

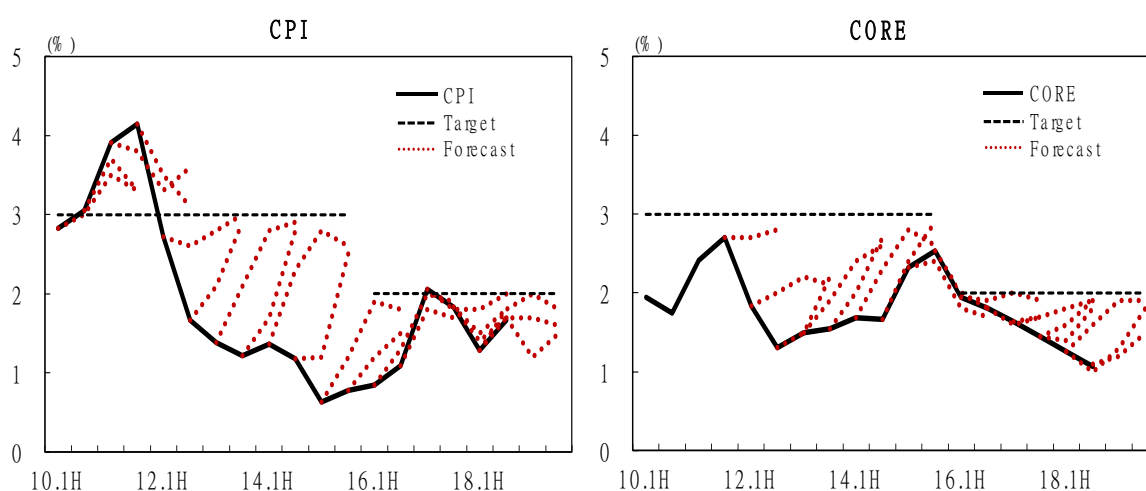
Discussion by Dongchul CHO (Bank of Korea)

I am supposed to discuss the paper on New Zealand's inflation written by Adam Richardson, but was also asked to brief on the recent minimum wage hikes in Korea. Though I am not sure how effectively I can carry out this double-mandate mission within 10 minutes, let me try.

1. Comments on New Zealand's Inflation

First, I would like to note that the lower-than-expected inflation after the global financial crisis was not a unique phenomenon of New Zealand. The figures below show the upward biases of the Bank of Korea's inflation forecasts, which look similar to Figure 1 of the Richardson paper.

Korea's Inflation: Actual and Forecast (Bank of Korea)



Source: Statistics Korea, Bank of Korea

Also similar to the New Zealand case are research results on the coefficient stability of the Philips curve, $\pi = \pi^e + \theta \text{GAP} + \text{others}$, where π , π^e , θ , GAP denote actual inflation, expected inflation, inflation sensitivity, and GDP gap, respectively. BOK's internal study employing time-varying coefficient estimation techniques finds that it is π^e , not θ , that varies over time in Korea after the global financial crisis. This is exactly the same conclusion of Karagedikli and McDermott (2017) for New Zealand, which is cited in the paper. In a similar vein, Damjan Pfajfar and John M. Roberts (2018) of the Federal Reserve Board emphasize that θ should measure, not an unconditional response of π to GAP , but its response conditional on π^e . They show that the Philips curve in the U.S. does not appear to have significantly flattened after controlling for expected inflation, while the simple correlation between π and GAP weakened.

An important issue is then how to understand the expected inflation. Just as in the case of New Zealand (McDonald (2017) cited in the paper), Korea's survey-based inflation expectation appears to be backward-looking (slowly declining as the actual inflation remained low), and adaptive expectation models reduce forecast errors. In contrast, any forecasts based on models with a constant term, appealing to an assumption of anchored-expectation, result in upward biases. (Technically, inflation may not be a stationary process if inflation expectation is not well-anchored.)

This inflation, or inflation expectation, story seems to be consistent with the data presented in the paper. That is, New Zealand's nominal wage growth has been clearly lowered after the global financial crisis (Figure 2), but its real wage growth has not (Figure 4). These facts suggest that the 'low' wage growth in New Zealand is more likely to be a macro- than a micro- or structural phenomenon.

Figure 2: wage inflation (nominal)

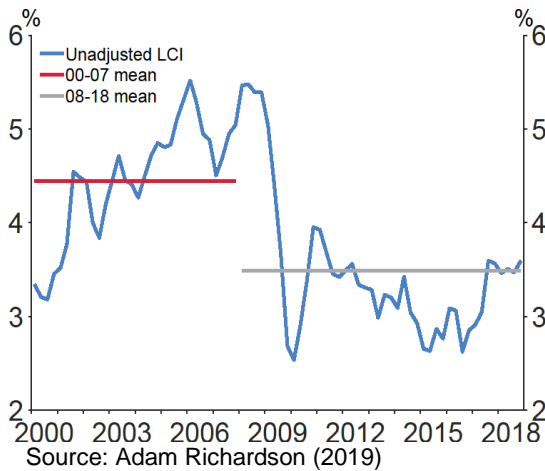
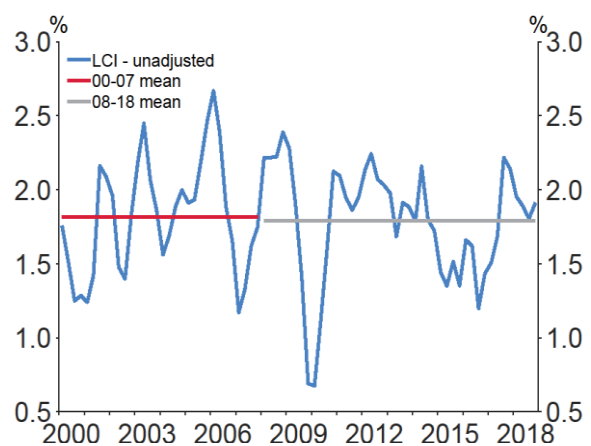


Figure 4: wage inflation (real)

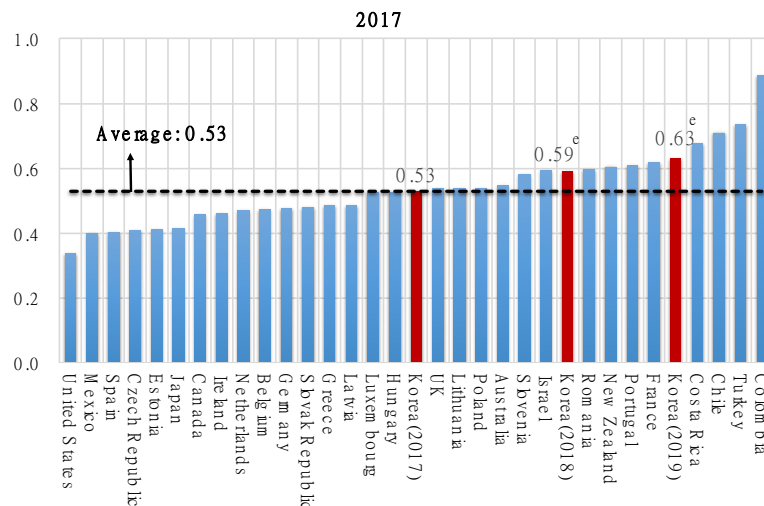


If so, it may be more productive to search for causes of the movement in π^e rather than θ weakening that the paper is seeking by analysing job-to-job transition rate and HHI-related data. There may be several candidates for the cause of π^e variation in both Korea and New Zealand: (i) suspicion about central bank's ability to control inflation, which may have stemmed from the long period of lower-than-target inflation; (ii) ineffectiveness of central bank's communication, which may have failed to convince people of the central bank's strong will to accomplish the inflation targeting mandate; and/or (iii) blurred central bank's commitment on inflation targeting, perhaps by implicitly (or explicitly) adding other objectives of monetary policy such as financial stability or full employment. This will be a challenging but worthwhile topic to study.

2. Korea's Minimum Wage Hike

Let me now brief you on Korea's minimum wage hikes and its impacts. Up until 2000, Korea's minimum wage was lower than 30 percent of its median wage, which was the second lowest ratio among OECD countries. However, the Korean government kept increasing the minimum wage relatively quickly until the minimum-to-median wage ratio reached 53 percent, the average level of the OECD countries, by 2017. Emphasizing social problems due to widening income inequality, the new government accelerated the pace of minimum wage increase to 16.4 percent in 2018 and 10.9 percent in 2019. According to preliminary estimation, these hikes will raise the Korea's minimum-to-median wage ratio to 63 percent in 2019, virtually the highest among OECD countries except for 4 newly joined developing members.

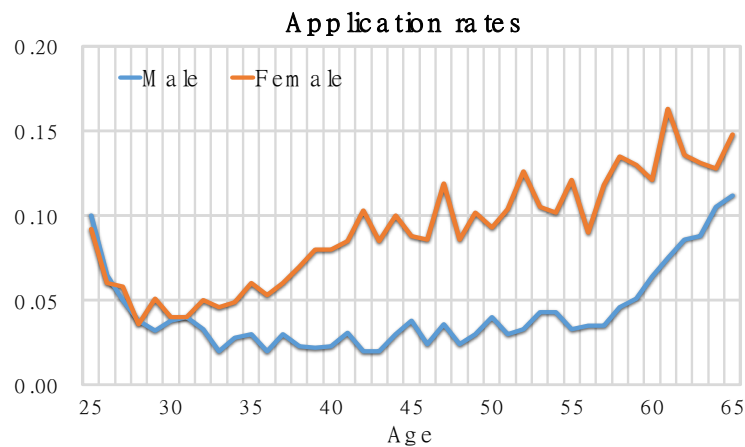
Minimum-to-Median Wage Ratio (OECD Countries)



Source: OECD, calculated by author

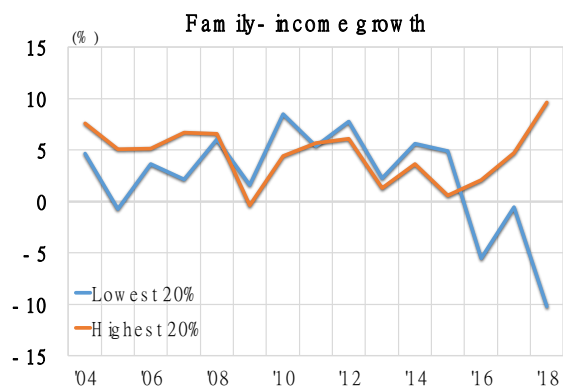
With respect to the minimum wage shock, firms would have three ways to respond: (i) raising output prices, (ii) squeezing profit margins, and/or (iii) reducing employment (extreme version is business shut-down). One can find some traces of output price increases in labour-intensive service sectors such as restaurants, but most firms appear to respond by (ii) and/or (iii) due to weak aggregate demand conditions. In particular, small businesses were most severely hit as they heavily rely on low-wage workers with no market power to pass through the higher costs to output prices. In fact, employment growth significantly slowed down from over 1% until 2017 to 0.2% in 2018, particularly for marginal workers (temporary, self-employed, and so forth).

As for aggregate impacts of the minimum wage shock, only a few rigorous research outputs are available. Among them, Kim and Lee (2019) estimate that 5~10% ('application rate') of workers additionally fell below the newly applied minimum wage in 2018 and that approximately 0.2~0.3% of employment ($\approx 60,000$ jobs) was reduced by the minimum wage hike in 2018 from the regression results of the 'application rates' across age and gender.

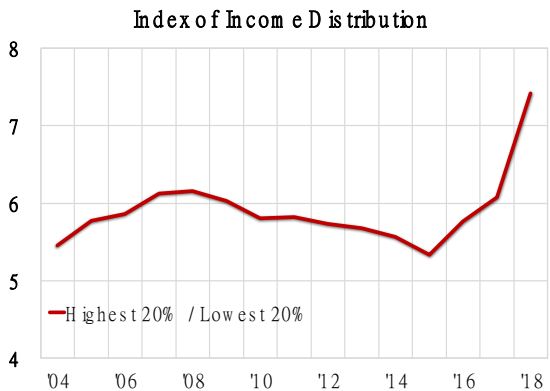


Source: Kim and Lee (2019)

Another aspect to note is its impact on income distribution, the most important motivation of the policy. However, it turned out that low income families were more severely hit (mostly losing jobs) by the minimum wage hike and income distribution worsened as measured by the multiple of the highest 20% families' income to lowest 20%. It may be premature to precisely assess the policy effects, but data available so far do not seem to be affirmative.



Source: Statistics Korea



References

Pfajfar, Damjan, and John M. Roberts (2018), "The Role of Expectations in Changed Inflation Dynamics," FEDS Working Paper No. 2018-062.

Kim, Daeil, and Jungmin Lee (2019), "Employment Effect of the 2018 Minimum Wage Hike," Manuscript, Seoul National University (in Korean).