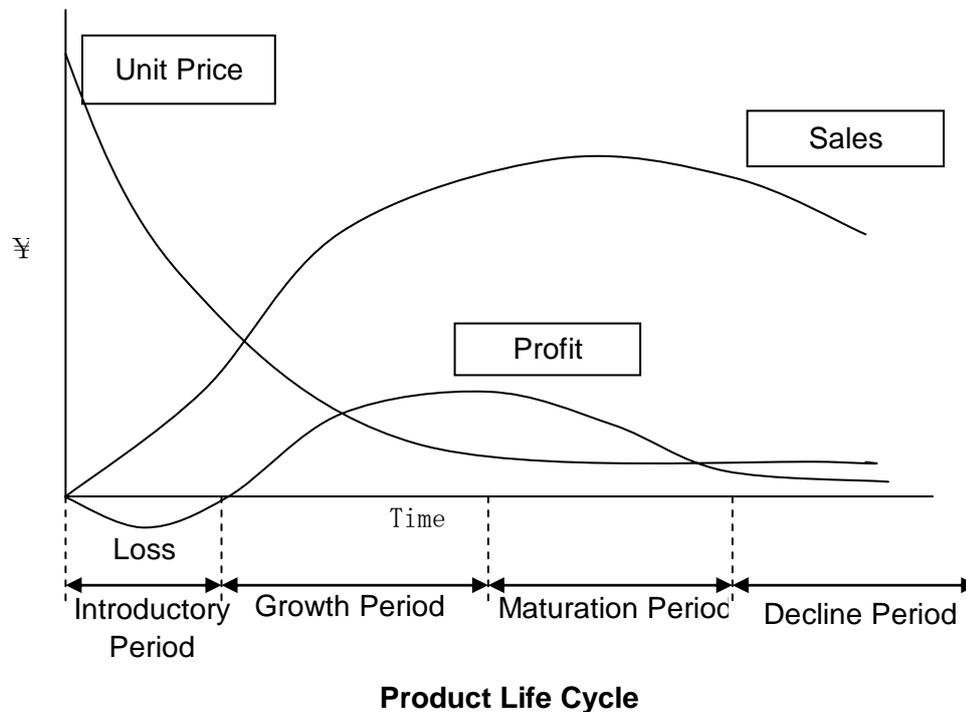


## 8 Product Life Cycle

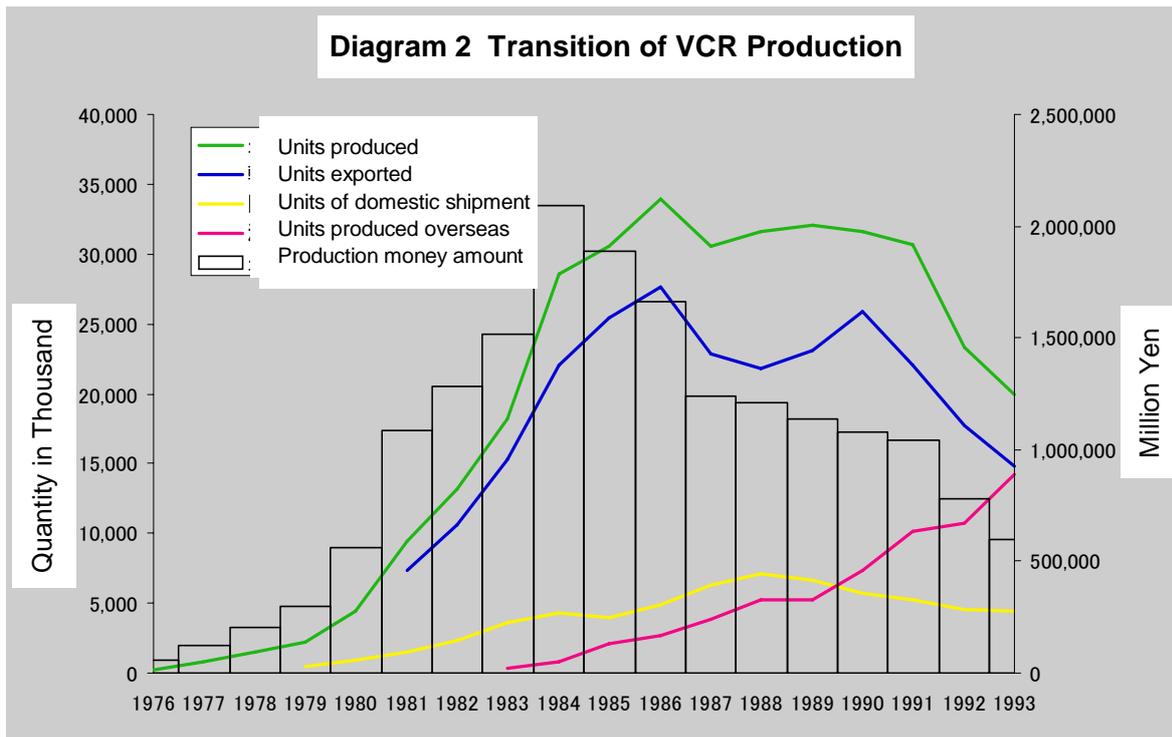
### 1 Stages of Product Life Cycle

#### 1.1 Fundamental Pattern

- ◆ Introductory Period
  - New product introduced, small sales/profit
- ◆ Growth Period
  - Rapid growth in sales/profit
- ◆ Maturation Period
  - Sales growth slacking off, coming to a halt
- ◆ Decline Period
  - Sales/profit in decline



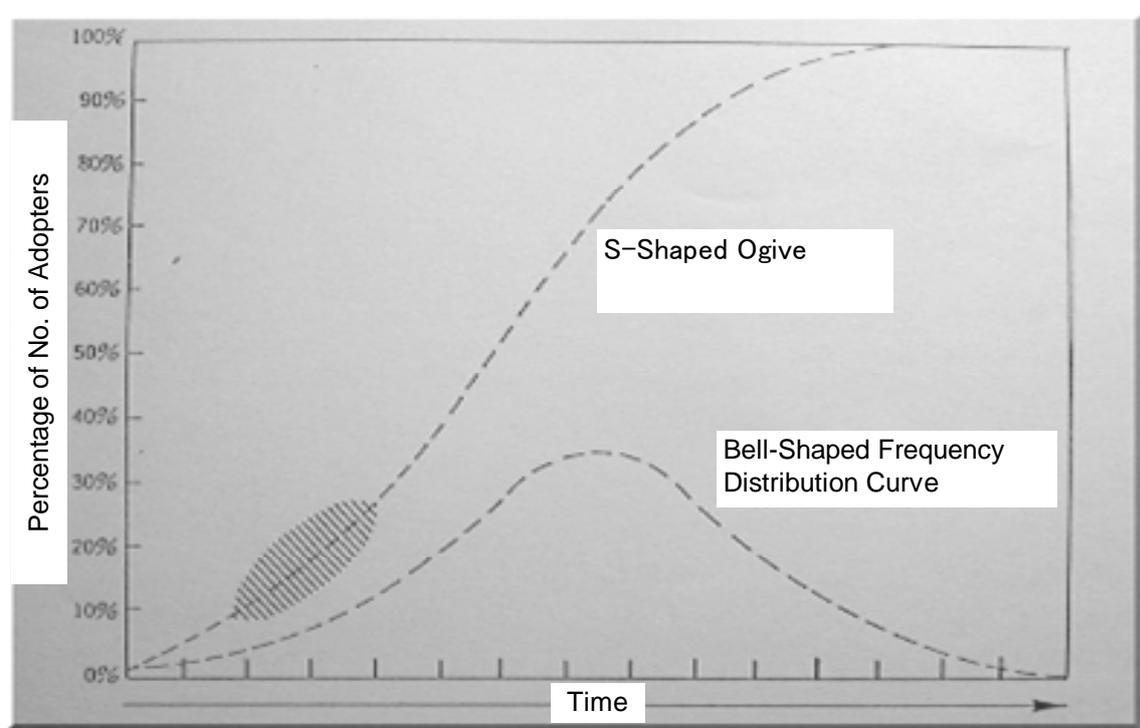
- ◆ Typical Example of Life Cycle: VCR



Drawn by Shintaku

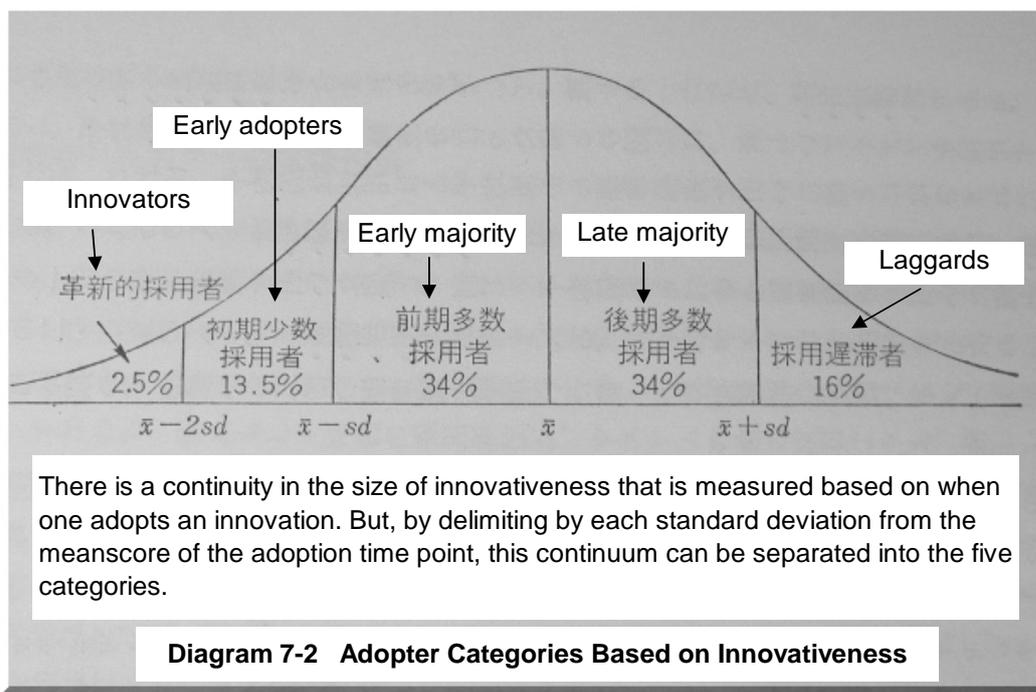
### 1.2 Diffusion Curve of New Product

#### ◆ Diffusion Curve



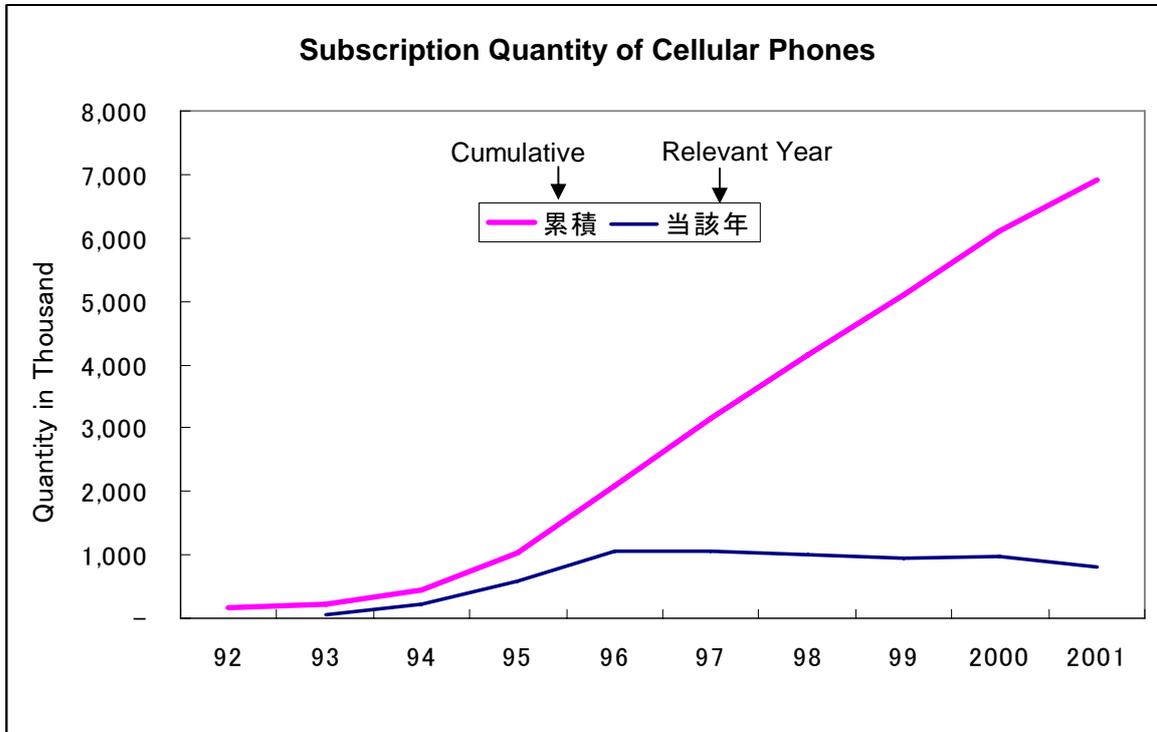
Rogers, E. M.(Author), Aoike, S. & Uno, Y. (Translator) *Diffusion of Innovations*, Sanno Univ. Publication, 1990. P350 Figure7-1.

◆ Adopter of New Product



†

Origin: Rogers, E. M.(Author), Aoike, S. & Uno, Y. (Translator) *Diffusion of Innovations*, Sanno Univ. Publication, 1990. P356 Figure7-2.



Drawn by Shintaku

**2 Product Life Cycle and Strategies**  
**2.1 Issues in Each Stage of Life Cycle**

- ◆ Introductory Period
  - Expansion of the market
- ◆ Growth Period
  - To secure the brand preference
- ◆ Maturation Period
  - To secure own firm's customers and deprive other firms of their customers
- ◆ Decline Period
  - Withdrawal
  - Reenlargement of the market
  - Survivor's profit

## 2.2 Strategies in Introductory Period

- ◆ Strategic focus: Market expansion
  - To remove a bottle neck of the diffusion
  
- ◆ Factors that prevent a new product's diffusion
  - Customers
    - Unaware of the product's being per se
    - Ignorant of the product information such as its application or function
    - Holding off due to a high price
  - Producers
    - Not grasping customer needs
    - Production system not prepared
    - Many defectives in initial-stage products
    - Sales system not organized
  
- ◆ 4Ps in the introductory period
  - Product
    - Easier understanding and easier use of the essential service
  - Promotion
    - Push-type promotion with an emphasis on the explanation for providing product information
  - Place (Distribution Channel)
    - Closed-type; To set a high margin for distributors
  - Price
    - Penetrating pricing policy
    - Skimming pricing policy
    - High side (to recover costs of manufacturing/marketing)

## 2.3 Strategies in Growth Period

- ◆ Strategic focus
  - To secure a brand preference, and grow at a rate higher than that of the market
- ◆ Marketing strategy in the growth period
  - Product
    - To enrich supplementary services in addition to the essential service
  - Distribution channel
    - From the closed-type to open-type; To reduce a distribution margin
  - Sales promotion
    - From the push-type to pull-type leveraging mass media
  - Price
    - Reduction in price to a popular level

#### 2.4 Strategy in Maturation Period

- ◆ Strategic focus: to secure own share
- ◆ Marketing strategy in the maturation period
  - To take away other firms' shares after establishing a brand loyalty to own product
- ◆ Marketing mix (set sequence) in the maturation period
  - Different by each competitive position
  - Leader, challenger, nicher, follower

#### 2.5 Strategies in Decline Period

- ◆ Strategic options in the decline period
  - Withdrawal
  - Reenlargement of the market
  - Survivor's profit
  
- ◆ Pullout at a right timing
  - Pullout of "8mm camera" of Fuji Photo Film Co.
  
- ◆ Look for an way to re-enlarge the whole market
  - Fairly epoch-making innovation is required for a reenlargement.
  - High-definition television set, Minolta's  $\alpha$  7000
  
- ◆ Find out a new application/market
  - Honda's foray into Asian markets with its Super Cub
  - Electronic notebook; from old chaps to females and grade-schoolers
  
- ◆ Gear towards a survivor's profit
  - Lotte's chewing gums
  - Nagaoka's phonograph needles

## 2.6 Characteristics and Strategies Regarding Product Life Cycle by Stage

		Introductory Period	Growth Period	Maturation Period	Decline Period
Characteristics	Sales	low level	rapid rise	slow rise or decent	decent
	Profit	small or minus	maximum level	decent	low level or zero
	Customer	innovator	mass market	mass market	laggard
	Competition	scarce	increase	many competitors	decrease
Strategies	Strategic Focus	market expansion	penetration in market	defense of share	timing of pullout
	Marketing Expenditure	high level	high level (decent in ratio)	decent	low level
	Strategic Emphasis	product awareness	brand preference	brand loyalty	selective
	Distribution	closed-type	open-type		
	Price	high level	decent		
	Product	essential service	supplementary service		
	Promotion	push	pull with mass media		

Insered with partial modification of the following sources: Kotler, P., *Marketing Management*, President Inc., p.240, and, Shimaguchi, Mitsuaki, and Ishii, Jyunzo (1987), *Contemporary Marketing*, Yuhikaku Publishing, p.154

## 3 Variations of Product Life Cycle

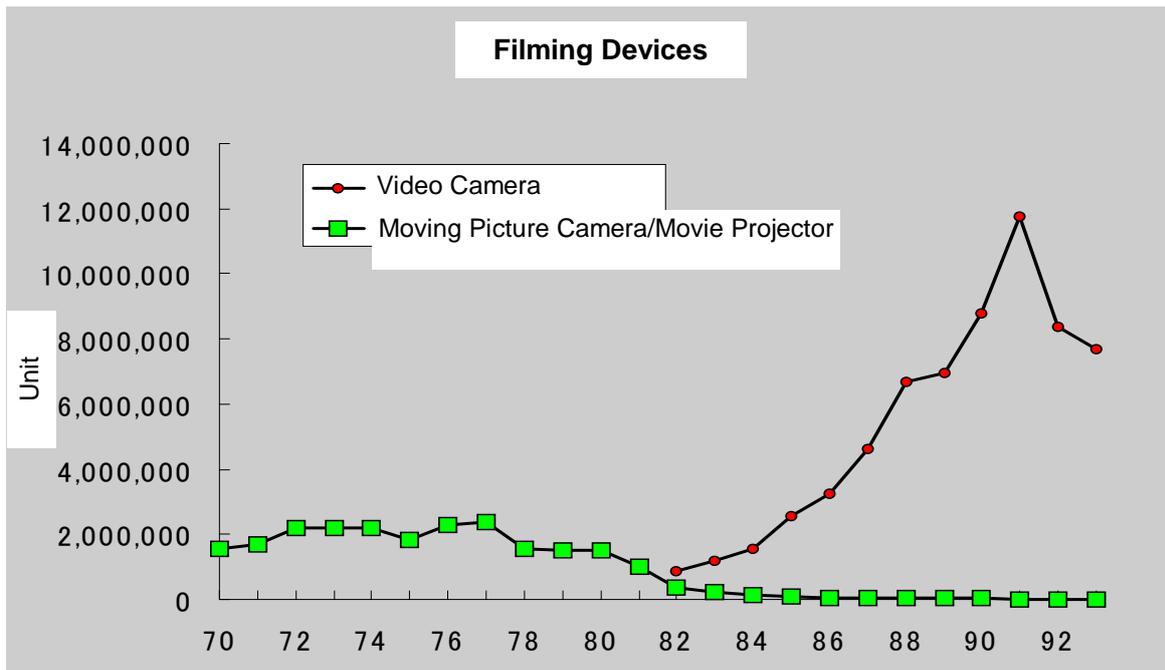
### 3.1 Relationship with Substitutes

#### ◆ Self-Fulfilling Prophecy

- If there had not been this prophecy nothing would have happened, but because of this, the reality has changed.
- When one takes it into one's head that certain product "has come to the decline period", then this product may in fact decline.
- Pullout at too early a timing (?)

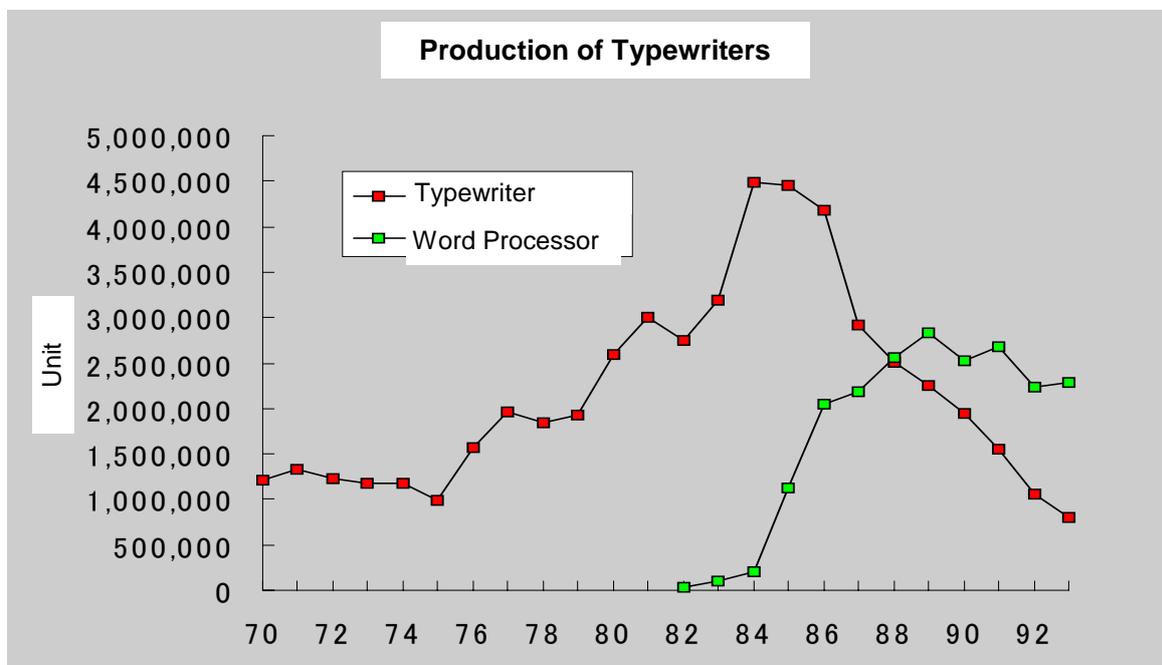
#### ◆ 8mm Camera ⇒ Video camera

- Early pullout and self-defeat of Elmo, Canon, Chinon, Fuji Photo Film
- Existence of an air pocket period
- Domestic shipment of 8mm cameras started declining around 1976.
- Video camera's emergence in '79, and its market's initial rise in '82
- As an 8mm camera was a durable consumer item, there was a chance that consumers held off purchasing them at an early stage foreseeing the emergence of video cameras.

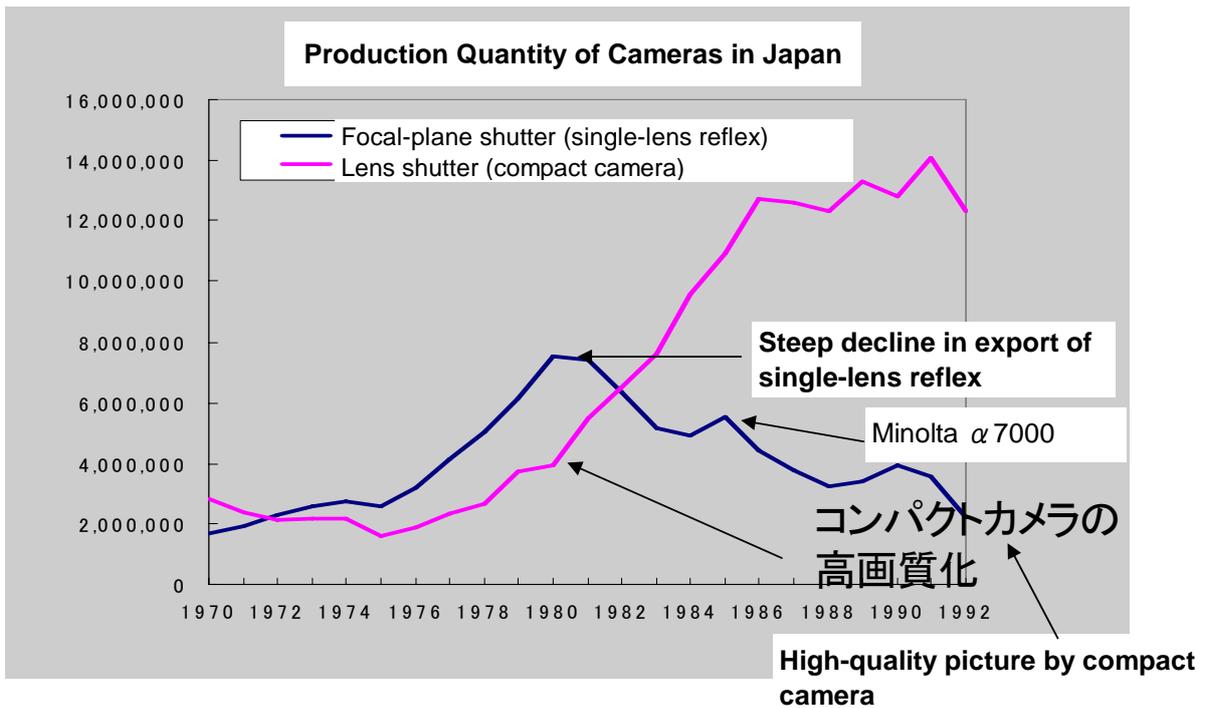


◆ Typewriter ⇒ Word Processor

- Pullout at too late a timing; Sudden growth immediately before the decay
- Emergence of the word processor for individual users and an enhancement in its price/performance ratio



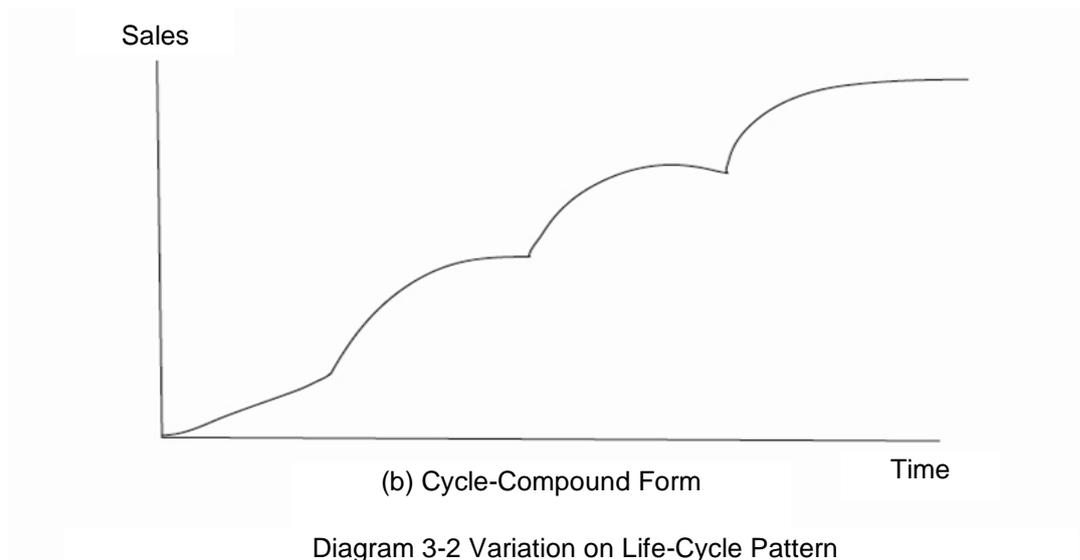
◆ Camera: Cycle by Segment



### 3.2 Anomalistic Cycle

- ◆ Actual life cycle is not necessarily “beautiful”.
- Anomalistic cycle is a composition of multiple life cycles.

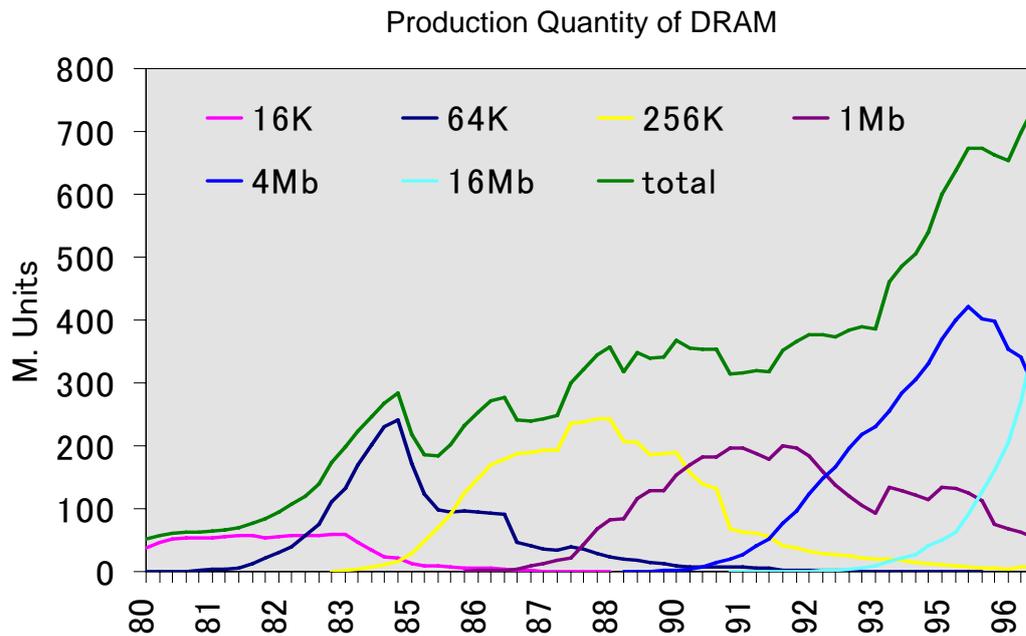
#### 3.2.1 Cycle-Compound Form



Origin: Kotler, P., *Marketing Management*, President Inc., P.223

†

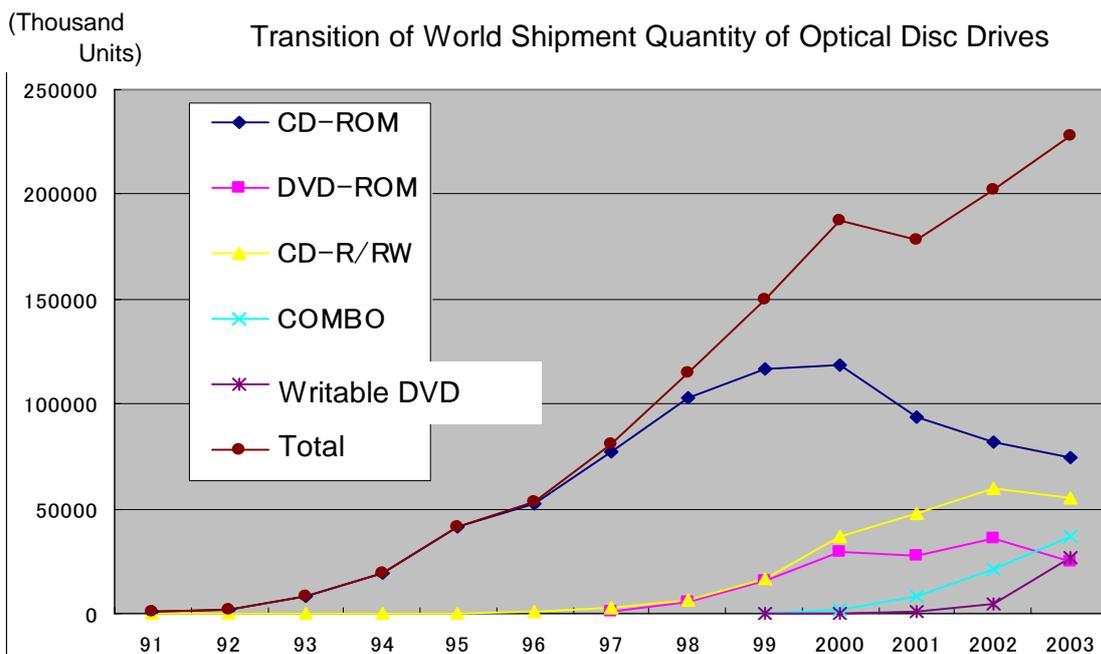
- ◆ Generational shift of semiconductor DRAMs



Origin: Drawn by Shintaku

- Life cycle of the whole DRAM is a compound of the life cycle of each generation.
- DRAM of two-to-three generations simultaneously exists side-by-side in the market.
- Market segments are different ranging from servers to personal computers.

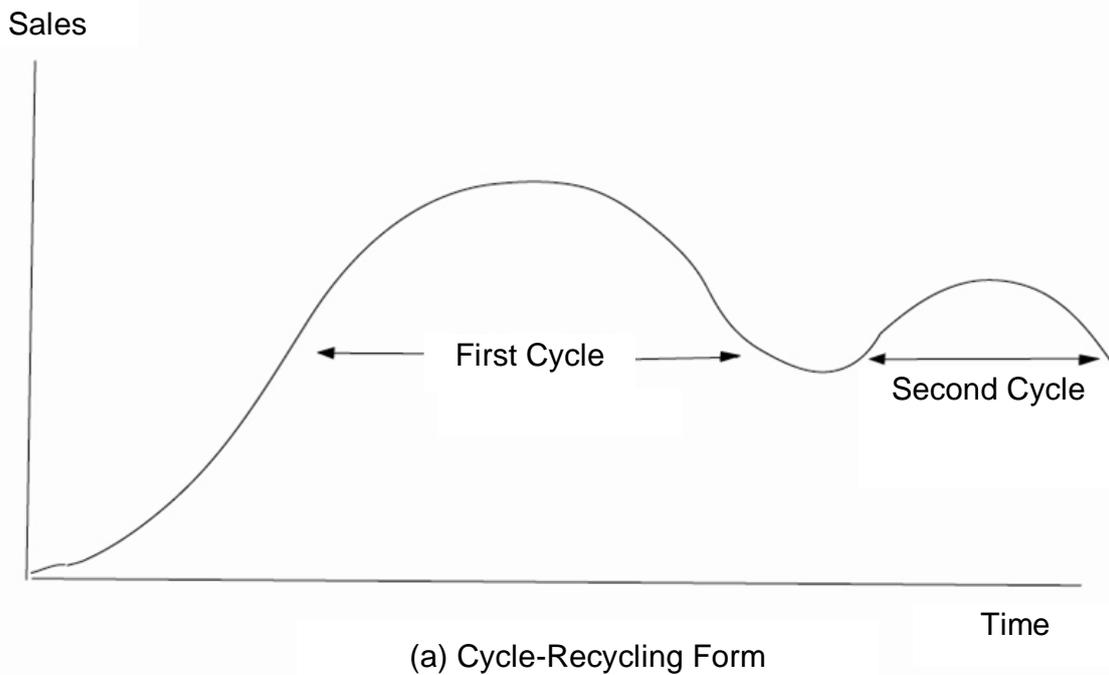
◆ Generation shift of optical disc drives



Drawn by Shintaku based on the data by Techno System Research

In view of the whole optical disc drives, the market is still on its way to enlargement (in Growth Period). But in terms of each product generation, initial CD-ROM drives have fallen off, and writable CD-R/RWs and next-generation DVDs are growing.

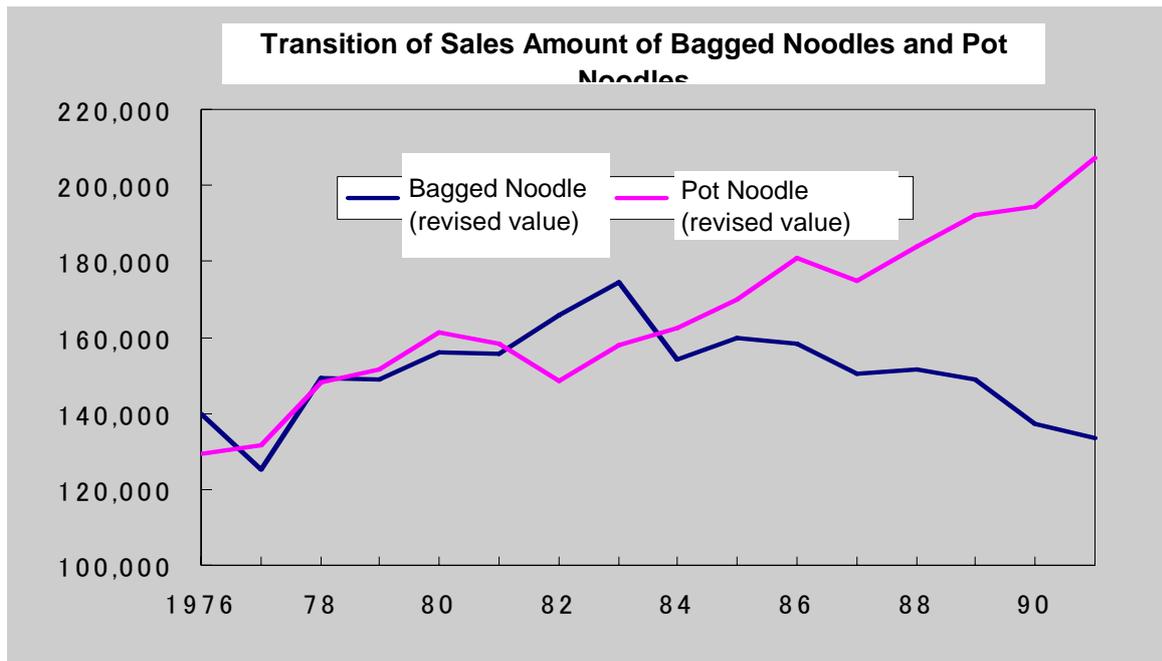
### 3.2.2 Cycle-Recycling Form



Origin: Kotler, P., *Marketing Management*, President Inc., p.223

#### ◆ Instant noodle

- Pot noodle's first boom and second boom
- Relationship between supplement and substitute
  - From a price segregation to a head-to-head competition
  - Chuka-zanmai and the price competition



Origin: Drawn by Shintaku



Chuka-zanmai (Myojyo Foods Co.): launched in Oct. 1981, 90 Yen

◆ Microwave

-First period

Limit in the diffusion into the market of households/housewives

Multifunctional microwave intended to be an all-purpose cooking device

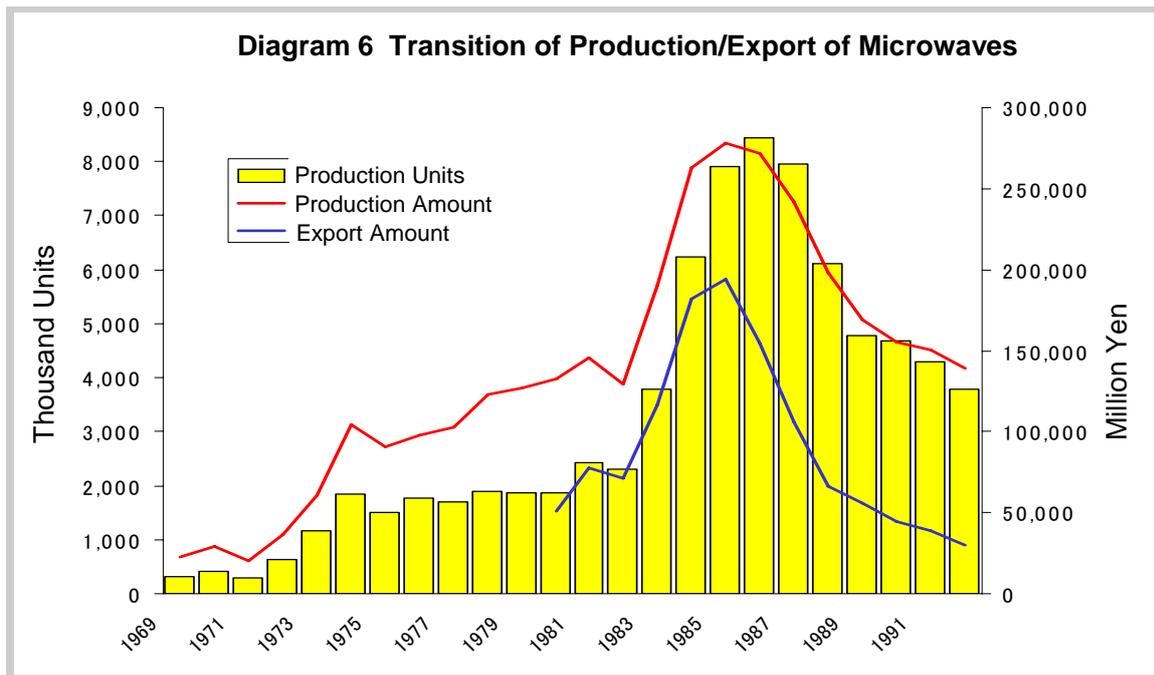
-Second period

Matsushita released a single-functional microwave at 50,000 Yen in 1980.

Single-person market

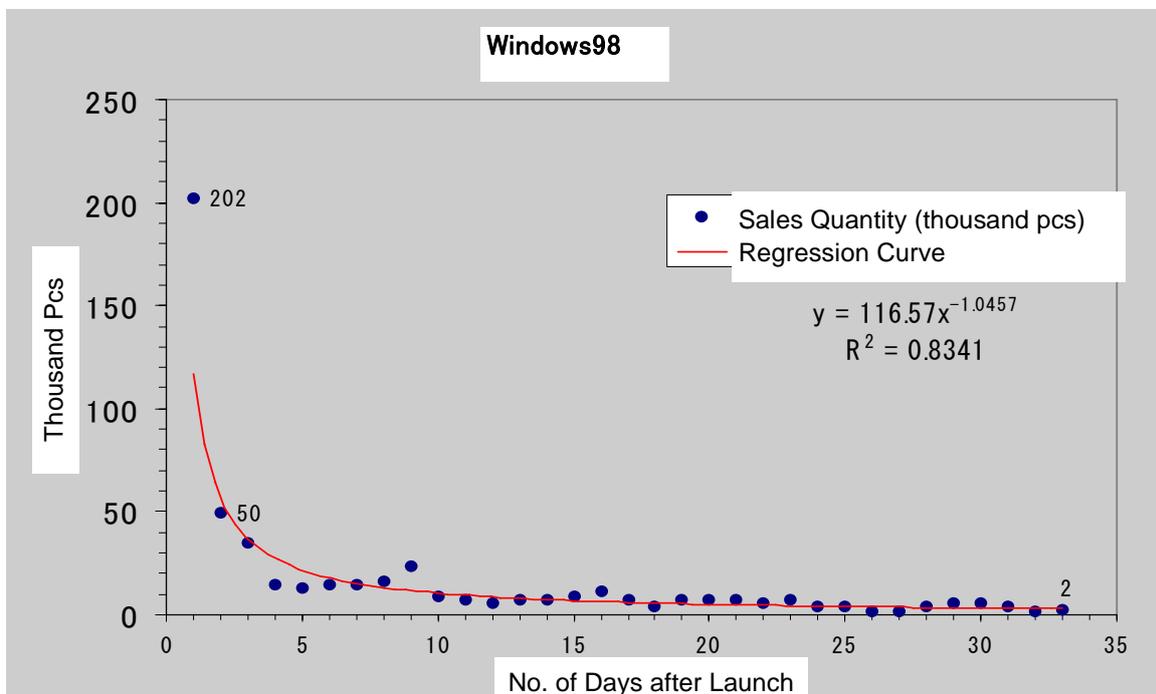
Non-cooking market

Microwave foods

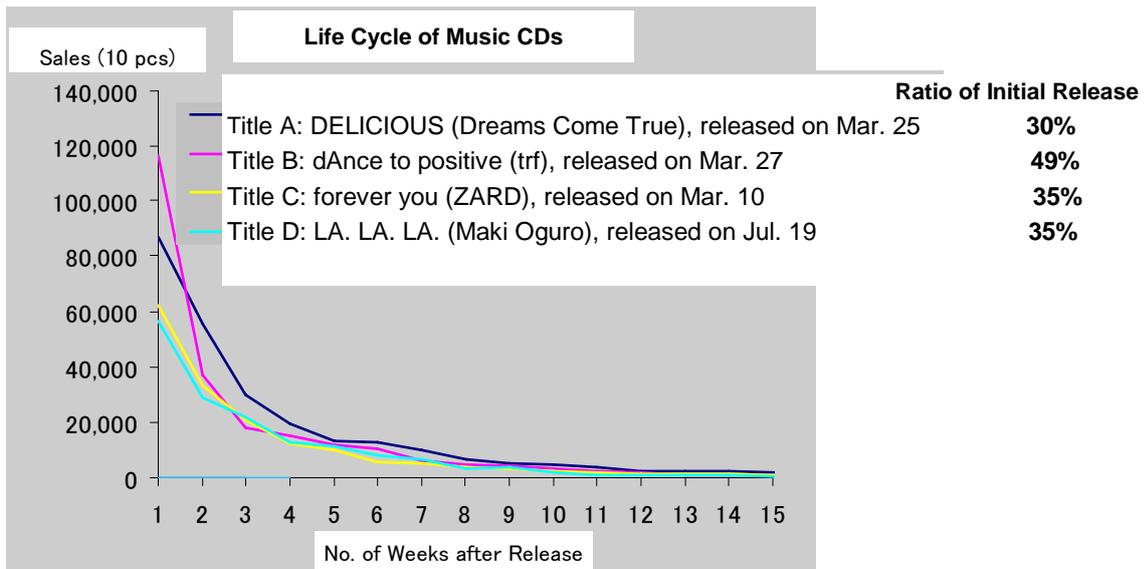


### 3.3 Life Cycle by Individual Product (Brand)

◆ Windows98: Steep decline in sales

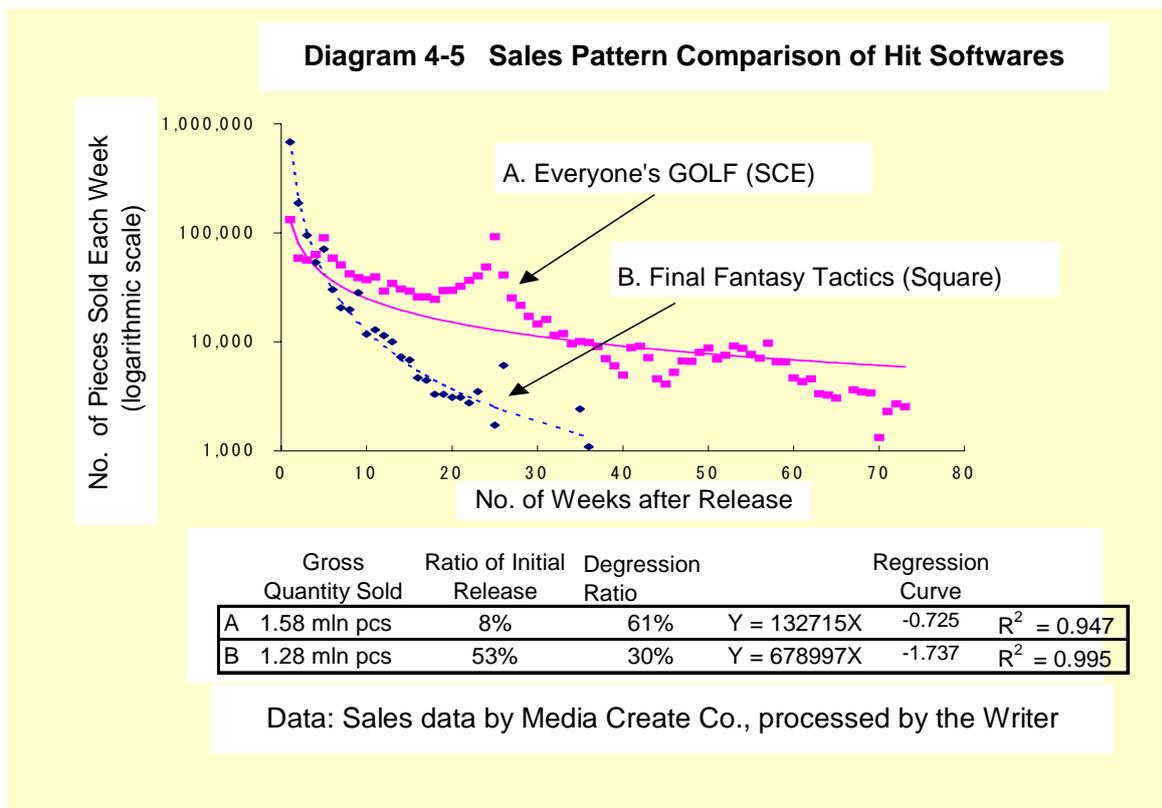


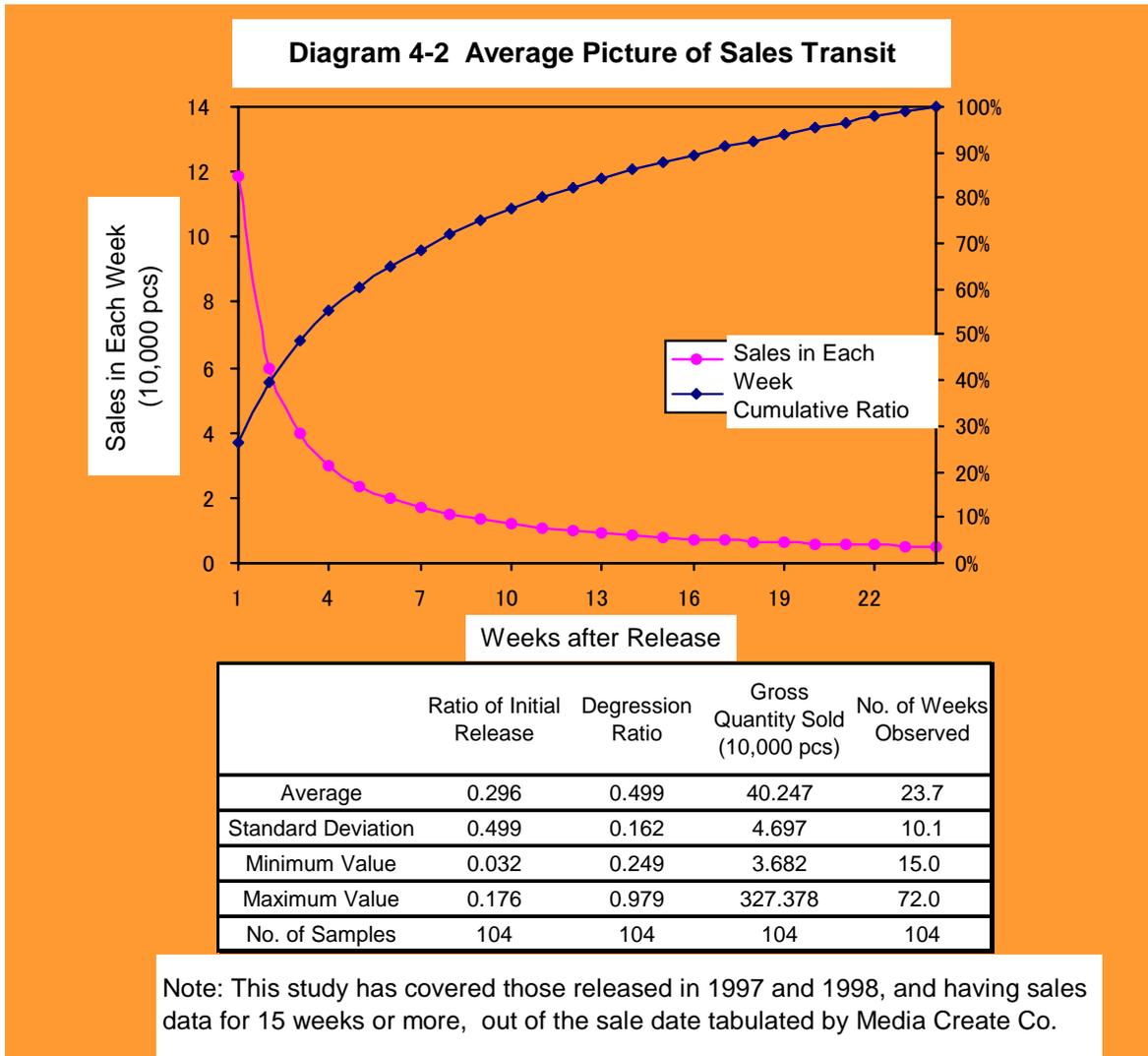
◆ Music CD: Steep decline in sales



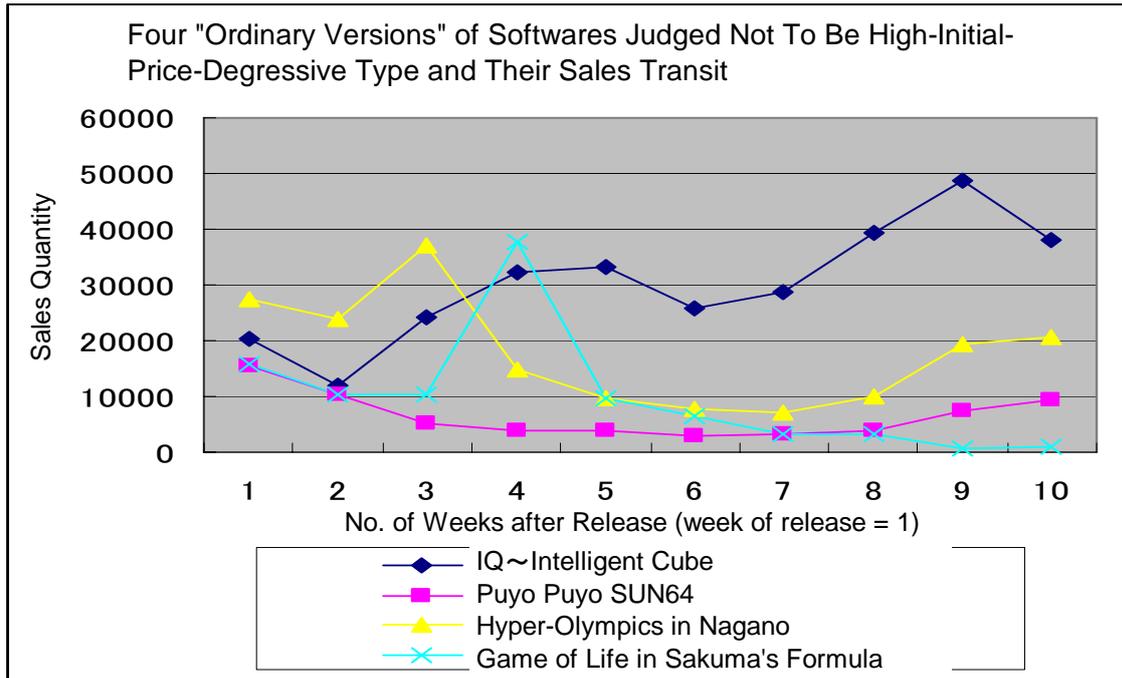
Kato, Hiroyuki, Dissertation

◆ Game Software





Game softwares having exceptional sales trends

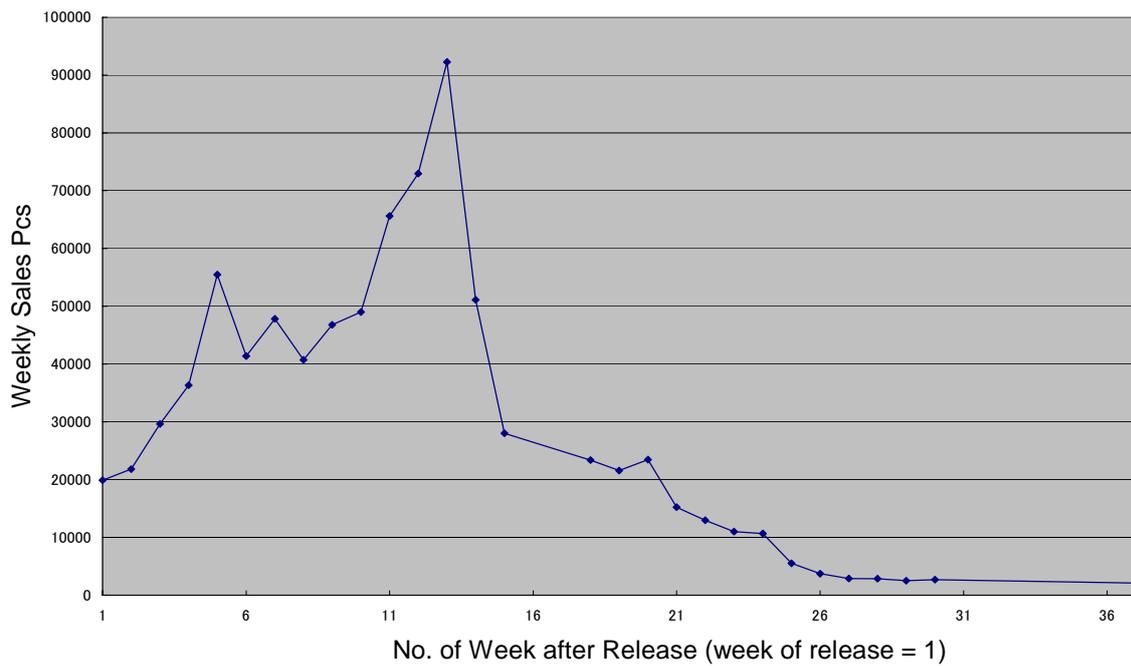


Title	Maker	Model	Genre	Date of Release	Gross Quantity Sold (A)	Quantity Sold in Week of Release (B)	Ratio of Quantity Sold in Week of Release (B/A)
IQ~Intelligent Cube	SCE	PS	Puzzle	01/31/97	633,154	20,281	3.20%
Puyo Puyo SUN64	Compile	N64	Puzzle	10/30/97	124,403	15,609	12.50%
Hyper-Olympics in Nagano	Konami	PS	Sports	12/18/97	230,267	27,401	11.90%
Game of Life in Sakuma's Formula	Takara	PS	Table Game	12/10/98	104,292	15,842	15.20%

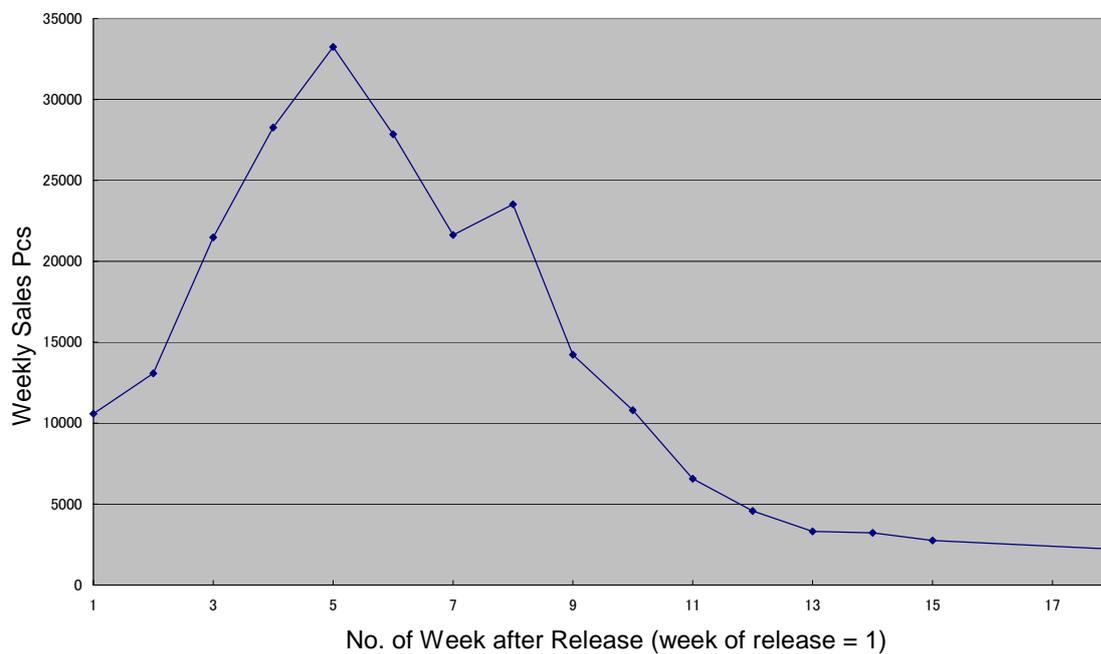
▲ Origin: Wada (2003), "Pattern of Sales Concentration in Infancy", Shintaku, Tanaka and Yanagawa ed. *Economic Analysis on Game Industry*, Toyo Keizai

Exception in music

**Wadatsumi-no-ki (released 2/6/2002): Gross Quantity of 839,420 Sold**



**Futari-no-akaboshi (released 1/9/2002): Gross Quantity of 227,340 Sold**



Origin: Drawn from data prepared by **Takeaki Wada**, University of Tokyo

◆ Automobile

- Odyssey

Model change in Dec. 1999

Monthly sales target of 6,000 cars

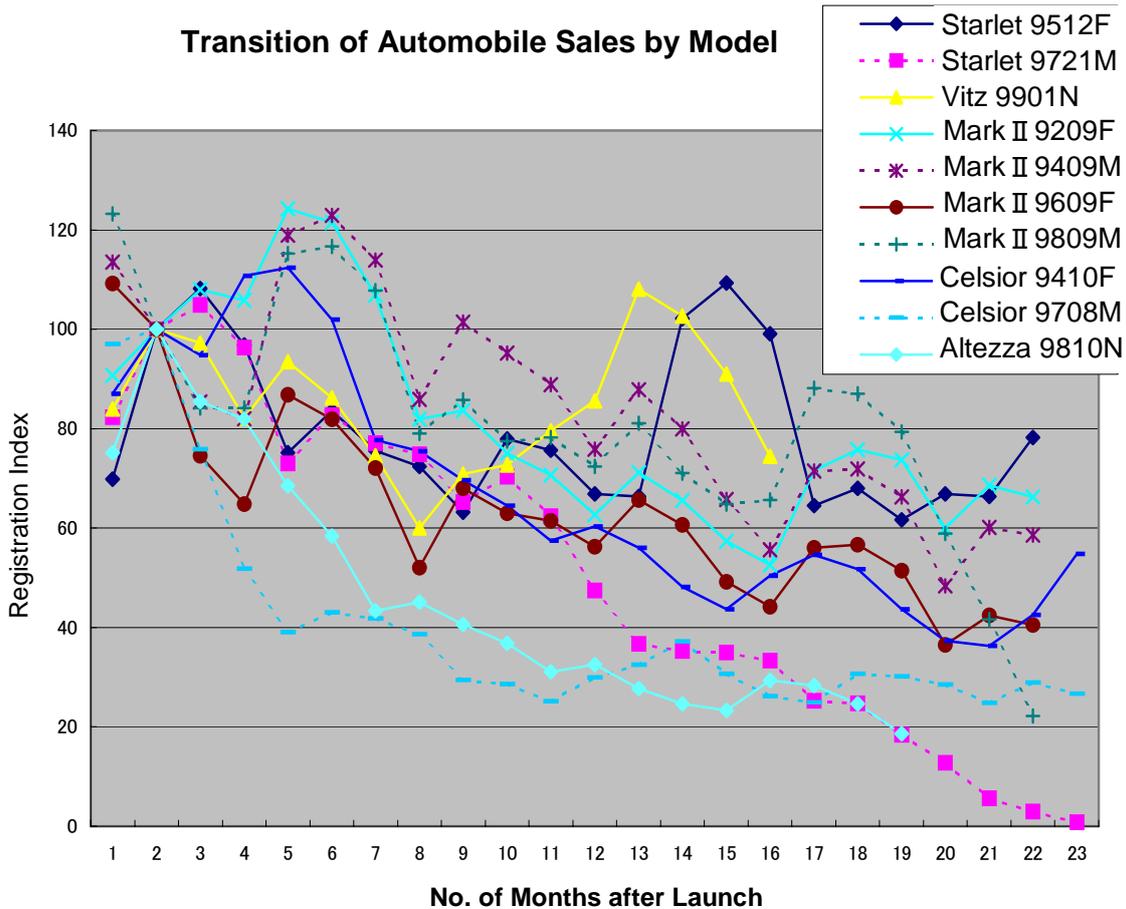
Mar. 2000: 15,392 cars

Jun. 2000: 14,600

*Nikkei Sangyo Shimbun* dated 7/4/2000



The figure is omitted  
due to copyright.



The data has been drawn as follows: Set as base the quantity of registered cars by month, and obtain a 3-month-moving average, and further, convert into the index by setting the registered cars of the second month (the average value of 2nd, 3rd and 4th month after the respective launch) as 100.

About the explanatory note: "Starlet 9512F" indicates a Starlet that was launched after a full-model change in Dec. 1995. Suffixed letter F is for "full-model change", M for "minor change" and N for "new model".

#### Comment

In general it appears as though the sale depression ratio tended to grow higher. The high depression ratios are being seen with Celsior launched in 1997, Altezza in '98 and Starlet in '97. As for Celsior and Starlet, their depression ratios are higher than ones for the previous model changes (in '94 and '95, respectively).

However, such a trend is not necessarily observed for Mark II.

In case of Vitz, the sales went up from the 9th month (from Nov. '99 to Mar. 2000). The reason for this is unclear to date: There might have been a significant line expansion. There is a possibility that the transition of Vitz could be largely different in case another examination were made from its order-entry perspective.