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ASK NUS ECONOMISTS

Raising productivity through wage rises

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Do increases in labour productivity lead to wage increments, or is it the other way around?

Improving productivity, particularly labour productivity, is a major focus of Budget 2013. The rationale behind this is that an ever increasing living standard is only sustainable if labour productivity keeps increasing.

Labour productivity is measured by the value-added per worker. This reflects the effectiveness and efficiency of labour in the production and sale of output. So, if a chef cooks a $200 meal in an hour and the ingredients of the meal cost $50, the labour productivity, or value-added, of the chef would be $150 per hour.

Although we call it labour productivity, it is actually attributable to both the chef's service and the physical capital used in making the meal, such as kitchen equipment and rooms to host customers. Clearly, an employer will not pay the chef more than $150 per hour for his services.

In a perfectly competitive labour market, wages are equal to labour's contribution to the value-added, which is proportional to labour productivity. Increases in labour productivity will always lead to wage rises.

However, wages and labour productivity do not always move together. The relative bargaining power between employees and employers determines the gap – or the wedge – between wage and productivity, which has varied considerably. In the US, Dr Lawrence Mishel of the Economic Policy Institute found that the wedge has increased only gradually over time due to a slower rise in wage rates. Between 1973 and 2011, labour productivity increased at an annualised rate of 1.56 per cent while the average hourly wages increased by only 0.87 per cent.

The disconnect between productivity gains and real wage increments has also been observed in many other countries. For instance, while the real wage in Germany and Japan remained flat between 2000 and 2008, productivity had increased by 10 per cent over the same period.

A large gap between wages and productivity is not necessarily always bad news for workers.

First, a larger gap implies higher profits, which provides a stronger incentive for investors to create jobs. As the employment outlook improves, workers' bargaining power increases and so do their wages. Secondly, it provides room for wage growth when productivity grows at a lower rate.

The latter explains why in Singapore, wages increased by 2.3 per cent between 2011 and last year although labour productivity actually fell by 2.6 per cent over the same period. Clearly, wage growth cannot outpace productivity growth forever. Once the wedge narrows to a certain extent, any further increase in wages without productivity increases will hurt employment. Sustained wage growth must be accompanied by productivity growth.

Luckily, wage rises can also work as a catalyst for productivity growth. If workers consider a higher wage as a gift from their employers for their hard work, a high wage encourages them to work even harder, which in turn raises their productivity. This gift exchange theory was first proposed by Nobel laureate George Akerlof in 1982 and many recent studies find evidence for it.

In an experiment conducted at the University of Pennsylvania in 2010 by Dr Judd Kessler, 88 participants were tasked to play either the role of employer or worker. Each employer hired one worker. At the experiment's start, each employer had $30 and could choose to pay his worker nothing, $5, or $10. Once the wage was decided, some employers got an additional $60, making them richer than the others, regardless of the wage paid to their employees.

The workers, having received their wage and having observed the sum of money the employers got, decided the effort they would put into the production process.

The experiment suggests that while higher wages induces more effort, its effectiveness depends heavily on workers' perception of how well their employers treat them. If the workers know the boss is rich, then they will expect to receive a higher pay.

What are the implications of Dr Kessler's study on the "wage credit scheme" proposed in the 2013 Budget, that will co-fund 40 per cent of wage rises for Singaporean workers?

The good news is that a wage rise could potentially increase Singaporean workers' productivity. However, to maximise the potential impact of wages on productivity, workers must feel that they are fairly treated.

A higher wage also provides firms a stronger incentive to invest in R&D, and to adopt more advanced technologies. A 1984 study found that banks facing higher labour costs had a higher probability of adopting ATM machines. The incentive to innovate would be lower if the government footed part of the wage bill.

Overall, while a rise in labour productivity does not necessarily lead to an increase in wages, wage increments cannot last for very long without matching increases in labour productivity.

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