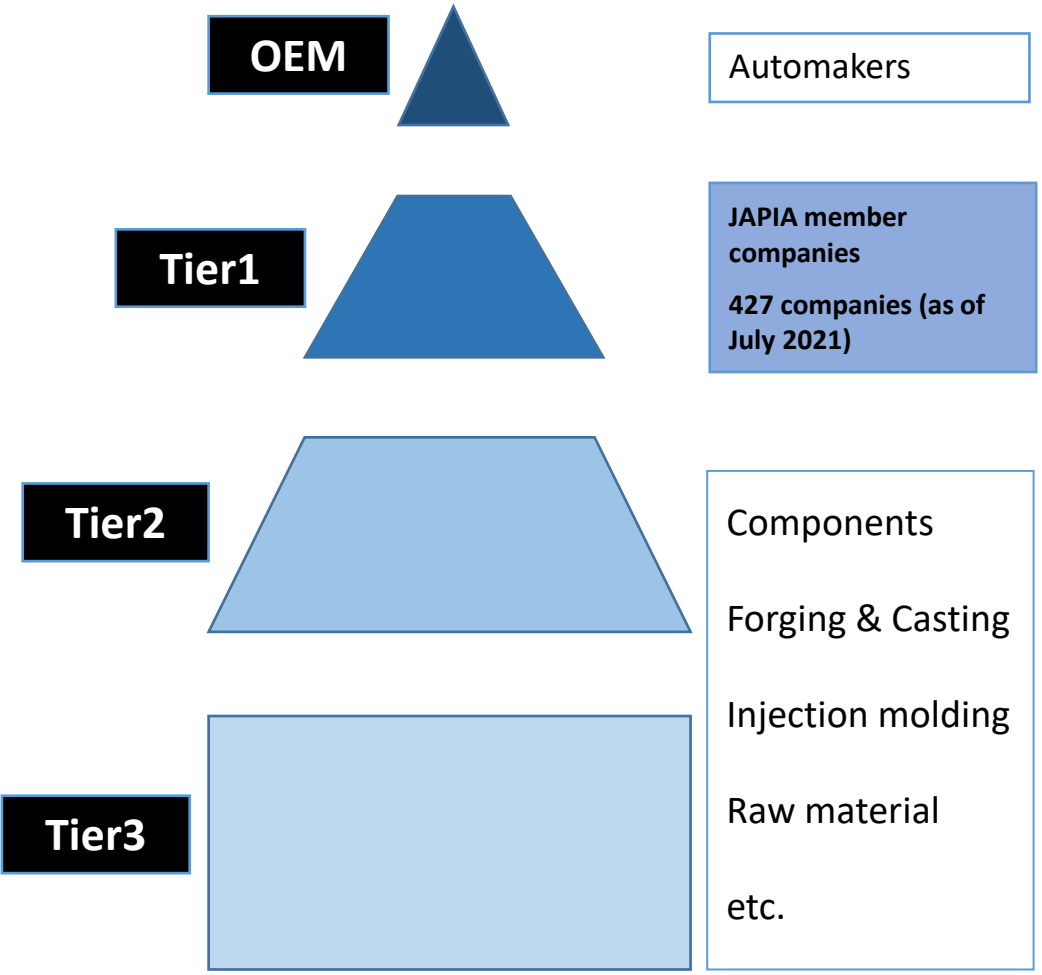
1. Overview of the survey for this fiscal year



	Current year	Previous year
Time of survey	June to September 2021	July to September 2020
Number of target companies	427 companies	426 companies
Survey target period	FY2020	FY2019
Response rate	84.5% 236/279 companies(*), among which 98 are small and medium-sized companies and 181 are large companies	78.9% 214/271 companies (*), among which 92 are small and medium-sized companies and 179 are large companies

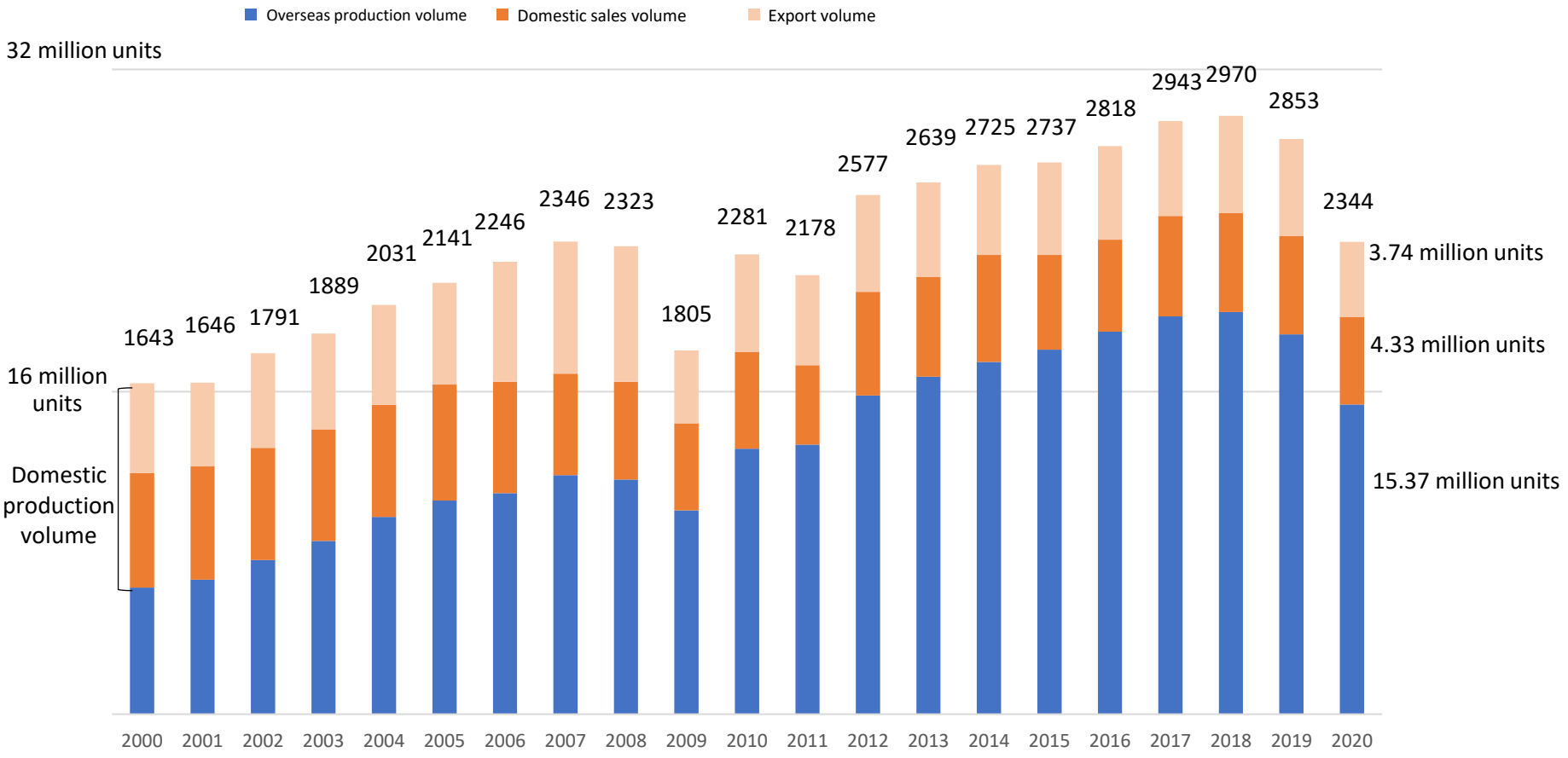
(*) The denominator is the number of member companies with overseas corporations.

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

- Overseas production volume of Japanese automobile manufacturers
  - The overseas production volume of Japanese automobile manufacturers in 2020 was 15.37 million units, a decrease of 18.4% over the previous year.
- Overseas expansion of JAPIA members (trend in the number of overseas subsidiaries)
  - The number of overseas subsidiaries is 2,696, a decrease of 35 subsidiaries over the previous year (△1.3%).
  - The decrease is particularly large in China (△16 subsidiaries).
- Trends of production function subsidiaries
  - Sales decreased by 2.2 trillion yen overall (△12%). There were large decreases in ASEAN, Europe, and North America.
    Sales increased in China.
  - The number of employees exceeded 1.5 million people in total.
  - In terms of ratio by client, the trend of local production for local consumption remains unchanged.
  - Only China showed improvement in the ratio of profitable subsidiaries and profitability. This is due to the strong performance of the client automobile manufacturers (recovery to pre-Covid levels), etc.
  - The local procurement rate has hovered at a high level of 70-80% worldwide. Balancing cost and quality is an issue.
- Topics survey

  Three recent issues (logistics disruption, semiconductor shortage, impact of Covid-19), the response to economic partnership agreements, and the response to economic security were surveyed.

3. Japanese automobile manufacturers Change in production volume



Data: JAMA

- Overseas production volume is 15.37 million units, a decrease of 18.4% compared to 2019; domestic production volume decreased by 16.7%.

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

Number of overseas subsidiaries

	North America	Europe	China	ASEAN	India	Other	Total
2020	538	355	640	722	138	303	2,696
2019	540	367	656	723	136	309	2,731
Number of changes	-2	-12	-16	-1	+2	-6	**-35**

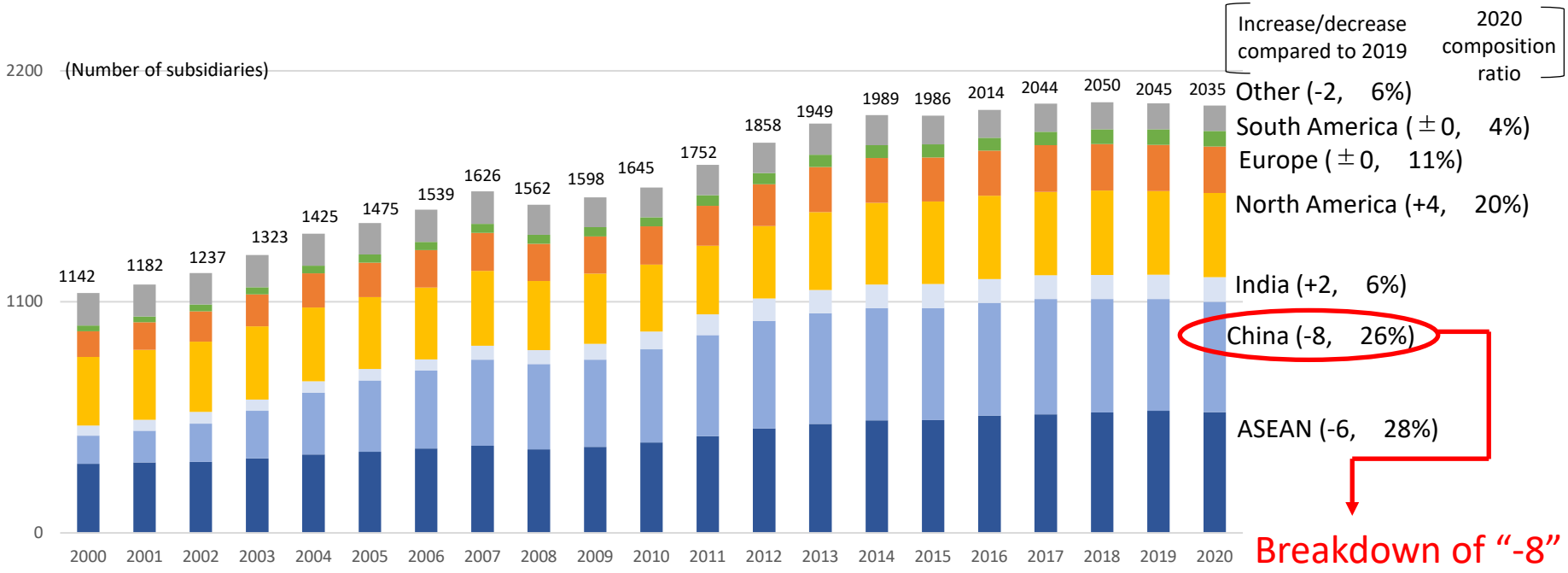
Breakdown by function of overseas subsidiaries (target local operation sites 2,696)

		North America	Europe	China	ASEAN	India	Other	Total	Number of changes
Production function	2020	402	221	525	575	117	195	2035	**-10**
	2019	398	221	533	581	115	197	2045	
Sales function	2020	126	122	119	167	35	116	685	**122**
	2019	106	117	88	124	24	104	563	
Management and control functions	2020	42	36	29	28	5	10	150	27
	2019	35	34	27	18	3	6	123	
Design and development functions	2020	29	38	39	29	10	15	160	36
	2019	21	29	34	25	7	8	124	
Marketing functions	2020	11	15	12	8	4	11	61	4
	2019	11	16	11	6	3	10	57	
Other functions	2020	15	22	21	11	3	12	84	18
	2019	15	17	14	8	2	10	66	

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

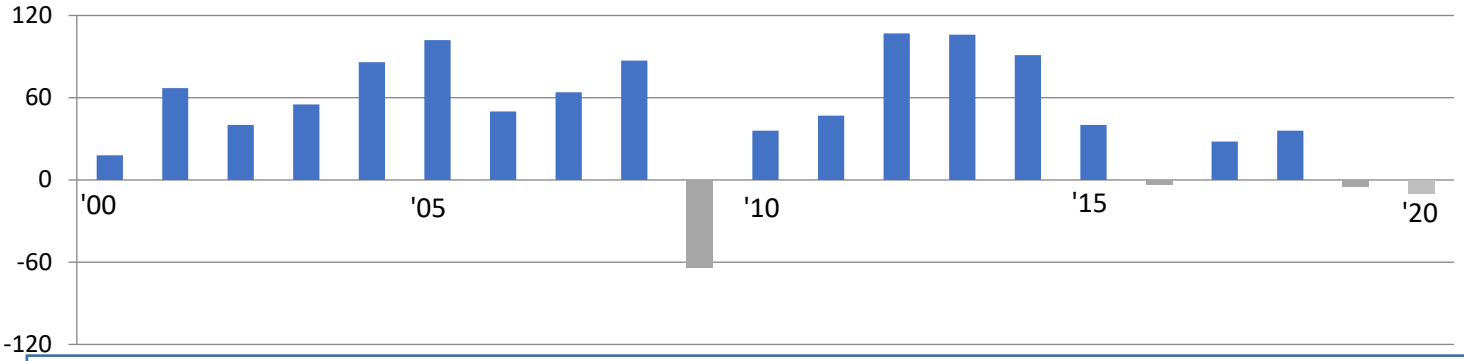
- Overall, the number of overseas subsidiaries decreased by 35; there were large decreases in China (△16) and Europe (△12) .
- The +122 for sales function subsidiaries in the breakdown is due to allowing multiple answers (functions) .

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



Breakdown of "-8"

【Changes in the number of subsidiaries】



Decrease due to membership withdrawal	-6	-24
Decrease due to pull out	-1	
Business integration/deconsolidation	-13	
Reason unknown	-4	
New establishment, etc.	16	16

- **The number of production function subsidiaries decreased two years in a row after peaking in 2018. Although the decrease is small, the amount of decrease expanded from △5 in 2019 to △10 in 2020.**
- **China had a large decrease of △8 subsidiaries despite having 16 newly established subsidiaries, due to business integration/deconsolidation, etc.**

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

JAPIA Japan Auto Parts Industries Association

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
1	China (+16)	China (+10)	China (+28)	China (+38)	China (+31)	Mexico (+16)	Mexico (+15)	Mexico (+6)	Indonesia (+8)	China (+13)	Indonesia Mexico (+5)	Philippines (+5)	Mexico (+5)
2	U.S. (+14)	India (+9)	Thailand (+10)	India (+15)	Indonesia (+20)	China (+14)	Thailand (+11)	India Indonesia (+2)	Thailand (+6)	Thailand Vietnam Brazil (+3)		Brazil (+3)	(Reference) China△8 Thailand△1 Indonesia△2
3	India (+9)	Thailand (+7)	Indonesia (+9)	Indonesia (+14)	Mexico (+15)	Indonesia (+13)	China (+8)		Mexico Philippines Cambodia China (+3)		Brazil (+4)	Thailand Britain (+2)	
4	Indonesia Korea (+4)	Indonesia Mexico (+3)	Vietnam Germany Morocco (+3)	Thailand (+4)	India (+8)	U.S. (+8)	Vietnam (+5)	Malaysia Vietnam Laos Paraguay France Moldova (+1)			Thailand France Morocco (+3)		
5				Brazil (+7)	Vietnam (+6)	Russia (+6)	U.S. (+4)			Mexico UK Italy (+2)		Indonesia Canada Spain Germany Italy Portugal Poland Turkey (+1)	
6	Thailand (+4)	U.S. (+2)		Mexico (+6)	Thailand (+4)	Thailand (+5)	Brazil (+2)						
7			France (+2)	Germany (+4)	Russia (+4)	Brazil (+5)	Russia (+2)				India (+2)		
8				Malaysia Vietnam Poland (+3)	Malaysia U.S. Turkey (+3)	India Germany Czech Republic (+4)					Philippines Colombia El Salvador Paraguay Serbia (+1)		
9													
10													

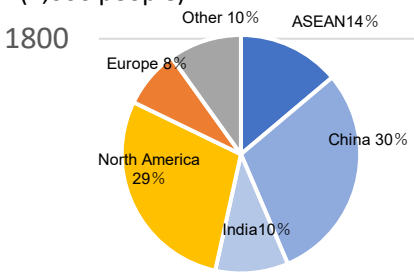
2008 financial crisis

Great East Japan Earthquake

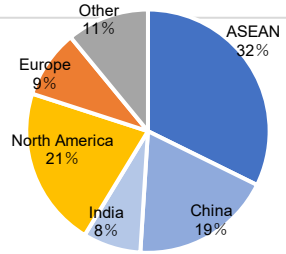
- **In 2020, there was a decrease in all countries except Mexico, which showed an increase.**
- **Reasons for the increase in Mexico include USMCA response, production transfer from the U.S., and response for new orders received in Mexico, etc.**

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

By region



Overseas production share of Japanese automobile manufacturers (2020)

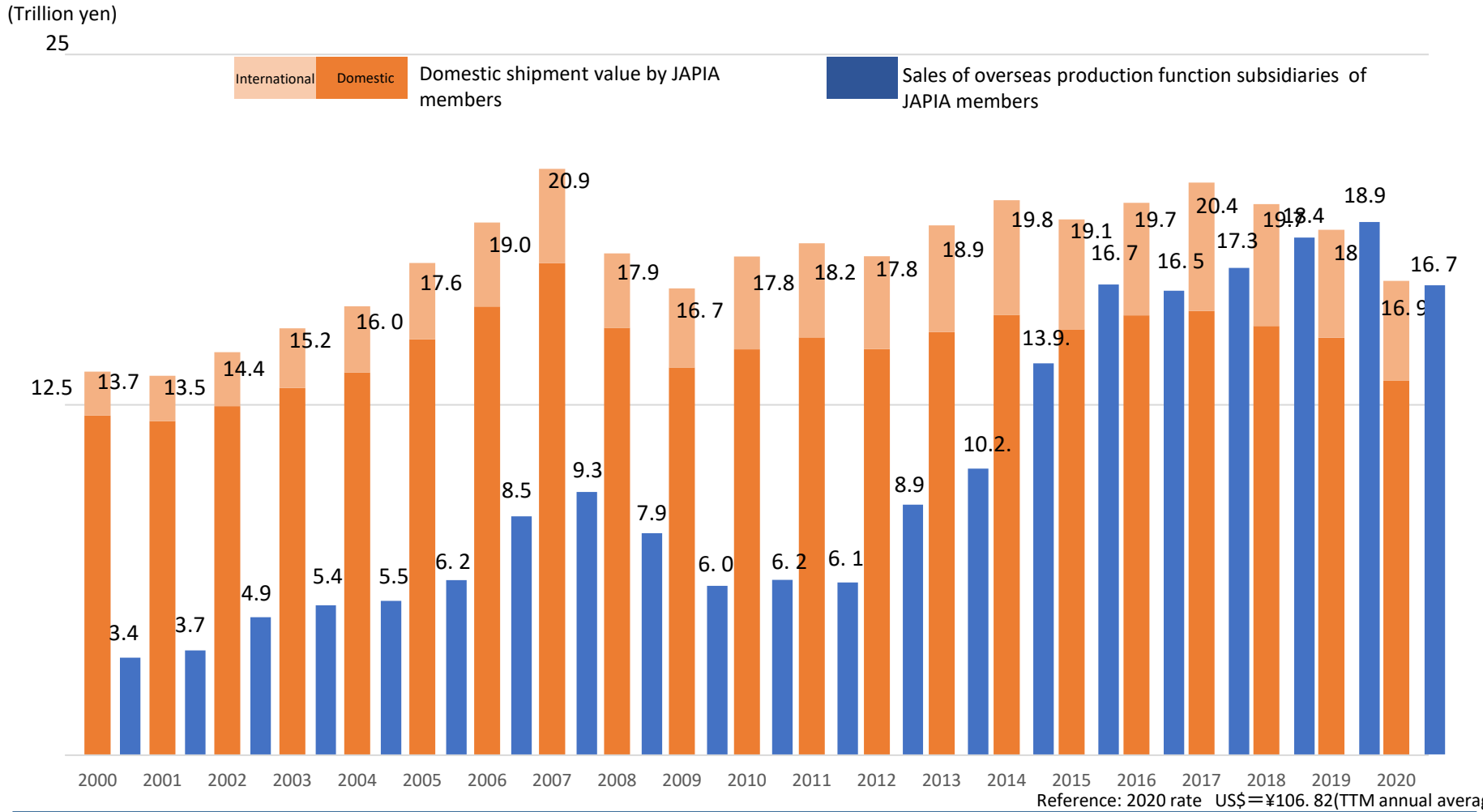


Total number of overseas employees of JAPIA members (2020)

- **The number of employees of overseas production function subsidiaries increased by 5% over the previous year, exceeding 1.5 million people in total.**
- **ASEAN, which is the largest by region/country, posted a decrease (△12,000 people) for the first time since 2013.**
- **All other regions posted an increase. In particular, China posted a 31,000 person increase overall due to newly established subsidiaries (16 subsidiaries) despite decreases in the number of employees due to business integration, etc.**

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

Comparison with domestic shipment value



Reference: 2020 rate US$＝¥106. 82(TTM annual average)

- **The sales volume of overseas production function subsidiaries was 16.7 trillion yen in total.**
- **This was a decrease of 2.2 trillion yen (△12%) over the previous year. This is slightly larger than the decrease in domestic shipment value of △10% (expected).**
- **This was due to the impact of a decrease in the overseas production volume of automobiles (△18.4%) and lockdowns in various countries, etc.**

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

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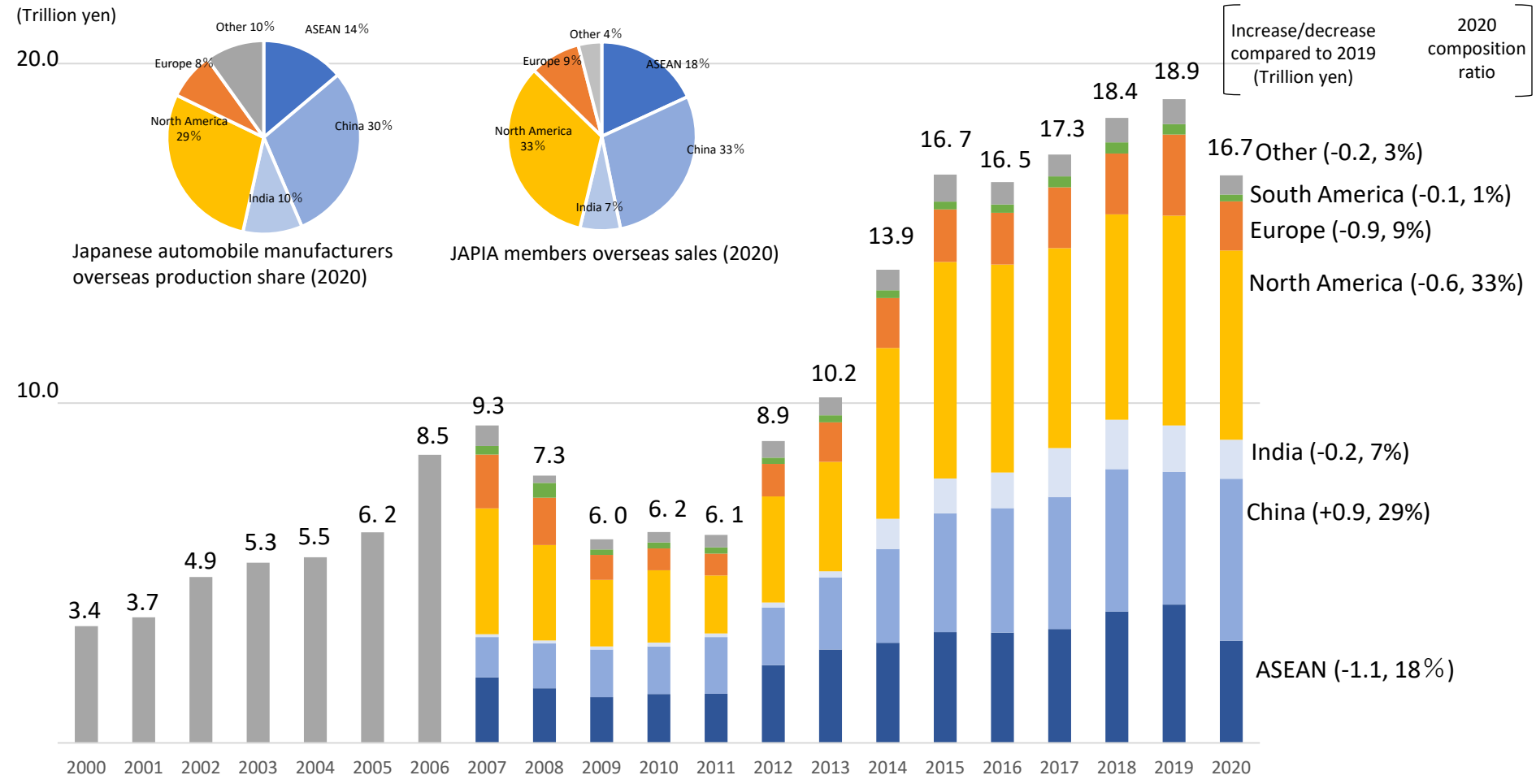
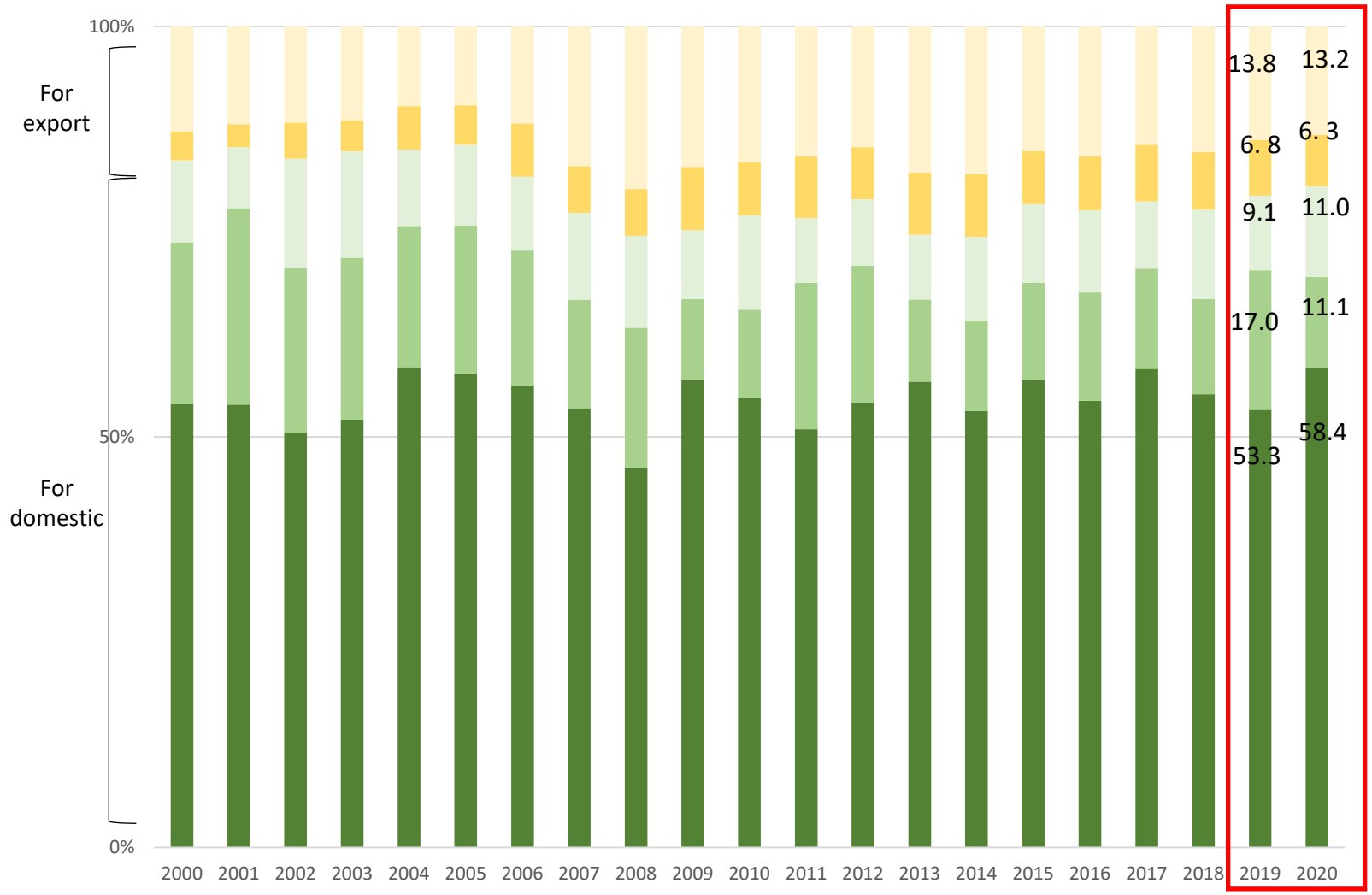
By region



- **2020 sales of overseas production subsidiaries decreased in all regions except for China. The largest decreases were in ASEAN (△1.1 trillion yen), Europe (△0.9 trillion yen), and North America (△0.6 trillion yen), in that order.**
- **China posted an increase of 0.9 trillion yen.**

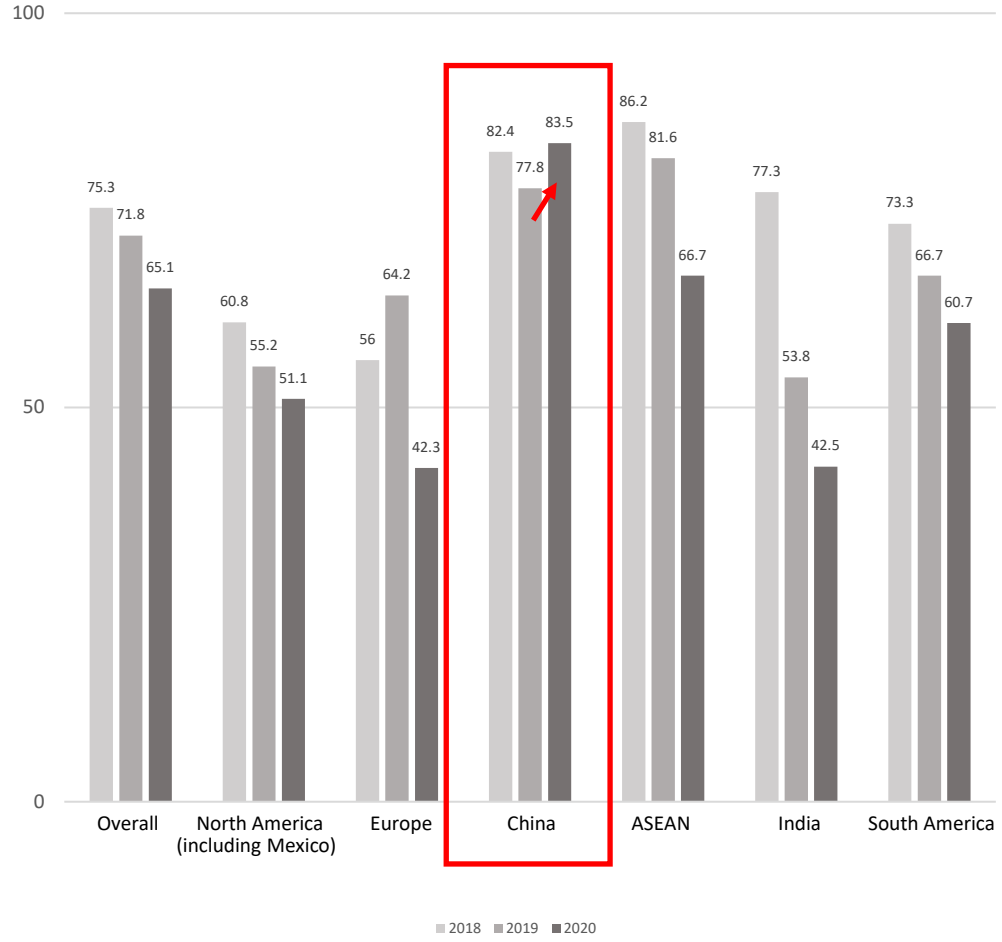
5. Overseas production function subsidiaries of JAPIA members
(4) Ratio by client



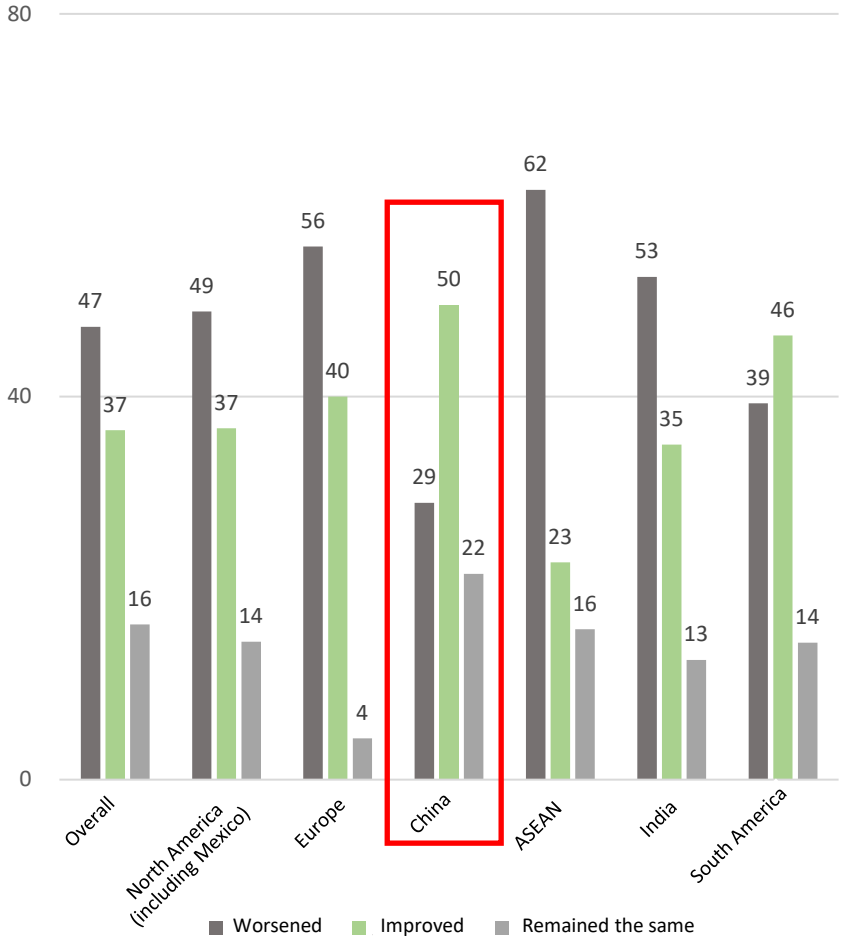
- **The share of export for third countries and Japan together was 20.6% in 2019 and 19.5% in 2020, indicating that the trend of local production of automobile parts for local consumption remains unchanged.**
- **Despite an overall decrease in sales in the domestic market due to Covid-19, dependence on Japanese automobile manufacturers has increased.**

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

Change in the ratio of profitable subsidiaries in a single fiscal year (3 years)

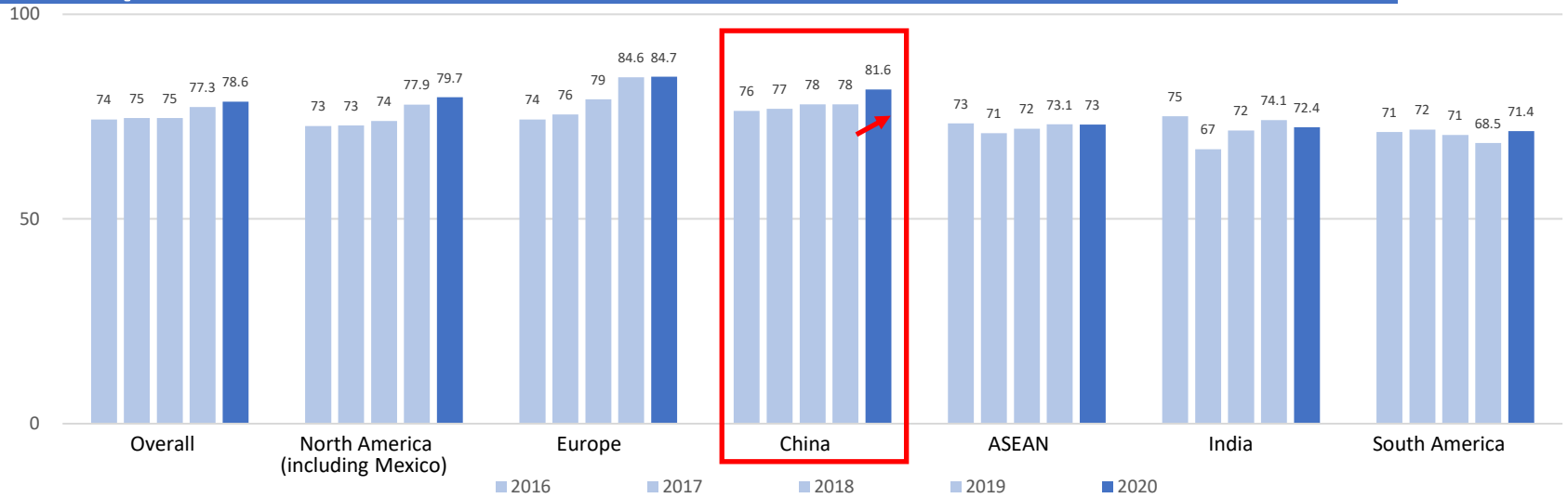


Profitability for 2020 compared to 2019



- **Only China is profitable/improving.**
- **Possible reasons may be due to strong performance of the client automobile manufacturers, increase in new orders, expansion in the sales of high-value added products, reduction in fixed costs, and suppressive effects of indirect material costs, etc.**

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



Note: Figures for 2016~2018 are simple averages, and figures for 2019 onwards are weighted averages

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

<North America>

- There are few suppliers that have a good cost/quality balance (Response by multiple subsidiaries)
- The labor market conditions are tight, and the required manpower cannot be secured (Response by multiple subsidiaries)
- Burden of increasing materials costs and rising wages
- High personnel turnover/difficulty in hiring personnel
- Local products (raw materials) are expensive

<Europe>

(Nothing in particular)

*There were comments regarding the lack of manufacturers that make processing equipment/electrical engineers (software) in Turkey.

<China>

- Quality issues
- Cannot obtain cheap parts and materials
- There is only one surface treatment (GEOMET) manufacturer that can produce the required quality

<ASEAN>

- Securing low-cost suppliers

<India>

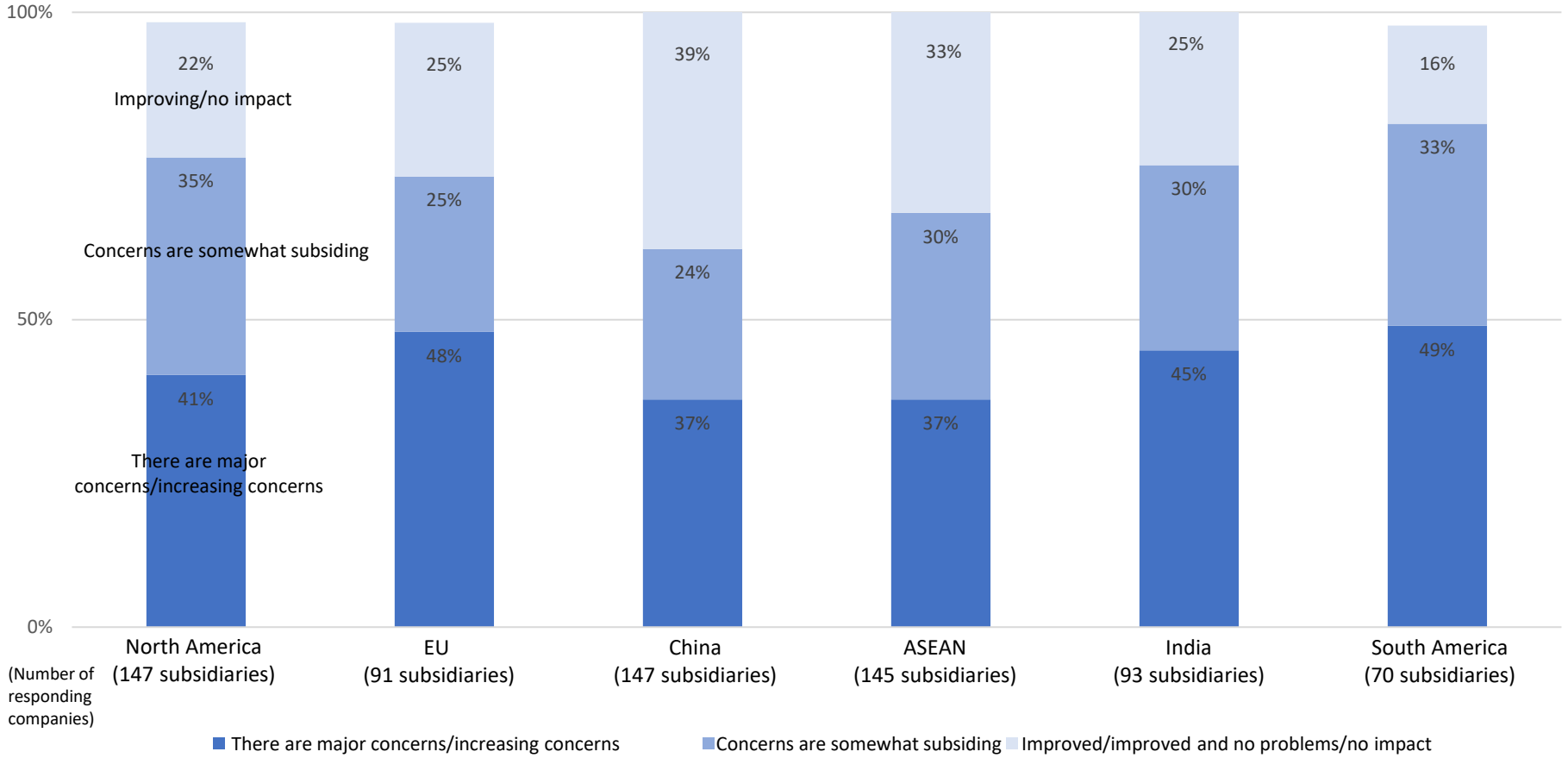
- It takes time to understand the instructions for standard conditions in drawings
- Quality issues

- **The local procurement rate has remained at a high level of 70-80% in all countries/regions.**
- **Overall, there was a 1.3 point increase in 2020, and the increase in China (+3.6 points) surpassed other regions. There was a 1.7 point decrease in India.**

6. Survey of topics for this fiscal year (1) Recent issues (As of July 2021)

Recent issues stated were ①Logistics (disruption), ②Semiconductor shortage , and ③Covid-19, and the degree of impact of each issue was surveyed.

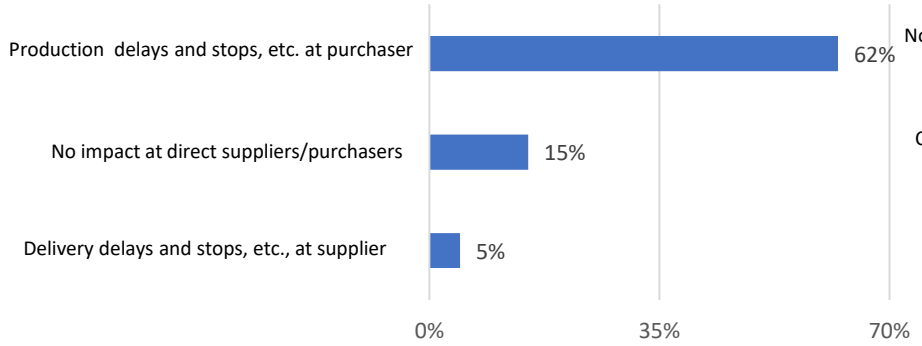
①Logistics disruption (By region)



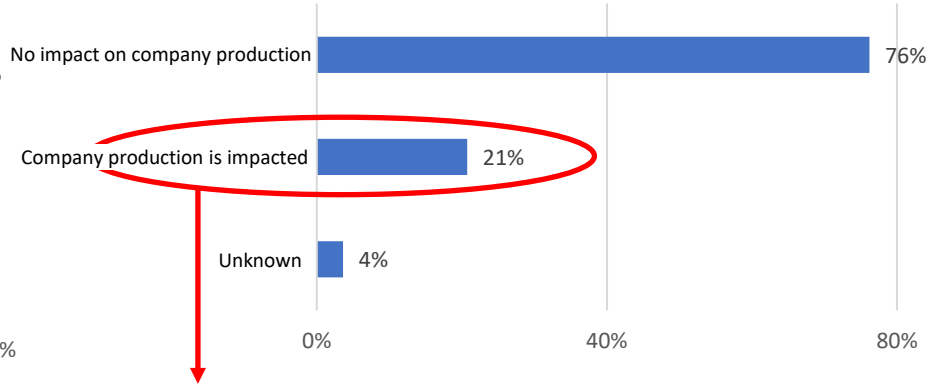
- **At the time of the survey (July 2021), the state of chaos in marine transportation had temporarily improved, and "There are major concerns/increasing concerns" were less than 50% in all regions.**
- **However, at present (December 2021), the situation is worsening again, and it is difficult to predict when the problem will be resolved.**

②Impact of the semiconductor shortage

<Impact on the supply chain (Respondents: 193 companies) >



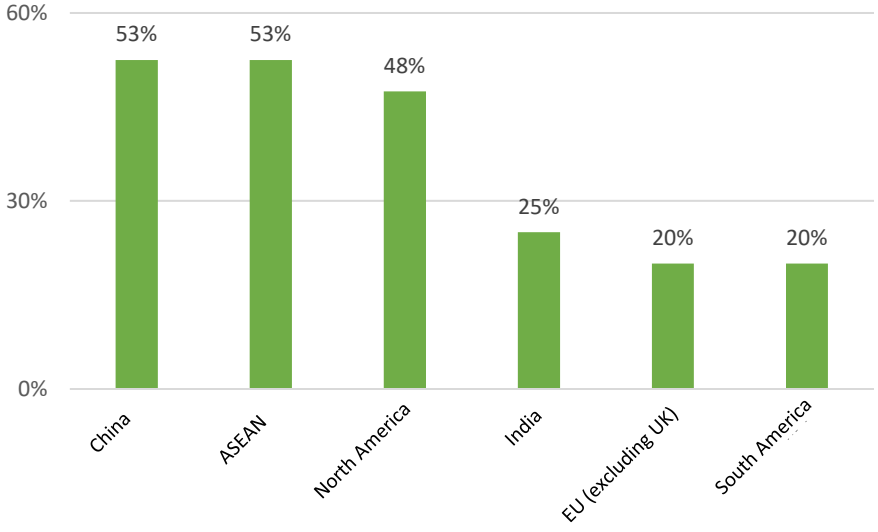
<Impact on company products (Respondents: 193 companies) >



<Main feedback to government strategy (in no particular order) >

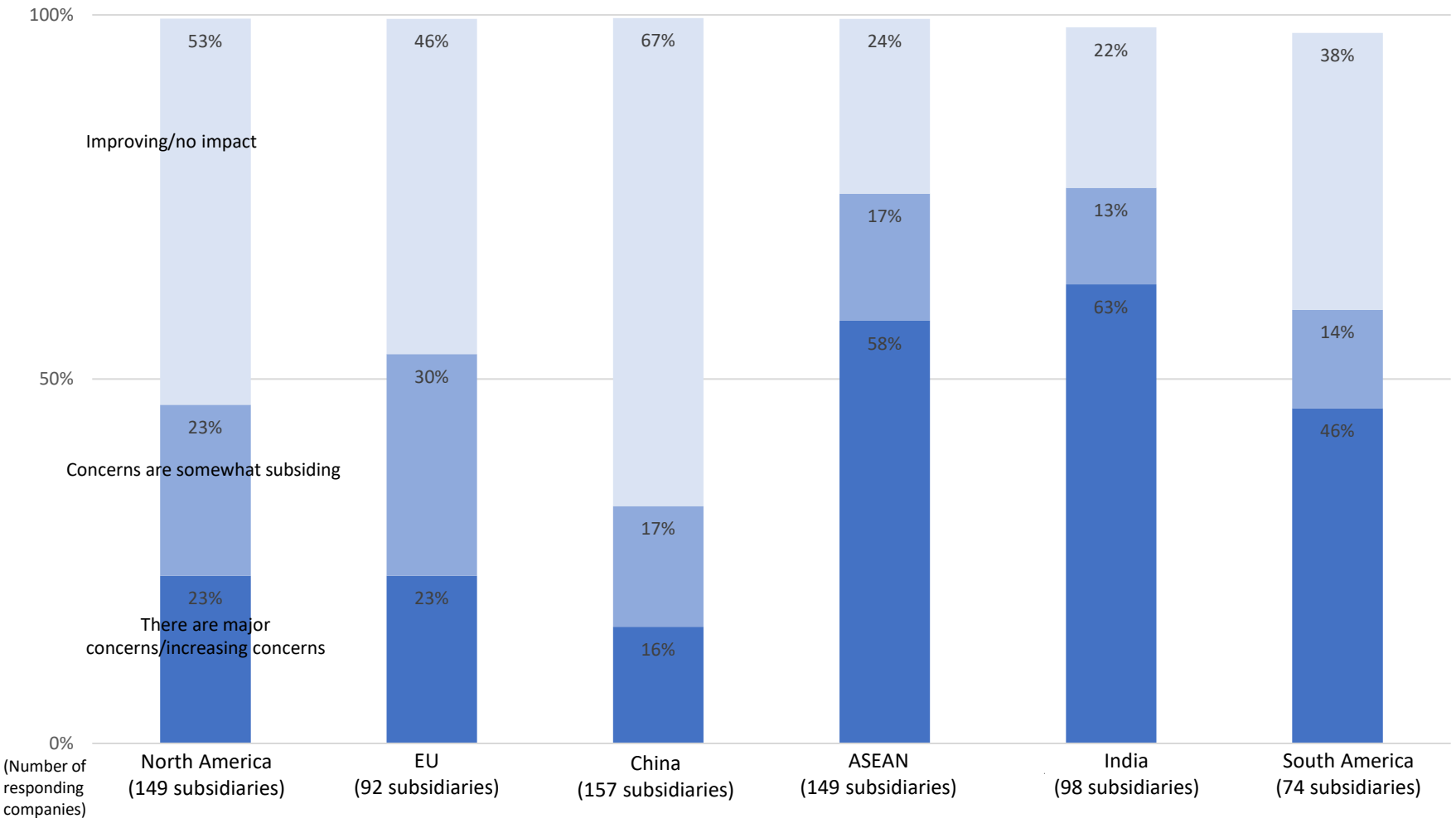
- **Establishment of a government mechanism for securing semiconductors, BCP management, and stable supply**
- **Listing core parts which may also be affected by shortages like semiconductors, and establishment of a stable supply system**
- **Secure Japan's competitive superiority, including semiconductor materials/production methods**
- **Supporting niche technologies affected by the semiconductor shortage**
- **Stable supply to the automobile industry**
- **As management of specific industries is a double-edged sword, manifestation of government policies, information transparency, and cooperation with related industries are important**
- **Creation of policies to supply opportunities for venture firms/start-ups in addition to economic incentives**

<Affected regions>



- **Automobile manufacturers were more severely impacted, with many auto parts companies whose own products were not affected even though their clients were impacted.**

③Impact of Covid-19 (By region)



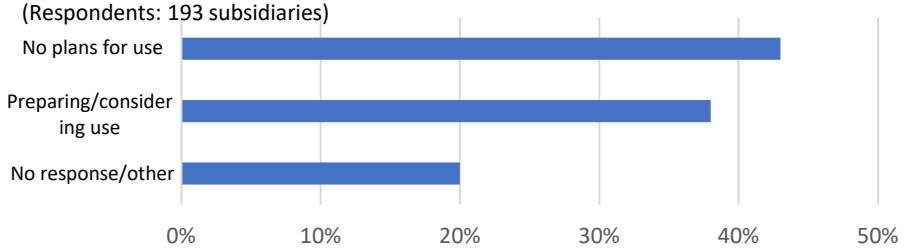
- **In China, North America, and EU, about 50% responded “improving/no impact” for the impact of Covid-19.**
- **The impact of Covid-19 is large in ASEAN and India.**

6. Survey of topics for this fiscal year
(2) Response to Economic Partnership Agreements (As of July 2021)

①Response to RCEP

There are no immediate customs benefits for the company's exports and imports, but usage is being considered due to requests for proof of origin, etc., from clients.

(Respondents: 193 subsidiaries)



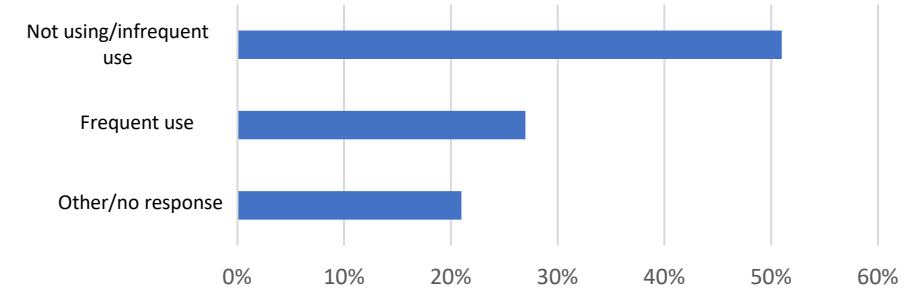
<Main feedback (in no particular order) **>**

- **Benefits will arise within a few years to 10 years after RCEP comes into effect. Surveys are being conducted to consider usage.**
- **We would like the Japanese government to work on publicizing the operational procedures to the partner countries as soon as possible when RCEP comes into effect.**
- **Smooth customs clearance when importing from China is desired.**

②Usage status of EU-Japan EPA

There are many companies that do not use it, also due to the Japan-UK EPA coming into effect.

(Respondents: 193 subsidiaries)



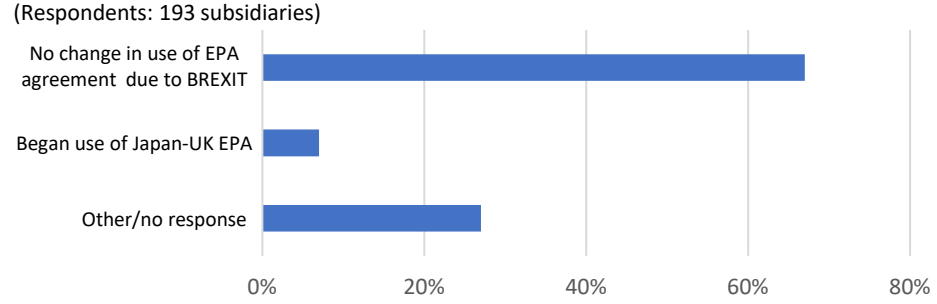
<Main feedback (in no particular order) **>**

- **There is some increase in difficulty in the exchanges with local customers and delivering goods, etc., when exporting products manufactured in Japan.**
- **The requirement to present proof of origin during customs clearance in Germany makes it extremely cumbersome compared to other countries.**
- **As the Japan-UK EPA came into effect, the EU-Japan EPA is not used.**

③Impact of BREXIT

No impact/changes in the use of Japan-EU EPA, etc., due to BREXIT.

(Respondents: 193 subsidiaries)



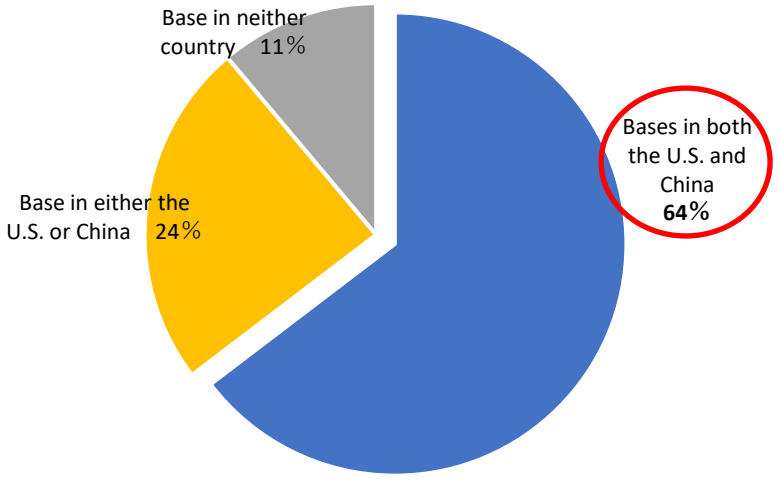
<Main feedback (in no particular order) **>**

- **Prolonged renting of external warehouses for parts inventory is becoming a management burden in terms of costs and management, etc.**
- **Separating from Japan-EU increases management work.**
- **It would be good if accumulation of origin that includes Japan is possible in the UK-EU agreement.**

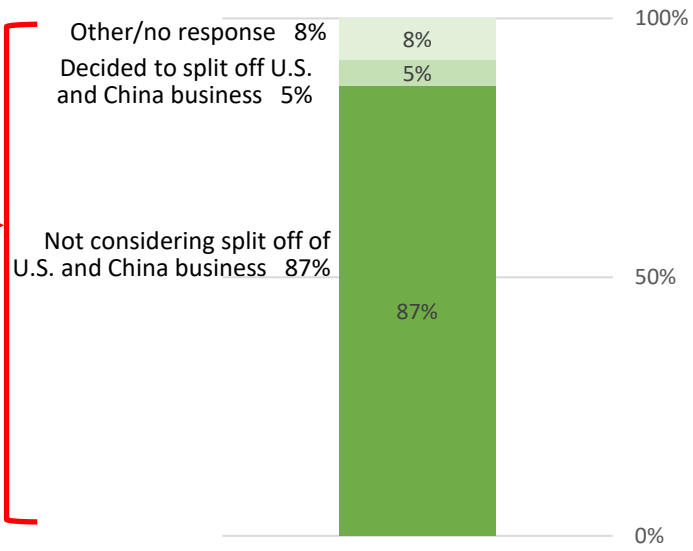
6. Survey of topics for this fiscal year
(3) Response to economic security (As of July 2021)

Presence of bases

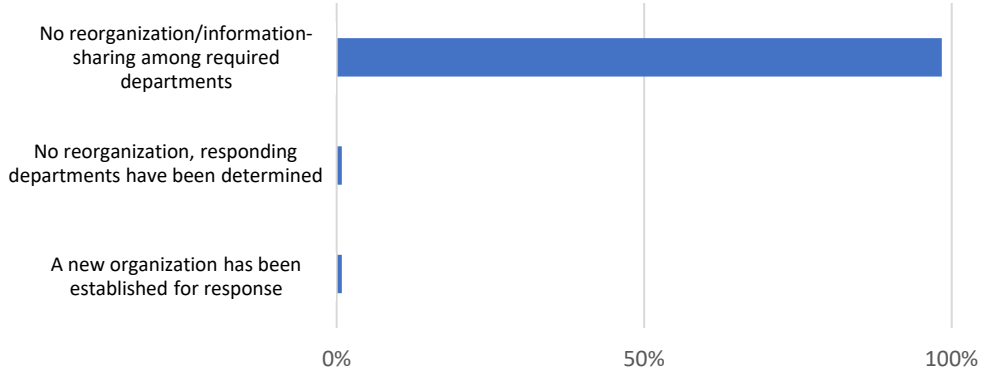
(Respondents: 193 subsidiaries)



Split-off of U.S. and China business



Main feedback for reorganization



<Main feedback for business split-off>

- There is no trade between U.S. and China/Business is established in each respective country/There is no reciprocal relationship/There are no concerns as the business entities are not affiliated, etc.
- Split-off is not being considered, but measures to reduce impact are being considered.
- In the U.S., some changes in the suppliers of parts that are procured from China are being considered.
- Split-off has already been implemented.

- **Among companies with business in both the U.S. and China, many say that their business in the U.S. and China are kept separate to begin with.**
- **About 90% of companies are not considering business split-off/reorganization at present.**

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 development of the automobile parts industry as well as smoother business activities of our member companies.

Supplementary material

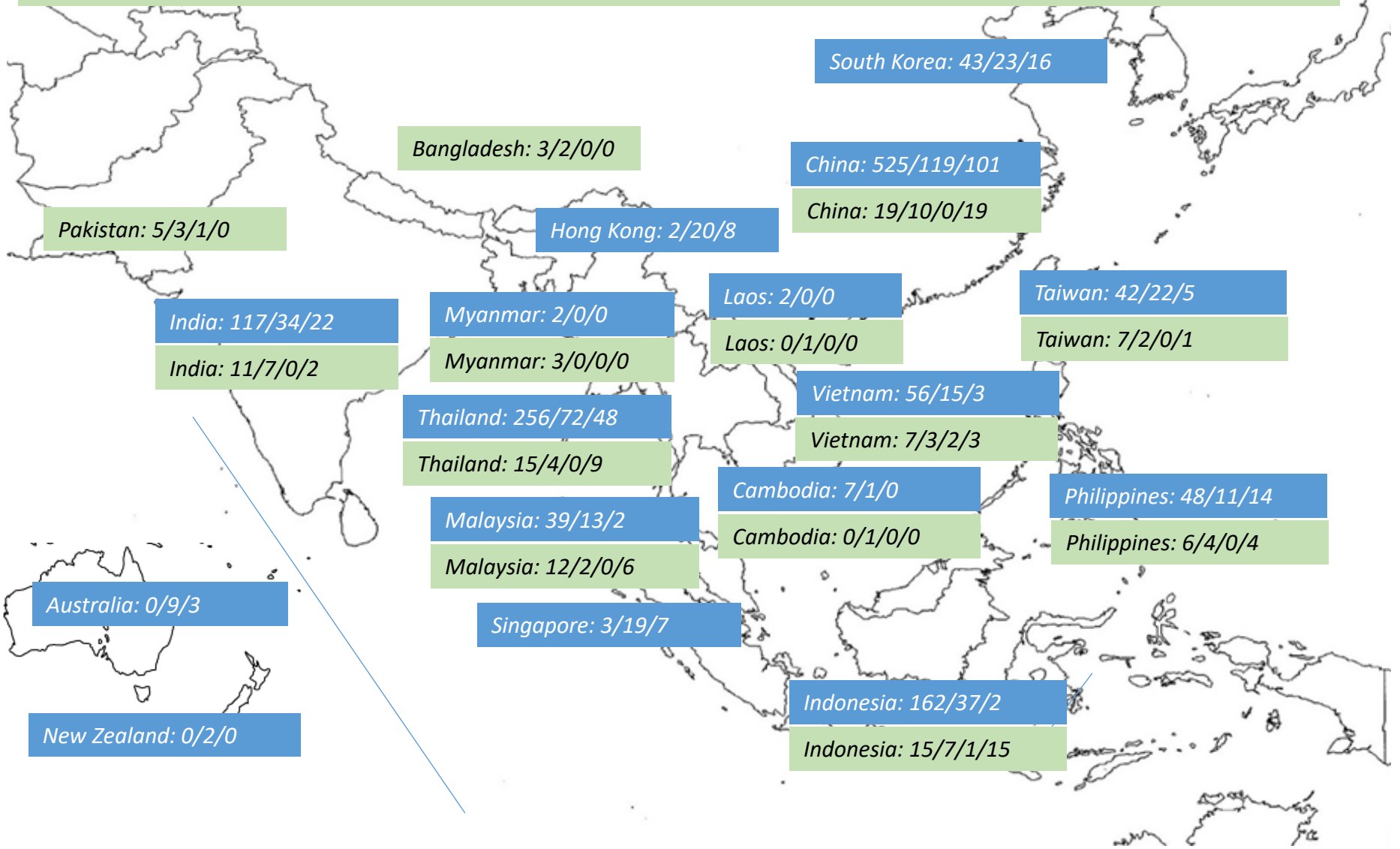
<Overseas expansion of member companies >

<Global sales of automobiles (2020) >

<Supplementary material Overseas expansion of member companies –Asia>

- *Automobile 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*



<Supplementary material　Overseas expansion of member companies – North, Central, and South America>

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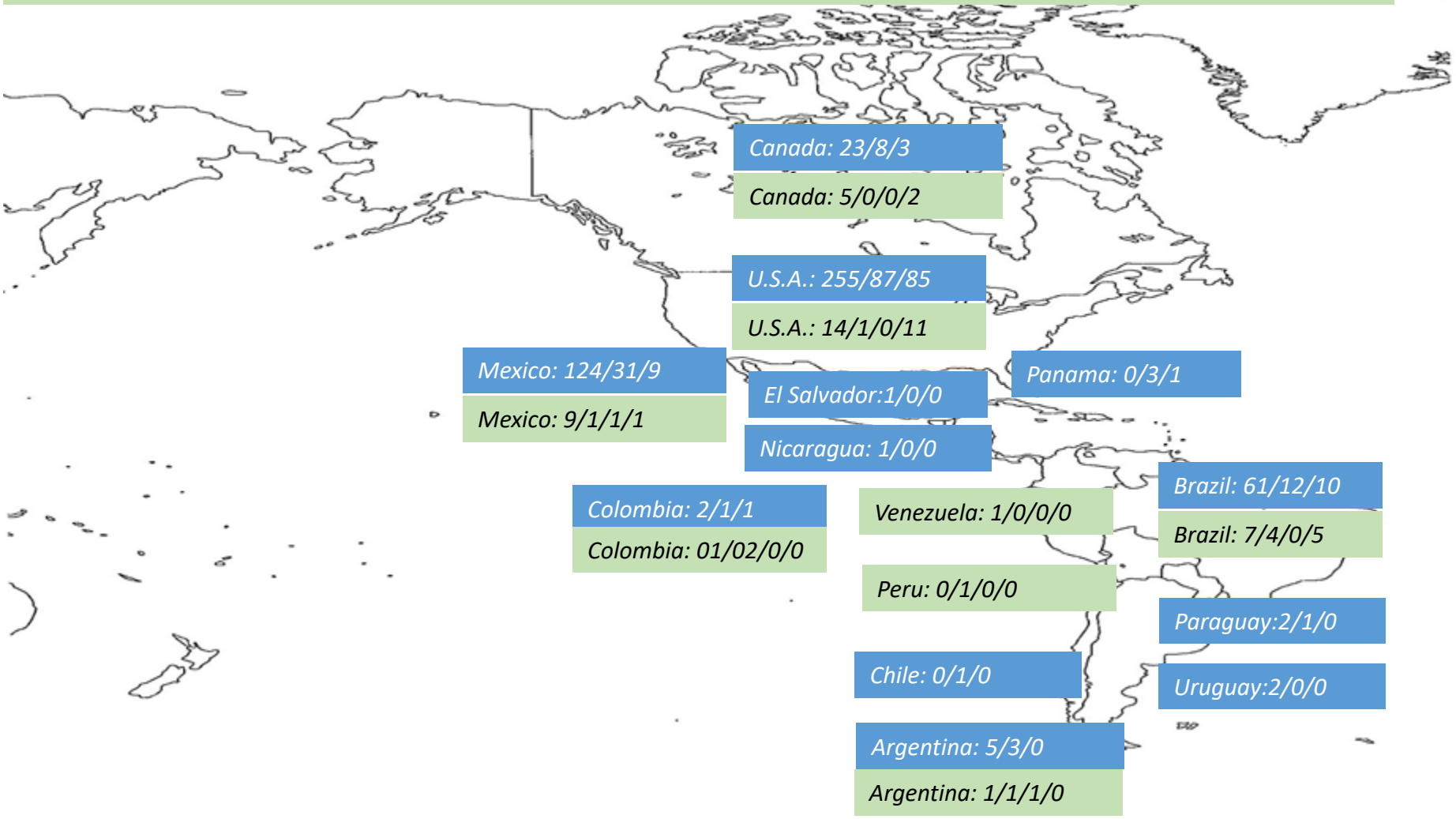
Automobile parts　Country: Number of production function subsidiaries/Number of sales function subsidiaries/Other(Management and supervision, design and development, marketing, etc.)

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

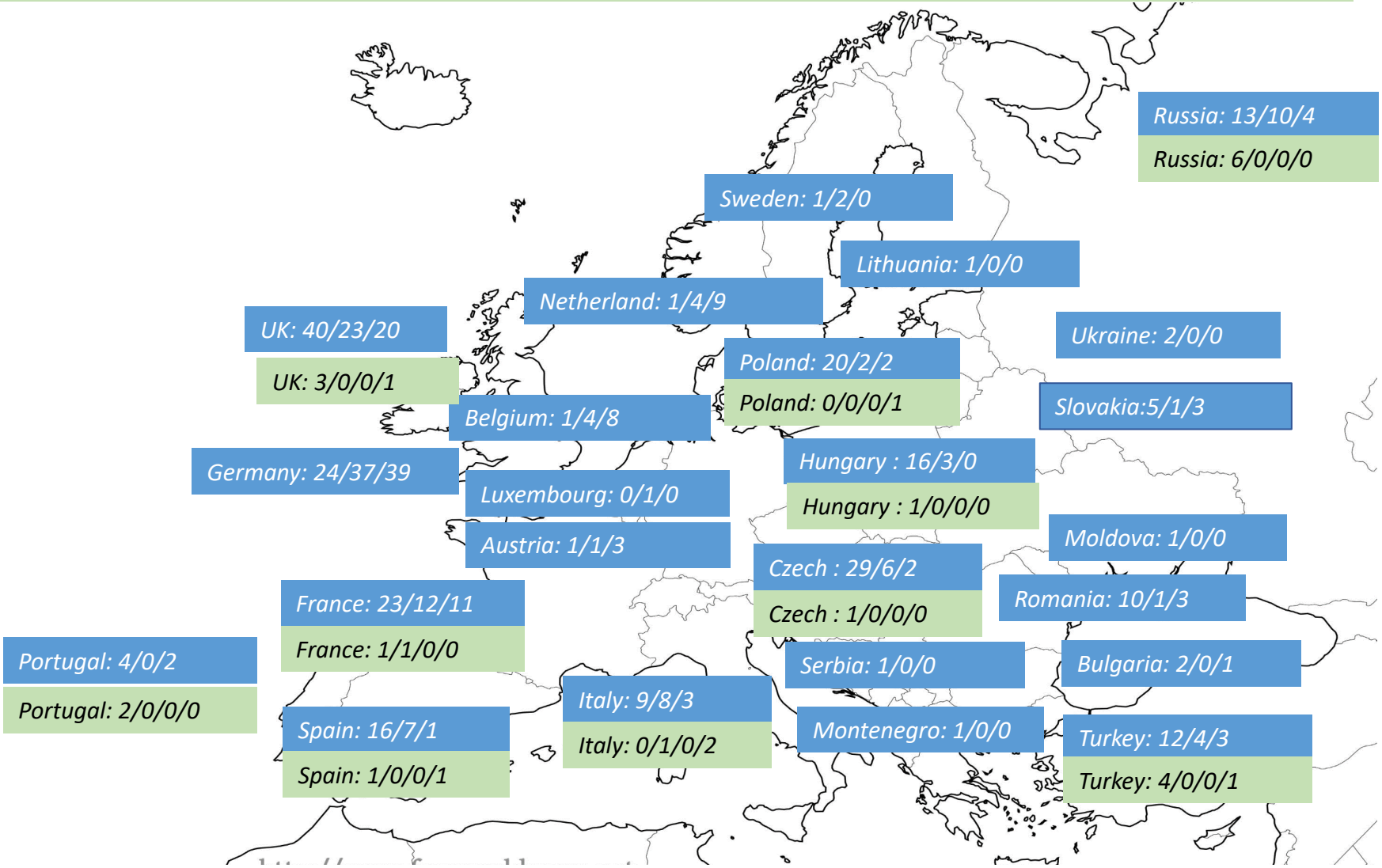
**Data: JAMA*



<Supplementary material Overseas expansion of member companies -Europe>

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

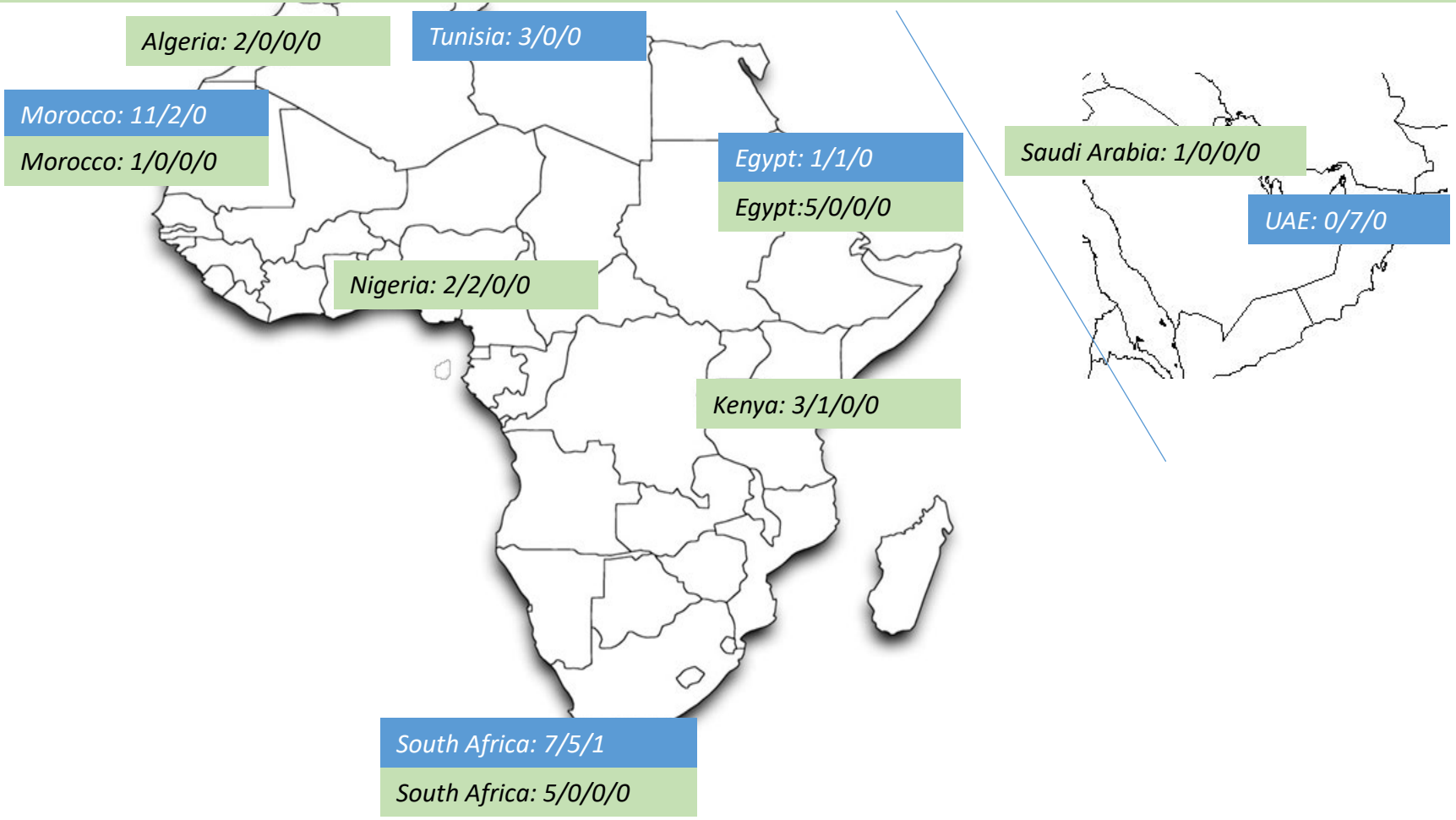
Number of local production factories of Japanese automobile manufacturers **Data: JAMA*
Country: Automobile/Motorcycle/Automobile・Motorcycle/Parts



<Supplementary material　Overseas expansion of member companies - Africa>

Automobile 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　**Data: JAMA*
Country: Automobile/Motorcycle/Automobile・Motorcycle/Parts



<Supplementary material
Global sales of automobiles (2020 source: MarkLines) >

Change in global sales

Source : MarkLines

【Global sales】

Unit: thousand

		January	February	March	April	May	June	July	August	September	October	November	December	Total
2019	Light vehicle	6,929	6,098	8,600	6,886	7,271	7,380	6,810	6,850	7,229	7,140	7,376	7,756	86,325
	Buses/trucks	193	181	259	219	230	238	212	202	202	207	215	217	2,576
	Total	7,122	6,279	8,859	7,105	7,501	7,618	7,022	7,052	7,430	7,347	7,591	7,974	88,900
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	7,862	73,519
	Buses/trucks	199	159	210	187	191	229	219	201	234	224	227	213	2,493
	Total	6,360	4,953	5,393	3,989	5,118	6,456	6,686	6,411	7,678	7,437	7,456	8,075	76,012
	Year-on-year comparison	89%	79%	61%	56%	68%	85%	95%	91%	103%	101%	98%	101%	86%

【Sales by region】

North America (Breakdown is shown in Appendix 1)		January	February	March	April	May	June	July	August	September	October	November	December	Total
2019	Light vehicle	1,373	1,509	1,932	1,635	1,919	1,827	1,700	1,966	1,562	1,636	1,700	1,800	20,558
	Buses/trucks	22	22	26	27	28	27	28	26	31	26	21	26	309
	Total	1,395	1,531	1,958	1,662	1,947	1,854	1,728	1,992	1,593	1,661	1,721	1,826	20,867
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%

Europe (*Breakdown is shown in Appendix 1)		January	February	March	April	May	June	July	August	September	October	November	December	Total
2019	Light vehicle	1,468	1,419	2,147	1,668	1,758	1,829	1,629	1,357	1,603	1,545	1,544	1,612	19,579
	Buses/trucks	36	35	43	41	47	48	39	41	32	39	40	35	478
	Total	1,504	1,454	2,191	1,710	1,805	1,878	1,668	1,399	1,636	1,584	1,583	1,648	20,057
2020	Light vehicle	1,381	1,337	1,138	385	807	1,436	1,591	1,168	1,651	1,453	1,371	1,530	15,248
	Buses/trucks	34	33	31	22	25	34	36	33	38	42	41	36	406
	Total	1,415	1,370	1,169	406	833	1,470	1,627	1,201	1,688	1,495	1,412	1,566	15,654
	Year-on-year comparison	94%	94%	53%	24%	46%	78%	98%	86%	103%	94%	89%	95%	78%

ASEAN		January	February	March	April	May	June	July	August	September	October	November	December	Total
2019	Light vehicle	294	247	298	258	288	241	276	270	267	280	263	240	3,222
	Buses/trucks	12	10	17	15	15	14	15	14	15	16	17	17	176
	Total	306	257	315	273	303	255	291	284	282	296	280	257	3,398
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%

<Supplementary material
Global sales of automobiles (2020 Source: MarkLines) >

JAPIA Japan Auto Parts Industries Association

China		January	February	March	April	May	June	July	August	September	October	November	December	Total
2019	Light vehicle	2,319	1,445	2,446	1,921	1,853	1,993	1,765	1,919	2,228	2,234	2,396	2,598	25,116
	Buses/trucks	48	37	74	60	59	64	43	39	43	50	61	60	639
	Total	2,367	1,482	2,520	1,980	1,913	2,056	1,808	1,958	2,271	2,284	2,457	2,658	25,754
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	92	76	68	81	76	77	61	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%

India		January	February	March	April	May	June	July	August	September	October	November	December	Total
2019	Light vehicle	364	356	395	313	305	293	255	246	280	349	322	297	3,775
	Buses/trucks	3	3	5	3	4	4	3	3	2	3	3	5	42
	Total	368	360	401	316	308	297	258	248	282	352	326	302	3,817
2020	Light vehicle	347	319	158	0	46	139	183	276	346	310	349	332	2,805
	Buses/trucks	5	4	2	0	0	1	0	1	2	0	1	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%

South America		January	February	March	April	May	June	July	August	September	October	November	December	Total
2019	Light vehicle	304	278	290	311	321	299	334	329	319	325	305	360	3,774
	Buses/trucks	13	12	12	13	14	12	14	15	14	15	14	14	161
	Total	316	289	302	324	335	311	348	344	333	340	318	374	3,936
2020	Light vehicle	277	264	206	65	93	179	219	234	283	298	301	338	2,756
	Buses/trucks	12	10	9	5	7	13	14	13	13	13	13	16	140
	Total	289	274	216	70	100	192	233	247	295	311	315	354	2,896
	Year-on-year comparison	91%	95%	71%	22%	30%	62%	67%	72%	89%	91%	99%	95%	74%

Other		January	February	March	April	May	June	July	August	September	October	November	December	Total
2019	Light vehicle	240	240	297	237	271	296	239	243	286	290	297	323	3,258
	Buses/trucks	33	35	38	29	34	39	36	36	41	39	36	34	429
	Total	273	275	335	266	305	335	275	279	326	329	332	357	3,687
2020	Light vehicle	177	196	182	72	117	228	211	176	215	234	233	246	2,286
	Buses/trucks	31	33	27	7	19	34	35	32	34	33	34	32	351
	Total	208	229	209	79	136	262	245	208	249	267	268	277	2,637
	Year-on-year comparison	76%	83%	62%	30%	45%	78%	89%	74%	76%	81%	81%	78%	72%

Japan out of others		January	February	March	April	May	June	July	August	September	October	November	December	Total
2019	Light vehicle	371	395	463	614	366	382	432	441	369	529	305	372	5,040
	Buses/trucks	16	12	16	26	13	14	18	18	20	19	10	13	194
	Total	387	408	479	640	378	396	450	459	388	548	315	386	5,234
2020	Light vehicle	349	415	557	259	208	334	383	314	452	394	398	365	4,429
	Buses/trucks	11	15	24	11	10	13	13	12	17	12	14	15	166
	Total	360	430	581	270	218	347	396	326	469	407	411	379	4,595
	Year-on-year comparison	93%	105%	121%	42%	58%	88%	88%	71%	121%	74%	131%	98%	88%