Ask: NUS Economists

Impact of Progressive Wage Model

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Q *What has been the effect of the Progressive Wage Model?*

A Income inequality and wage stagnation are serious concerns among low-income workers throughout the world. Singapore is no exception. Various politicians and scholars have advocated a national minimum wage to tackle the problem. However, the Government in Singapore has roundly rejected a minimum wage in favour of the Progressive Wage Model (PWM).

The PWM is a productivity-based wage ladder that stipulates wage increments and corresponding training requirements at different levels of skill and responsibility. It is made mandatory for Singapore citizens and permanent resident workers in the cleaning, security and landscaping sectors. The PWM was recommended for the cleaning and security sectors in 2014, and the landscaping sector in the following year.

So, what has the PWM done for these low-income workers?

A recently completed Honours Thesis by one of us (Mr Ler) addresses this question.

The key challenge in this research, as with any evaluation of government policy, is causal inference. A simplistic approach would compare earnings and employment of cleaning, landscape, and security workers before and after the policy. However, such an evaluation might be confounded by other changes that took place at the same time. For instance, the rise in wages could be attributed to macro-economic expansion, recommendations of the National Wages Council, or general changes in government policy.

A more robust approach would be to apply a difference-in-differences analysis. This method compares the earnings of the targeted workers ("treatment group") with the earnings of other low-wage workers ("control group") before and after the PWM came into effect.

The earnings of the control group would account for extraneous factors such as macro-economic expansion and general government policy. The difference in the change in the earnings between the treatment and control groups can then be attributed to the PWM with greater confidence.

Another methodological concern is identifying occupations that comprise the control group. The coarsened exact matching and synthetic control methods are used to construct control groups that are as similar as possible to the treatment unit based on a set of pre-defined covariates. Applying these methods, the control group for cleaners comprises a weighted basket of other low-wage occupations, like food preparation workers and kitchen assistants.

Using data from the Occupational Wage Survey over the years 2008-2016, the analysis shows that the PWM was associated with basic wages being 11 per cent and 18 per cent higher in the cleaning and security sectors respectively.

The positive result suggests that employers have complied with the new legislation. More important for alleviating poverty, the estimates also show that the PWM was associated with gross wages being higher by 20 per cent and 15 per cent for cleaners and security guards in 2016.

However, gross wages increased somewhat later than basic wages, suggesting that, initially, employers might have reacted to the PWM by cutting the 13th month Annual Wage Supplement, other allowances, and overtime pay, but, over time, restored these towards the original levels.

As for employment, using data from the annual Comprehensive Labour Force Survey over the years 2011-2016, the analysis shows that the increase in the wages of cleaners and security workers was not associated with lower employment. Instead, under the PWM, employment of cleaners and security guards rose by 24 per cent and 11 per cent respectively. This is consistent with the PWM driving higher productivity through training and skills upgrading.

However, the estimates of the effect of the PWM on employment are not statistically significant. Moreover, the results may be a statistical artefact, as higher wages for cleaners and security guards might have attracted other low-wage workers to switch into these occupations.

To the extent that food preparation workers and kitchen assistants switched to higher-paying jobs in cleaning and security, employment in the control group would have fallen, causing employment of cleaners and security guards to rise relative to employment of the control group.

Another caveat to note is that the possible negative effect of the PWM on the employment of Singapore citizens and permanent residents is constrained by limits on foreign workers. To the extent that dependency ratio ceilings are binding, employers cannot substitute foreign workers for Singaporeans.

In sum, as a unique kind of "minimum-wage" policy, the PWM has succeeded in raising wages without apparently reducing employment.

More importantly, as a tailored, structured and progressive policy, it provides a wage ladder for low-skilled Singaporean workers, holding out its promise of growing income over time.

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