

2000

\*

1.

가 . . . . . 가가  
 . . . . . 3%  
 90 . . . . . 1  
 . . . . . 10  
 . . . . . 가 61  
 7 , 20 . . . . . 7%  
 . . . . .  
 가 . . . . . 가  
 . . . . .  
 가 가 . . . . . 가  
 가 . . . . .  
 가 . . . . . 2000  
 ,

---

\* (Tel: 02-3284-1822 /  
 e-mail: jmpark@stepi.re.kr)

.1)

2.

1)

1999 . 4.6  
 9.9 , 9.7  
 , EU ,  
 , 가 (< 1>  
 ). 1995 1998  
 OECD 가  
 .  
 , 12%, 21%, 36%  
 (< 2> ).

4%, 7%

2000 159,973 .  
 1997 138,438 1998  
 129,767 1999 2000  
 159,973 1998 23.3% 가 (< 3>  
 ).  
 94,333 (59.0%) , 51,727  
 (32.3%) , 13,913 (8.7%)  
 . 1997 15,185

1) 1999

(2001)

2000 13,913 8.4%  
 48,588 51,727 , 74,665  
 94,333 6.5% 26.3%

2000  
 46,146 (28.8%) , 51,130 (32.0%) ,  
 62,697 가 54,026 (33.8%) (< 4>  
 ).

2000 76.2%가  
 , 1998 78.2% , 1999 76.8%  
 1997 75.4%  
 40.6% 67.9%  
 5.7% ,  
 54.7%가

2)

)

2)

가

2000

61,027

2)

가 (2001)

가 , 1998 1999 20.3% 3.4%  
 . 2000 1999  
 18,903 14.1% 16,232 (< 5> ).

, 2000  
 237,232 25.7% 61,027 ,  
 6.8% 16,232 .  
 41.4% 가  
 19.4% 13.2% ,  
 16.0% 가  
 (< 6> ).

3)  
 가 2000 115,026  
 . 82.0% 94,333  
 20,693 . . .  
 93,660  
 81.4% , 17,952  
 (15.6%), 2,006 (1.7%) (< 7> ).  
 . 가 . 1%  
 . 가 . 80.8%가, , ,  
 16.3%, 1.7%, 0.8%가 ,  
 84.3%, 12.2% ,  
 1.9% .

4)



5)

2000 13 8,485  
 , 1999 11 9,218 1998 11  
 3,366 16.2% 22.2%가 가 (< 11>  
 ). 1999  
 1 9,792 2000 2 320 2.7%  
 , 9.1% 20.5%가  
 가 가 .  
 , 2000  
 13 8,485 가 가 10 9,415 79.0%  
 , 2 9,070 (< 12> ).  
 43.4% , .  
 85.7% .  
 2000 2 320  
 , 가 75.9% 1 5,429  
 4,891(24.1%) .  
 8,464 . 6,965 .  
 3,190 1,701 .  
 2000 1 5,619 가 82.5%  
 1 2,884 , 2,734 (17.5%)  
 .  
 , .  
 10 2,547 가  
 79.1% 가 ,  
 가 가 .

2000

83.7% 8 5,849 ,  
 1 725 (10.5%), 3,819 (3.7%), . 가 .  
 1,870 (1.8%) (< 13> ).  
 . . 7 198  
 81.8% , . (9,661 )

5,450 3,645 가

3.

가 (input-output  
 model) 가 ,  
 (final demand  
 manipulation) 가

4)

1)

가

$$(1) \quad wr_{n+k,i} = \frac{r_{n+k,i}}{x_i}$$

$$r_{n+k,i} \quad i$$

$$, x_i \quad i$$

k

$$wr_{n+k,i} \quad i$$

(physical researcher input coefficient)

(researcher employment multiplier)

$$(2) \quad ws_{n+l,i} = \frac{s_{n+l,i}}{x_i} = \gamma_{n+l,i} \left( \frac{\xi_i}{1 - \xi_i} \right) \sum_k wr_{n+k,i}$$

$$s_{n+l,i} \quad i$$

$$, \xi_i \quad i$$

4)

(computable general equilibrium model)

가





2000 10  
 10.0  
 23.2 가 ,  
 8.5 7.3  
 15.2 7.0  
 6.3  
 8.0  
 5  
 가  
 가  
 7.9 17.1 , 14.9 ,  
 9.5 , .가 .  
 .가 20.0 가  
 , 17.0 , . 16.9 , .  
 16.3 , 15.5  
 가 35.2 가 ,  
 , , 23.2 , 21.8 , 17.3  
 .

3)

2000 13 8,485 , 가 23.2%  
 3 2,113 , , ,  
 (< 14> ).  
 51.5%  
 1 6,544 , 2000  
 81.4% .

8,716 6,853 ,  
55.8% 6.7% .  
5,697 978  
97.4% (<  
15> ).  
4,776 83.8%가  
, 421  
358 가 .  
2000  
38,041 가 28,439  
9,603 .  
(headcount) 2000  
3 2,113 81,406 .  
56,163 가 ,  
17,556 7,687  
.  
(headcount)  
가 가 ,  
(multiple part-time job) 가  
- - ,  
, (headcount) 가  
.

4.

2000  
가 .

1999 11 9,218 2000 13 8,485  
 16.2% . 212,510  
 237,232 11.6%가 가 .  
 가  
 , 2000  
 138,077 1999 137,874 0.1%<sup>5)</sup>  
 . 1999 100,210  
 2000 108,370 8.1% .  
 가 가  
 가 .

(outsourcing) .  
 , 2000  
 (headcount) 0.1%, (full-time equivalent)  
 21.1% .<sup>6)</sup>

. , 1  
 5) . 가 (2001)  
 2000 0.1 1999  
 1.5 . 가 2000  
 1999 가 140,953 , 가 2.2%

6) < 5>  
 21.1% 13.5% .

1 7.4%, 1 37.  
1%<sup>7)</sup>가 -

가

5.

2000

가

가  
(underestimated)

가

1999 4,000

가 1999

20 7%

3.7% 4.6%,  
( , 2002).

105

가

---

7) 2000 1 2,779 1 1999 1 1,897  
3.6 , 1 2.7

가 (2001), 「2000  
」.

(2002), 「2002 : ,  
」.

(2001), 「 ,  
2001-07, .

NSF (2000), *Science and Engineering Indicators*.

OECD (2001), *Main Science and Technology Indicators*.

< 1> 가

( : )

가	1995	1996	1997	1998	1999
	4.8	4.7	4.7	4.3	4.6
	7.4	-	8.1	-	-
	10.1	9.2	9.2	9.6	9.7
	5.9	5.8	5.9	6.0	6.0
	5.1	5.1	5.1	5.5	-
	4.0	4.5	5.1	-	-
	6.7	-	8.4	9.4	9.9
	5.4	5.4	5.4	-	-
	5.7	5.9	6.1	-	-
	2.3	-	2.6	-	-
	3.0	3.2	3.3	3.7	3.7
	6.0	6.0	6.0	6.1	-
	3.3	3.3	3.3	-	-
	4.6	4.6	5.0	5.0	-
	3.4	-	-	-	-
	2.4	-	2.7	-	-
	7.7	-	8.4	-	9.1

: OECD(2001)  
: 1993

< 2> 가 .

가		1991	1993	1995	1997
		225	244	358	427
	/	99	124	169	187
		466	659	938	1,157
	Total S&T	1,135	1,421	1,920	2,189
	Total Ph.D.s	2,984	3,583	4,462	4,999
		9,086	9,562	9,997	10,414
	/	1,839	2,024	2,188	2,030
		5,215	5,696	6,008	6,098
	Total S&T	24,020	25,441	26,536	27,180
	Total Ph.D.s	37,517	39,754	41,743	42,705
		863	1,009	1,182	1,315
	/	0	0	0	0
		2,029	2,362	2,791	3,411
	Total S&T	3,874	4,438	5,205	6,157
	Total Ph.D.s	10,758	11,576	12,645	13,921
		5,326	5,700	5,868	6,418
	/	418	500	663	785
		2,529	2,100	2,110	2,229
	Total S&T	10,465	10,200	10,889	11,728
	Total Ph.D.s	22,462	22,000	22,387	24,174
		3,151	3,034	3,356	3,625
	/	535	528	602	565
		914	739	646	816
		1,454	1,522	1,557	1,837
	Total S&T	6,302	6,098	6,512	7,131
	Total Ph.D.s	8,387	8,717	9,761	10,993
		62	97	115	163
	/	32	45	55	88
		209	287	373	433
	Total S&T	370	513	650	839
	Total Ph.D.s	410	701	848	1,187

: NSF (2000)

: 1.

2.

3. Total S&T , / , ,



< 3>

( : , %)

1994	117,446(100.0)	15,465(13.1)	42,700(36.4)	59,281(50.4)
1995	128,315(100.0)	15,007(11.7)	44,683(34.8)	68,625(53.5)
1996	132,023(100.0)	15,503(11.7)	45,327(34.3)	71,193(54.0)
1997	138,438(100.0)	15,185(11.0)	48,588(35.1)	74,665(53.9)
1998	129,767(100.0)	12,587( 9.7)	51,162(39.4)	66,018(50.9)
1999	134,568(100.0)	13,982(10.4)	50,155(37.3)	70,431(52.3)
2000	159,973(100.0)	13,913( 8.7)	51,727(32.3)	94,333(59.0)

:  
: ( )

가 (2001)

< 4>

(2000 )

( : )

	159,973(100.0)	13,913(8.7)	51,727(32.3)	94,333(59.0)
	46,146(100.0)	5,654(12.3)	35,141(76.2)	5,351(11.6)
	51,130(100.0)	6,505(12.7)	15,459(30.2)	29,166(57.0)
	54,026(100.0)	1,619(3.0)	813(1.5)	51,594(95.5)
	8,671(100.0)	135(1.6)	314(3.6)	8,222(94.8)

:  
: ( )

가 (2001)

< 5 >

( : , %)

1994	190,298(100.0)	117,446(61.7)	56,802(29.8)	16,050(8.4)
1995	201,661(100.0)	128,315(63.6)	57,474(28.5)	15,872(7.9)
1996	202,347(100.0)	132,023(65.2)	55,647(27.5)	14,677(7.3)
1997	212,117(100.0)	138,438(65.3)	58,310(27.5)	15,369(7.2)
1998	199,191(100.0)	129,767(65.1)	50,719(25.5)	18,705(9.4)
1999	212,510(100.0)	134,568(63.3)	59,039(27.8)	18,903(8.9)
2000	237,232(100.0)	159,973(67.4)	61,027(25.7)	16,232(6.8)

:  
: ( ) 가 (2001)

< 6 >

(2000 )

( : )

	237,232(100.0)	21,563(100.0)	100,643(100.0)	115,026(100.0)
	159,973(67.4)	13,913(64.5)	51,727(51.4)	94,333(82.0)
	61,027(25.7)	4,194(19.4)	41,649(41.4)	15,184(13.2)
	16,232(6.8)	3,456(16.0)	7,267(7.2)	5,509(4.8)

:  
: ( ) 가 (2001)

< 7 >

(2000 )

( : )

	(headcount)			
	115,026	94,333	15,184	5,509
1.	395	263	69	63
2.	81	50	26	5
3.	93,660	76,210	13,116	4,334
3-1.	2,565	2,044	389	132
3-2.	1,622	958	580	84
3-3.	646	494	117	35
3-4.	12,529	9,807	1,991	731
3-5.	997	720	222	55
3-6. 1	1,350	810	455	85
3-7.	1,214	900	257	57
3-8.	71,500	59,497	8,904	3,099
3-9. 가	1,205	954	187	54
3-10. .가	32	26	4	2
4. .가	932	772	53	107
5.	2,006	1,615	264	127
6.	17,952	15,423	1,656	873
6-1.	663	537	98	28
6-2.	619	553	33	33
6-3.	1,821	1,532	51	238
6-4.	30	24	4	2
6-5.	14,351	12,410	1,410	531
6-6.	141	91	40	10
6-7.	32	28	1	3
6-8.	13	9	0	4
6-9.	174	149	7	18
6-10.	108	90	12	6

: 가 (2001)

< 8 >

( : , %)

	(headcount)		
1994	117,446	89,018	75.8
1995	128,315	100,456	78.3
1996	132,023	99,433	75.3
1997	138,438	102,660	74.2
1998	129,767	92,541	71.3
1999	134,568	100,210	74.5
2000	159,973	108,370	67.7

: . 가 (2001)

< 9 >

(2000 )  
( : , %)

	159,973	13,913	51,727	94,333
	108,370	12,802	23,674	71,894
(%)	67.7	92.0	45.8	76.2
	61,027	4,194	41,649	15,184
	21,202	198	9,427	11,578
(%)	34.7	4.7	22.6	76.3
	16,232	3,456	7,267	5,509
	8,505	1,755	3,109	3,641
(%)	52.4	50.8	42.8	66.1

: . 가 (2001)

	87,113	71,894	11,578	3,641
1.	371	277	53	42
2.	62	39	20	3
3.	68,202	55,336	10,001	2,864
3-1.	2,358	1,974	297	87
3-2.	1,422	924	442	56
3-3.	599	487	89	23
3-4.	11,219	9,218	1,518	483
3-5.	867	661	169	36
3-6. 1	1,132	729	347	56
3-7.	1,061	827	196	38
3-8.	48,470	39,632	6,789	2,048
3-9. 가	1,038	860	143	36
3-10. .가	28	24	3	1
4. .가	821	710	40	71
5.	1,688	1,403	201	84
6.	15,969	14,129	1,263	577
6-1.	598	505	75	19
6-2.	589	542	25	22
6-3.	1,692	1,496	39	157
6-4.	28	24	3	1
6-5.	12,651	11,225	1,075	351
6-6.	125	88	31	7
6-7.	37	34	1	2
6-8.	11	8	0	3
6-9.	157	140	5	12
6-10.	81	68	9	4

: 가 (2001)

< 11>

( : , %)

1996	108,780(100.0)	18,956(17.4)	10,188(9.4)	79,636(73.2)
1997	121,858(100.0)	20,689(17.0)	12,716(10.4)	88,453(72.6)
1998	113,366(100.0)	20,994(18.5)	12,651(11.2)	79,721(70.3)
1999	119,218(100.0)	19,792(16.6)	14,314(12.0)	85,112(71.4)
2000	138,485(100.0)	20,320(14.7)	15,619(11.3)	102,547(74.0)

:  
: ( ) 가 (2001)

< 12>

(2000 )

( : , %)

	109,415(79.0)	15,429(75.9)	12,884(82.5)	61,102(79.1)
	47,391(34.2)	6,965(34.3)	5,418(34.7)	35,009(34.1)
.	62,024(44.8)	8,464(41.7)	7,467(47.8)	46,093(44.9)
	29,070(21.0)	4,891(24.1)	2,734(17.5)	21,444(20.9)
.	24,915(18.0)	3,190(15.7)	2,400(15.4)	19,324(18.8)
.	4,160(3.0)	1,701(8.4)	334(2.1)	2,120(2.1)
	138,485(100.0)	20,320(100.0)	15,619(100.0)	102,547(100.0)

:  
: ( ) 가 (2001)

( : )

				·	·
	102,547	35,009	46,093	19,324	2,120
1.	217	120	87	6	5
2.	65	32	23	11	0
3.	85,849	29,104	38,231	16,634	1,880
3-1. ·	1,394	554	626	172	41
3-2. ·	872	364	423	74	11
3-3. ·	392	122	247	21	3
3-4. ·	9,661	3,607	3,358	2,134	562
3-5.	560	260	210	88	2
3-6. 1	1,305	361	812	104	29
3-7.	623	219	254	148	3
3-8. · ·	70,198	23,240	31,978	13,759	1,221
3-9. 가 ·	829	370	318	132	9
3-10. · 가	14	7	5	1	0
4. · 가 ·	1,870	282	1,329	214	45
5.	3,819	900	2,575	317	27
6.	10,725	4,570	3,849	2,142	163
6-1.	345	160	83	47	56
6-2. ·	464	175	246	43	0
6-3.	3,645	1,227	1,451	959	8
6-4. ·	45	2	2	0	0
6-5.	5,450	2,877	1,648	832	94
6-6. ·	603	63	338	197	5
6-7.	17	8	5	4	0
6-8. ·	16	1	4	11	0
6-9. ·	157	47	64	46	0
6-10.	23	11	8	4	0

: · 가 (2001)

< 14>

(2000 )

( : , %)

	138,485	20,320	15,619	102,547
	32,113	16,544	8,716	6,853
(%)	23.2	81.4	55.8	6.7

: . 가 (2001)  
: , ( ),

< 15>

(2000 )

( : )

1.	3,976	4. . 가 .	8,718
2.	0	5.	5,042
3.	569,727	6.	97,845
3-1. .	4,257	6-1.	3,059
3-2. .	6,615	6-2. .	12,937
3-3. .	846	6-3.	35,778
3-4. .	59,193	6-4. .	0
3-5.	3,766	6-5.	42,075
3-6. 1	7,436	6-6. .	783
3-7.	6,064	6-7.	0
3-8. . .	477,575	6-8. .	0
3-9. 가 .	3,807	6-9. .	2,806
3-10. . 가	167	6-10.	408
			685,308

: . 가 (2001)