

ECONOMIC VIEWPOINT



The Causes and Consequences of Low Wage Growth in Canada

In a recent *Economic Viewpoint*, we did a review of wage growth in Canada. We have determined that wage developments may not be as worrying as elsewhere, but we can hardly say that it is vigorous. This *Economic Viewpoint* follows up on this analysis and discusses, among other things, the outlook for wage growth. In the near term, the rebound in productivity observed recently in Canada bodes well for wage growth. In the longer term, the effect of new technologies, which are increasingly becoming labour-saving, will have to be monitored closely, even in sectors that were thought to be safe from this phenomenon. The persistence of such a situation could maintain downward pressure on the share of GDP that goes to compensate the labour force. Such dynamic would have ramifications for inflation, financial stability, the finances of households, and also those of governments.

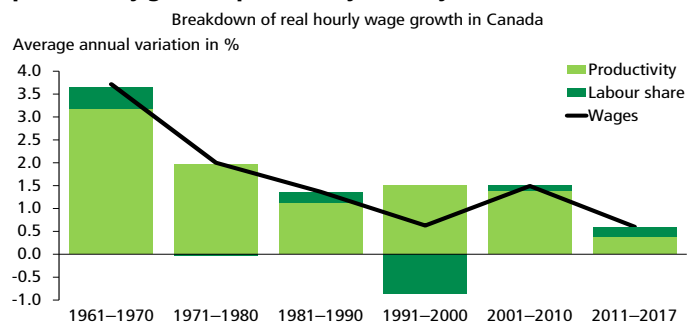
What Are the Drivers of Wage Growth?

Economic theory holds that the growth of labour compensation is closely tied to that of labour productivity. Simply put, when workers are more productive, companies will be encouraged to hire more of them. Increased demand for labour will increase its price, that is, wage. Firms will hire new employees until the increase in labour compensation equals marginal productivity. Real growth in labour productivity is therefore an important reference point for real labour compensation.

In fact, viewed in certain analytical framework (box on page 2), real hourly wage growth depends on two factors: growth in labour productivity and changes in the labour's share of economy-wide income. Statistics Canada data available from the first quarter of 1961 allows to perform a breakdown of real wage growth according to these two influences (graph 1).

One of the key takeaways from this exercise is that productivity growth accounts for essentially all the wage growth. Between 1961 and 1970, annual productivity growth was particularly strong, averaging 3.2%. The share of the labour force was also increasing, so that during this period, growth in real hourly wages averaged 3.7%. For the next four decades, productivity growth generally held steady in the range of 1% to 2%. Meanwhile, the share of labour began to stagnate from the 1970s, and contributed very little to wage developments. The exception was the 1990s, when the share of the labour

GRAPH 1
Weakening wage growth has been a reflection of soft productivity growth, particularly recently



Sources: Statistics Canada and Desjardins, Economic Studies

force declined. In particular, globalization and automation had significant effects on employment in the manufacturing sector. The share of the labour force stabilized thereafter, allowing for a slight recovery in wages in the early 2000s.

However, since 2011, productivity growth has declined again, with average annual growth of just 0.4%. It is not such a surprise, then, that wage growth was the weakest of the six periods studied.

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NOTE TO READERS: The letters k, M and B are used in texts and tables to refer to thousands, millions and billions respectively.

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BOX**The role of the labour share and productivity in wage growth**

There are usually two ways to measure GDP: by the expenditures of economic agents, or by the income they earn for rendered services. Conceptually, the calculation of GDP using either approach yields the same result.

In the GDP-by-income approach, Statistics Canada compiles the compensation of employees, operating surpluses of incorporated businesses, mixed income (which includes unincorporated businesses and income of the self-employed), and transfers to governments, net of subsidies.

Starting with the portion of GDP that accrues to the labour force, it is possible to perform a decomposition to isolate wages. We define the share of the workforce as follows:

$$LSHARE = \frac{W \times H}{P \times Y}$$

Where: W = Average hourly earnings (including social contributions made by employers)
H = Hours worked at the aggregate level
P = Price
Y = Output

Isolating hourly compensation, the equation becomes:

$$W = \frac{LSHARE \times P \times Y}{H}$$

Expressing hourly compensation in real terms and rearranging yields:

$$\frac{W}{P} = LSHARE \times \frac{Y}{H}$$

Real hourly compensation growth can thus be expressed as such:

$$\Delta \frac{W}{P} = \Delta LSHARE + \Delta \frac{Y}{H}$$

This equation shows that growth in real hourly compensation can be broken down in two factors; growth in the labour share, and growth in output per hours (which is the definition of labour productivity).

The year 2015 was particularly difficult in terms of productivity, but the good news is that it has returned to firmer growth from 2016 (graph 2). In connection with this outcome, and also as a result of an unemployment rate that has formed a new cyclical low, signs of wage acceleration have appeared in 2017.

GRAPH 2
Disruptions related to the oil shock of 2015 weighed on Canadian productivity growth



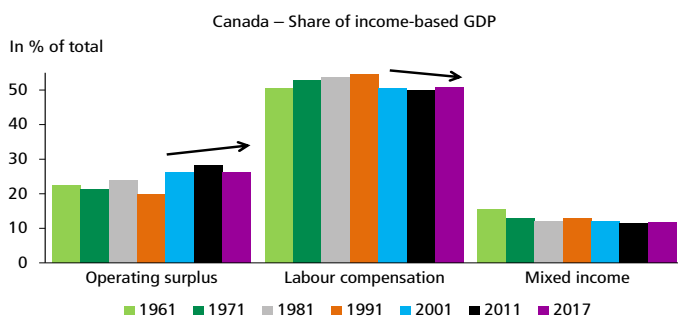
Sources: Statistics Canada and Desjardins, Economic Studies

The Labour Share's Stagnation Is a Preoccupation

In spite of the recent improvement, Canada's labour productivity growth record has long been disappointing. Can we expect a miracle? Probably not, but we must also hope that the labour share of income does not experience a new decline, as occurred in the 1990s. A persistent situation where labour productivity grows less rapidly than real wages implies that capital input appropriates a greater portion of the yields of this increased productivity. This translates into a decreasing share of aggregate income bestowed to the labour force.

The evolution of the labour's share of GDP has been an issue for several years. The decline observed in Canada in the 1990s was not recovered in subsequent years (graph 3). Canada is far from the only country where such a situation has occurred; in a majority of developed countries, the labour share has decreased

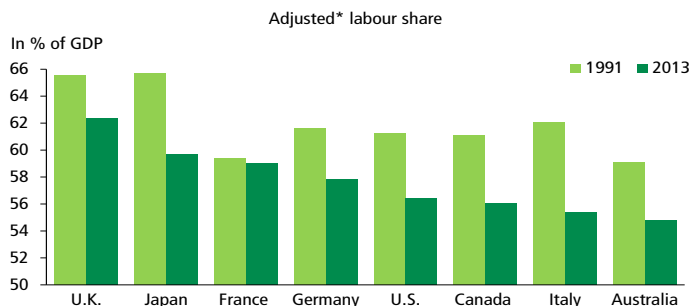
GRAPH 3
The labour share has failed to increase since the 1990s



Sources: Statistics Canada and Desjardins, Economic Studies

(graph 4). The issue is not unrelated to that of wealth inequality. Some interpret the reduction in the labour share as a facet of increasing wealth inequality, given that capital is held by only a small portion of the population, in contrast to labour input, which is more democratized since distributed throughout the population able to work.

GRAPH 4
The labour share of GDP has fallen everywhere



* Adjusted to include self-employed workers.

Sources: International Labour Organization and Desjardins, Economic Studies

This being said, it has been demonstrated that historically, the impact on inequality has tended to be temporary. For example, during periods of major technological change (i.e. the first two Industrial Revolutions), agricultural jobs were severely affected, while plant owners thrived. However, new demand emerged for factory workers, allowing a large part of the workforce to relocate. Thus, when the increase in the return on capital ends up being reflected in new investments, these will generate demand for labour. Ultimately, wage pressures will reassert themselves and the labour's share of income will rise. Thus, the optimistic interpretation is that in the long term, technological change works out for everyone¹.

The more pessimistic argument states that this is only true if capital and labour are complementary and non-substitutable. From this point of view, technological progress has come to a point that makes it easier to substitute capital for labour. Automation has already had a noticeable impact on jobs requiring a relatively low level of qualification, including jobs that consist of simple and repetitive tasks².

However, with the sophistication of artificial intelligence and declining costs, technological advancement is increasingly able to replace hitherto spared workers, especially in service-producing

¹ In 1932, John Maynard Keynes spoke of "technological unemployment", which he said was temporary and caused by the fact that "our discovery of economizing the use of labour outruns the pace at which we can find new uses for labour."

² *New technologies: progress in robotization – An economic look at a global phenomenon*, Desjardins, Economic Studies, *Perspective*, September 2016, 5 p.

sectors. True, technological advancement generates new opportunities³. However, in the opinion of the pessimists, at the macroeconomic level, the fact that the labour share of GDP has tended to fall is evidence that the compensation offered by the new sectors of activity is now insufficient. From this perspective, if labour-saving technological innovations continued to accelerate, it would further erode the bargaining power of wage earners and thus maintain downward pressure on the share of labour.

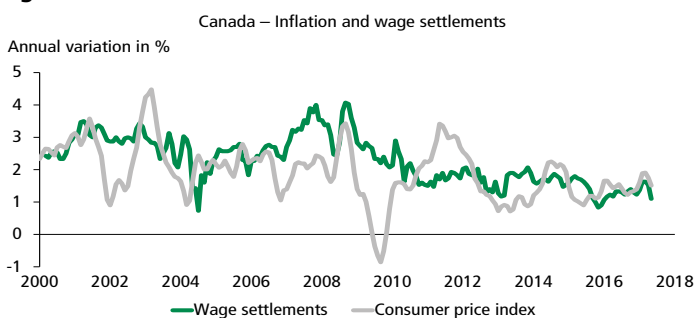
Low Compensation Growth Has Multiple Ramifications

Should downward pressures on the labour share still be interpreted as a temporary phenomenon, or do they have more structural characteristics? The debate remains heated, but it must be admitted that this situation has harmful consequences, which can be observed on inflation, financial stability, household finances and government finances.

Weak Inflationary Pressures

Workers' difficulties in meaningfully increasing their incomes are among the factors contributing to sluggish inflationary pressures. Companies simply do not have large increases in labour costs to pass-on to consumers via price increases. A vicious circle then takes hold, since inflation is often an anchor point for wage bargaining processes, particularly in collective agreements (graph 5). Low inflation is not a problem in itself. On the contrary, during the 1990s, central banks worked hard to reduce inflation and bring it back to more controllable levels.

GRAPH 5 Inflation is an important anchor in the negotiation of collective agreements



Sources: Statistics Canada and Desjardins, Economic Studies

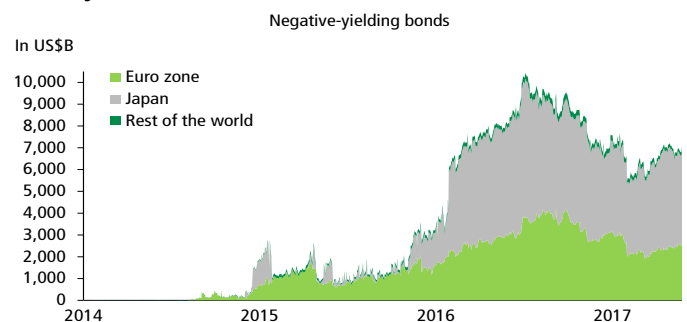
But too little inflation, or worse, deflation, is not desirable, especially because of the nominal wage rigidity constraint. When inflation falls into negative territory, it is rare for wage nominal growth to follow in negative territory. This implies that wages, expressed in real terms, increase. In other words, there

³ One example is the field of cybersecurity. As the repercussions of hacking incidents become increasingly important, there is strong demand for skilled workers in this sector.

will be an increase in real labour costs for employers. They will seek to remedy this by reducing their payrolls, since they are limited in their power to cut wages. This will lead to an increase in unemployment and a drop in consumption, fueling the deflationary thrust.

This is the kind of phenomenon observed in a deflationary spiral, a situation that central banks are particularly wary of, given the limits of conventional monetary policy to remedy it. Central bankers' motto has been that prevention is better than cure, which led them to adopt extremely stimulating policies in recent years, such as quantitative easing and negative interest rate policies (graph 6).

GRAPH 6 Negative yields penalizing savings have been among the levers used by central banks



Sources: Bank for International Settlements and Desjardins, Economic Studies

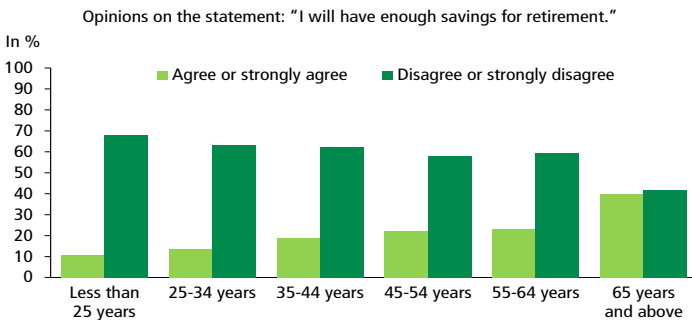
Financial Instability

There is, however, a price to pay for the kind of approaches undertaken by central banks. Highly stimulative monetary policies have managed to prevent a deflationary spiral following the 2008–2009 financial crisis, but by keeping the cost of credit at extremely low levels, central banks have encouraged excess indebtedness and bubble formation in certain a number of asset classes.

Residential real estate markets in some major Canadian cities are an example. According to the Bank of Canada, the proportion of mortgages with a loan-to-income ratio greater than 450% has increased in each of the last three years. In Toronto, over one-third of all new mortgage borrowers were in this extreme debt situation in 2016. Such a debt burden inevitably has implications for household finances, including for savings. This is hardly reassuring, in a context where already the majority admits to being poorly financially prepared for retirement⁴ (graph 7 on page 5).

⁴ Judith MACBRIDE-KING, *A Survey of Non-retirees and Retirees in Canada: Retirement Perspectives and Plans*, Conference Board of Canada, October 27, 2014, 108 p.

GRAPH 7
Only a minority of Canadians are confident that their savings will be sufficient for retirement



Sources: Conference Board of Canada and Desjardins, Economic Studies

One could of course argue that nothing obliges households to accept taking up such amount of debt. However, in a context where many households consider owning a property as a right more than a privilege, many are willing to make the sacrifices necessary to offset the inadequacy of their incomes, in this particular case the acceptance of a very high level of indebtedness.

Pressures on Public Finances

Even if they are the first that come to mind, households are not the only ones to be affected. At the federal level, personal income taxes account for about half of the government's budgetary revenues. Low wage growth therefore has a direct impact on public finances. The political pressure to adopt an expansionary fiscal policy grows when the economy goes through a shock, as has been the case with the fall in oil prices in recent years. The result is deficits and, by implication, an increase in public debt.

The basic assumption is that government spending and investment will lead to a recovery in growth, which will help reduce deficits. If, however, the recovery fails to raise labour incomes sufficiently (and by implication government personal income tax revenues), there is a risk of drifting into structural deficits. Such a situation may eventually lead to higher borrowing costs for the government, in the event that investors lose confidence in the management of public finances. Austerity measures could be enacted to avoid this situation, but this would then put fiscal policy in a restrictive stance. All in all, persistently low wage growth can lead to volatility in public finances.

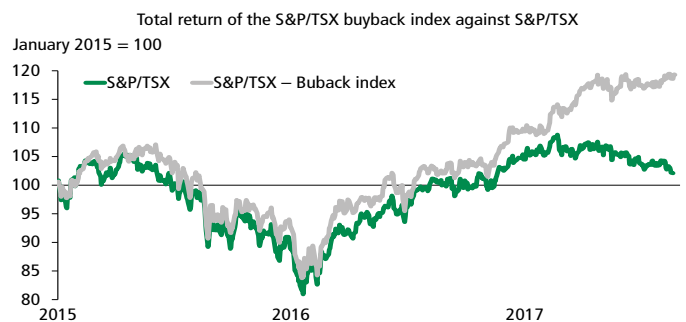
What About Businesses?

Companies have conflicting interests in the evolution of wages. Naturally, low growth in labour costs is conducive to profitability, especially when wages are growing less rapidly than productivity. On the other hand, low household income growth is a limiting factor on corporate revenues. Combined with an increasingly global competitive environment, this prevents companies from

improving their profitability through price increases. They can then decide to invest to increase their productivity and profitability, thereby maximizing shareholder value. But when these investments are intended to replace the workforce, the root issue is not solved.

Another way to maximize shareholder value is for companies to buy back some of their shares and concentrate their capitalization on a smaller number of investors: these maneuvers have been popular in this cycle, and even successful for the companies that lent themselves to them (graph 8).

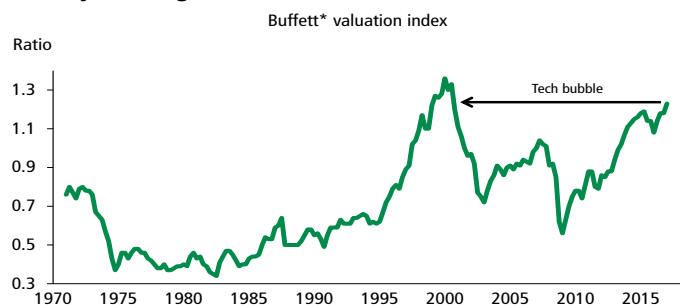
GRAPH 8
Stocks of high-buyback companies have outperformed the overall index



Sources: Datastream and Desjardins, Economic Studies

These actions combined with very low interest rates to help inflate stock market valuations, especially in comparison with economic growth (graph 9). However, situations of asset overvaluation most of the time conclude with corrections. These corrections can only contribute to the unstable and uncertain environment that inhibits business investment, thus extending the vicious circle.

GRAPH 9
Market capitalization decouples from the level of economic activity, to a degree reminiscent of the tech bubble



* Market cap of the Wilshire 5000 Index divided by the U.S. Gross National Product.
 Sources: Datastream and Desjardins, Economic Studies

Conclusion

This *Economic Viewpoint* addressed the causes and consequences of low wage growth, including the impact of technological change on the share of labour compensation in GDP. The problem is not new. To the contrary, in economic history, it has resurfaced in nearly every period of great technological transformation. As John Maynard Keynes said, the human being always ends up finding new ways of being useful, and it is hoped that this will still be the case. However, past experiences suggest that transitions can be long, difficult, and orchestrate turbulence at the economic, social, political and geopolitical levels.

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