

MPHPT

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Biweekly Newsletter of the Ministry of Public Management, Home Affairs, Posts and Telecommunications, Japan

“Study Group on Countermeasures against Unsolicited/Nuisance E-mails” Compiles an Interim Report

Since November 2001, MPHPT has been holding the “Study Group on Countermeasures against Unsolicited/Nuisance E-mails” (Chair: Prof. HORIBE Masao, Faculty of Law, Chuo University) in order to deliberate countermeasures for limiting/blocking unsolicited/nuisance e-mails. On January 24, 2002, at the fourth meeting of the study group, its findings were compiled as an interim report. MPHPT released the report on the same day.

The increase in unsolicited e-mails (so-called “SPAM or junk e-mails”) is becoming a social problem, these being sent mainly to cellular telephones without consent from recipients. Against

these backdrops, the study group aimed to i) grasp the current status of unsolicited/nuisance e-mails in Japan; ii) survey and analyze the current status of unsolicited/nuisance e-mails, countermea-

asures and effects thereof in foreign countries; and iii) deliberate necessary countermeasures for limiting/blocking unsolicited/nuisance e-mails.

Addition of Typical Business Examples to “Guidelines Concerning the Distinction between Communications and Broadcasting in Converging New Services that Utilize Communications Satellites”

On December 26, 2001, MPHPT revised the “Guidelines concerning the Distinction between Communications and Broadcasting in Converging New Services that Utilize Communications Satellites” (formulated by MPT on December 18, 1997) and added typical business examples thereon, etc. This revision was made in response to the

“Reform Schedule” (approved by the Council on Economic and Fiscal Policy on September 21, 2001).

MPHPT will publicly release the Guidelines in order to raise public awareness, such as posting them on its website (http://www.soumu.go.jp/s-news/2001/011226_1.html).

group under the Director-General of Information and Communications Policy

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Analysis of Information and Communications Technology's Economic Effects

Since May 2001, MPHPT has been holding the “Study Group on IT Effects upon the Economy” (Chair: Prof.

MITOMO Hitoshi, the Global Information and Telecommunication Studies: GITS, Waseda University), as a study

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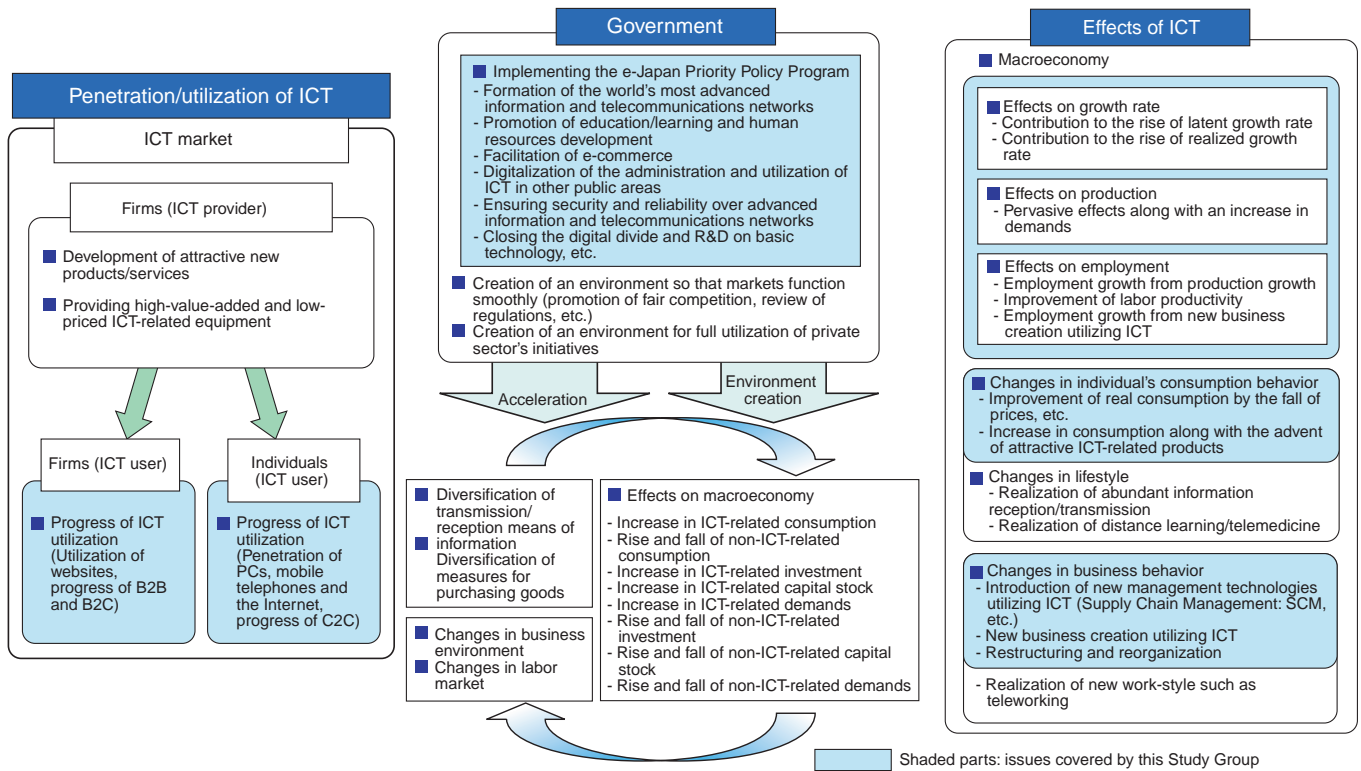
Bureau, in order to establish an economic theoretical foundation for taking ICT policy measures of the government, including analyses/assessment on ICT-

related economic effects. Recently, the study group compiled its findings as a report on i) effects of the implementation of the “e-Japan Priority Policy Pro-

gram” on the macroeconomy and ii) changes in the economic activities of people and companies brought about by the widespread use of ICT.

Purposes and outline of the “Study Group on ICT Effects upon the Economy”

- Presenting economic theoretical foundation for information and communications policy: contributing to implementation of appropriate ICT policies for realizing the “world’s most advanced ICT nation”
- Necessity of multifaceted and fact-based analyses: presenting the effects of ICT’s progress on Japanese economy
- Based on the above, MPHPT, by focusing on the “e-Japan Priority Policy Program,” held a Study Group in order to analyze the e-Japan Priority Policy Program’s effects on the macroeconomy.



Chapter I: Current status of ICT

■ Review of ICT’s current status in Japan and abroad

1. Current status of ICT penetration
 - Expansion of Internet use and introduction of broadband media, etc.
2. Measures for promoting ICT in various countries
 - ICT strategy of Japan: creation of “e-Japan Strategy”/”e-Japan Priority Policy Program” and “e-Japan 2002 Program”
 - IT strategies in foreign countries: the U.S. (IT²), EU (eEurope 2002), the U.K. (UK Online), Republic of Korea (CYBER KOREA 21), etc.
3. Situation of global ICT recession
 - Poor performance of hardware industries such as ICT-related equipment due to declining demands, deterioration in telecommunications industries’ profit along with reductions of telecommunications rates, etc.

Chapter II: Existing analyses concerning ICT’s effects on economy

■ Introducing analyses in Japan and abroad on ICT’s economic effects

- Analyses abroad: “Digital Economy 2000” (the US Department of Commerce), ILO Report
- Analyses in Japan: contribution to economic growth (White Paper: Information and Communications in Japan), contribution to improvement of productivity (Annual Report on Japan’s Economy), effects on employment (White Paper on the Labour Economy)

Chapter III. Section 1: Macroeconomic effects of e-Japan Priority Policy Program

- i) Analysis objective: quantitative analyses of economic effects of the e-Japan Priority Policy Program in latent growth rates, inducement coefficients, job creation and productivity improvement
- ii) Analysis methods: trans-log production function and interindustry relations table

Estimate results

		CY2001	CY2002	CY2003	CY2004	CY2005
Latent growth rate	Pushing-up latent growth rate	0.9%	1.0%	0.6%	0.5%	0.5%
Inducement	Inducement coefficient	1.82	1.82	1.85	1.86	1.86
	Inducement amount	4.142 trillion yen	8.210 trillion yen	16.655 trillion yen	26.212 trillion yen	36.464 trillion yen
Employment creation	Employment creation from demand increase	0.19 million	0.36 million	0.79 million	1.31 million	1.85 million
Productivity improvement	Productivity improvement rate	0.3-1.0%	1.3-2.0%	2.0-2.7%	2.4-3.1%	2.8-3.5%
i) Economic effects of the e-Japan Priority Policy Program in CY2005 are: - Latent growth rate: raised by 0.5% - Inducement coefficient: 1.86 (average of all industries: 1.65) - Employment creation from demand expansion: 1.85 million jobs - Improvement rate of labor productivity: 2.8-3.5% ii) Improvement of labor productivity by promoting ICT is an indispensable condition for Japan to maintain international competitiveness and sustain economic prosperity under a decreasing labor population. iii) It is crucial to absorb labor forces from existing industries by creating new businesses utilizing ICT and shifting labor forces from low-productivity industries to higher ones through steady implementation of the e-Japan Priority Policy Program, etc.						
		CY2001	CY2002	CY2003	CY2004	CY2005
Employment expansion of new businesses utilizing ICT (estimate)		0.40-0.43 million	0.78-0.83 million	1.14-1.21 million	1.49-1.57 million	1.82-1.92 million

Chapter III. Section 2: Changes in consumption behavior along with progress of ICT introduction

- i) Analysis objective: Quantitative/positivistic analysis of changes in individuals' consumption behavior through the Internet use
- ii) Analysis methods: Questionnaire survey on website (survey period: October 10-14, 2001; Number of samples: 1,222)

(Annual consumption)

Estimate results

			Non-users of the Internet	Users of access service on a usage-sensitive rate basis	Users of flat-rate access service
Analysis of current status	Expansion of real consumption	Consumption with lower prices from productivity improvement in distribution	i) 27,477 yen	i) 27,477 yen	i) 27,477 yen
		Consumption with price differentials between actual and electronic commerce	0	2,856 yen	3,984 yen
Future prospect	Expansion of nominal consumption	Impulse consumption via e-commerce	0	1,908 yen	3,120 yen
		Consumption with the advent of attractive ICT-related products	-	58,000 yen	66,000 yen
		Additional consumption through diversification of information sources utilizing ICT and relief of future anxiety	-	168,000 yen	180,000 yen

- i) "Consumption expansion by lower prices from distribution sector's productivity improvement" is about 27,000 yen a year.
- ii) "Consumption expansion from price differentials between actual and electronic commerce" and "impulsive consumption through e-commerce" is 4,800-7,100 yen a year.
- iii) "Consumption expansion with the advent of attractive ICT-related products" is 60-70 thousand yen a year.
- iv) "Consumption expansion through diversification of information sources utilizing ICT and relief of future anxiety" is 170-180 thousand yen a year.
- v) "Users of flat-rate access service" have higher propensity to consume in comparison with those of access service on a usage-sensitive rate basis (by some 22,000 yen a year).

Chapter IV. Section 3: Changes in business behavior along with progress of ICT utilization

- i) Analysis objective: Fact-based analysis on changes in business behavior along with progress of ICT utilization
- ii) Analysis methods: Interview with ICT-related vendors and advanced corporate ICT-users (7 companies)

Analysis results

1. Motivation for businesses to introduce ICT

By the early 1990s: Mainly for business efficiency
 Since the late 1990s: Transition toward higher value-added services

Recent trends:

- 1) Creating new business opportunities
 Companies make ICT investment to develop new business utilizing the Internet, represented by the "click & mortar" business strategy
- 2) Strengthening core competence
 In business becoming more and more competitive, companies make ICT investment with the aim at ensuring and strengthening its core competence for getting the upper-hand over rival firms.

2. Conditions for success through use of ICT

- 1) Changing business practices (importance of simultaneous changes in ICT investment and business manner [e.g., outsourcing and organizational reform] under clear strategies)
- 2) Top management's leadership
 - For effective ICT investment, integration of systems and activities across various sections is necessary. For that purpose, top management's leadership is indispensable.
 - Necessity for chief information officers (CIOs) as the total directors of specific action programs
- 3) Necessity of improving the ICT literacy of the firm's human resources (especially in front office sections)
- 4) Phase-in system construction (at the system construction, introducing smaller systems at first and expanding it by confirming its effectiveness)

Communications Industry Increases Revenues by 2.8% in FY2000

Facilities and Equipment Investment by Communications Industry Occupies 10.4% Share in All Industries

MPHPT compiled a survey, conducted in October 2001, on financial data of and on facilities and equipment investment by the communications industry (telecommunications and broadcasting businesses) for FY 2001. According to this survey, FY2001 planned revenues amount and facilities and

equipment investment amount of the communications industry increased by 2.8% and 1.7%, respectively, in contrast to

Table 1 Revenues by communications business

(Unit: 1 billion yen)

Type of business	FY1999		FY2000		FY2001	
	Actual result	FY99/FY98	Actual result	FY00/FY99	Planned	FY01/FY00
Communications Industry	19,710.6	8.9%	21,179.0	7.5%	21,768.7	2.8%
Telecommunications carriers	16,311.7	10.1%	17,593.8	7.9%	18,202.5	3.5%
Type I carriers	15,392.9	11.2%	16,218.7	5.4%	17,125.2	5.6%
Mobile carriers	6,788.7	13.6%	7,785.0	14.7%	9,028.5	16.0%
Other than mobile carriers	8,604.2	9.3%	8,433.7	-2.0%	8,096.7	-4.0%
Type II carriers	918.8	-5.2%	1,375.1	49.7%	1,077.3	-21.7%
Broadcasters	3,398.9	3.7%	3,585.1	5.5%	3,566.2	-0.5%
Commercial broadcasters	2,566.6	3.7%	2,713.1	5.7%	2,661.5	-1.9%
Cable TV operators	198.9	13.3%	219.5	10.3%	241.7	10.1%
NHK	633.4	1.2%	652.6	3.0%	663.0	1.6%
All industries	1,383,463.9	0.2%	1,435,027.8	3.7%	-	-3.3%

Note: The data on the all industries are based on *Financial Statistics of Corporations by Industry and Business Outlook Survey*, the Ministry of Finance.

Table 2 Revenues by Type I carriers

(Unit: 1 billion yen)

Type of carrier	FY1999		FY2000		FY2001	
	Actual result	FY99/FY98	Actual result	FY00/FY99	Planned	FY01/FY00
NTT	6,759.2	10.1%	6,781.6	0.3%	6,638.0	-2.1%
NCCs	8,633.7	12.0%	9,437.1	9.3%	10,487.2	11.1%
Long-distance/international carriers	1,443.0	0.0%	1,193.0	-17.3%	920.6	-22.8%
Satellite carriers	51.8	6.4%	61.2	18.2%	64.6	5.6%
Regional carriers	350.2	44.5%	398.0	13.6%	473.5	19.0%
Mobile carriers	6,788.7	13.6%	7,785.0	14.7%	9,028.5	16.0%

Notes: 1. The planned figures of NTT are totals of the figures of NTT, NTT East, NTT West and NTT Communications.
 2. "NCCs" refers to Type I telecommunications carriers other than NTT.

Fig. 1 Revenues of communications industry

(Unit: 1 billion yen)

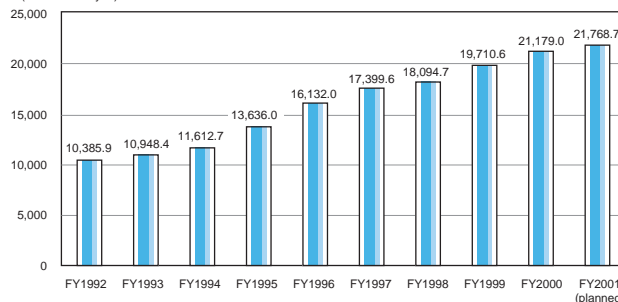


Table 3 Facilities and equipment investment amount by communications business

(Unit: 1 billion yen)

Type of business	FY1999		FY2000		FY2001	
	Actual result	FY99/FY98	Actual result	FY00/FY99	Revised plan	FY01/FY00
Communications Industry	4,090.8	-4.5%	4,284.9	4.3%	4,337.8	1.7%
Telecommunications carriers	3,821.2	-5.2%	3,935.3	3.0%	4,015.2	2.0%
Type I carriers	3,398.2	-8.4%	3,522.0	3.6%	3,692.8	4.9%
Mobile carriers	1,521.0	1.9%	1,599.2	5.1%	1,763.6	10.3%
Other than mobile carriers	1,877.2	-15.3%	1,922.8	2.4%	1,929.1	0.3%
Type II carriers	423.0	32.2%	413.3	-2.3%	322.4	-22.0%
Broadcasters	269.6	6.7%	329.5	22.2%	322.6	-2.1%
Commercial broadcasters	119.1	0.5%	136.9	15.0%	138.9	1.5%
Cable TV operators	80.8	3.7%	113.3	40.2%	106.0	-6.4%
NHK	69.7	23.8%	79.3	13.8%	77.7	-2.0%
All industries	42,024.0	-1.6%	43,098.0	2.6%	41,717.7	-3.2%

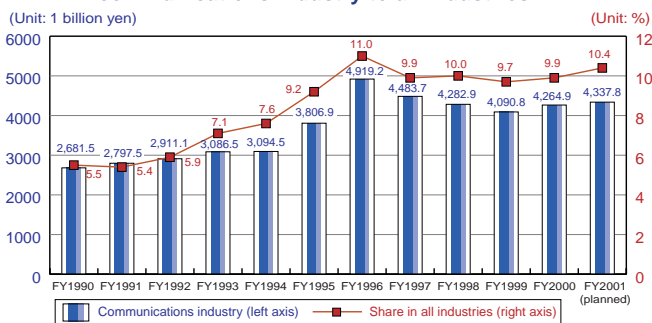
Note: The data on the all industries are based on Business and Investment Survey of Incorporated Enterprises, Economic and Social Research Institute, the Cabinet Office.

Table 4 Facilities and equipment investment amount by Type I carriers

Type of carrier	FY1999		FY2000		FY2001	
	Actual result	FY99/FY98	Actual result	FY00/FY99	Revised plan	FY01/FY00
NTT	1,416.8	-18.0%	1,265.3	-10.7%	1,155.0	-8.7%
NCCs	1,981.3	-1.0%	2,256.7	13.9%	2,537.8	12.5%
Long-distance/international carriers	250.7	-11.7%	474.3	89.2%	529.3	11.6%
Satellite carriers	57.8	24.6%	23.8	-58.8%	28.5	19.7%
Regional carriers	152.0	4.6%	159.4	4.9%	216.3	35.7%
Mobile carriers	1,521.0	1.9%	1,599.2	5.1%	1,763.6	10.3%

Notes: 1. The planned figures of NTT are totals of those figures of NTT, NTT East, NTT West and NTT Communications.
2. "NCCs" refers to Type I telecommunications carriers other than NTT.

Fig. 2 Ratio of facilities and equipment investment by communications industry to all industries



the decreasing trends of all industries.

Outline of the survey

1. Revenue plans by the communications industry for FY2001 increased by 589.7 billion yen to 21,768.7 billion yen, a 2.8% increase compared to the actual revenue results in the previous fiscal year. Main factors for the growth are that the increase by the mobile communications sector surpassed the decrease by the long-distance and international communications sectors. Although the growth rate of 2.8% is lower than that of 7.5% in the previous fiscal year, it is still higher than that of - 3.3% for all industries.
2. Planned facilities and equipment investment in FY 2000 by the communications industry, including telecommunications carriers and broadcasters, totaled 4,337.8 billion yen, a 1.7% increase from FY2000. Main factors for the growth are the increase in investment by the mobile communications sector. In comparison with the previous fiscal year, the growth rate of 1.7% is lower than that of 4.3%, however, it is still stable and higher than that of - 3.2% for all industries.
3. Trends in purposes of facilities and equipment investment
 - 1) Type I telecommunications carriers
The ratios of purposes for "expanding service areas" and "commencing new services" are growing.

- 2) Type II telecommunications carriers
As for Special Type II telecommunications carriers, in addition to "commencing new services," the ratio for "expanding service areas," under the declining trend in the past, showed an increase. For General Type II telecommunications carriers, the ratio for "commencing new services" is increasing, on the other hand, the ratio for "expanding service areas" decreasing.
- 3) Commercial broadcasters
Investments for "renewal (replacing old equipment)" and "improving broadcast programming" occupy about 50% in all investments.
- 4) Cable TV operators
The ratio for "commencing new services" is increasing, on the other hand, the ratio for "expanding service areas" decreasing.

[Businesses surveyed]

Businesses including telecommunications carriers and broadcasters. With regard to telecommunications carriers, all Type I and Special Type II carriers are included; as for General Type II carriers, carriers with capitalized at or more than 30 million yen are surveyed; for broadcasters, all commercial broadcasters are included; and for cable TV operators, operators, other than stock companies with equal to or more than 100,000 drop terminals, are excluded.

Notes: 1. As regards broadcasters, the survey results include NHK (Nippon Hoso Kyokai, or Japan Broadcasting Corp.), which was not surveyed.
2. As for figures in tables, totals and totaled figures of breakdowns may differ because rounded figures are used.
3. Figures may be corrected after release.

Financial survey

Category	Questionnaires sent	Collected questionnaires	Collection rate (%)
Type I telecommunications carriers	324	286	88.3
Type II telecommunications carriers	1,203	427	35.5
Commercial broadcasters	473	429	90.7
Cable TV operators	317	279	88.0
Total	2,317	1,421	61.3

Investment survey

Category	Questionnaires sent	Collected questionnaires	Collection rate (%)
Type I telecommunications carriers	324	285	88.0
Type II telecommunications carriers	1,203	435	36.2
Commercial broadcasters	473	328	90.5
Cable TV operators	317	279	88.0
Total	2,317	1,427	61.6

Communications Industry Increases Revenues by 4.3% in the II Quarter of FY2001

MPHPT released the survey on "overall results on Japan's communications industry (telecommunications carriers and broadcasters)" for the second quarter of FY2001 (July - September 2001) on 137 companies. This statistical survey was authorized by the Minister of Public Management, Home Affairs,

Posts and Telecommunications (MPHPT).

Outline of the survey

[The Survey "overall results of Japan's communications industry"]

To grasp the business trend of communications industry (telecommunica-

tions and broadcasting industries), the monthly survey indicated below has been carried out on sales, etc. since April 1995.

1. Trend in Sales Growth

- The communications industry (telecommunications carriers and broad-

casters) revenues in FY2000 second quarter (Q-II) grew by 4.3% over the same period in the previous fiscal year. Main factors for the growth are the increase in revenues of mobile communications carriers. The communications industry (telecommunications carriers and broadcasters) revenues have been increasing 26 quarters in succession since FY1995 Q-I

Table 1. Growth rates for revenues compared to the same period last year (Unit: %)

Type of business	Q-II			Q-I	Q-II	Q-III	Q-IV	FY2001 total
	Jul.	Aug.	Sep.					
FY2000								
Communications Industry	4.0	6.7	1.4	11.4	4.0	5.0	3.8	5.8
Telecommunications carriers	3.8	7.5	0.7	12.0	3.8	4.8	3.6	5.8
Type I carriers	3.9	7.7	0.8	12.6	4.0	5.0	3.7	6.0
Mobile carriers	9.2	16.7	8.3	13.0	10.8	7.0	8.1	9.6
Other than mobile carriers	-0.3	0.5	-6.6	12.3	-1.9	3.4	-0.2	3.0
Type II carriers	0.3	2.4	-2.6	1.4	0.5	1.6	1.6	1.3
Broadcasters	6.0	-0.1	7.9	7.9	5.1	6.3	5.8	6.3
Commercial broadcasters	5.4	-0.7	7.6	7.4	4.5	6.1	6.0	6.0
Cable TV operators	36.4	27.8	19.5	34.6	30.0	14.7	-0.6	17.4
All industries (1 trillion yen)	-	-	-	3.1	3.2	4.2	2.8	-
FY2001								
Communications Industry	6.2	3.0	3.9	8.8	4.3	-	-	-
Telecommunications carriers	5.8	2.7	4.3	9.7	4.2	-	-	-
Type I carriers	6.1	2.7	4.3	10.2	4.3	-	-	-
Mobile carriers	16.6	7.3	4.4	24.9	9.0	-	-	-
Other than mobile carriers	-3.1	-1.6	4.2	-1.6	-0.2	-	-	-
Type II carriers	0.2	1.7	4.7	2.7	2.3	-	-	-
Broadcasters	9.2	5.6	0.5	2.6	5.1	-	-	-
Commercial broadcasters	8.5	5.1	-0.3	1.9	4.4	-	-	-
Cable TV operators	37.8	21.7	25.0	29.4	28.0	-	-	-
All industries (1 trillion yen)	-	-	-	1.3	-2.6	-	-	-

Source: "Financial Statement Statistics of Corporations by Industry (April-June 2000)," Ministry of Finance

Note: The data on the all industries are based on the "Financial Statement Statistics of Corporations by Industry," Ministry of Finance

Table 2. Revenues compared to the same period last year (Unit: 1 billion yen)

Type of business	Q-II			Q-I	Q-II	Q-III	Q-IV	FY2001 total
	Jul.	Aug.	Sep.					
FY2000								
Communications Industry	1,529.6	1,544.7	1,668.4	4,351.9	4,742.8	4,494.4	5,055.4	18,644.4
Telecommunications carriers	1,350.6	1,388.2	1,491.2	3,801.8	4,229.9	3,933.6	4,518.9	16,484.2
Type I carriers	1,286.5	1,325.0	1,419.1	3,617.9	4,030.6	3,748.7	4,309.5	15,706.7
Mobile carriers	597.5	641.0	754.7	1,600.6	1,993.2	1,666.3	2,103.0	7,363.1
Other than mobile carriers	689.0	684.0	664.4	2,017.3	2,037.4	2,082.5	2,206.5	8,343.7
Type II carriers	64.1	63.1	72.1	183.9	199.3	184.9	209.4	777.5
Broadcasters	179.0	156.6	177.2	550.0	512.8	560.8	536.5	2,160.1
Commercial broadcasters	174.5	152.0	172.0	536.4	498.5	547.5	520.4	2,102.8
Cable TV operators	4.5	4.6	5.2	13.6	14.3	13.3	16.1	57.4
All industries (1 trillion yen)	-	-	-	314,244.2	335,754.8	342,482.1	358,131.0	-
FY2001								
Communications Industry	1,623.9	1,590.4	1,733.3	4,733.9	4,947.7	-	-	9,681.6
Telecommunications carriers	1,428.5	1,425.1	1,555.3	4,169.7	4,408.9	-	-	8,578.6
Type I carriers	1,364.3	1,360.9	1,479.9	3,985.3	4,205.0	-	-	8,190.3
Mobile carriers	696.4	687.5	787.8	1,999.6	2,171.7	-	-	4,171.3
Other than mobile carriers	667.8	673.4	692.1	1,985.7	2,033.3	-	-	4,019.0
Type II carriers	64.2	64.2	75.5	184.4	203.9	-	-	388.3
Broadcasters	195.4	165.3	178.0	564.2	538.7	-	-	1,102.9
Commercial broadcasters	189.3	159.7	171.5	546.6	520.4	-	-	1,067.0
Cable TV operators	6.2	5.6	6.5	17.6	18.3	-	-	35.9
All industries (1 trillion yen)	-	-	-	318,188.4	327,186.7	-	-	-

Notes: 1. Figures may not add up to total because of rounding data.
2. Figures on all industries are based on the "Financial Statement Statistics of Corporations by Industry (Quarterly)," Ministry of Finance

Table 3. Sales Forecast Index (Unit: point)

Type of business	FY2000 Q-II	FY2000 Q-III	FY2000 Q-IV	FY2001 Q-I	FY2001 Q-II	FY2001 Q-III	FY2001 Q-IV
Telecommunications industry	44.3	35.3	25.9	32.7	38.5	20.0	20.0
Type I telecommunications carriers	41.5	38.8	16.2	48.6	36.1	23.5	8.8
Type II telecommunications carriers	50.0	42.9	44.5	0.0	50.0	6.7	43.8
Broadcasting industry	30.2	48.3	8.5	9.1	-16.2	-37.9	-34.9
Commercial broadcasters	14.0	32.4	-16.7	-15.0	-52.3	-72.9	-68.8
Cable TV operators	66.7	88.9	70.6	73.3	72.2	55.6	55.6
All industries	4	-1	-10	-18	-13	-27	-14

Notes: 1. Basically, index is estimated at the end of the previous quarter for each. However, indexes for Q-III and Q-IV in FY2001 are estimated at the end of Q-II in FY2001.
2. Figures of "all industries" are based on the "Business and Investment Survey of Incorporated Enterprises," the Economic and Social Research Institute (ESRI), Cabinet Office.

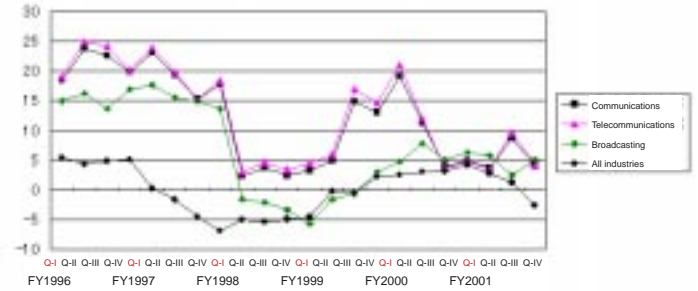
(the first survey). On the contrary, the sales amount of all industries for the same period declined by 2.6%.

Reference: Sales growth rates of each industry except "communications industry"

(Q-II in comparison with the same period last year)

Services: 25.9%, Publishing/Printing: 17.0%, Construction: 1.8%, Transportation equipment: 0.6%, Chemicals: 0.1%, Food: -2.2%, Power: -4.8%, Wholesale/Retail: -8.4%, Electrical machinery/Consumer electronics: -10.9%, General machinery: -11.1%, Metallic products: -12.8%, Real estate: -18.1%.

Fig. 1 Growth rate for revenues compared to the same period in the previous fiscal year



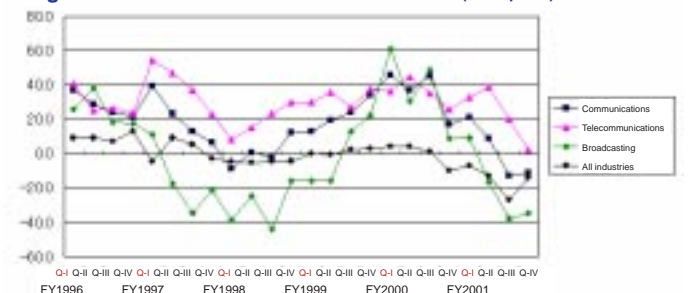
2. Sales Forecasts

The Sales Forecast Index shows as follows:

- An upward tendency for sales growth of the "communications industry," except for the broadcasting industry, is seen for Q-III and Q-IV of FY2001 in the table below:
- A downward tendency for sales growth of "broadcasting business," is seen for Q-III and Q-IV of FY2001.

Ref: The Sales Forecast Index = "percentage of businesses forecasting increase in sales" - "percentage of businesses forecasting decrease in sales."

Fig. 2 Transition of sales forecast index (Unit: point)



[Companies Surveyed]

Number of Companies Surveyed	
Type I telecommunication carriers:	46
Type II telecommunication carriers:	20
Commercial broadcasters:	51
Cable TV operators:	20
Total:	137