

Japanese Video Game Industry

Japanese Economy Division

Summary

In 2005, shipments of home video games increased for the first time in four years, bolstered by launches of the Nintendo DS and Sony PlayStation Portable. Next-generation game consoles, such as the Nintendo Wii and Sony PlayStation 3 to be marketed from the end of 2006, are expected to further expand the home video game market into 2007.

Since the release of Nintendo's Family Computer (*Famicon*) in 1983, Japan's electronic game industry has come to depend on home video games to such an extent that it can be interchangeably called the game console industry. In recent years, the spread of broadband, flat-rate telecommunications services has enabled new platforms for games, such as online and mobile, further broadening the industry's base. This report, however, covers only the home video game industry, which still accounts for a significant portion of the industry.

1. History of video game industry

Japanese video game companies have been overwhelmingly competitive in the international market, but competition in the hardware sector has intensified in recent years, following the entry of Microsoft.

A. Desktop game consoles

The industry dawned with the runaway success of the Atari 2600, a home game device with a plug-in ROM cartridge, which was launched by Atari in the U.S. market in 1977. Third-party software could be developed freely, because Atari made the programming specifications openly available. As a result, numerous software packages appeared and were well received by users. Over time, however, user support steadily weakened as inferior software also began to circulate. The market for the Atari 2600 rapidly declined due to stiff competition during the 1982 Christmas season, and the U.S. market remained in the doldrums until the arrival of the Nintendo Entertainment System (NES) in 1985.

In Japan, on the other hand, the video game market expanded rapidly from the time Nintendo released the Family Computer in 1983. Many manufacturers launched home game units around this time, but from 1983 to 2000 competition mainly involved three companies: NEC Home Electronics (NEC), Nintendo and Sega Corporation. Since 2000, however, the major players have been Microsoft, Nintendo and Sony Computer Entertainment (Sony) (Fig. 1).

Fig. 1 Milestones in Home Desktop Games

1977	TV Jack1000, 1200, 1500, 2500, 3000 (Bandai)
1978	Visicom (Toshiba)
1979	Video Computer System (made by Atari, sold by Epoch)
	Supervision8000 (Bandai)
1981	Cassette vision (Epoch), Pyu-Ta (Tomy)
	Game Pasocom M5 (Sword / Takara)
	Max Machine (Commodore)
1983	Family Computer (Nintendo), SG-1000, SC-3000 (Sega)
	PV-1000 (Casio), OseroMaltibision (Tsukuda)
	TV Boy (Gakken), My Vision (Kanto Denshi / Nihon Bussan)
	Cassette vision Jr. (Epoch)
1984	SG-1000 II (Sega), Super Cassette vision (Epoch)
	RX-78 (Bandai), Pyu-Ta Mk II (Tomy)
1985	Sega Mark III (Sega)
1986	DiscSystem (Nintendo), Twin Famicom (Sharp)
1987	Master System (Sega), PC Engine (NEC)
1988	Megadrive (Sega), CD-ROM (NEC)
1990	Super Famicom (Nintendo), Neogeo (SNK)
1991	MegaCD (Sega), PC Engine Duo, Super CD-ROM (NEC)
1992	Wondermega (Victor)
1993	Laser Active (Pioneer)
1994	PlayStation (SCE), 3DO Real (Panasonic)
	3DO Try (Sanyo), Saturn (Sega), PC-FX (NEC)
	Playdia (Bandai), Neogeo CD (SNK)
	Super 32X (Sega)
1996	Nintendo 64 (Nintendo), PiPPiN@Atmark (Bandai)
1998	Dreamcast (Sega)
2000	PlayStation 2 (SCE), Psone (SCE)
2001	Nintendo GameCube (Nintendo)
2002	X box (Microsoft)
2003	PSX (Sony)
2005	X box 360 (Microsoft)
2006	Family Computer (Nintendo), SG-1000, SC-3000 (Sega)

SCE = Sony Computer Entertainment

Source: Computer Entertainment Suppliers Association, 2006 *CESA Game White Paper*.

1) From 1983: 8-bit CPUs

Nintendo released the Family Computer and Sega the SG-1000 in 1983. Both consoles contained eight-bit CPUs and games were played using proprietary plug-in cartridges. The major difference between the two consoles was that Nintendo offered a large lineup of games developed under license by third parties, while the SG-1000 only accepted games developed by Sega.

Over time, however, Nintendo began licensing to third parties due to its limited capacity to develop competitive games. As a result, by 1984 outside companies were producing hit games for the Family Computer, such as Galaxian by Namco, the leading arcade game manufacturer, and Lode Runner, a smash hit that sold 1.2 million cartridges, by Hudson Soft, a major PC software developer. As a result, the Family Computer's wide variety of games helped it lead the market with 62.91 million units shipped, including 19.35 million in Japan and 42.56 million overseas.

2) From 1988: 16-bit CPUs and CD-ROMs

The market for 16-bit consoles, which offered improved graphics and sound over 8-bit models, began in 1987 with the NEC PC Engine, which featured an 8-bit CPU but 16-bit-equivalent graphics and processing. The first true 16-bit models were the Sega Mega Drive in 1988 and the Nintendo Super Famicom in 1990.

Although the 16-bit Super Famicom was the successor to the Family Computer, games for the latter were not compatible with the former. Nevertheless, the Super Famicom was superior to the NEC and Sega models in terms of audio-video performance, so it captured an overwhelming market share amounting to 49.10 million units shipped, including 17.17 million in Japan and 31.93 million overseas.

Sega's Mega Drive was the first console with a true 16-bit CPU. As the successor to the Sega Mark III and Master System, the Mega Drive could accept games for these earlier models via an optional adapter. Games were also available from third parties. Despite these features, however, Sega was unable to take the lead in 16-bit models due to the Super Famicom's overwhelming popularity.

Following the launch of 16-bit consoles, manufacturers released outboard CD-ROM drives to play software. Sega released the Mega-CD for its Mega Drive, and NEC the CD-ROM² and Super CD-ROM² for its PC Engine. CD-ROM software offered far better graphics and sound, as well as more capacity, than cartridge software. They also could be produced faster and at less cost. Soon CD-ROMs were the standard medium for game software. Interestingly, Nintendo was engaged in developing a CD-ROM drive for its Super Famicom, but never released it.

3) From 1994: 32-bit and 64-bit CPUs

A series of 32-bit game consoles came out beginning in 1994, offering yet again higher performance than existing models. Most of these consoles used CD-ROMs.

The 3DO Real, based on specs developed by the 3DO Company of the U.S., was released by Matsushita Electric Industrial. The unit price was undercut significantly by the subsequently launched PlayStation and Sega Saturn, so 3DO faded from the market.

The 32-bit game console market was divided between the Sony PlayStation and Sega Saturn, but the PlayStation seized an overwhelming share based on the success of hit titles, particularly Final Fantasy and Dragon Quest, both by Square Enix. Sony shipped 102.49 million PlayStations, including 21.59 million in Japan, 40.78 million in North America and 40.12 million in Europe.

Two years after the launch of the PlayStation, Nintendo released the 64-bit Nintendo 64, but the model was unable to break the PlayStation's stranglehold on the market. Worldwide shipments totaled 32.93 million units

4) From 2000: PlayStation 2

After the introduction of 32-bit consoles, Sony released the PlayStation 2 (PS2), Sega the Dreamcast and Nintendo the GameCube. Microsoft then entered the market with the Xbox.

The PS2 is compatible with the PlayStation, but the other consoles are not compatible with their respective predecessors. The PS2 helped to popularize DVDs for gaming, since it accepts DVD-ROMs, and can even play DVD videos. The PS2 quickly grabbed an overwhelming share, largely because it could use the huge number of games people had already purchased for the some 100

million PlayStations sold worldwide. Worldwide shipments of the PS2 have amounted to 101.37 million, 22.83 million in Japan, 40.99 million in North America and 37.55 million in Europe. Sega's Dreamcast shipped only 9.13 million units, so the company dropped out of the hardware market. Microsoft's Xbox, plagued by initial product glitches and a glaring lack of appealing software, was unable to succeed in Japan.

5) From 2005: Next-generation consoles

Microsoft, despite its initial failure with the Xbox in Japan, stole the lead on sixth-generation models with the Xbox 360, launched in December 2005. Sony released the PS3 in November 2006 and Nintendo the Wii in December 2006.

B. Portable game consoles

The first portable game devices were the Game & Watch series, which Nintendo launched in 1980. Games were built in, and the consoles could not accept external software. Nevertheless, the series was very popular, with some 13 million units shipped in Japan. The Game Boy, however, revolutionized the portable game device market in 1989 (Fig. 2).

Fig. 2 Milestones in Portable Game Consoles

1980	Game & Watch (Nintendo)
1989	Game Boy (Nintendo), Lynx (Atari)
1990	Game Gear (Sega), PC Engine GT (NEC)
1994	Game Boy Bros. (Nintendo)
1995	Virtual Boy (Nintendo)
1996	Game Boy Pocket (Nintendo)
1998	Game Boy Light, Game Boy Color (Nintendo)
	Neogeo Pocket (SNK)
1999	WonderSwan (Bandai), Neogeo Pocket Color (SNK)
2000	WonderSwan Color (Bandai)
2001	Game Boy Advance (Nintendo)
2002	Swan Crystal (Bandai)
2003	Game Boy Advance SP (Nintendo)
2004	Nintendo DS (Nintendo)
	PSP (SCE)
2005	Nintendo DS Lite, Game Boy micro (Nintendo)

Source: Computer Entertainment Suppliers Association, 2006 *CESA Game White Paper*.

1) From 1989: Game Boy and killer games

Nintendo's launch of the Game Boy in 1989 energized the portable game console market. Software on ROM cartridges provided access to a wide variety of games. The console was equipped with a monochrome screen, plus cables for connection with other game devices for competitive playing. Games covered a range of fields, including action, puzzles, role-playing and more, and some of them enjoyed huge popularity as "killer games." In fact, so popular was the Game Boy itself that retailers were frequently sold out. As of the end of 2005, the Game Boy was the most popular portable gaming device ever, with shipments of 118.69 million units.

Portable units developed by other companies included Sega's Game Gear, released at about the same time, NEC's PC Engine GT and Atari's Lynx. But the Game Boy maintained an overwhelming share with its fine balance between pricing and performance, as well as its extensive menu of popular games.

2) From mid-90s: slumping sales

Although the Game Boy was the leading portable, sales began to wane in the mid-90s. But Game Boy sales recovered in 1996 with the introduction of the highly successful game Pocket Monsters (“Pokemon”), versions Red and Green. As a result of this success, a variety of other Pokemon content was merchandised, such as animation, movies, trading card games and character goods. Three firms — Creatures, Game Freak and copyright holder Nintendo — pooled capital to form Pocket Monsters (now Pokemon) Co., Ltd. and develop the business through licensing.

High-performance portable game consoles with color screens appeared between 1999 and 2001, including the WonderSwan Color by Bandai (now Namco Bandai Holdings), Neo-Geo Pocket Color by SNK (now SNK Playmore) and Nintendo’s Game Boy Advance (GBA). These devices revived intense competition in the market, with the GBA eventually winning out due to its compatibility with previous devices (Game Boy and Game Boy Color) and large lineup of appealing software.

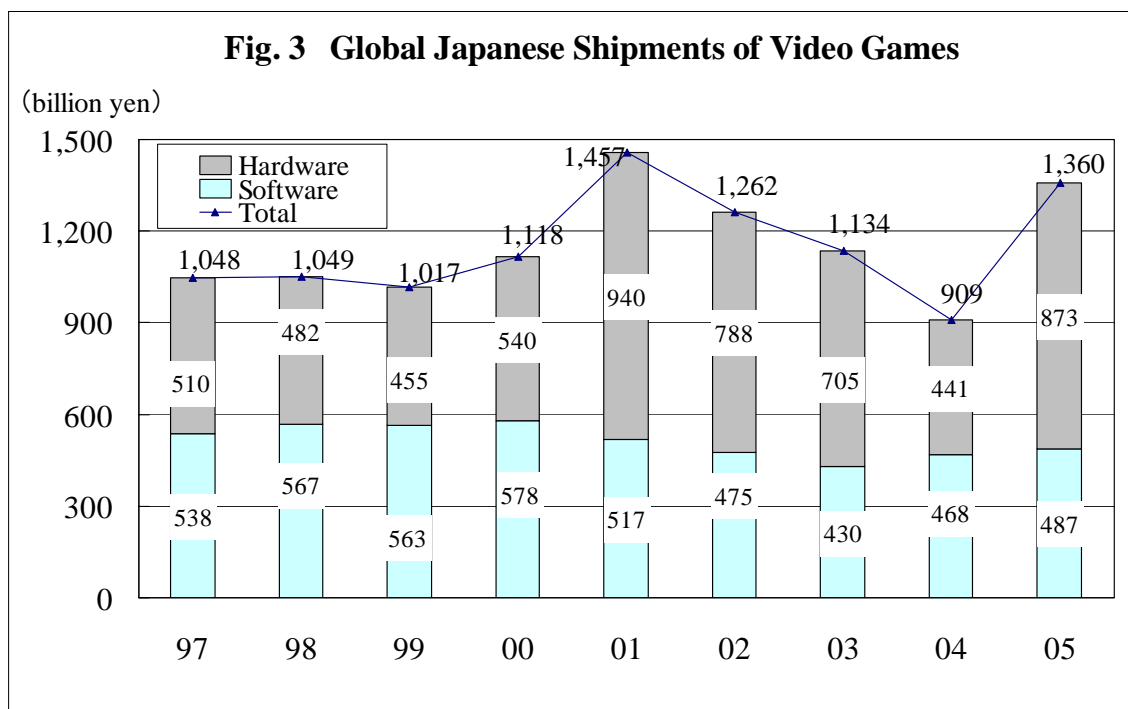
3) From 2004: Battle between Nintendo and Sony

In December 2004, Nintendo launched the NDS and Sony the PSP. The NDS is compatible with the GBA and has unique dual touch-sensitive screens, a stylus and wireless LAN capability. New games that make use of these features have been released, which has resulted in a broad lineup of software for the NDS and popularity for the model among children and adults alike.

2. Market overview

A. Shipments overall

Shipments of home video games in 2005 jumped 49.6% to ¥1,359.849 billion, second only to the record-breaking shipments of 2001, according to the Computer Entertainment Suppliers Association (CESA). Hardware shipments shot up 98% to ¥872.74 billion, of which 70% was shipped overseas.



B. Exports

Combined exports of hardware and software rose 70.3% to ¥961.371 billion. Domestic shipments increased 15.6% to ¥398.479 billion, or 29.3% of all shipments (Fig. 4). Hardware increased 113.5% to ¥708.553 billion and software 8.7% to ¥252.818 billion. Manufacturers, anticipating a shrinking domestic market, reinforced overseas sales.

North America was the main destination for exports, receiving some 50% of hardware and 60% of software (Fig. 5). Although Japan is extremely competitive, global competition is heating up, with Korean firms taking the lead in online gaming and Microsoft expanding its share of the North American market with the Xbox.

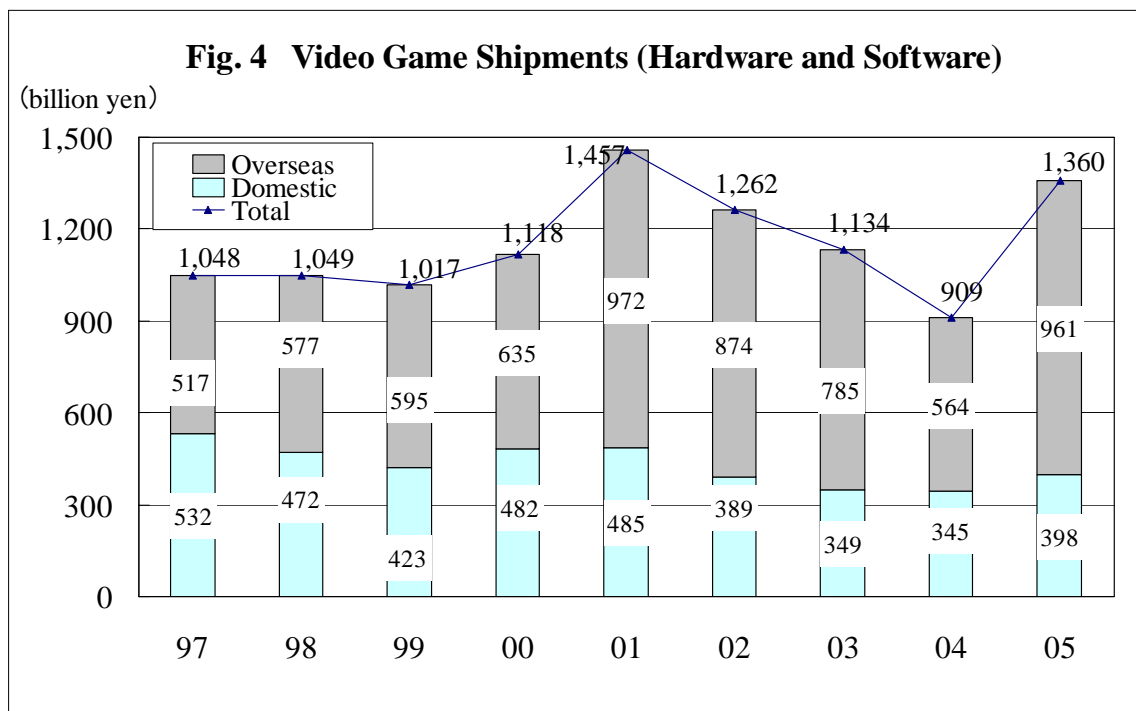
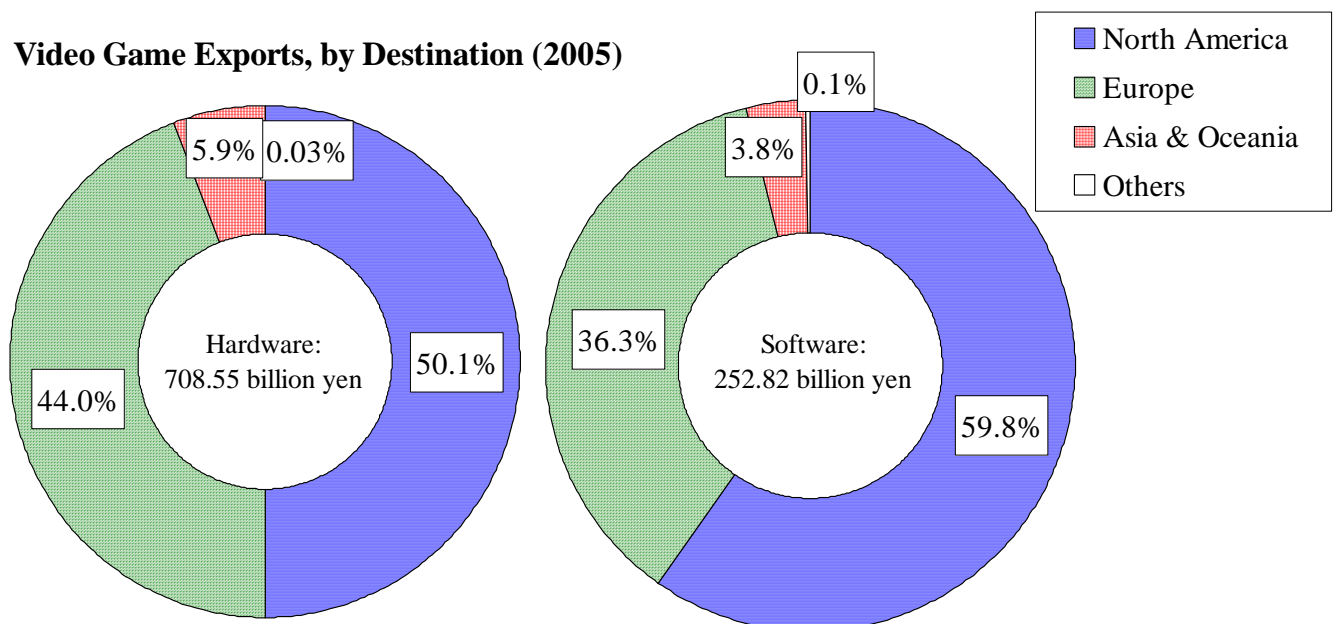


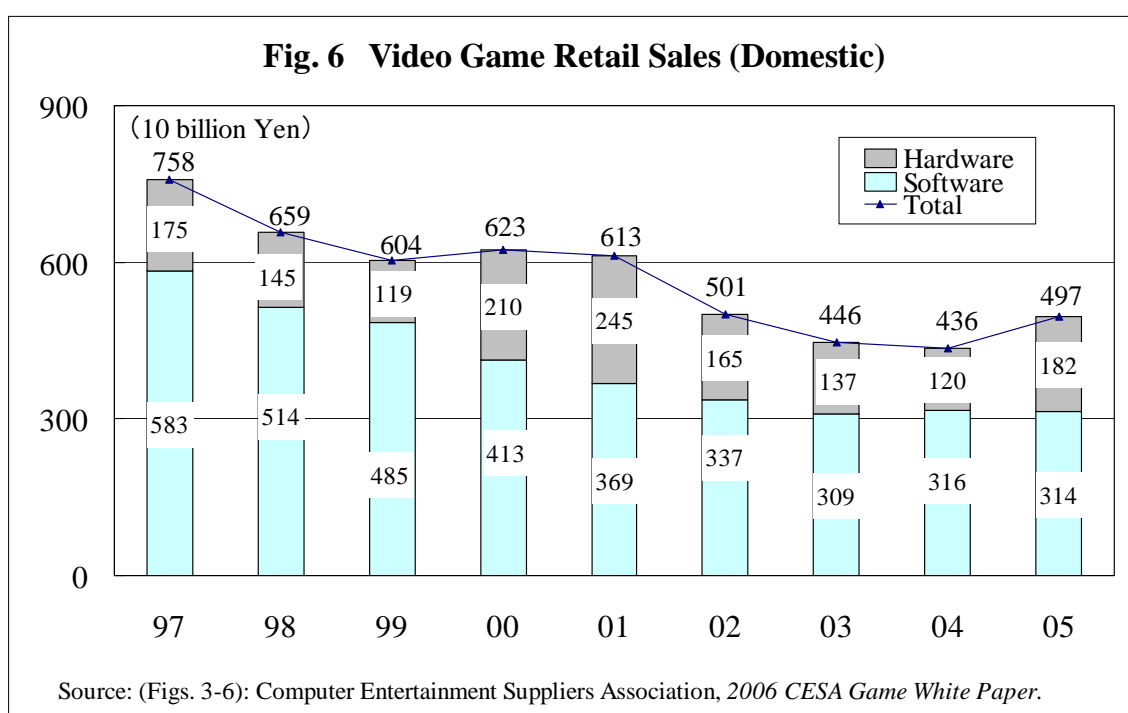
Fig. 5 Video Game Exports, by Destination (2005)



C. Japanese market

The Japanese home video game retail market grew for the first time in five years in 2005, when sales went up 13.9% to ¥496.549 billion. Hardware sales grew 51.8% to ¥182.422 billion. Previously, sales of new hardware grew in 2000 and 2001, thanks to the launch of the PS2, but then went on a downward trend from 2002. Sales rebounded in 2005 due to launches of major new portable game consoles, such as Nintendo's NDS and Sony's PlayStation Portable 2 at the end of 2004 and Microsoft's Xbox 360 at the end of 2005. At the Wii Preview in September 2006, Nintendo President Satoru Iwata said that consumer acceptance of the NDS had helped to revive the popularity of games in Japan.

Software sales have continued to decline since peaking in 1997. Sales in 2005 dipped 0.6% to ¥314.127 billion. Discounted popular older titles and low-priced software have accounted for a large share of sales in recent years, which is why sales have slowed. Fewer hit titles in 2005 compared to 2004 was also a factor in the slump.



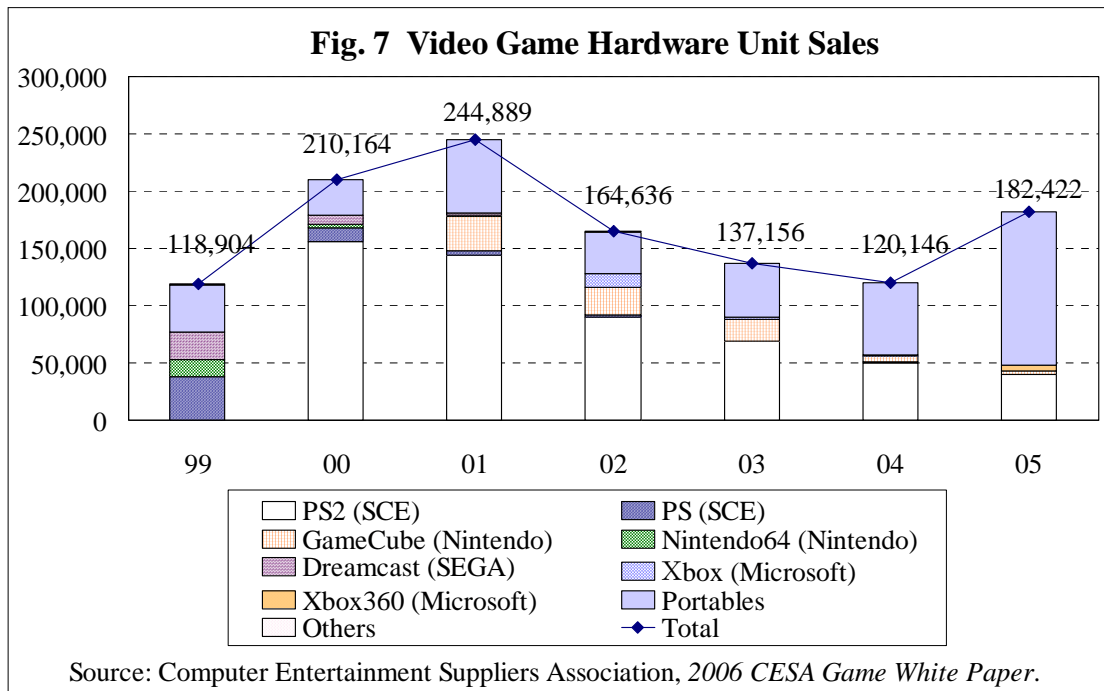
3. Product trends

A. Hardware

1) Portable game consoles propel market

In 2005, domestic hardware retail sales grew 51.8% to ¥182.422 billion, the first annual rise since 2001 (Fig. 7). Two blockbuster portable game consoles, the Nintendo NDS and Sony PSP, contributed to this growth. Combined sales of these two portables alone jumped 212.9% to ¥134.721 billion (73.9% share of the market). In total, 4.25 million units of the NDS and 2.62 million PSPs were shipped. The NDS took the lead by appealing to women as well as men, and to a wider range of age groups.

Desktop hardware sales shrank 16.1% to ¥47.710 billion, just 26.1% of total hardware sales. Sony's PS2 led with ¥40.286 billion, but this was 20.2% less than in 2004. Nintendo's GameCube and Microsoft's Xbox also slumped, but Microsoft got a jump on other companies with the December 2005 launch of its next-generation Xbox 360. Sony and Nintendo released their next-generation hardware in November and December 2006, respectively, so growth is expected in 2007.



2) Next-generation desktop and portable consoles

All of the latest next-generation desktop consoles were released by the end of 2006 (Fig. 8). The Nintendo Wii is aimed at enticing women and people in older age groups who have previously showed little interest in games, thus increasing the gaming population. A line has been drawn between Nintendo and other hardware models in terms of price and performance. The Sony PS3 will be equipped with a high-performance CPU, a large-capacity hard drive and the latest technology, including a Blu-ray disc drive, to enable large, high-resolution images. The Xbox 360 is also a high-performance game console, and can be connected to PCs equipped with Windows XP.

Among portables, the high-performance PSP accepts a variety of digital content, while the NDS focuses on new functions that expand the ways of playing games (Fig. 9).

Fig. 8 Features of Next-Generation Game Consoles

	Nintendo	SCE	Microsoft
	Wii	PlayStation 3	Xbox 360
Price (including tax)	¥25,000	60Gb HDD: open pricing 20Gb HDD: ¥49,980	Xbox 360: ¥39,795 Xbox Core System: ¥29,800
Release date	Dec. 2, 2006	Nov. 11, 2006	Dec. 15, 2006
Floating point processing power	Not announced	2 TFLOPs	1 TFLOP
Drives	Proprietary 12cm Wii disk (single or 8cm GameCube disk)	Blu-ray, DVD, etc.	DVD, etc.
Storage media	SD memory card and GameCube memory card	SD memory card, Memory Stick and CompactFlash	Xbox 360 Memory Unit
Features	Compact size. Unique controller, unlike those of other consoles. Works with wireless LAN. Enables downloading of Famicom and other games via Internet..	Higher floating point processing capabilities than current PCs with new Cell CPU. Increased digital connectivity for data exchanges with cameras, portable music players, etc. Movie-quality high-resolution images.	Increased PC connectivity to view HDTV programs and movies recorded on PC. VoIP capability to talk with opponent during online competition.
Compatibility	GameCube	PlayStation PlayStation 2	Xbox (Only compatible titles)
Global shipments of previous model	GameCube: 20.61 million	PlayStation 2: 101.37 million	Xbox: 20.42 million
Year-end global shipment target	4 million	2 million	10 million

Current version shipments are as of December 31, 2005.

Sources: Ministry of Economy, Trade and Industry, *Game Industry Strategy*, and press reports.

Fig. 9 Features of Two Major Handheld Consoles

	Nintendo	SCE
Product	Nintendo DS	PlayStation Portable (PSP)
Price (including tax)	¥15,000	¥20,790
Release date	Dec. 2, 2004	Dec. 12, 2004
Size	148.7×28.9×84.7mm (W×H×D)	170×23×74mm (W×H×D)
Weight	275g	280g (with battery)
Screen(s)	Top screen: Three-inch backlit, translucent, reflective TFT color LCD, 256×192 pixel resolution, 260,000 color display Bottom screen: Transparent analog touch screen	4.3-inch, 16:9 wide screen TFT LCD, 480×272 pixel resolution, 16.77 million colors
Wireless capabilities	IEEE 802.11, proprietary Nintendo protocol	IEEE 802.11
Storage media / compatible software	Nintendo DS cartridges Game Boy Advance cartridges	UMD Memory Stick Duo
Features	Dual panels and touch-sensitive screen. Standard equipped for wireless LAN. Focused on gaming, so no video or music playback features. Multi-console play with single DS cartridge.	Large, high-resolution Sharp LCD display. Audiovisual playback and other features for PS2-equivalent graphics. Movies and games available on UMD.
Available titles	113	108
Total global shipments	14.43 million	14.48 million

Nintendo DS measurements show when device is closed. Title, global shipment data as of December 31, 2005.

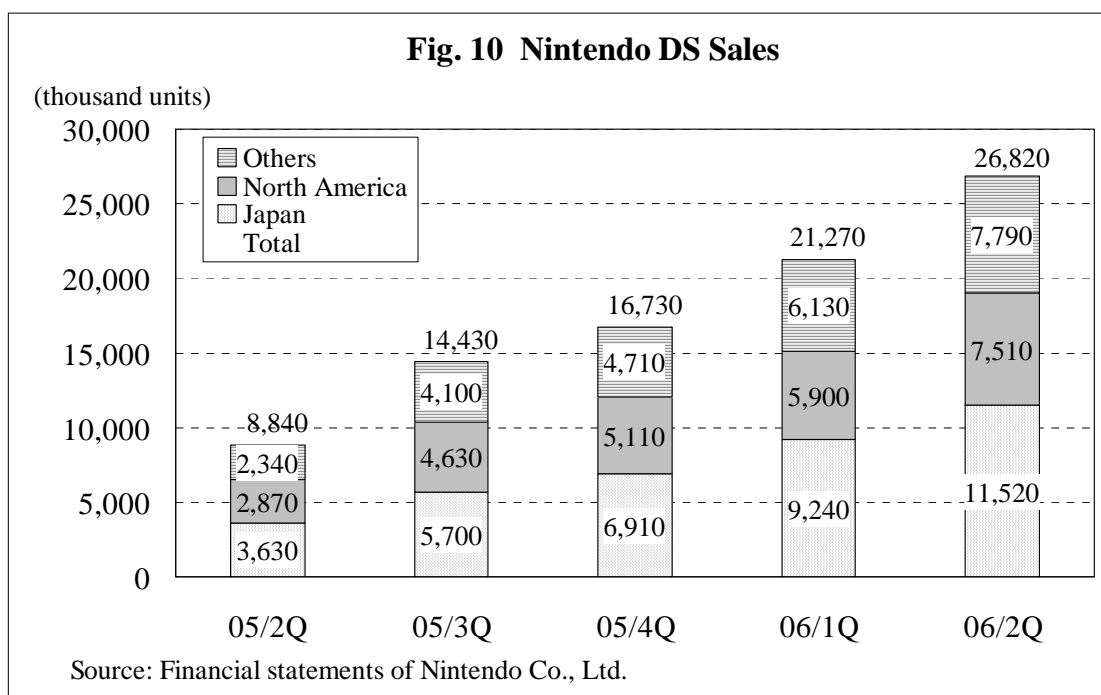
Sources: Nintendo and SCE websites, press reports, and Computer Entertainment Suppliers Association, *2006 CESA Game White Paper*.

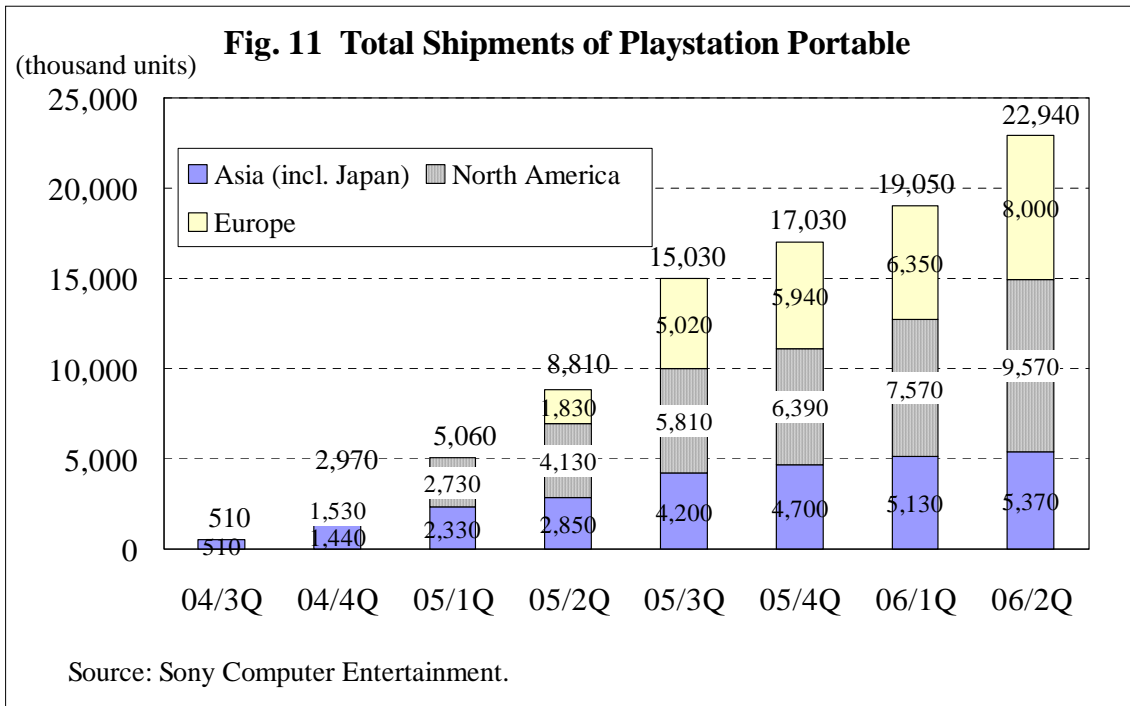
3) Outlook

The hardware market is expected to continue growing with the popularity of portable game consoles such as the NDS and PSP. The NDS was doing well as of the end of September 2006, with 26.82 million units sold — 11.52 million in Japan and 15.3 million overseas (Fig. 10). The PSP has sold 22.94 million units — 5.37 million in Japan and the rest of Asia, and 17.57 million elsewhere.

The PS3, Wii and other next-generation hardware are expected to be in wide use from 2007 onward, but forecasts of sales in Japan vary greatly. According to an Internet survey of 1,000 men and women of ages 20 to 69, conducted by Nikkei Marketing Journal from September 22-25, 2006, less than 20% intend to purchase a next-generation game console, 10.8% plan to buy a PS3, 5.5% a Wii and 1.1% an Xbox 360. In response to the high prices of next-generation machines, Sony announced price cuts on its PS3 a month before it was launched. The price for the low-end model equipped with a 20 GB drive was cut from ¥62,790 to ¥49,980. Microsoft also released a stripped down version of the Xbox 360, called the Xbox Core System, for ¥29,800 in November. The suggested retail price for the Wii is ¥25,000. Some think that these cuts are linked to the strong initial sales of next-generation models.

Game magazine publisher Enterbrain forecasts cumulative sales of 4.13 million for the PS3 and 5.47 million for the Wii by March 2007. Since sales of portable consoles have not flagged, many see the market becoming polarized between portables and next-generation models.



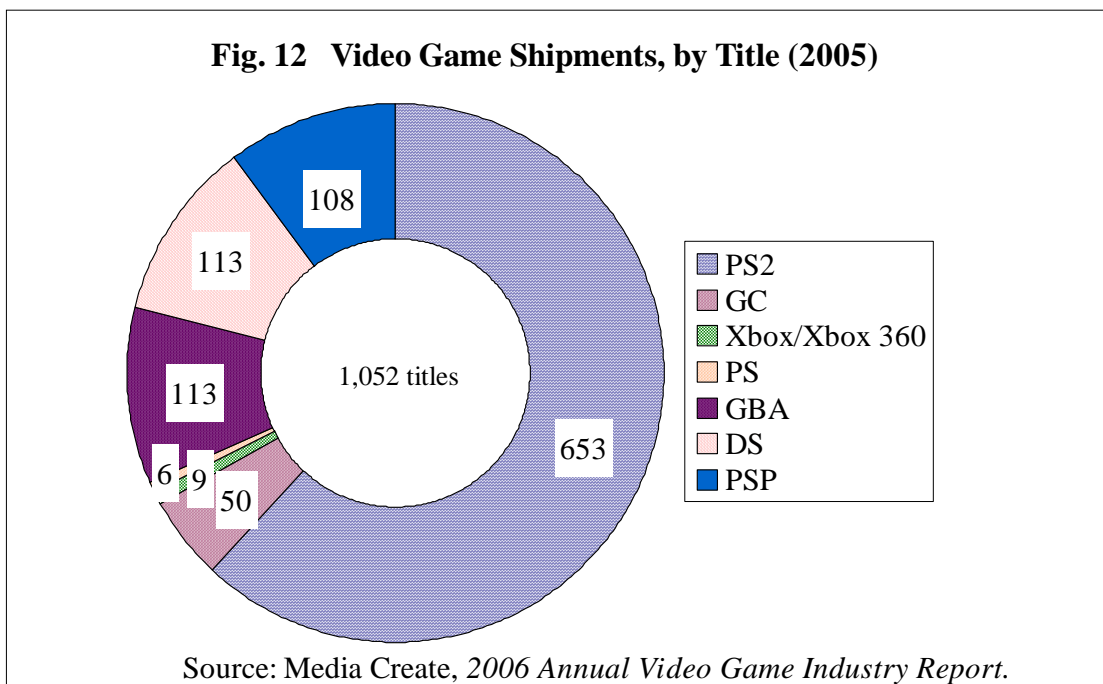


B. Software

Media Create's 2006 Video Game Industry White Paper reported that 1,052 game titles were released in 2005 (Fig. 12). The PS2 commanded an overwhelming majority of desktop titles at 653 (636 in 2004), followed by 50 for the GameCube (54 in 2004), nine for the Xbox and Xbox 360 (60 in 2004) and six for the PlayStation (29 in 2004). With the exception of the PS2, all devices saw declines in titles.

Among titles for portables, there were 113 for the GBA (195 in 2004), 113 for the NDS (14 in 2004) and 108 for the PSP (18 in 2004), evidence of the continuing changeover in game devices. There have been two million-selling titles in Japan for desktop consoles and five for portables. None have achieved the blockbuster status of Square Enix Dragon Quest VIII (3.63 million shipped) or Nintendo's Pokemon Fire Red and Leaf Green (2.9 million shipped). Nevertheless, the NDS had a significant number of software titles that ranked high in sales.

Low-priced and discounted titles accounted for around 30% of total sales.



1) 2005 sales rankings

Figure 13 shows the top 10 titles in 2005. A noticeable trend in recent years has been sequels to million-sellers, which themselves generate profit and are among the top sellers. Among the leading sellers in 2005, all four PS2 titles were sequels. This is a result of game software producers trying to minimize development costs by limiting their numbers of titles. As a result, fewer innovative, adventurous titles appeared, leaving consumers bored and less interested in playing games.

However, a number of new games for the NDS offer innovative, unique formats, such as split screens, touch screens and wireless LAN capabilities. These have gained acceptance among consumers. In particular, software ranking in the top 10 in 2005, such as *Animal Crossing: Wild World*, *Brain Age*, *Nintendogs* and the voice-controlled DS *Cooking Navigator* (released in July 2006), have attracted new fans of portables, especially women.

In addition, licensees other than Nintendo have been releasing new software for practical or tutorial purposes, turning portable gaming consoles into data terminals.

Fig. 13 Top 10 Games for Home Consoles in Japan in 2005

Rank	Hardware	Genre	Title	Publisher	Total sales
1	DS	Other	<i>Animal Crossing: Wild World</i>	Nintendo	1,382,228
2	DS	Other	<i>Brain Age</i>	Nintendo	1,157,870
3	DS	Other	<i>Big Brain Academy</i>	Nintendo	935,535
4	PS2	Action	<i>New Dynasty Warriors 4</i>	Koei	886,624
5	PS2	RP	<i>Kingdom Hearts II</i>	Square Enix	884,428
6	PS2	Sports	<i>World Soccer Winning Eleven 9</i>	Konami	877,347
7	DS	Racing	<i>Mario Kart DS</i>	Nintendo	836,478
8	DS	Other	<i>Tamagotchi no Puchi Puchi Omisechi Gohi-Kini</i>	Bandai	784,537
9	PS2	Action	<i>Dragonball Z: Budokai 3</i>	SCE	659,975
10	GBA	RP	<i>Mushiking: King of the Beetles</i>	Nintendo	624,292

DS = Nintendo DS, PS2 = PlayStation 2, GBA = Game Boy Advance, RP = Role playing, SCE = Sony Computer Entertainment. Genres based on Computer Entertainment Suppliers Association, *2006 Games White Paper*.
Source: Media Create, *2006 Annual Video Game Industry Report*

2) Trends by genre, and consumer preferences

CESA's *2006 Game White Paper* uses data from a Media Works survey, and confirms the general trends seen in other firms' research data (Fig. 14). The action genre sold the best, accounting for 27.0% of total sales, followed by role-playing at 15.2%. The miscellaneous "other" category grew on strong sales of mental-exercise games.

Around 70% of consumers like role-playing games, 40% action and 30% adventure, according to a CESA poll at Tokyo Game Show 2005.

The U.S. differs from Japan in that best sellers are sports and action games based on hit movies (Fig. 15). Only one Japanese-produced software title ranked among the top 10 in the U.S., which explains why software producers employ local firms when they expand overseas.

Fig. 14 Software Sales Shares, by Genre

Genre	2004	2005
Action	32.1%	27.0%
Role-playing	28.2%	15.2%
Sports	8.4%	8.8%
Action role-playing	1.9%	6.2%
Simulation	7.6%	5.2%
Racing	4.5%	4.5%
Simulation role-playing	2.2%	4.4%
Action adventure	1.6%	3.9%
Fighting action	4.1%	2.8%
Table	1.7%	2.2%
Puzzle	1.2%	1.8%
Adventure	1.7%	1.7%
Shooting	1.8%	0.8%
Others	3.0%	15.6%

Source: Computer Entertainment Suppliers Association, *2006 CESA Game White Paper*.

Fig. 15 Top 10 Games for Home Consoles in U.S.A. in 2005

Rank	Hardware	Genre	Title	Publisher
1	PS2	Sports	Madden NFL 06	Electronic Arts
2	PS2	Racing	Gran Turismo 4	SCE
3	Xbox	Sports	Madden NFL 06	Electronic Arts
4	PS2	Sports	NCAA Football 06	Electronic Arts
5	PS2	Sports	Star Wars Battlefront II	Lucas Arts
6	PS2	Sports	MVP Baseball 2005	Electronic Arts
7	PS2	Action	SW Episode III: SITH	Lucas Arts
8	PS2	Sports	NBA Live 06	Electronic Arts
9	PS2	Action	Lego Star Wars	Edios
10	Xbox	Action	Star Wars Battlefront II	Lucas Arts

Sources: Computer Entertainment Suppliers Association, *2006 CESA Game White Paper*, and official websites for Playstation and Xbox.

4. The industry

A. Manufacturing

Video game producers are broadly divided into hardware and software producers.

1) Hardware

Hardware is divided into desktop consoles that connect to a TV, and portable models with their own LCD screens.

Hardware, also referred to as “platforms,” was being sold by three companies in Japan — Microsoft, Nintendo and Sony — as of October 2006 (Fig. 16). Nintendo and Sony sell both desktop and portable models.

Sega and Bandai are no longer in the market.

Microsoft is hoping to enter the portable market, but nothing had been officially announced as of October 2006.

Fig. 16 Video Game Hardware Makers and Top Products

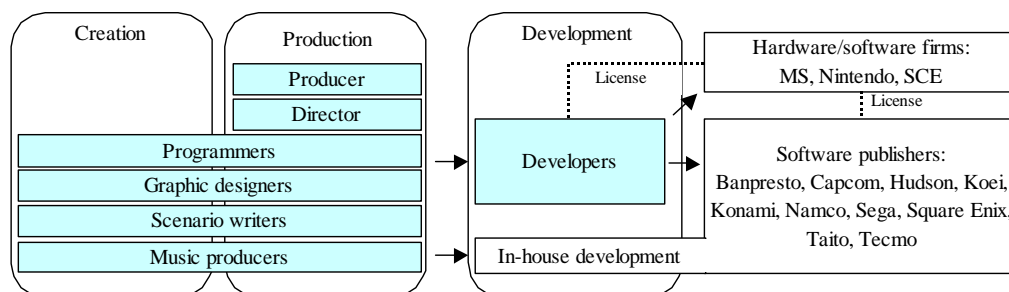
Manufacturer	Desktop types	Portable types
Nintendo	• GameCube (Sep. 2001) • Wii (Dec. 2006)	• Game Boy Advance (Mar. 2001) • Nintendo DS (Dec. 2004)
Sony Computer Entertainment	• Playstation2 (Mar. 2000) • Playstation3 (Nov. 2006)	• PSP (Dec. 2004)
Microsoft	• Xbox 360 (Dec. 2005)	-

Source: JETRO.

2) Software

Because Microsoft, Nintendo and Sony hardware platforms are incompatible, software producers create and sell titles matched to the specs of each platform (Fig. 17).

Fig. 17 Video Game Production Model



MS = Microsoft, SCE = Sony Computer Entertainment

Source: Digital Content Association of Japan, 2006 *Digital Content White Paper*.

Software producers ordinarily pay royalties to hardware manufacturers. For example, a company that develops and sells a title for the PS2 would pay a fixed royalty to Sony. Royalties vary by companies, products and sales volumes.

While some producers create games for the hardware of only one maker (closed platform), others simultaneously produce and sell identical software for multiple makers' hardware (open platform). In recent years, more producers have developed open-platform software to maximize returns and reduce risk.

Microsoft, Nintendo and Sony also develop and sell their own software. Other software producers with businesses worth over ¥10 billion include Banpresto (owned by Namco Bandai), Capcom, Hudson (owned by Konami), Koei, Konami, Namco Bandai Games, Sega (owned by Sega Sammy Holdings), Square Enix, Taito (owned by Square Enix) and Tecmo.

3) Restructuring and diversification in software field

The software field has been increasingly restructured in recent years (Fig. 18). The main aims have been to use content more effectively and to establish companies large enough to bear development costs, which continue to rise because of the increasingly high performance needs of hardware. The ultimate goal is to establish new revenue streams through expanded sales routes and uses for game-console software. Since the video game market is in decline while new markets, such as online gaming, continue to develop, software publishers must diversify.

Hardware manufacturers have usually taken the lead in establishing distribution networks, as well as setting prices, but software publishers have had to devise their own strategies for developing products for other devices, such as cell phones and PCs, often through merger or acquisition.

Fig. 18 Recent Examples of Restructuring in Software Publishing Field

Pre-merger	Merger date	New company
Enix Co., Ltd. + Square Co., Ltd.	April 2003	Square Enix Co., Ltd.
Takara Co., Ltd. (now Takara-Tomy Co., Ltd.) ⇒ Atlus Co., Ltd.	October 2003	Wholly owned subsidiary of Atlus
Sammy Corporation + Sega Corporation	October 2004	Sega Sammy Holdings Inc.
Namco Ltd. + Bandai Co., Ltd.	September 2005	Namco Bandai Holdings Inc.
Konami Corporation ⇒ Hudson Soft Co., Ltd.	April 2005	Hudson made wholly owned subsidiary
Square Enix Co., Ltd. ⇒ Taito Corporation	March 2006	Taito made wholly owned subsidiary
Takara Co., Ltd. + Tomy Co., Ltd.	March 2006	Takara-Tomy Co., Ltd.

Sources: Company press releases.

Software producers have bought a number of overseas software publishers (Fig. 19), particularly those with hit titles or games for the rapidly growing online and cell phone markets. In recent years, there has also been an increase in tie-ups with foreign firms, and the establishment of operations in

new locations overseas, or strengthening of existing operations¹ (Fig. 20). Tie-ups with foreign firms are usually related to online and mobile games, which are increasingly popular worldwide. Especially notable is the large number of tie-ups with Chinese companies and the establishment of business bases in China to develop the market.

Fig. 19 Overseas Buyouts by Japanese Software Publishers

Japanese firm	Overseas firm bought out	Buyout date
Sony Computer Entertainment Inc.	Zipper Interactive (U.S.)	June 2006
	Guerrilla Games (Holland)	December 2005
Sega Sammy Holdings Inc.	The Creative Assembly Ltd. (U.K.)	March 2005
	Sports Interactive Ltd. (U.K.)	April 2006
	Secret Level, Inc. (U.S.)	April 2006
Square Enix Co., Ltd.	UIEvolution, Inc. (U.S.)	March 2004
Capcom Co., Ltd.	Cosmic Infinity Inc. (Canada)	May 2006
Konami Corporation	Blue Label Interactive, Inc. (U.S.)	June 2006

Konami purchased Blue Label Interactive's primary assets.

Sources: Company announcements.

¹ A good example of restructuring is Capcom, which closed its U.S. sales subsidiary's software-development studio, reorganized operational structure and reduced staffing overall, but added more sales and marketing personnel.

Fig. 20 Software Producer Alliances with Overseas Publishers

Company	Alliances	Announcements
Namco	Partnership between firm's U.S. software development subsidiary, Namco Hometek, and Flagship Studios (U.S.) to develop online games for PCs, including Hellgate: London	March 2004
	Licensed Eolith (Rep. of Korea) to use Galaga and Mr. Driller in Korea. Jointly development of Galaga Online and Mr. Driller Online with multi-player game content.	August 2004
	Increased staffing from about 20 to 50 at company overseeing European operations to prepare for sales. Also strengthened game development and launched online game services.	April 2004
Sega	Launched PC online game business in China. Developed Chinese versions of three software packages developed in Japan or ROK. Set up software development site for Chinese market.	August 2004
	Agreed to distribute selected game titles published by Take-Two Interactive for home game consoles and PCs in Asia, including Japan.	January 2005
	Agreed with THQ (U.S.) on comprehensive tie-up giving Sega publishing and sales rights in Japan to home game titles of THQ.	September 2005
	Agreed with Beijing Gehua Cultural Development Group (Beijing) to establish joint game R&D center in Beijing.	December 2005
	Licensed Beijing Gehua Online Cultural Co. (Beijing) to develop PC game content for China.	December 2005
	Teamed with Auhui Sanlian Investment Group (China) to develop simulator software for Chinese driving schools.	May 2006
Square Enix	Agreed with Sprint (U.S.) to provide content for PCS Vision mobile phone data service.	May 2004
	Established subsidiary Square Enix China in Beijing.	February 2005
Koei	U.S. subsidiary signed North America distribution agreements with Electronic Arts (U.S.) for PS2 version of Samurai Warriors.	February 2004
	Established overseas game development subsidiary in Singapore.	February 2005
	Subsidiary Koei France SAS established near Paris to develop European sales.	February 2005
	Began expansion of Canadian software development studio from about 40 people to 150-200 in around three years.	October 2005
	Agreed with Digital Entertainment Art Co, Ltd. (Beijing) to develop Chinese version of blockbuster online game Uncharted Waters Online.	June 2006

Namco is now Namco Bandai Holdings. Sega is a subsidiary of Sega Sammy Holdings.

Sources: Various press reports.

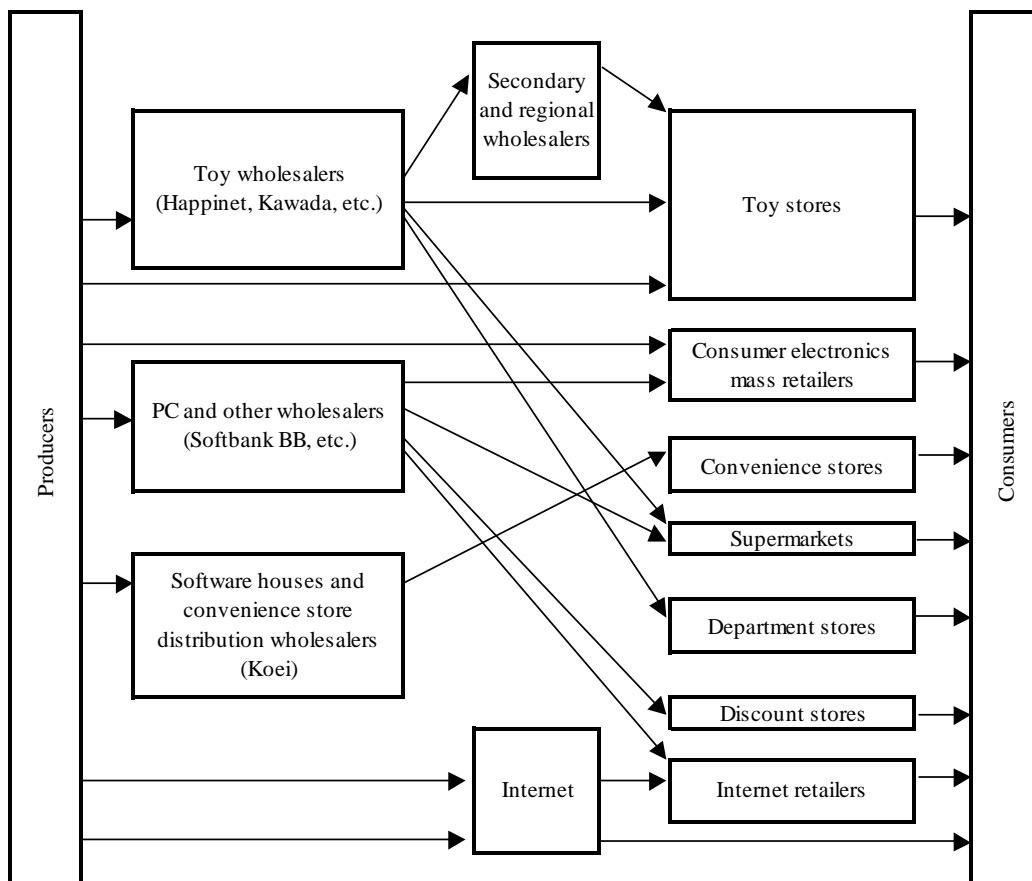
B. Distribution

Video game manufacturers usually deliver products to consumers via toy wholesalers, who then sell to specialty toy retailers (Fig. 21). Typical toy wholesalers include Happinet and Kawada. The Japan subsidiary of Toys ‘R’ Us is another leading specialty retailer.

However, retail sales channels other than toy specialists have diversified to include CD and DVD retailers, appliance mass merchandisers, convenience stores and home centers, along with other increasingly common types of retailers, such as those specializing in catalog and Internet sales. Distribution flow remains largely unchanged, from manufacturer to wholesaler to retailer.

Some general merchandising stores, discounters and Internet retailers use specialty software wholesalers, such as SoftBank BB (formerly SoftBank Commerce) and Marubeni Infotec (formerly Computer Wave), to link manufacturers and consumers. Also, some software manufacturers are involved concurrently in wholesaling.

Fig. 21 Video Game Distribution Routes



Source: Yano Research Institute

5. Japan's expanding game market

Japan's video game hardware and software markets have been enjoying revived sales of late, due to growing demand for PC games, online games, cell phone games and arcade games.

The Digital Content Association of Japan's *2006 Digital Content White Paper* reports that the combined market for game-related content and consoles has been growing since 2003 (Fig. 22) due to robust expansion of the online and cell phone markets. Although the increased volume of product has been a main factor, so has the spread of flat-rate broadband services, according to the paper.

The paper forecasts that the Japanese game market as a whole will grow in 2006, including increased sales of online and cell phone games (excluding arcade games) and portable games.

Fig. 22 Market Scale of Game Industry

(billion yen)

	2001	2002	2003	2004	2005	2006
Sales of software	424.8	403.0	369.8	377.1	376.5	377.0
Software for household game machines	368.5	336.7	309.1	316.0	314.1	314.1
Software for PCs	56.3	66.3	60.7	61.1	62.4	62.9
Sales of network games	1.4	6.0	12.9	36.7	59.6	72.0
Sales of mobile phone games	9.0	20.1	27.0	41.2	58.9	75.2
Sales of arcade game operations	590.3	605.5	637.7	649.2	649.2	-
Sales of household game machines	221.1	149.8	120.1	109.3	168.1	343.7
Desktop	168.7	120.4	81.9	52.3	42.6	32.1
Playstation2	134.6	87.7	63.9	46.7	36.4	27.5
Playstation	3.6	2.2	0.4	0.0	0.0	0.0
GameCube	27.6	20.3	16.0	5.1	2.3	0.9
NINTENDO64	1.2					
Dreamcast	1.7	0.1				
Xbox360					3.6	3.6
Xbox		10.1	1.6	0.5	0.3	0.1
Portable	52.4	29.1	38.0	57.0	125.5	311.6
PSP				10.7	57.9	185.4
Nintendo DS				18.6	57.7	118.1
Game Boy micro					6.2	6.2
Game Boy Advance SP			31.4	27.5	3.7	1.9
Game Boy Advance	39.1	25.9	6.6	0.2		
Game Boy(Color included)	8.1	1.3				
WonderSwan (Color and SwanCrystal included)	5.2	1.9				
Others	0.0	0.3	0.2			
Total	1,246.6	1,184.4	1,167.5	1,213.5	1,312.3	-

Figures for 2006 are estimates. Totals are rounded off, so sums of figures may vary from totals.

Source: Digital Content Association of Japan, *2006 Digital Content White Paper*.

6. Companies and organizations mentioned in this report

	Name	URL
Industry Organization	Computer Entertainment Suppliers Association (CESA)	www.cesa.or.jp
Hardware Manufacturers	Nintendo Co., Ltd.	www.nintendo.co.jp
	Sony Computer Entertainment Inc.	www.scei.co.jp
	Microsoft Corporation	www.microsoft.com/japan
Software Publishers	Atlus Co., Ltd.	www.atlus.co.jp
	Capcom Co., Ltd.	www.capcom.co.jp
	Konami Corporation	www.konami.co.jp
	Square Enix Co., Ltd.	www.square-enix.com/jp
	Sega Corporation	sega.jp
	Taito Corporation	www.taito.co.jp
	Tomy Co., Ltd. (Kabushiki Kaisha TakaraTomy)	www.takaratomy.co.jp
	Tecmo, Ltd.	www.tecmo.co.jp
	Hudson Soft Co., Ltd	www.hudson.co.jp
Namco Bandai Game Inc.	www.bandainamcogames.co.jp	

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This report is an update of *Trends in the Japanese Video Game Industry* (May 2004), compiled by JETRO with data from Yano Research Institute.