

According to the expansion of demand for IT cost reduction and user convenience, cloud computing has been highlighted as the mega trend to change the IT paradigm. This means the advent of age for cloud services which provide H/W and S/W as the amount that the user wants as the type of utility services. Under this background, this study uses Input-Output analysis and FGI in order to analyze the cloud service's economic value and consumer needs. According to the result of the research, cloud services from 2011 till 2020 are expected to show about 58 trillion won as the total production inducement, about 30 trillion won as the total value added inducement, and about 550 thousand people as the total employment inducement. It is also expected that the forward-backward linkage effects of cloud services will increase constantly. Meanwhile, according to the result of analyzing consumer needs for cloud services, it is expected that cost reduction, user convenience, and information accessibility will be the stimulative factors for acceptance and expansion. In addition, it has been found that the chief concerning and hindrance factors affecting the cloud service's market diffusion negatively are the possibility of information leak and uncertainty of performance anticipation.

I. 가 .
IT IT .
가 . IT IT

가 . 가 . 가 .

, ,

.

. 가 IT 가 가 .

가 . FGI 가 .

가 , , , 가 가 가 .

IT ,

가 .

가 II.

IT 1.

가 , , ,

(, , ,) SW,) 3

가 IT

가 IT

가 IT / 가

Frost & Sullivan社(2010) 가

가 IT

69% IT

(Pew Internet, 2008). 가 가 가 IT

가 가 가

가 .

1. (: 10)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SaaS	787	981	1,180	1,539	2,007	2,619	3,417	4,458	5,817	7,590
PaaS	108	134	161	201	260	337	435	563	728	942
IaaS	409	510	613	799	1,043	1,361	1,775	2,316	3,022	3,943

: 2011~2014 - (2010) , 2015~2020 - 가

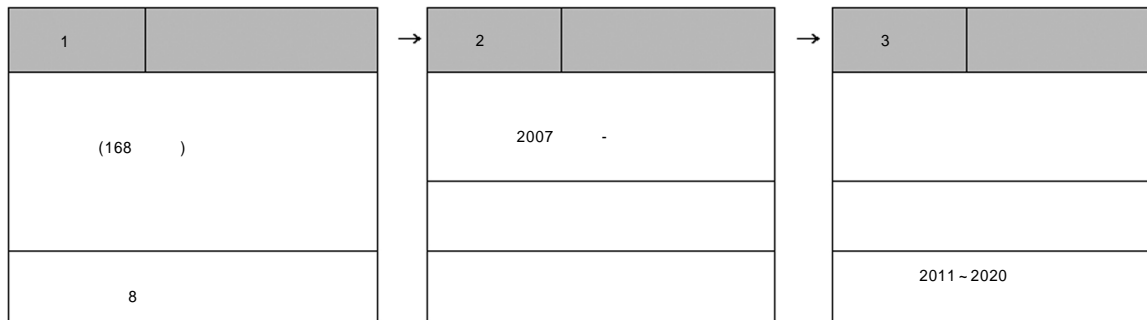
2. (: 10)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
SaaS	90	129	155	207	282	384	524	713	971	1323
PaaS	12	18	21	28	39	53	72	98	133	182
IaaS	50	67	81	108	140	181	235	304	394	510

: 2011~2014 - (2010) , 2015~2020 - 가

가 IT .

2. , MS, IT 가 SaaS . (, 2010; , 2010). OVUM(2010) IT Infrastructure-as-aService(IaaS), Platform-as-a-Service(PaaS), Software-as-a-Service(SaaS), Communication-as-a-Service(CaaS) Applications, Platform, Infrastructure API, SW API, SW (Merrill Lynch, 2008). SaaS, PaaS, IaaS 가 가 (, 2011; , 2010). 가 SaaS 가 SaaS, IaaS, PaaS 가 PaaS 가 3. IaaS (2010) 가 2011-2014 가 2015~2010 가 5% (outlier) 2015~2020 . 2011 1 3,000 2015 2 ,



1.

2020 12 30.4%
(1).
(2011~2010)
SaaS 61%, IaaS 31%, PaaS 8%

0.5~0.8%

SaaS가 60%

가
2015 4609 , 2020 2
1524 155 33.9%
(2).

1
1

2009) . 2 2007 (,

1.

가
3
가

3 .

2.

가

가

2007
(168)

가

8

3.

	가 1 가	= ×
가가	가 1 가 가가 가가	가가 = 가가 ×
	(10)	= 가 ×

4.

	1)	가가 2)	3)
	1.1550	0.5994	10.925
1:	$(I-A^d)^{-1}$		
2: 가가	, , , ()		
3:	(168)		

5.

	2000	2005	2007
1)	0.708	0.899	0.919
2)	0.460	0.545	0.595
1)			
2)			

8 10.925 10.9

3. 가 (, 2009; 2007)

2007 -

(Leontief, W, 1970; , 2003)

가가 , 가

가가 , 가

4 .

1.1550 가 1 1

가가 0.5994 , 1.150

가가 가 1 가

가가 0.5994 (5).

6. (: 10 ,)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
	1,506	1,877	2,256	2,933	3,824	4,985	6,500	8,475	11,050	14,408	57,814
가가	782	974	1,171	1,522	1,984	2,587	3,374	4,399	5,735	7,478	30,006
	14,246	17,753	21,341	27,739	36,166	47,155	61,483	80,164	104,523	136,284	546,855

7. FGI 가

Group 1	IT 가 ()		8
Group 2	IT 가 ()		7
Group 3	.		9
Group 4	25 ~ 35		8
Group 5	36 ~ 45		8
Group 6	46 ~ 55		8
Group 7	.		8

8.

	()
Group 1-2(IT 가)	1. 가 2. SaaS 3. SNS &
Group 3-6()	1. 2. SNS 3.
Group 7()	1. 2. SW 3.

가 2020 14 4,080 가
가 가가 2011 7,820 2020
7 4,780 (/10
) 2010 14,246 2020 136,284
가
.
2011 ~
가 2020 58 가가
가 30
2011 ~ 2020
4. 55
가 가

6

가 가 가
가
2011 1 5,060

the Economic Structure: an Input-output Approach,"
Review of Economics and Statistics, 67(3),
 1970, pp.262-271.

- [13] Merrill Lynch, "he Cloud Wars: \$100+ billion at stake",
 Merrill Lynch's Industry Overview, 2008.
- [14] OVUM, 『The Cloud Computing Strategies of Global
 Telcos』, Peter Hall, 2010.
- [15] Pew Internet, 『Use of Cloud Computing Applications
 and Services』 ([http://www.pewinternet.org/
 PPF/r/262/report_display.asp](http://www.pewinternet.org/PPF/r/262/report_display.asp)), 2008.



(Jin-Bo Sim)

2006:

2006 ~ :

E-mail: jbsim@etri.re.kr

Tel: +82-42-860-6213

Fax: +82-42-860-6504



(You-Jin Kim)

2009:

2007 ~ :

E-mail: prettyyj@etri.re.kr

Tel: +82-42-860-5767

Fax: +82-42-860-6504