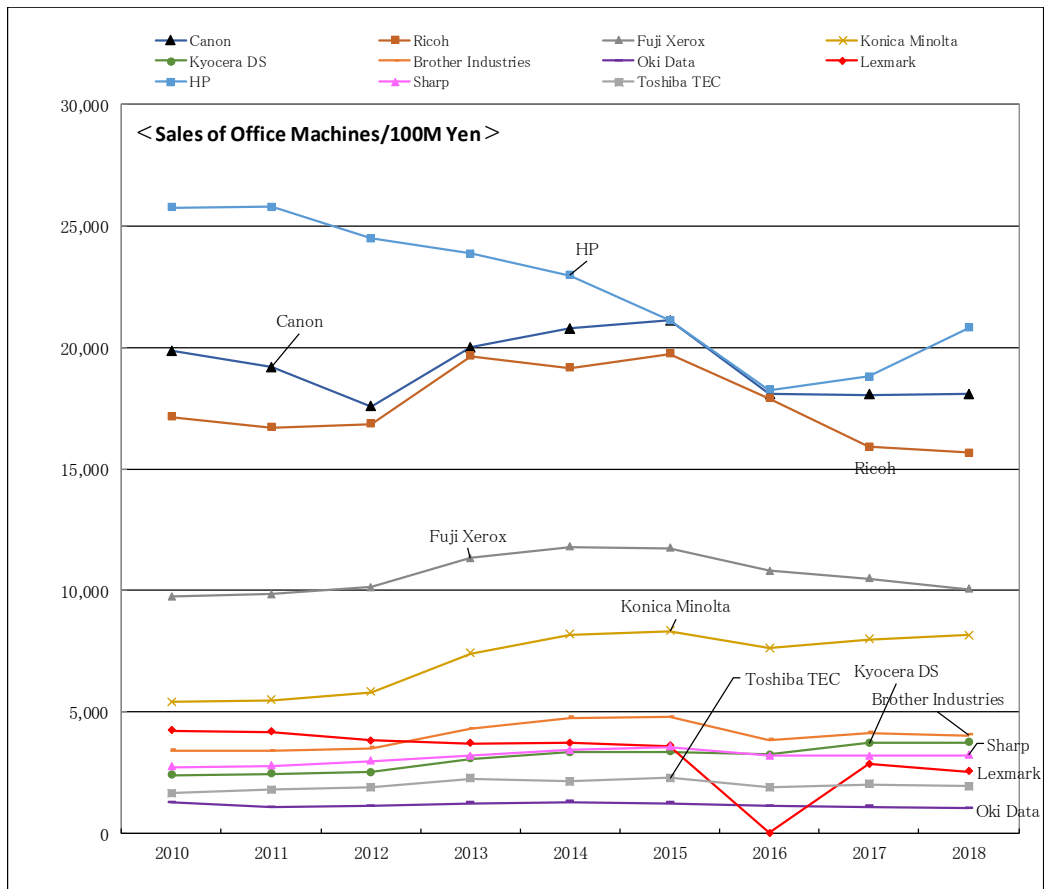


Research Report

[2019 Version of Supply Chain Market Forecast]

“The Rapidly Changing Face of the Office Equipment Industry and Its Supply Chain”

=A decade-long history of the supply chain of copiers, laser printers, toner and its related materials, photoconductors and their related materials, as well as functional components =



<Overview>

I. Theme

“The Rapidly Changing Face of the Office Equipment Industry and Its Supply Chain”

=A decade-long history of the supply chain of copiers, laser printers, toner and its related materials, photoconductors and their related materials, as well as functional components =

II. Abstract

The Japanese office equipment industry characterized by dominant market share of Japanese makers boasting their globally recognized technology and collective strengths is now struggling.

Development and manufacturing technology, sales network, and support system, based on a combination of electricity, electronics, chemistry, machinery, and software among others are a must for manufacturing copiers and laser printers in the office equipment industry. Japanese manufacturers did all it could in every single field to maintain their current leading position; they quickly adapted to the transition from analog to digital and supported the advent of smaller products and evolving imaging technology. However, as the market is becoming overcrowded, the overall industry is going slowly out of tune.

Development of hardware products has made little progress, leading makers to save costs, while parts makers are forced out of business because they could make little profit out of products they were told to supply at as low a price as possible. Behind this was the fast-growing presence of Chinese makers whose growth is supported by Japanese engineers who were asked to join them after being dismissed by their Japanese employers worried too much about their company's future to care for the retention of their engineers. Such Chinese makers supported by their government naturally grew quickly and are squeezing the profitability of Japanese makers.

If Chinese makers start manufacturing their own copiers, Japanese makers will have no choice but restructure their industry.

Against this background, this special report describes how much change the supply chain has gone through over the last decade in terms of hardware machines, functional parts, toner, photoconductors, and other items analyzed by each hardware maker. We hope the report will be beneficial to all readers and be a good reference for them to lay out business strategy.

III. Items and Makers

1. Target Items

1-1. Hardware makers

1-2. Functional parts makers

1-3. Toner related makers

1-4. Photoconductor related makers

2. Target makers

2-1. Hardware makers (11 companies)

- 1) Canon
- 2) Fuji Xerox
- 3) Ricoh
- 4) Konica Minolta
- 5) Sharp
- 6) Kyocera Document Solutions
- 7) Toshiba TEC
- 8) Brother Industries
- 9) Oki Data
- 10) Lexmark
- 11) HPPK

2-2. Functional parts makers (**total of 125+ makers**)

- 1) Charge roller (11+ companies)
- 2) Magnetic roller (10+ makers)
- 3) Developer roller (13+ companies)
- 4) Toner adder roller (9+ companies)
- 5) Transfer roller (13+ companies)
- 6) Intermediate transfer belt (11+ companies)
- 7) Heat roller/Fuser belt (19+ companies)
- 8) Pressure roller/Pressure belt (18+ companies)
- 9) Cleaning blade (8+ companies)
- 10) Paper feeder and Transporting roller (13+ companies)

2-3. Toner related makers (**total of 48+ makers**)

- 1) Toner makers (17+ makers)
- 2) Toner resin makers (7+ companies)
- 3) Carrier makers (4+ makers)
- 4) Magnetic oxide makers (4+ makers)
- 5) Colorant makers (5+ makers)
- 6) CCA makers (4+ makers)
- 7) External additives makers (7+ makers)

2-4. Photoconductor related makers (**total of 28+ makers**)

- 1) Photoconductor makers (9+ makers)
- 2) Photoconductor's substrate makers (5+ makers)
- 3) Photoconductor's coating material makers (14+ makers)

IV. Research Period and Methodology

1. Research Period

From 2010 to 2019

2. Methodology

- 1) On-site and in-person interviews with target makers
- 2) Analysis and review of open literatures, materials, statistics, and other sources
- 3) Analysis of Data Supply's own proprietary database

V. Format and Report Preparation Period

1. Research Form

This is a multi-client study.

2. Research Period

October, 2019

3. Publication Date

January 17, 2020 (Japanese version was released on November 14, 2019)

4. Report Size and Format

A4 size in PDF format

5. Price

\$2,000-

6. Researchers

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7. How to Apply

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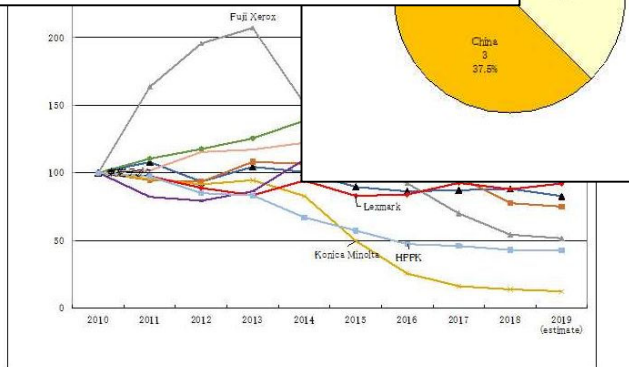
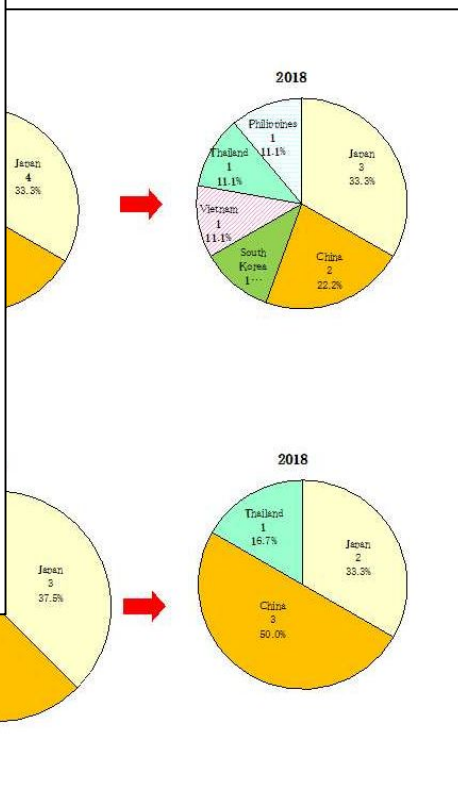
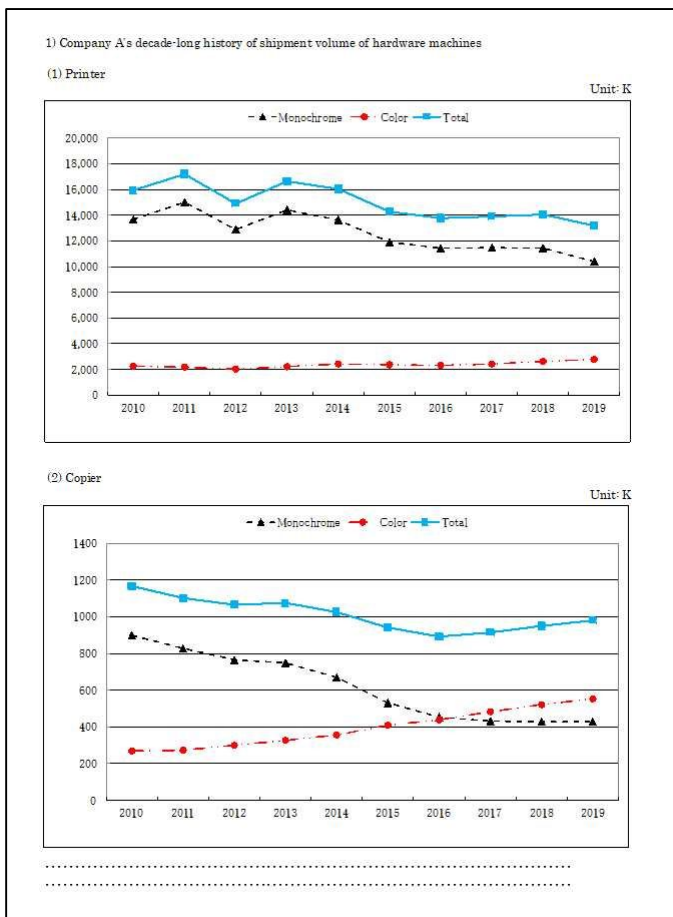
《Items common among makers》

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[1] Canon [2] Ricoh [3] Fuji Xerox [4] Konica Minolta [5] Sharp
 [6] Kyocera Document Solutions [7] Toshiba TEC [8] Brother Industries [9] Oki Data
 [10] Lexmark [11] HPPK

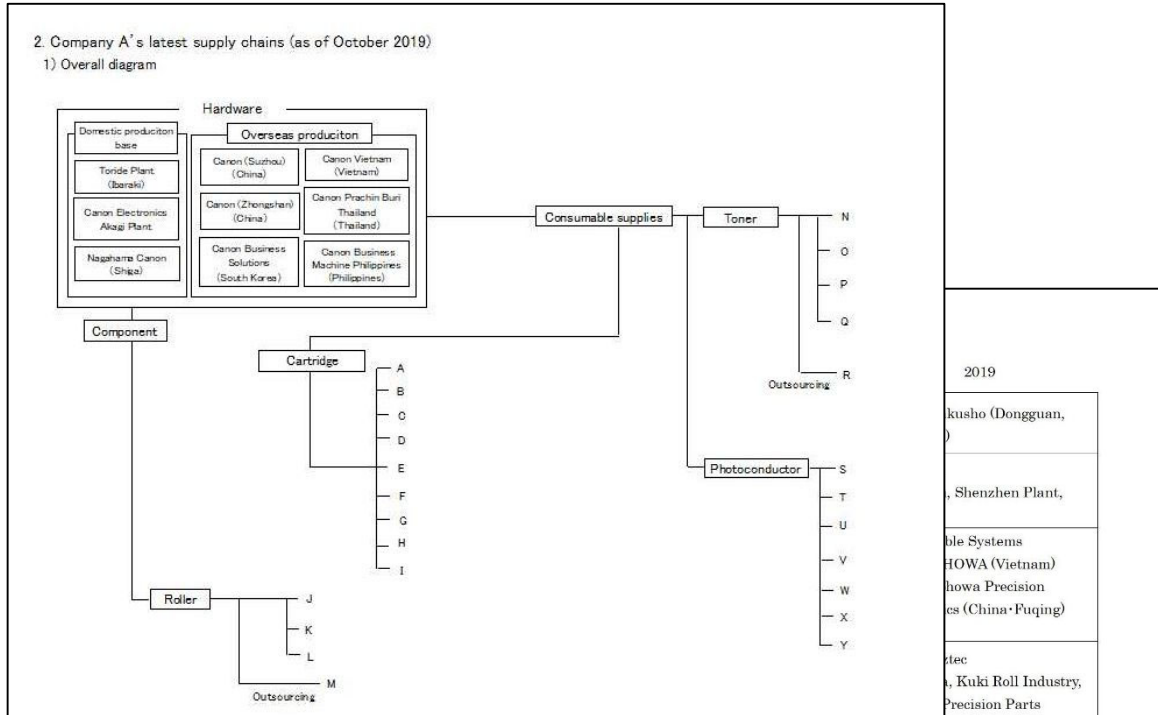
SAMPLE

(Actual company name and commentary are provided in the official version.)



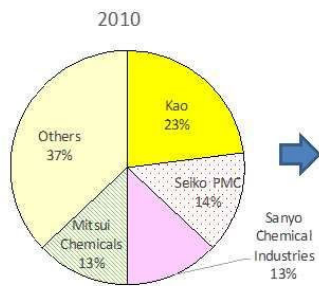
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019 (estimate)
Canon	100	108	93	104	101	90	86	87	88	83
Ricoh	100	95	93	108	107	129	110	97	78	75
Fuji Xerox	100	164	196	207	151	124	92	70	84	82
Konica/Minolta	100	95	91	95	83	50	26	16	14	12
Kyocera Document Solutions	100	111	118	128	139	169	169	202	208	212
Brother Industries	100	102	115	117	122	124	125	136	125	120
Oki Data	100	82	79	86	110	107	106	103	102	93
Lexmark	100	98	89	83	94	83	84	93	88	92
HPPK	100	97	85	83	67	57	47	46	43	43
Grand total	100	105	98	104	95	90	86	87	84	81

(Actual company name and commentary are provided in the official version.)



5) History of material purchase for toner

(1) Resin



[Highlights]

[Polyester-based resin]

Polyester-based resin specialist maker Kao has increased the production ratio from 23 percent to 50 percent as the color toner grew in volume. Sanyo Chemical Industries, which produces both polyester-based and styrene-acrylic resin, maintains 13 percent. In contrast, Mitsui Chemicals and Seiko PMC, which either produce styrene-acrylic resin as a core item or produce it only, have lost share sharply.

Plant=Shenzhen		(Shenzhen)
Sumitomo Electric Fine Polymer Vietnam, Zhongshan, Suzhou	To be withdrawn in 2020	Sumitomo Electric Industries (Vietnam)
Nissei Electric Vietnam/Zhongshan		Nissei Electric Vietnam
	Added	Shenzhen Fancy Creation Industrial Shenzhen Plant Suzhou Plant
		Internal production Canon Business Machines Philippines

[Highlights]

Number of suppliers: 6 companies→7 companies. Canon produces pressure rollers in the Philippines. Chinese maker Shenzhen Fancy has become a supplier of genuine parts for copiers. Sumitomo Electric Industries is to be withdrawn in 2020.

Number of component plants: 14 plants→16 plants. NOK/Synztec has changed the plants, while Fancy has added two plants in China.