

2005 2 25

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한국은행  
THE BANK OF KOREA

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**2005.2**

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I. .... 1

II. .... 2

1. .... 2

2. .... 5

III. .... 7

1. : .... 7

2. : .... 10

3. : .... 11

IV. .... 13

1. .... 13

2. • • .... 14

V. .... 16

VI. .... 20

1. .... 20

2. .... 21

3. .... 23

4. : → .... 24

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( )



, IT  
38%(2003 ), 46%(2004.1~11 )

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FTA



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( )



(interdependence)

(circularity)

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— ,

(high-tech equilibrium)

—

(low-tech equilibrium)



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□

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□

, ,

□

1988 29% 2004 46%(1~11

)

IT

—

IT ( · · , , )  
2000 0.47~0.55 (0.13) 4

0.28 (0.10~0.13) , 2~3

□

,

—

(1 )  
(1992~1997) 11.6% (1997~2002)  
5.4% ( 15.9% → 12.5%)

—

11.2% 3.3% ( 18% → 9.2%), 7.1% 4.1% ( 6.2% → 6.6%)

□

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, 99%

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, IT,

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□

1980

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1950

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☐ 2001 ‘

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☐

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WTO

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(Network Loan)

o

(“

’(The Valley of Death))

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I.



1970

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FTA



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II.

1.



(spill-over)

(deep division of labor)

(Rodríguez-Clare 1996)



(interdependence)

(circularity)\*

(multiple equilibria)

(Ciccone and Matsuyama

1996; Rodríguez-Clare 1996; Rodrik 1996)

\*

( )

(high-tech

equilibrium)

—

(low-tech equilibrium),  
(underdevelopment trap)'



,

( (coordination) )

—

(skill),  
(knowledge),

o

(non-transferability) (non-tradability)

—

,

\*

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\*

o



(Okuno-Fujiwara 1987)

—

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o

(economy of scale)

(economy of scope),

\*

\*

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,

2.

□ \* 38%(2003 ), 46%(2003 ), 46%(2004.1~11 )

\* 2001 ‘ .  
( ‘ , )  
①  
, ②  
, ③

|     |        | 2000  | 2001  | 2002  | 2003  |
|-----|--------|-------|-------|-------|-------|
| ( ) | (A)    | 214.3 | 217.7 | 243.3 | 257.0 |
|     | (B)    | 564.8 | 583.8 | 634.2 | 676.3 |
|     | A/B(%) | 37.9  | 37.3  | 38.4  | 38.0  |
| ( ) | (A)    | 121.3 | 120.5 | 122.9 | 126.0 |
|     | (B)    | 265.3 | 264.8 | 269.6 | 272.1 |
|     | A/B(%) | 45.7  | 45.5  | 45.6  | 46.3  |

: , ; ,

|       | ( , %) |       |         |         |         |         |         |         |           |
|-------|--------|-------|---------|---------|---------|---------|---------|---------|-----------|
|       | 1988   | 1993  | 1995    | 1997    | 2000    | 2001    | 2002    | 2003    | 2004.1~11 |
| (A)   | 177.6  | 332.0 | 591.7   | 624.1   | 818.8   | 634.1   | 695.5   | 858.1   | 1,055.9   |
| (B)   | 607.0  | 822.4 | 1,250.6 | 1,361.6 | 1,722.7 | 1,504.4 | 1,624.7 | 1,938.2 | 2,306.4   |
| (A/B) | 29.3   | 40.4  | 47.3    | 45.8    | 47.5    | 42.1    | 42.8    | 44.3    | 45.8      |

: ‘ , MTI  
: , KITA.NET

□ , ,

— 1 (2003 ) 2  
(2.5 )\* 80%

o ( GDP)  
1997 100 32 (76)  
(44) (Ark and Timmer 2003)

—

, IT

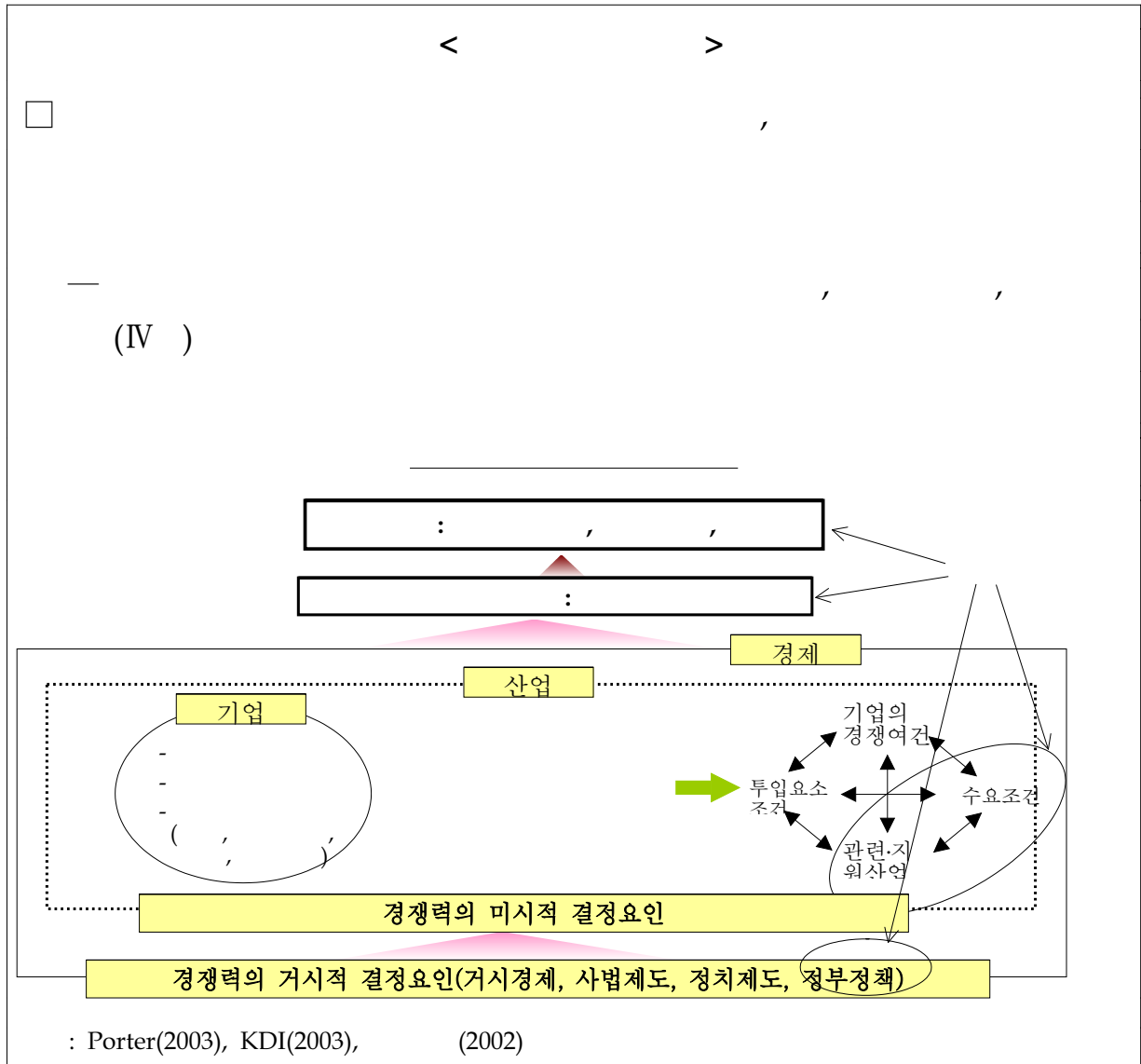
o 10 (HS 4 , 2004 )  
24% (20%)  
, \* (0.011) (0.006) 2

\* - 10

o 10  
(24%) 20%\*

\* 2004 1~11 229.6 ,  
248.6

### III.



#### 1. :

|             |             |      |
|-------------|-------------|------|
| □           | 1988~2003   | 11%  |
|             | 1980        | 20%  |
|             |             | 1990 |
|             |             | *    |
| 40%         |             |      |
| 40%         |             |      |
| * 2000~2003 | 43%(04.1~11 | 62%) |

IT \*

\* 2003

22%, 50%(1988 10%, 36%)

O

0

\*  $(x_i - m_i)/(x_i + m_i)$ ,  $x_i$   $m_i$  i

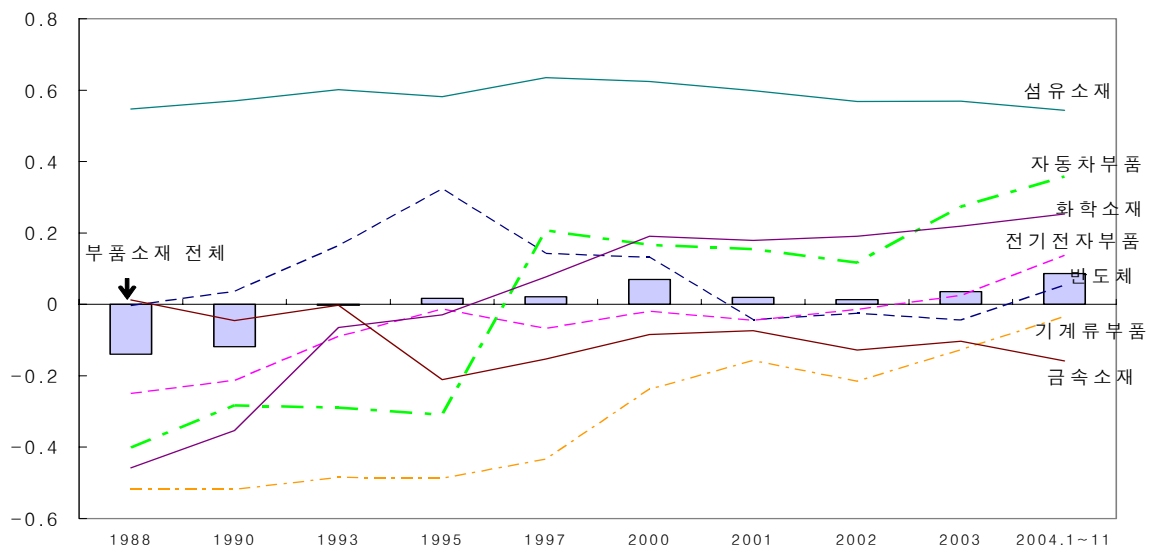
• , LCD

, , LCD

\*

\* (2004) DVD 70%, 50%,  
65%, 82%, 91%, 2  
91%

\*



: , KITA.NET



\*

\* : 1990 1.3% → 2003 26%(04.1~11 29.3%)  
: 1990 40% → 2003 30%(04.1~11 29.4%)

—

2000

\*

\* ( , ) 1990~2000  
30% 2001~2004 54%

—

, 70~80%  
40%

IT

•

|  |                   | ( , %) |         |         |         |           |
|--|-------------------|--------|---------|---------|---------|-----------|
|  |                   | 1990   | 1995    | 2000    | 2003    | 2004.1~11 |
|  | (A)               | − 69.5 | − 121.2 | − 123.8 | − 148.5 | − 158.8   |
|  | (IT) <sup>*</sup> | − 29.7 | − 49.2  | − 54.4  | − 64.1  | − 63.3    |
|  | (B)               | − 59.4 | − 155.6 | − 113.6 | − 190.4 | − 223.3   |
|  | A/B               | 117    | 77.9    | 109.0   | 78.0    | 71.1      |
|  | (A)               | − 3.0  | 12.0    | 49.8    | 123.8   | 178.3     |
|  | (B)               | − 16.8 | 17.4    | 56.6    | 132.0   | 186.6     |
|  | A/B               | 17.9   | 69.0    | 88.0    | 98.8    | 95.6      |

: +  
: , KITA.NET

⇒

IT

## 2. :



\*

(1

) (1992~1997) 11.6%

(1997~2002) 5.4% ( 15.9% → 12.5%)

\*

5

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( )

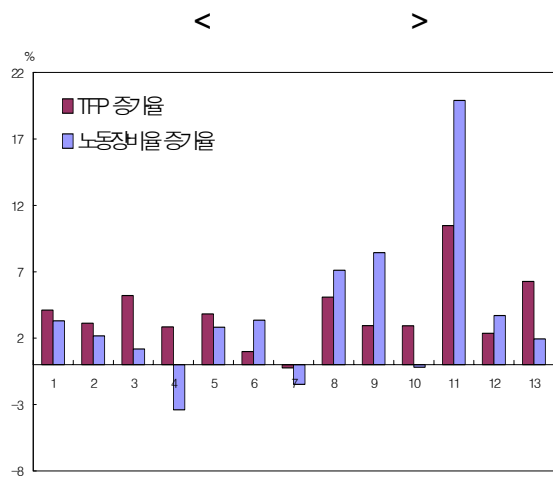
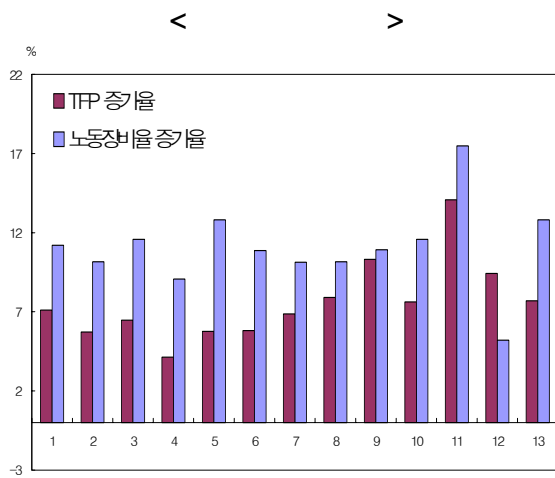
o

11.2% 3.3% ( 18% → 9.2%)

o

7.1%

4.1% ( 6.2% → 6.6%)



: 1- , 6- 1 , 2- , 7- , 3- , 8- , 9- 4- , 5- , 10- , 11-

— , , . . IT

⇒ IT

3. :

□ IT

— , , 1990

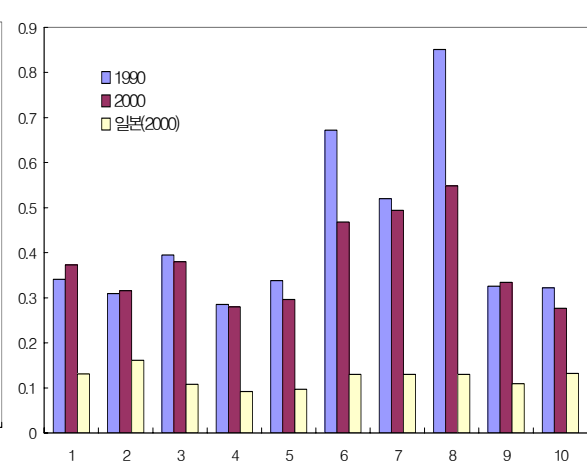
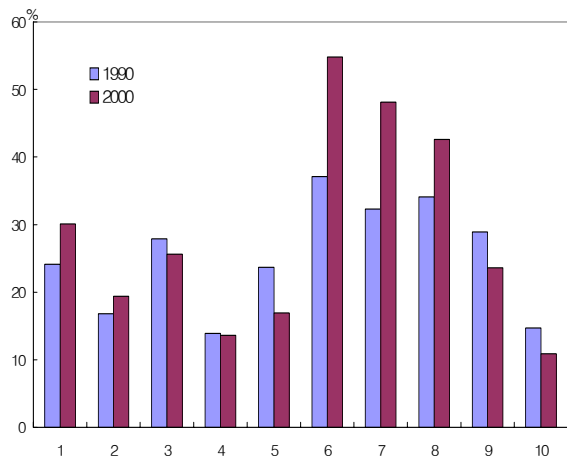
30% 2000 40%

o , LCD, (37.1%→54.8%)  
 . . (32.3%→48.1%)

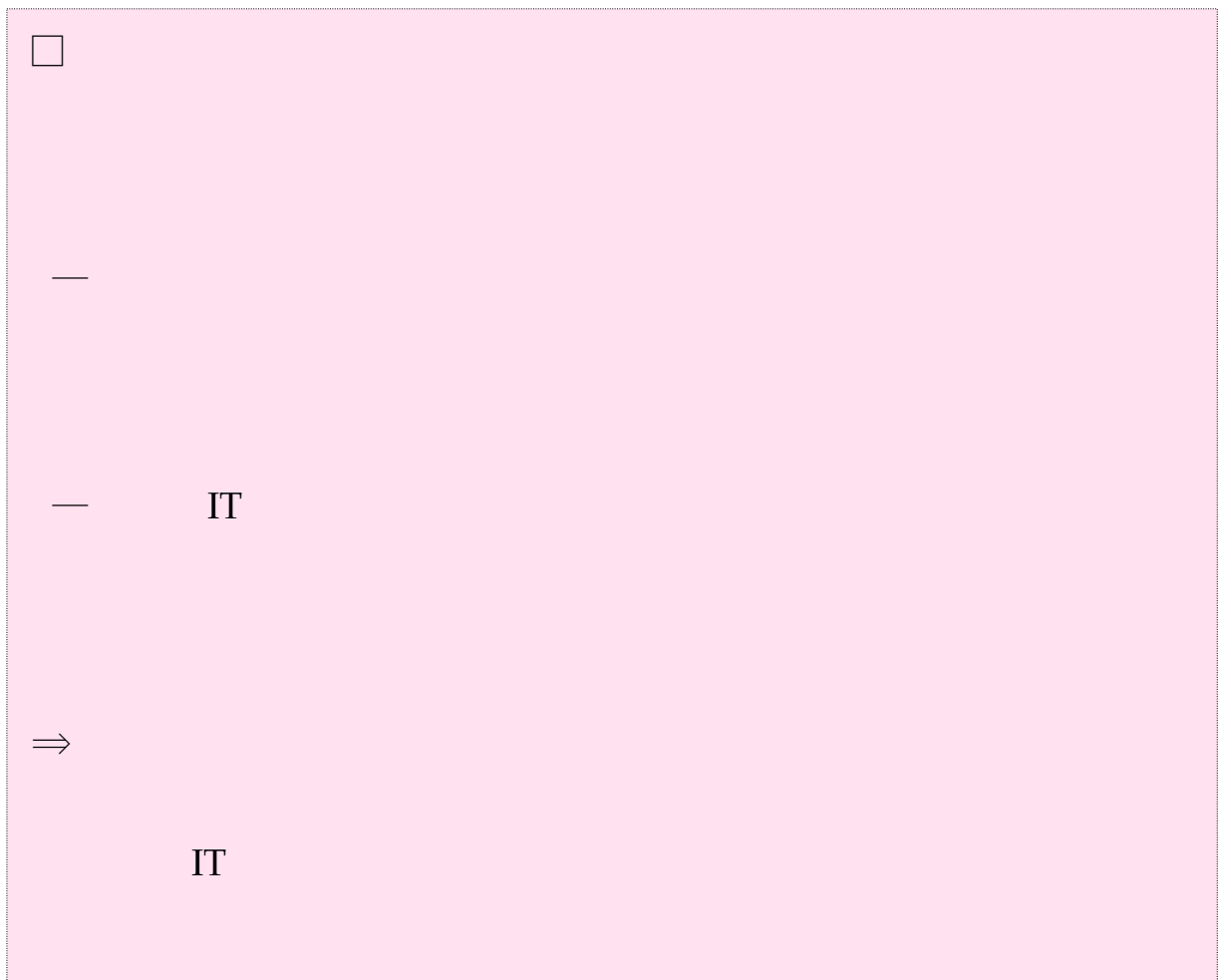
— , IT ( . . , )  
 (1— ) 2000 0.47~0.55 (0.13)

4

0.28 (0.10, 0.13) 2~3



: 1- , 2- , 3- , 4- , 5- , 6- , 7- , 8- , 9- , 10-



IV.

1.

☐

— \* ,

\* (CPU, ), ( , ), ( , ),  
( , ), ( , )

☐

— - .

☐

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☐

3 (5 )

99%

## 2. . .

□ 10 . . 3

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(Trade Complementarity Index; TCI)\* . .

-

$$* \quad C_{k,j} = 100 - \sum_i (|x_{i,j} - m_{i,k}| \div 2)$$

o - TCI 1990 44 2003 50 , -  
1998 47 2003 54

—

o 60%  
1990 36% 2003 53%

o (1990 26% → 2003 49%)

49% 68%

□ . . , .

—

IT ( , )  
( : 1992 2.6% →  
2000 8.2%, : 13.1% → 11.8%)

— , (2.9% → 6%)  
(1.9% → 2.8%)

□ , . .

— . . 100  
76.5, 110.5 3.8  
( 2004)  
99 100  
87.6, 65.1, 52.5  
2.1 ( 2004)

⇒

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—

,

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V.

□ 1980

1980

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(< > ' ,

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|                            |                                                            |                                                        |
|----------------------------|------------------------------------------------------------|--------------------------------------------------------|
|                            |                                                            |                                                        |
| 1970 :                     | —<br><br>— ,                                               | — :<br><br>— :                                         |
| 1980~90 :                  | — (1979~1999) :<br>(93 )<br>— (1987<br>~95), (1995<br>~99) | — : 4200<br>— :<br><br>1 ) (                           |
| 2000 :<br>( '<br><br>2001) | —<br><br>—19<br><br>' ,<br>—                               | — :<br><br>' ,<br>— :<br><br>' ,<br><br>' ,<br><br>' , |

□ ‘

’(2001 )

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1960

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1970

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( , 1997)

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o

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□ 2001 ‘ ’

— ( : ‘5  
1 300 ‘\*)

\* , ‘ . ‘(2005.1.17)

⇒

‘ ’

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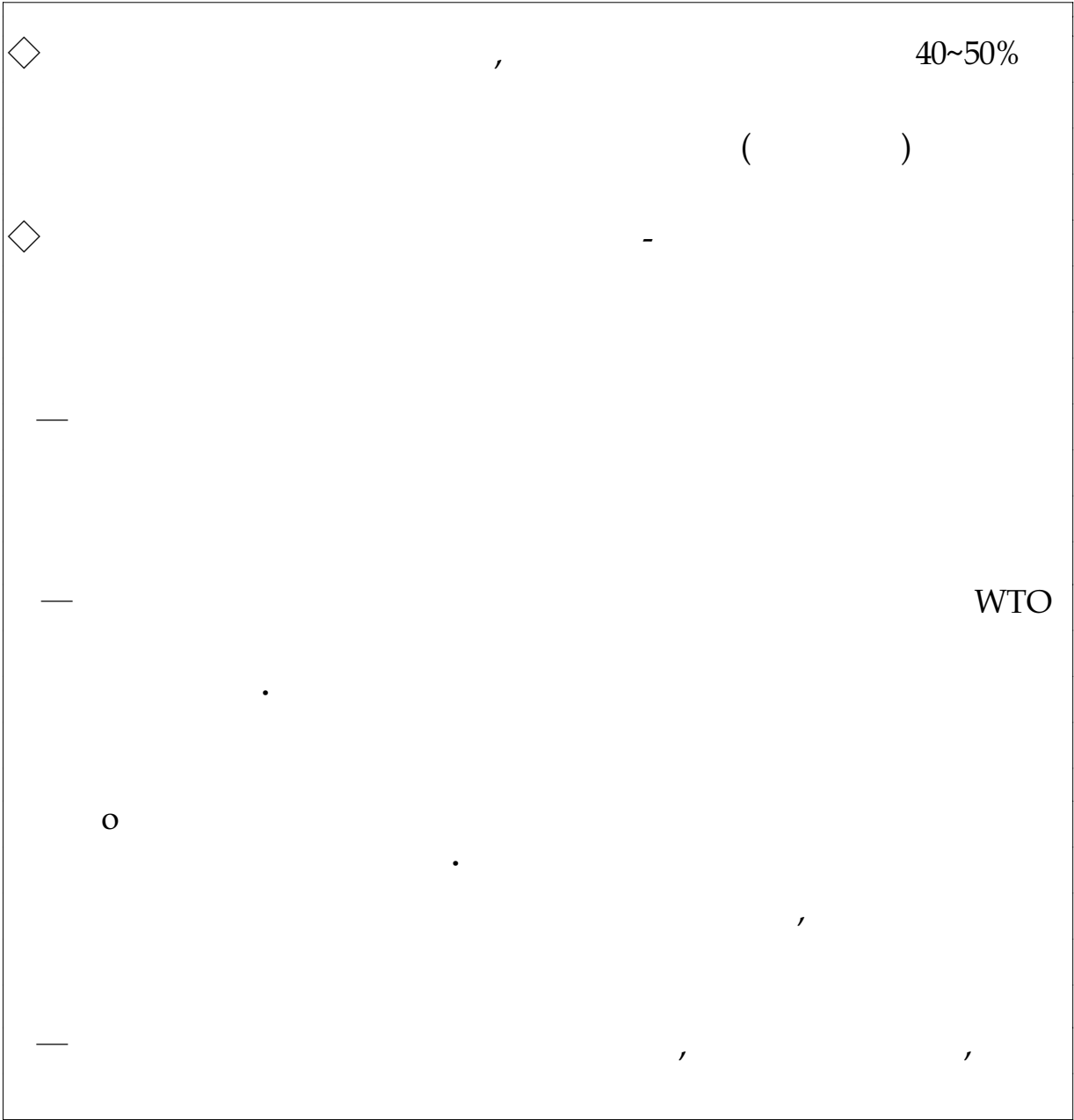


— (1952)  
(鶴田俊正 1982)  
1960~90  
o  
7  
o  
( 1999)  
⇒ ,  
,

□ WTO

1990  
,  
— 1990  
( , 1999~2008)\*  
\*  
, 40%  
, 10  
o - LCD , LCD

VI.



— 2000 ,

o ( , )

☐ . .  
\* , R&D  
/

\* 2003.8 ( TV/ , , , /SW , , / 10 )

— , .  
R&D ,

o 2001 , , , ,

2.

☐

—

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o

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\* WTO

③

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l)

(①

②

50~75%

\*\*

30%

5

□

-

(Network Loan)

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\*

04.7

'04

1,076

1,335

( )

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,

( 0.3%)

—

(Network

Loan)

3.



o ( , IT, , )

— WTO

o ( , IT, , )



o ( , IT, , )



o (Technology Licensing Office, TLO)\* . .

\* 1980

. . (Bahy-Dole) ( 2002 )



4.

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( ' (The Valley of Death)'

—

, (risk money)

o ' , , , , ,

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(

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o ' '(2000 )

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9