

**EXECUTIVE
BOARD
MEETING**

SM/23/63
Correction 1

March 20, 2023

To: Members of the Executive Board

From: The Secretary

Subject: **Japan—Selected Issues**

Board Action:

The attached corrections to SM/23/63 (3/8/23) have been provided by the staff:

**Factual Errors Not
Affecting the
Presentation of Staff's
Analysis or Views**

Pages 18, 24, 28, 30, 56 (para. 5, line 9)

Typographical Errors

Page 56 (para. 5, line 8)

Questions:

Mr. Salgado, APD (ext. 34182)
Mr. Lopez Murphy, APD (ext. 37647)

D. Policy Implications

16. Policies that promote female STEM workers should remove both financial and non-financial barriers. First, Japanese women face explicit pay gaps in nominal income. Among OECD countries, Japan's gender pay gap is the third highest. Second, female workers face implicit pay gaps due to disproportionate family care burdens and work-place discrimination. Compared to other OECD countries, Japanese men do the least amount of housework, making it difficult for working moms to keep their full-time jobs. ~~As of 2015, almost half~~ 30 percent of ~~the~~ women quit their jobs when they give birth, and many do not come back as full-time workers under the rigid labor market structure. In addition, many managers are hostile towards working moms—one out of every five pregnant full-time working women have experienced maternity harassment according to the Japan Institute for Labour Policy and Training. Although the maternity leave policy is generous in Japan, the harassment may discourage women from returning to their full-time positions after childbirth given no legal consequences for maternity harassment. And third, cultural bias and social stereotypes are preventing young girls from exploring the STEM fields in schools.

17. The government can help reduce the explicit gender pay gap through policies and leading by example. The recent "framework policies" that require companies to increase the transparency of their gender wage gap is a welcome step. In addition, public agencies should promote female leaders to set an example for the private sector. Public universities can consider using female-specific quotas to improve diversity and representation of women in STEM fields.

18. Work style reforms and a more flexible labor market can help address the implicit gender pay gap. Despite the generous parental leave policy on paper, very few men take childcare leave lest they disappoint their managers and coworkers. The government is trying to double the number of men taking paternity leave by 2025, but mandatory leave policies may be needed to achieve that. Reducing working hours and adopting flexible work arrangements (such as teleworking) are needed to allow men to contribute more to housework so that women can retain their full-time jobs. To help women reenter the labor market as full-time workers, the labor market in STEM fields needs to be more flexible, with hiring and promotion based on merit instead of seniority. As an example, more flexible hiring policies in medical and legal fields (likely due to the certificate requirement) have allowed women to reenter the labor force as full-time workers after childbirth.

19. Parents, schools, and the society at large should eliminate gender stereotyping and explore the use of quotas to correct for gender biases. The gender stereotype that boys are better at math and science fields has been prevalent everywhere but is now gradually improving in the United States, China, and some other countries. A few factors have proved helpful. First, more training and workshops should take place to counter gender bias for teachers and parents. Second, the government and public universities should support female scientists through targeted research grants and special quotas. In the presence of gender bias in STEM fields, quotas are needed to correct for such biases and improve diversity. The recent decision by Tokyo Tech to introduce special quotas for female students is a welcome step. And third, role

tight labor market tends to raise hourly wages, *average monthly* income could still decline if the share of part-time workers goes up, or if existing workers reduce their hours.²

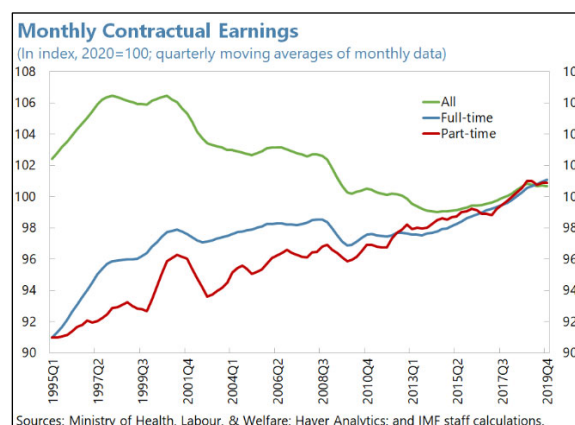
4. The paper finds that average monthly income has been stagnant due to the rise of part-time workers, while real hourly wage has grown across all labor groups. The weak income growth is largely caused by structural factors. First, the rise of part-time workers stems from higher labor force participation among female and senior workers. These trends reflect better childcare options and the gradual increase of the pension eligibility age, respectively. Second, the declining hours among part-time workers are at least partly caused by distortions in the tax system for the second income earners (e.g., spousal deductions and exemption of pension contributions). Since the income thresholds are in nominal terms and rarely adjusted, higher hourly wage would force the second earners to reduce hours. And third, there seems to be a college “discount” in terms of wage growth and that is driven by life-long employment practices in Japan. The lack of mobility and flexibility reduces workers’ bargaining power as well as their incentives to reskill.

5. Addressing these structural barriers is key in boosting income growth in Japan. The top priority remains comprehensive labor market reform to break down the dualism. A more flexible labor market with merit-based pay could boost income of both regular and non-regular workers. Second, disincentives to employment in the ~~tax system~~ benefit policies should be removed. In particular, the health care and pension coverage should be redesigned to avoid any specific threshold that distorts labor supply. Third, worker training and reskilling, especially for non-regular workers, should be encouraged to improve labor mobility and productivity. And lastly, further progress on work-style reforms and family care services is needed to encourage women to keep their regular jobs after childbirth.

B. Resolving the “Wage Puzzle”

6. Average monthly earnings statistics are misleading due to significant structural changes in the Japanese labor market (Figure 1).

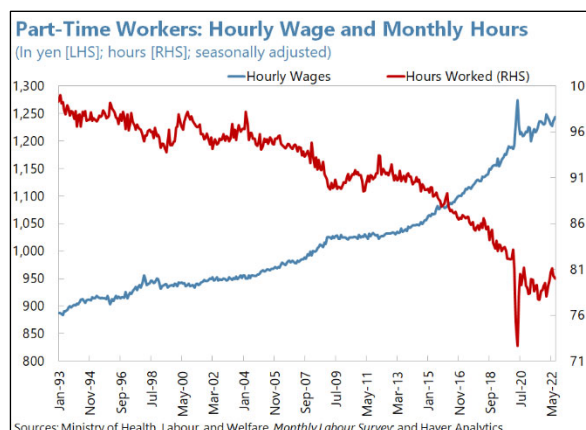
- First, the share of part-time workers increased from 30 percent in 2010 to 38 percent in 2020. These part-time workers are typically paid much less than full-time workers due to fewer hours and lower hourly wages. Therefore, more part-time workers would drag down the average statistics of monthly earnings. As shown in the chart, monthly earnings have been rising among full-time workers as well as part-time workers when looked separately.



² This paper uses contractual monthly earnings for all analysis. Compared with total cash earnings, contractual earnings exclude one-off bonuses which are volatile and lumpy.

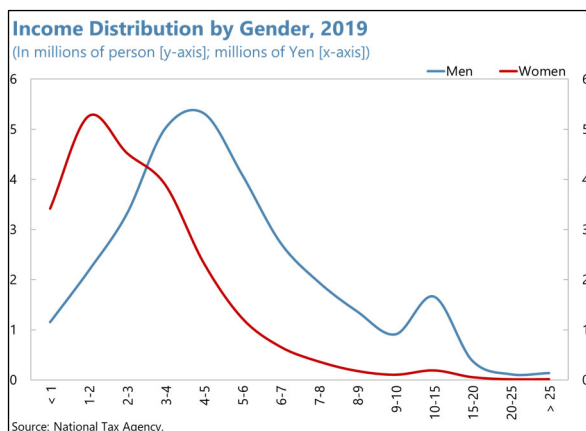
experience a significant pay cut compared to their pre-retirement wages. Lower wages, to some extent, are consistent with changes in job responsibilities, and many workers choose to work part-time.

10. Among part-time workers, hours have declined over time. In fact, our analysis suggests that hours and hourly wages have a strong negative correlation since 1995. Higher wages could increase labor supply as it raises the opportunity cost of leisure, but it may also reduce labor supply due to income effect. The literature (e.g., in Kimball and Shapiro, 2008) suggests that labor supply tends to be inelastic with permanent wage increases. Therefore, the declining hours among part-time workers point to distortions in the labor market.



11. The declining hours among part-time workers are mainly caused by various distortions in the tax and social security system. Three policies are relevant here.

- *The first one is the spousal deduction.* Japan's tax system is based on individuals rather than families. Originally introduced in 1961, the spousal deduction exempts up to JPY 380 000 from the main earner's taxable income, if the second earner's income is below some nominal threshold (JPY1.03 million before 2018 and JPY1.5 million after 2018). The taxable income deduction would go down **"dollar for dollar"** when the second income is above the threshold. This would imply a discount on the second earner's marginal **contribution to family** income that is equal to the main earner's marginal tax rate, which is about 20-33%. The discount would reduce the labor supply for those second earners whose income level is close to the threshold.



- *The second distortion relates to the social security contribution.* Second earners are eligible for the national pension without paying the premium if their income is below JPY 1.3 million. This further discourages female labor supply and became more binding after 2018 when the income threshold for the spousal deduction was increased to 1.5 million yen.
- *And last, the newly expanded Health Insurance and Employee's Pension Insurance coverage has unintended consequences in limiting working hours.* Before 2016, firms only paid Health Insurance and Employee's Pension Insurance for those working more than 30 hours a week.

expect inflation to accelerate in the future, they will demand higher wages, which will push businesses to raise prices further, leading to a “wage-price” spiral.

14. However, our analysis suggests that wages in Japan have not responded to inflation expectations in the past. Given the potential biases of average earnings data mentioned above, we analyze monthly earnings and hourly wages separately for full-time and part-time workers (Table 1). Neither monthly earnings nor hourly wage respond to any measure of inflation expectations. Instead, wages respond to core inflation, with a larger coefficient for hourly wages than monthly earnings. Monthly earnings of part-time workers do not respond to core inflation due to the distortions from the tax system mentioned above. Hourly income is also affected by labor market tightness, but not potential growth.

15. The lack of a response to inflation expectations could be partly attributed to the structural issues in the labor market mentioned above. Wages for regular workers are mostly determined by the annual *shunto* negotiation between corporates and labor unions. And unions mostly cover workers in large corporations, with the other 80 percent of the workforce un-unionized. Given the much higher pay level and better job security enjoyed by unionized regular workers, the unions tend to put more weight on maintaining regular employment than bargaining for higher wages. Extremely low mobility among regular workers also implies few outside option and low bargaining power. Regarding part-time workers who are second income earners, the distortions in the tax-system-benefit policies discourage labor supply and prevent monthly income from growing despite higher hourly wages.

Table 1. Japan: Determinants of Wage Growth

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Monthly earnings growth				Hourly wage growth					
	All		Full-time		Part-time		Full-time		Part-time	
Imputed HH inf expectations (LT)	-0.13 (0.20)		-0.03 (0.17)		-0.30 (0.35)		0.17 (0.39)		0.37 (0.25)	
Consensus forecast (LT)		0.38 (0.34)		-0.04 (0.29)		0.32 (0.61)		-1.09 (0.66)		-0.23 (0.45)
Core inflation last year(excl. VAT)	0.50*** (0.11)	0.50*** (0.11)	0.39*** (0.09)	0.39*** (0.10)	-0.04 (0.20)	-0.04 (0.20)	0.66*** (0.22)	0.68*** (0.22)	0.85*** (0.14)	0.85*** (0.15)
Unemployment gap	-1.27*** (0.34)	-1.03*** (0.25)	-0.93*** (0.29)	-0.90*** (0.21)	-0.66 (0.61)	-0.22 (0.44)	-0.77 (0.67)	-1.19** (0.48)	-0.94** (0.44)	-1.46*** (0.32)
Potential growth	0.75*** (0.17)	0.70*** (0.17)	0.74*** (0.14)	0.75*** (0.15)	0.50 (0.30)	0.45 (0.31)	-0.07 (0.33)	0.05 (0.33)	0.07 (0.22)	0.11 (0.22)
Constant	-0.52*** (0.11)	-0.98** (0.42)	-0.16* (0.09)	-0.12 (0.36)	0.15 (0.20)	-0.23 (0.75)	0.43* (0.22)	1.73** (0.81)	1.27*** (0.14)	1.55*** (0.55)
Observations	64	64	64	64	64	64	64	64	64	64
Adjusted R-squared	0.400	0.408	0.414	0.414	-0.002	-0.010	0.108	0.144	0.409	0.391

Standard errors in parentheses

=** p<0.10

** p<0.0. *** p<0.010"

E. Policy Implications

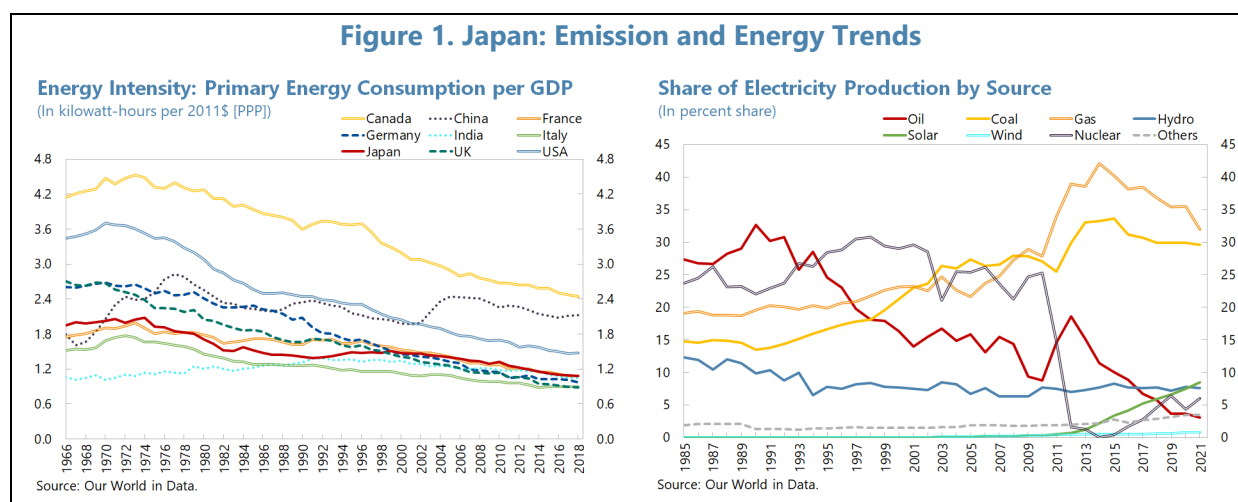
16. Despite strong growth of hourly wages, overall wage income has been stagnant, preventing Japan from reaching the two-percent inflation target in a sustainable manner.

The slow income growth reflects structural barriers in the labor market. For part-time workers who

for the transition to reduce risks. This requires firms to develop strategies to comply with lower emissions. The financial sector plays a role in monitoring and pricing risks, and in working with corporates to address transition risks. Public policy needs to support firms in the transition through investment in decarbonization and green technologies, clarity on mitigation policies to enable corporate planning, support for green and transition finance, and climate risk assessments and management.

B. Emission Trends in Japan

4. Reliance on fossil fuels remains high (Figure 1). The emission-intensity of GDP has fallen less over the last three decades in Japan than in most other major advanced economies. Decarbonizing energy production is particularly challenging—the emission intensity of energy production has been stagnant since the 1960s and is now higher in Japan than in most other major advanced economies. Fossil fuels account for about 85 percent of primary energy production. Renewable energy production has almost doubled since 2011, but at the same time nuclear energy production dropped following the accident at the Fukushima Daiichi nuclear power plant in 2011.



5. Electricity and heat production are the largest sources of emissions, but they mostly serve as inputs for other sectors (Figure 2). Electricity and heat production account for close to half of Japan's GHG emissions underscoring the need to decarbonize this part of the economy to achieve carbon neutrality. Transport, manufacturing and construction, buildings, and industry are also important emission sources, even when not counting emissions from purchased electricity and heat in these sectors. Since electricity and heat are mostly inputs for other sectors, another way to look at the sectoral emission profile is to allocate electricity and heat related emissions to the sectors that use these as inputs (right hand side chart, CO₂ only). With this, industry is the largest source of emissions at 36.58 percent followed by transport, commercial activities (commerce, services, offices, etc.), and residential.