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Structural Barriers to Wage Income Growth in Japan

Japan

Rui Xu and Kaustubh Chahande

SIP/2023/031

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Structural Barriers to Wage Income Growth in Japan
Prepared by Rui Xu and Kaustubh Chahande

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ABSTRACT: Stagnant income growth has limited Japan's growth potential and reflation efforts. This paper dissects the wage dynamics of different labor groups and identifies the structural barriers to income growth. Although average income growth has been weak due to the rise of part-time workers and their declining hours, real wages per hour have risen across all labor groups, with the most gain seen among part-time and female workers. The weak income growth is largely driven by structural factors, including disincentives for second earners in the social security system, pension policies, and more broadly the dual labor market structure. Policies to address these structural barriers are key to boost income growth in Japan.

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Structural Barriers to Wage Income Growth in Japan

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Prepared by Rui Xu and Kaustubh Chahande ¹

¹ The authors would like to thank the Japanese authorities for providing helpful comments.



JAPAN

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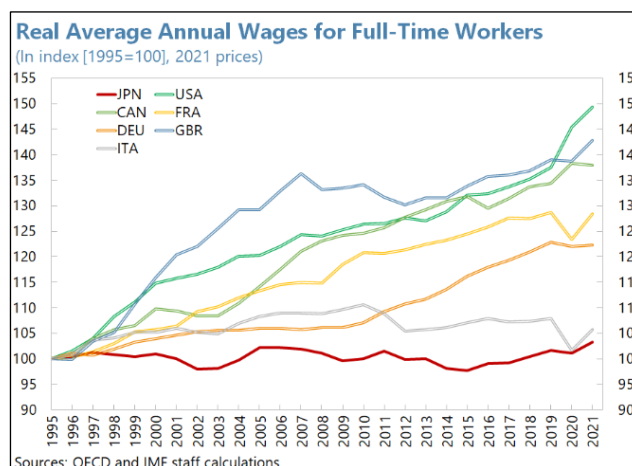
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STRUCTURAL BARRIERS TO WAGE INCOME GROWTH IN JAPAN¹

A. Introduction

1. Stagnant income growth has limited Japan's growth potential and depressed inflation for the last two decades.

Average wage income has not risen since 1995, making Japan the worst performing country among the G7. The weak income growth, combined with the ageing population, puts downward pressure on domestic demand. Weak domestic demand offsets some of the boost from fiscal and monetary policy accommodation during Abenomics, resulting in low inflation. A pessimistic demand outlook also discourages firms from investing in modern technology such as digitalization, lowering Japan's growth potential over the medium to long term.



2. However, the meager wage income growth is at odds with the tight labor market. By 2019, unemployment had dropped to below 2.5 percent while the female labor force participation rate rose to 54 percent. According to the Tankan survey, labor shortages were increasingly cited as binding constraints for firms' growth. For every job seeker, more than two new job openings were available. Under such a tight labor market, it was puzzling that wage income had been stagnant.

3. This paper resolves the puzzle by studying the wage dynamics in each labor group. Mathematically, three factors could affect average wage income: composition of workers (e.g., part-time vs. full-time workers), hours worked in each group, and hourly wages in each group. Although a 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

¹ Prepared by Rui Xu (APD) and Kaustubh Chahande (APD).

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.

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.

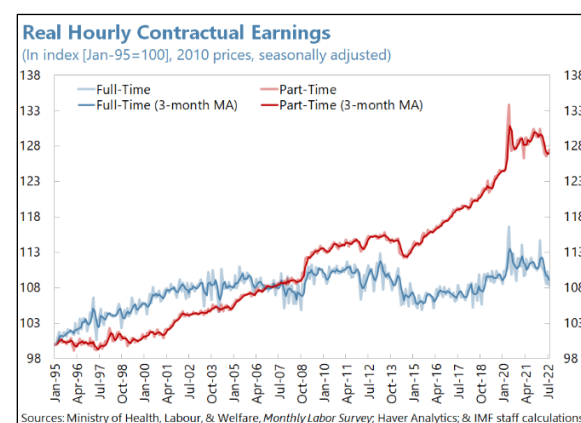
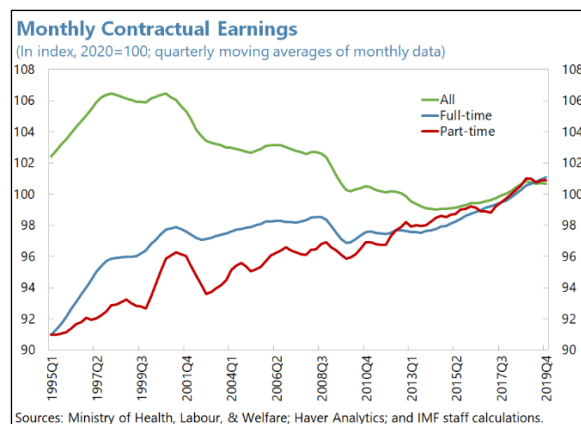
5. Addressing these structural barriers is key in boosting income growth in Japan. The top priority remains comprehensive labor market reform to break down the dualism. A more flexible labor market with merit-based pay could boost income of both regular and non-regular workers. Second, disincentives to employment in the 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.
- Second, monthly working hours by part-time workers dropped by about 10 percent from 2010 to 2019. The reduced labor input would offset higher hourly wages.

7. Wages per hour have been rising rapidly among part-time workers, and to a lesser extent among full-time workers. To remove the biases related to part-time workers, we construct two separate wage indices for part-time and full-time workers using hourly wages. Both wage indices



have been rising since 1995. The real wage growth among part-time workers was especially strong, averaging 1.8 percent from 2015-2019.

8. Even among full-time workers, there is significant heterogeneity regarding wage growth. To tease out the effects of other structural changes in the labor market, we calculate hourly wages for each demographic group by employment type, gender, and education. The data are from the Basic Survey on Wage Structure.³ A few patterns stand out:

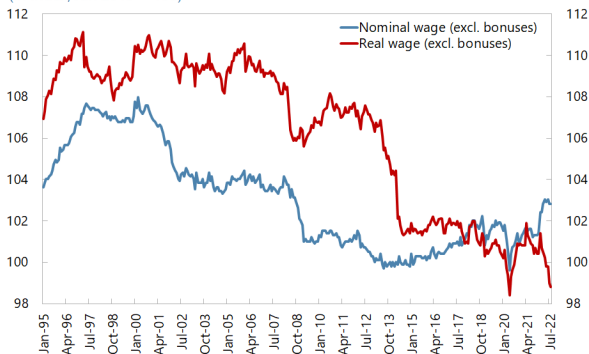
- **Female workers experienced faster wage growth than the male ones.** This is true for both regular and non-regular workers, and for each level of education. Since male workers tend to have higher level of wages, faster growth among women implies a shrinking gender pay gap. Notably, the overall wage growth among female workers is faster than each segment, reflecting improving education attainment among female workers.
- **Less educated workers experienced faster wage growth, in contrast to the trend in the United States.** Among regular workers, colleague-educated workers had the least wage increase while those with technical and junior college degrees had the most wage increase. Among non-regular workers, the least educated group experienced the highest wage growth. This could reflect the rapidly ageing society, where demand for services related to old-age care rises whereas manufacturing activity is increasingly outsourced.

³ The data are at annual frequency, compiled by the Ministry of Health, Labour, and Welfare.

Figure 1. Japan: Wage Dynamics

Wage Index: Nominal vs. Real

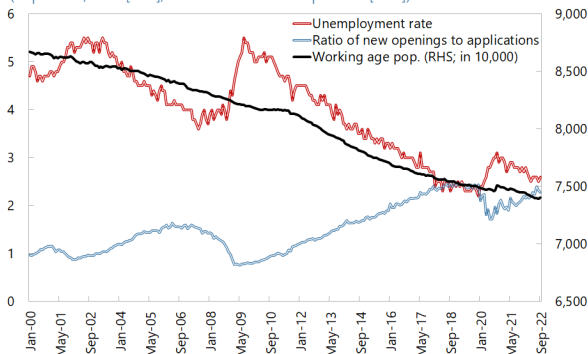
(In index, Jan 2013 = 100)



Sources: Ministry of Health, Labour & Welfare; Haver Analytics; and IMF staff calculations.

Japan Labor Market

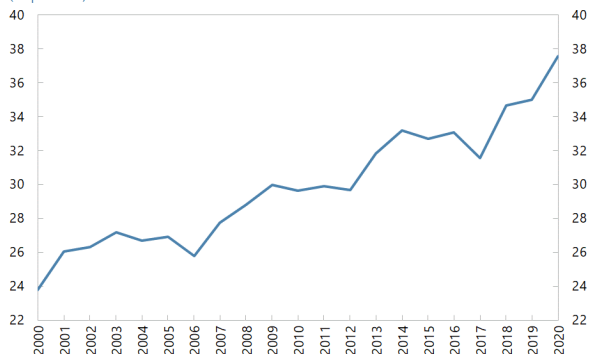
(In percent, ratio [LHS]; tens of thousands of persons [RHS])



Sources: Ministry of Internal Affairs & Communications; Ministry of Health, Labour, & Welfare; Haver Analytics.

Share of Part-Time Workers

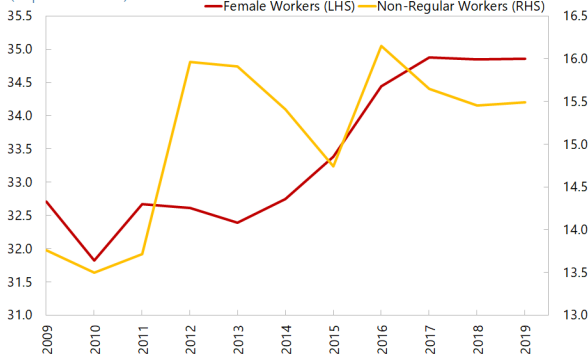
(In percent)



Sources: International Labour Organization.

Full-Time Workers: Share of Female & Non-regular Workers

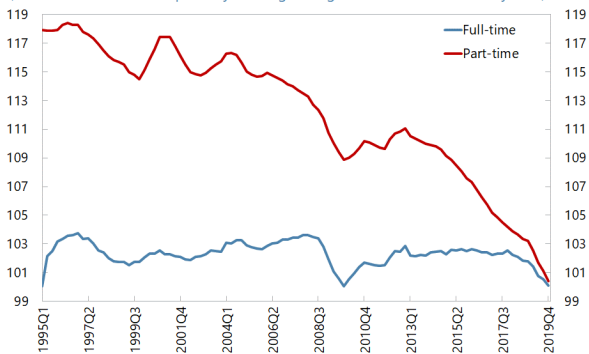
(In percent share)



Sources: Ministry of Health, Labour, and Welfare, Basic Survey on Wage Structure, and IMF staff calculations.

Monthly Working Hours

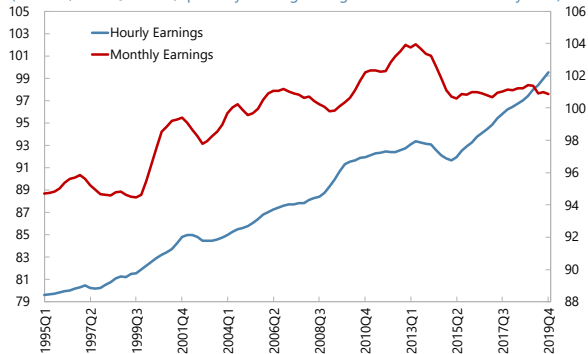
(In index, 2020Q1=100; quarterly moving averages of normalized monthly data)



Sources: Ministry of Health, Labour, & Welfare; Haver Analytics; and IMF staff calculations.

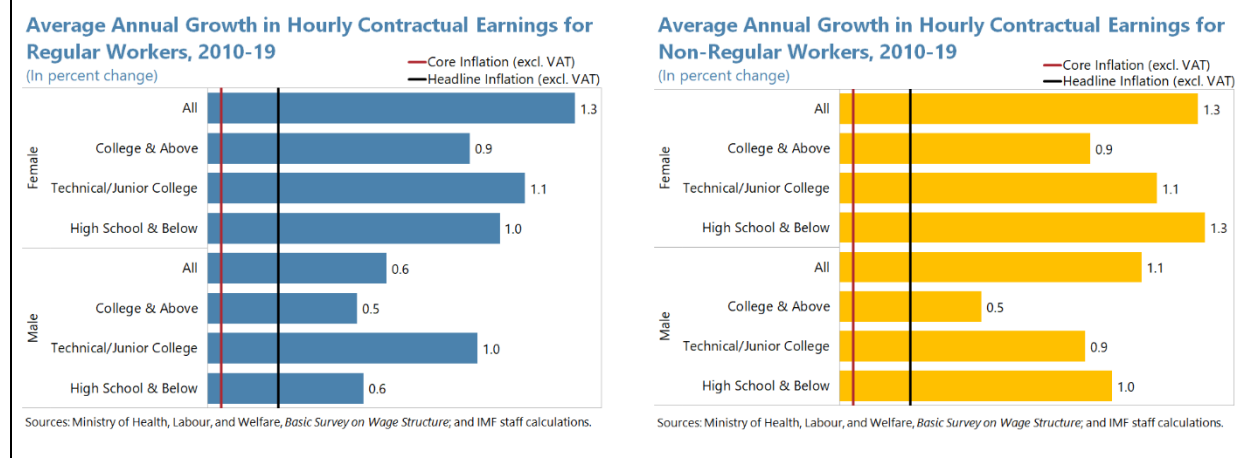
Real Wages for Part-Time Workers

(In index, 2020Q1 = 100; quarterly moving averages of normalized monthly data)



Sources: Ministry of Health, Labour, and Welfare; Haver Analytics; and IMF staff calculations.

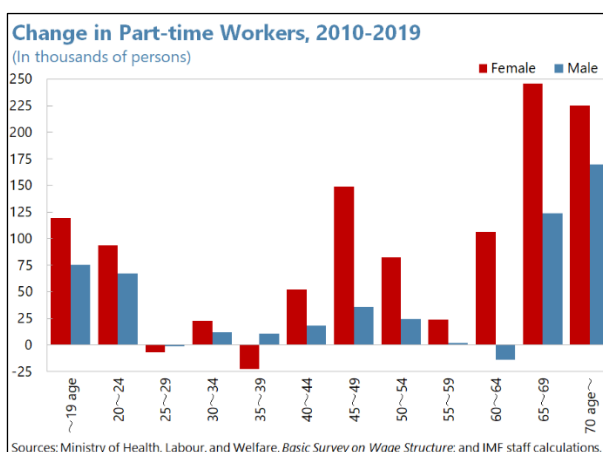
Figure 1. Japan: Wage Dynamics (concluded)



C. The Rise of Part-Time Workers and Their Reduced Hours

9. Higher labor force participation rates among women and seniors contributed to the rise of part-time workers.

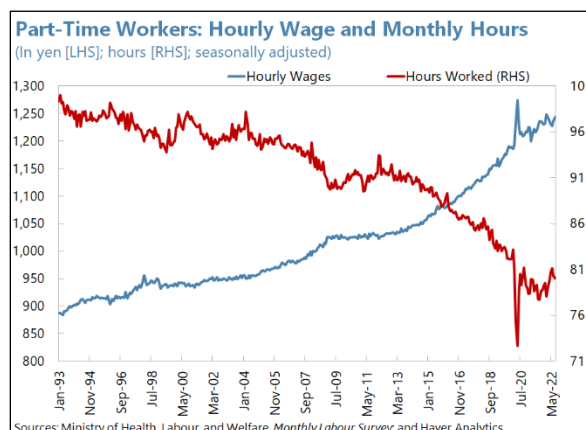
- *Japan has added 2.5 million women to the labor force since 2013, of which half were part-time workers.* The increase is primarily a result of labor shortages resulting from demographic factors and the economic recovery. At the same time, structural reforms during Abenomics, notably the increase in childcare capacity since 2013, has also helped women return to the labor force after childbirth.
- *Employment among senior citizens has also increased due to rising life expectancy and pension eligibility age.* Many firms still set a mandatory retirement age at 60 while the pension eligibility age has been raised to 65 for men. The government introduced the continuous employment system in 2006 which required firms to provide employment to workers until their pension eligibility age.⁴ However, only about one-fifth of firms extend regular employment for workers above 60. The remainder rehire senior workers as non-regular workers. Those rehired non-regular workers tend to



⁴ In 2006, firms were allowed to screen workers based on ability or service record. Since 2013, such screening is no longer allowed, and firms are required to provide employment until age 65 for everyone who wants to remain in the firm.

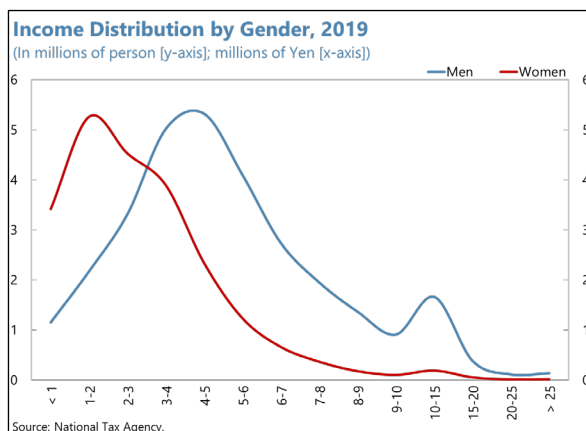
experience a significant pay cut compared to their pre-retirement wages. Lower wages, to some extent, are consistent with changes in job responsibilities, and many workers choose to work part-time.

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.



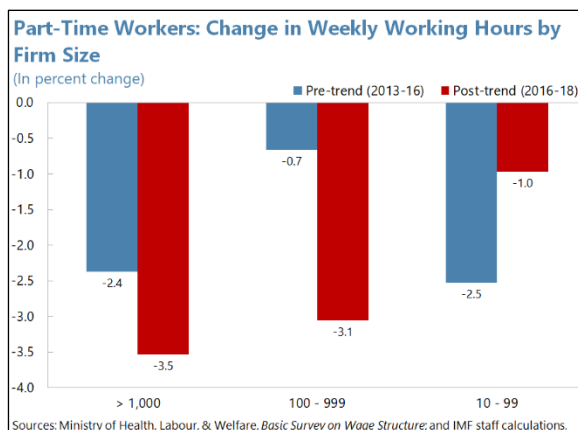
11. The declining hours among part-time workers are mainly caused by various distortions in the tax and social security system. Three policies are relevant here.

- *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 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.

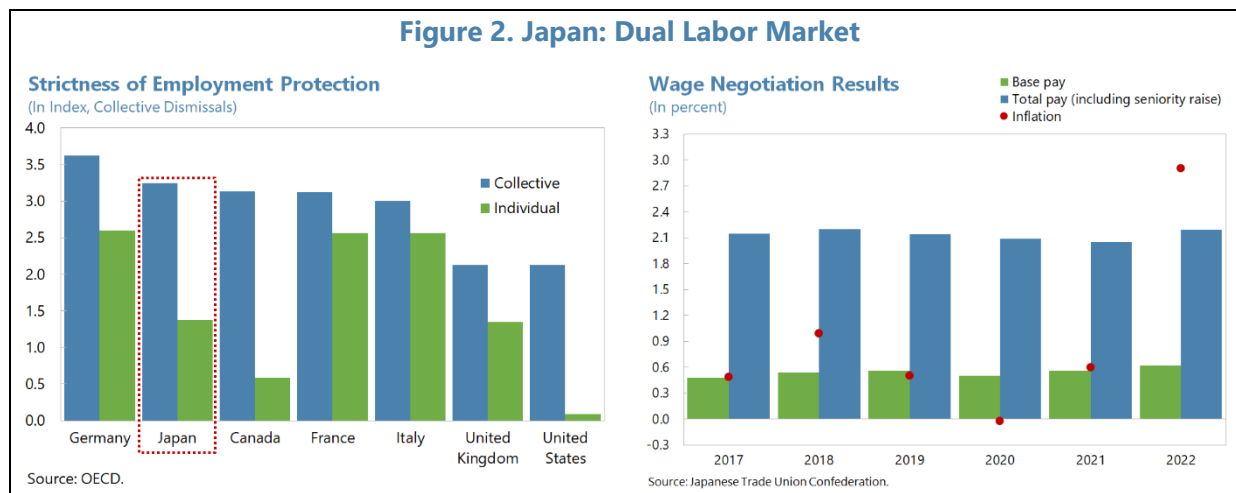


- *The second distortion relates to the social security contribution.* Second earners are eligible for the national pension without paying the premium if their income is below JPY 1.3 million. This further discourages female labor supply and became more binding after 2018 when the income threshold for 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.

Since October 2016, the government gradually expanded social security coverage to those working more than 20 hours a week and earning more than 1.06 million per year. Initially the policy was enforced in large companies employing more than 500 people. Over time, the policy is being extended to smaller firms, with expansion to those hiring more than 100 people in 2022 and those hiring more than 50 people planned in 2024. Although designed with good intention, the policy led many large firms to limit part-time workers' hours to 20 to avoid paying the social security contribution (see text chart).



12. The relatively weaker wage growth among full-time workers is due to the dual labor market structure in Japan. Japan's lifetime employment system is an implicit long-term contract for regular workers. Under this system, firms hire new graduates with the promise of a job until the mandatory retirement age. The long-term commitment encourages employers to develop company-specific skills by investing in their workers. However, such a system discourages labor mobility of regular workers due to seniority pay structures, firm-specific skill sets, and high dismissal costs. Labor unions also tend to focus more on maintaining employment than requesting higher salaries during the annual *shunto* negotiations. On the other hand, the labor market for non-regular workers is more flexible and responds more to labor market conditions. As a result, regular workers' hourly wages have been increasing much slower than non-regular workers (who are mostly part-time).



D. The Absence of a Wage-Price Spiral

13. As inflation has risen sharply around the world, central banks have tightened monetary policy to anchor inflation expectations and prevent wage-price spirals. If workers

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-ionized. 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 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

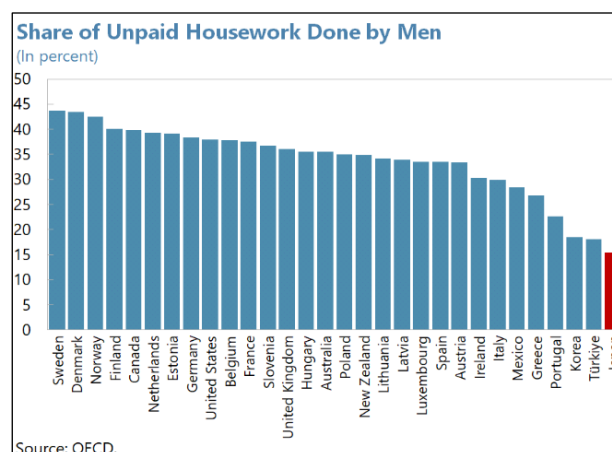
16. Despite strong growth of hourly wages, overall wage income has been stagnant, preventing Japan from reaching the two-percent inflation target in a sustainable manner.

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

are typically second income earners, monthly income was implicitly capped by the distortions in the social security system. Among full-time workers, hourly wages have been growing slowly due to the rigid labor market. Since core inflation responds mostly to family income, it is essential to boost overall income to achieve the inflation target in a sustainable manner.

17. To boost overall wage income, the government needs to address the structural barriers.

- First, disincentives to labor supply in the social security system should be eliminated.* In the near term, income thresholds should be harmonized to reduce such distortions. Although the income threshold for the spousal deduction was raised from 1.03 to 1.5 million yen in 2018, the effect is muted as the income threshold for a dependent spouse (of an insured employee) who can be exempted from Health Insurance and Pension Insurance contribution remains at 1.3 million yen. Over the medium term, the tax incentives should be reviewed regularly and streamlined to ensure compatibility, especially in the current environment of surging inflation. As shown in Kitao and Mikoshiba (2022), eliminating those distortions would significantly raise women’s labor supply and earnings and boost government revenues. The expansion of Health Insurance and Employee’s Pension Insurance to part-time workers since 2016 is a welcome step in mitigating the distortions in the social security system. But the partial coverage has the side effect of limiting labor supply within 20 hours per week for some workers. A new design that avoids thresholds in hours or nominal income should be adopted to eliminate distortions to labor supply.
- Second, further progress on work-style reforms, including through teleworking, is needed to improve career prospects and income of female workers.* Since 2013, significant progress has been made on work-style reforms and childcare services, which helped boost female labor force participation. However, most of the female workers re-enter the labor force as part-time workers taking on jobs that under-utilize their skills. While the rigid labor market plays a role, women also shoulder a disproportionate amount of housework. In this context, work style reforms can help women by providing more flexible work arrangements and allowing men to share more housework. Teleworking was found especially helpful for working mothers to retain their jobs while taking care of young children during the pandemic.
- Finally, a comprehensive strategy is needed to break down labor market dualism and improve flexibility.* Japan’s traditional model – simultaneous recruitment of new graduates, lifetime employment, seniority-based wage and promotion system, mandatory retirement and company-based training – needs to be modernized to adapt to the rapidly ageing society. A



more flexible labor market with merit-based promotions could boost productivity and raise labor income. As suggested in Aoyagi and Ganelli (2013), one reform option is to introduce a Single Open-Ended Contract for all newly hired workers, complemented by a shift towards a model that combines labor market flexibility and security.

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