

Progress in a “people, equipment and money” based approach needed for digitalisation

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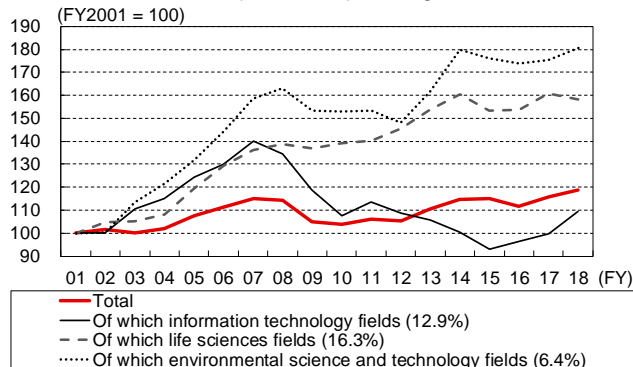
Digitalisation is one of the most important issues in Japan at the moment. It has been pointed out on many occasions that, during the COVID-19 pandemic, there have been countries who could swiftly enact benefits for their businesses and individuals using digital technology, whereas many processes in Japan are paper based, which takes time and effort. Prime Minister Suga, who took office this month, announced the establishment of a new “digital agency” as one of the reforms he aims to achieve. It seems this came about because digitalisation up until now has been deemed insufficient and it was decided that action was necessary.

When it comes to digitalisation, a look back at Japan’s spending on research and development reveals investment in “life sciences fields” and “environmental science and technology fields” remains firm, whereas spending on “information technology fields” related to digitalisation took a downturn during the global financial crisis and has not yet fully recovered as of FY2018 (Chart 1). On the whole, spending on research and development has only increased by approximately 1% on average each year since around the turn of the century; however, spending is increasing by a significant amount in China and South Korea in particular (Chart 2). It is thought that growth in these two countries is being supported by this spending, including the digital technology field. In order to boost the level of digitalisation in Japan in the future, it will be crucial to speed up investment first by giving support on the capital front to the development of the research and development fields.

That being said, simply just increasing the budget for the research and development fields will likely not make up for the delay in digitalisation. For instance, it has been some time since Japan proclaimed a labour shortage, particularly in its private sector. The number of researchers as a percentage of employees has been rising in other countries compared with the percentage in 2000 and it appears there has been an active increase of labour input in the research sector. Meanwhile, the number of researchers as a percentage of employees has flattened in Japan and its competitiveness in numerical terms has been falling year after year. Judging by the level of the ratio of employees in research, it is possible that there were more people working in research and development fields in Japan at the start of the 2000s compared with other countries, but as research fields expanded, such as the development of technology and IoT, it is possible there was insufficient human resources to populate these growing fields. In order to compete with other countries in terms of the speed of digitalisation,

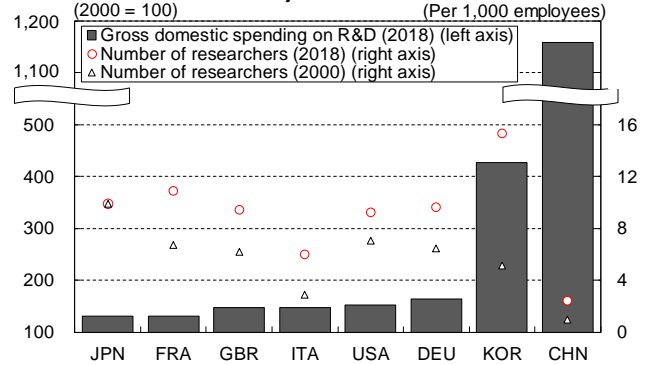
Japan must change the framework of its society with administrative organisations, such as the “digital agency”, while also investing people, equipment and money in the research and development fields and encouraging growth.

Chart 1: Japanese Spending on R&D



Note: 1. Total of business enterprises with capital of JPY 100 million and over, universities, non-profit institutions and public organisations
 2. Figure in brackets denotes share of spending in FY2018
 Source: Ministry of Internal Affairs and Communications, MUFG Bank Economic Research Office

Chart 2: Spending on R&D and Number of Researchers in Major Countries



Note: 1. "Gross domestic spending on R&D" is measured in USD
 2. "Number of researchers 2018" for USA was not released so 2017 data is used
 Source: OECD, MUFG Bank Economic Research Office

Translated by Elizabeth Foster

MAIN ECONOMIC AND FINANCIAL INDICATORS (JAPAN)

1. Main Economic Indicators

As of Sep. 30, 2020

	Fiscal	Fiscal	2019	2020		2020				
	2018	2019	4Q	1Q	2Q	APR	MAY	JUN	JUL	AUG
Real GDP Growth Rate <% changes from previous period at SA annual rate>	0.3	0.0	-7.0 (-0.7)	-2.3 (-1.8)	-28.1 (-9.9)	***	***	***	***	***
Industrial Production Index	0.3	-3.8	-3.6 (-6.8)	0.4 (-4.5)	-16.9 (-19.8)	-9.8 (-15.0)	-8.9 (-26.3)	1.9 (-18.2)	8.7 (-15.5)	1.7 (-13.3)
Production										
Shipments	0.2	-3.6	-3.9 (-6.5)	-0.6 (-5.2)	-16.8 (-19.9)	-9.5 (-16.6)	-8.9 (-26.8)	4.8 (-16.6)	6.6 (-16.6)	2.1 (-13.8)
Inventory	0.2	2.9	0.7 (1.2)	2.3 (2.9)	-5.3 (-3.4)	-0.3 (2.7)	-2.6 (-0.5)	-2.4 (-3.4)	-1.5 (-4.8)	-1.4 (-6.0)
Inventory/Shipments Ratio (2015=100)	105.0	112.3	114.6 [105.6]	116.5 [105.9]	141.7 [107.3]	138.5 [105.6]	148.6 [107.0]	138.0 [109.4]	125.7 [108.5]	122.5 [110.7]
Index of Tertiary Industries Activity	1.1	-0.7	-3.1 (-2.4)	-1.1 (-2.8)	-10.1 (-13.0)	-8.0 (-13.5)	-3.5 (-17.4)	9.0 (-8.3)	-0.5 (-9.4)	
Domestic Corporate Goods Price Index	2.2	0.1	1.1 (0.2)	-0.4 (0.5)	-2.4 (-2.3)	-1.6 (-2.5)	-0.5 (-2.8)	0.7 (-1.6)	0.6 (-0.9)	0.2 (-0.5)
Consumer Price Index(SA, total, excl.fresh foods)	0.8	0.6	0.5 (0.6)	-0.2 (0.6)	-0.3 (-0.1)	-0.5 (-0.2)	0.0 (-0.2)	0.1 (0.0)	0.1 (0.0)	-0.4 (-0.4)
Index of Capacity Utilization (2015=100)	102.5	98.3	95.6 [104.7]	95.1 [101.6]	75.2 [102.1]	79.9 [101.8]	70.6 [102.7]	75.0 [101.8]	82.2 [101.8]	
Machinery Orders(Private Demand, Excl.Electric Power and Ship building)	2.8	-0.3	-1.8 (-1.5)	-0.7 (-1.0)	-12.9 (-19.1)	-12.0 (-17.7)	1.7 (-16.3)	-7.6 (-22.5)	6.3 (-16.2)	
Manufacturing	3.8	-8.1	-2.8 (-10.2)	1.8 (-3.4)	-16.6 (-19.9)	-2.6 (-15.0)	-15.5 (-27.4)	5.6 (-18.0)	5.0 (-19.0)	
Non-manufacturing Excl.Electric Power & Ship building	2.1	6.2	3.6 (6.2)	-5.1 (0.6)	-9.7 (-18.4)	-20.2 (-19.6)	17.7 (-7.0)	-10.4 (-25.2)	3.4 (-14.3)	
Shipments of Capital Goods (Excl.Transport Equipment)	-0.2	-5.5	-7.0 (-9.5)	-0.4 (-5.7)	-8.4 (-12.7)	1.4 (-7.8)	-9.0 (-21.2)	6.7 (-9.1)	-1.0 (-14.4)	-8.7 (-21.6)
Construction Orders	6.5	-5.9								
Private	14.5	-8.7								
Public	-15.0	-3.2								
Public Works Contracts	1.1	6.8								
Housing Starts 10,000 units at Annual Rate, SA	95.3 (0.7)	88.4 (-7.3)	86.5 (-9.3)	86.3 (-10.0)	80.0 (-12.4)	80.1 (-12.4)	80.9 (-12.0)	79.0 (-12.8)	82.8 (-11.3)	81.9 (-9.1)
Total floor	(1.0)	(-4.5)	(-7.7)	(-10.1)	(-13.8)	(-11.8)	(-15.2)	(-14.4)	(-15.6)	(-14.6)
Sales at Retailers	1.6	-0.4								
Real Consumption Expenditures of Households over 2 persons (SA)	0.0	-0.4	-5.2 (-2.9)	-2.3 (-3.5)	-4.5 (-9.8)	-6.2 (-11.1)	-0.1 (-16.2)	13.0 (-1.2)	-6.5 (-7.6)	
Propensity to Consume (SA, %)	69.2	66.9	65.5 [69.2]	64.8 [69.9]	54.8 [66.9]	60.7 [67.9]	53.2 [69.7]	51.7 [63.6]	56.6 [70.8]	[70.4]
Overtime Hours Worked (All Industries, 5 employees or more)	-1.7	-2.5	-1.8 (-2.4)	-1.9 (-4.1)	-21.0 (-24.4)	-12.3 (-18.9)	-14.1 (-30.7)	9.6 (-23.9)	9.7 (-16.2)	
Total Cash Earnings (Regular Employees Only; All Industries, 5 employees or more)	0.9	0.0								
Employment Index(Regular Employees Only;All Industries, 5 employees or more) (Change over the M/Q/Y)	1	97	107	94	43	74	25	30	35	
Ratio of Job Offers to Applicants (SA, Times)	1.62	1.55	1.57 [1.63]	1.44 [1.63]	1.21 [1.62]	1.32 [1.63]	1.20 [1.62]	1.11 [1.61]	1.08 [1.59]	[1.59]
Unemployment Rate (SA, %)	2.4	2.4	2.3	2.4	2.8	2.6	2.9	2.8	2.9	
Economy Watcher Survey (Judgment of the present condition D.I.%)	47.8	38.7	38.5 [48.0]	27.8 [46.0]	20.7 [44.5]	7.9 [45.3]	15.5 [44.2]	38.8 [44.1]	41.1 [41.6]	43.9 [43.1]
Bankruptcies (Number of cases)	8,110 (-3.1)	8,631 (6.4)	2,211 (6.8)	2,164 (12.9)	1,837 (-11.4)	743 (15.2)	314 (-54.8)	780 (6.3)	789 (-1.6)	667 (-1.6)

(Notes)

Unless otherwise indicated, tabulated figures and those in parentheses show % changes from previous quarter/month as applicable.

The figures in () indicate % changes from previous year.

[] show the comparable figure of the previous year.

2. Balance of Payments

As of Sep. 30, 2020

	Fiscal	Fiscal	2019	2020			2020				
	2018	2019	4Q	1Q	2Q	APR	MAY	JUN	JUL	AUG	
Customs Clearance (Exports in Yen Terms)	1.9	-6.0	(-7.8)	(-5.5)	(-25.3)	(-21.9)	(-28.3)	(-26.2)	(-19.2)	(-14.8)	
Value	2.5	-1.7	(-4.2)	(-0.0)	(-0.3)	(-0.7)	(-1.4)	(1.0)	(3.5)	(0.1)	
Volumes	-0.6	-4.4	(-3.8)	(-5.5)	(-25.1)	(-21.3)	(-27.3)	(-26.9)	(-21.9)	(-14.9)	
Imports (In Yen terms)	7.2	-6.3	(-11.9)	(-7.2)	(-16.0)	(-7.1)	(-26.1)	(-14.4)	(-22.3)	(-20.8)	
Value	5.7	-3.9	(-7.8)	(-0.3)	(-11.8)	(-8.4)	(-13.5)	(-13.7)	(-9.6)	(-10.4)	
Volumes	1.4	-2.4	(-4.5)	(-7.0)	(-4.8)	(1.5)	(-14.6)	(-0.8)	(-14.0)	(-11.6)	
Current Account (100 mil. yen)	194,848	197,092	37,483	56,999	16,070	2,627	11,768	1,675	14,683		
Goods (100 mil. yen)	6,341	6,665	2,743	5,031	-16,007	-9,665	-5,568	-773	1,373		
Services (100 mil. yen)	-9,342	-4,777	1,455	-2,908	-8,803	-6,302	-925	-1,577	-3,495		
Financial Account (100 mil. yen)	213,154	221,271	22,347	66,966	9,646	-9,490	9,857	9,279	21,094		
Gold & Foreign Exchange Reserves (\$1mil.)	1,291,813	1,366,177	1,323,750	1,366,177	1,383,164	1,368,567	1,378,239	1,383,164	1,402,475	1,398,516	
Exchange Rate (¥/\$)	110.88	108.68	108.72	108.86	107.60	107.93	107.31	107.56	106.78	106.04	

3. Financial Market Indicators

	Fiscal	Fiscal	2019	2020			2020						
	2018	2019	4Q	1Q	2Q	APR	MAY	JUN	JUL	AUG			
Uncollateralized Overnight Call Rates	-0.062	-0.046	-0.034	-0.032	-0.044	-0.036	-0.047	-0.048	-0.028	-0.035			
			[-0.066]	[-0.054]	[-0.060]	[-0.068]	[-0.050]	[-0.063]	[-0.071]	-0.046			
Euro Yen TIBOR (3 Months)	0.062	0.026	0.016	0.016	-0.041	-0.039	-0.042	-0.042	-0.065	-0.065			
			[0.050]	[0.037]	[0.049]	[0.050]	[0.049]	[0.049]	[0.049]	[0.009]			
Newly Issued Japanese Government Bonds Yields (10 Years)	-0.095	0.005	-0.025	0.005	0.030	-0.050	0.000	0.030	0.010	0.045			
			[-0.010]	[-0.095]	[-0.165]	[-0.045]	[-0.095]	[-0.165]	-0.160	[-0.280]			
Average Contracted Interest Rates on Loans and Discounts(City Banks) (% changes from previous period)	0.751	0.720	0.729	0.720	0.668	0.693	0.674	0.668	0.667				
			(-0.009)	(-0.009)	(-0.052)	(-0.027)	(-0.019)	(-0.006)	(-0.001)				
The Nikkei Stock Average (TSE 225 Issues)	21,206	18,917	23,657	18,917	22,288	20,194	21,878	22,288	21,710	23,140			
			[20,015]	[21,206]	[21,276]	[22,259]	[20,601]	[21,276]	[21,522]	[20,704]			
M2(Average)	(2.7)	(2.6)	(2.6)	(3.0)	(5.3)	(3.7)	(5.1)	(7.2)	(7.9)	(8.6)			
Broadly-defined Liquidity(Average)	(1.9)	(2.2)	(2.3)	(2.8)	(3.3)	(2.4)	(3.0)	(4.4)	(4.8)	(5.3)			
Principal Figures of Financial Institutions													
Loans and Discount (Average)	Banks & Shinkin	Banks & Shinkin	(2.2)	(2.1)	(1.9)	(1.9)	(4.7)	(2.9)	(4.8)	(6.3)	(6.4)	(6.7)	
		Banks	Banks	(2.2)	(2.2)	(2.0)	(2.1)	(4.9)	(3.1)	(5.1)	(6.6)	(6.4)	(6.7)
			City Banks etc.	(1.0)	(2.0)	(1.8)	(1.8)	(6.3)	(3.4)	(6.7)	(8.7)	(7.9)	(8.0)
			Regional Banks	(4.3)	(4.5)	(4.3)	(4.3)	(3.7)	(2.8)	(3.7)	(4.5)	(4.9)	(5.1)
			Regional Banks II	(-0.4)	(-5.9)	(-5.7)	(-5.5)	(4.2)	(3.2)	(4.1)	(5.3)	(6.4)	(6.9)
	Shinkin	(2.1)	(1.1)	(1.0)	(1.0)	(2.9)	(1.6)	(2.7)	(4.5)	(6.2)	(7.3)		
Deposits and CDs (Average)	Total(3 Business Condition)	Total(3 Business Condition)	(3.4)	(2.6)	(2.8)	(3.0)	(6.1)	(4.2)	(6.2)	(8.0)	(8.3)	(8.8)	
		City Banks	(4.9)	(3.6)	(3.8)	(3.9)	(8.1)	(5.9)	(8.2)	(10.2)	(10.1)	(10.5)	
		Regional Banks	(2.7)	(3.4)	(3.4)	(3.7)	(4.1)	(2.5)	(4.0)	(5.9)	(6.5)	(7.0)	
		Regional Banks II	(-1.3)	(-5.5)	(-5.4)	(-5.1)	(3.1)	(1.7)	(2.9)	(4.7)	(5.9)	(6.9)	

(Notes)

Newly Issued Japanese Government Bonds Yields and Interest rates are averages. The Nikkei Stock Average is as of month-end. Unless otherwise indicated, tabulated figures and those in parentheses show % changes from previous quarter/month as applicable. The figures in () indicate % changes from previous year. [] show the comparable figure of the previous year.

(Sources)

Cabinet Office, National Accounts, Machinery Orders; METI, Indices of Tertiary Industry Activity, Industrial Production, Current Survey of Commerce; MOF, Trade Statistics, Balance of Payments; MPMHAPT, Consumer Price Index, Family Income and Expenditure Survey, Labour Force Survey; MHLW, Monthly Labour Survey; Ministry of Land, Infrastructure, and Transport, Economic Construction Statistics; BOJ, Corporate Price Index, Financial and Economic Statistics Monthly, etc.

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