
Government Budgets as if Sustainability Mattered

A May 2017 brief by Eric Miller in support of Economic Literacy for a Green Economy



Government budgets report on spending and revenue. Yet they usually fail to report on built capital, human capital, and natural capital. These forms of capital are necessary for sustainability since this capital provides for future wellbeing. This brief explains how capital relates to sustainability and government budgets. This brief recommends that future budgets include a balance sheet that identifies changes in capital. This would enhance the transparency of a government's performance on sustainability.

Government budgets report on spending and revenue

Every year in Canada, the federal, provincial, and municipal governments issue a budget. Each budget communicates government priorities, with details about planned spending and revenue. The budget also identifies its assumptions and often its consequences.

Government spending includes wages of public employees, and the purchase of goods and services that are produced by others outside of government. Spending can also include social transfers, such as pensions, and financial transfers to those who own government bonds.

Government revenue includes various types of taxes and fees, expected penalties, and proceeds from the sales of government-supplied goods and services.

Consumption spending is rarely differentiated from investment

Some government spending will be *consumed* within the year, such as heating public buildings. And some spending will be *invested* to generate multi-year benefits, such as creating new public

buildings. Ideally, all spending should be differentiated as consumption or investment, since this difference matters from a sustainability perspective.

Unfortunately the Federal budget does not make this distinction, nor do many provincial budgets. Only at a municipal level are you likely to see an *operating budget* with consumption expenditures separated from a *capital budget* that details investment expenditures.

Investment sustains capital, which provides economic benefits over time

Governments can invest in new capital and can sustain existing capital.

Built capital includes buildings, machines, and grey infrastructure that enables transportation and telecommunications.

Human capital is the combination of humans and their lasting knowledge and networks and institutions, which provide flows of work and information and care.

Natural capital provides humans with ecosystem goods (like food and building materials and fuel), and ecosystem services (like air and water purification).

These three forms of capital are necessary for human wellbeing. Governments can increase built capital by investing in its construction or acquisition. Governments can increase human capital by spending on education and training. Governments can increase natural capital by restoring degraded areas and by facilitating new non-consumptive uses of nature.

Changes in capital affect the sustainability of an economy

Something is sustainable if it can endure over time. Capital is durable, as long as humans sustain it through investment and conservation.

The sustainability of an economy will depend upon the amount and use of capital. For several decades, economists have devised ways of measuring the sustainability of an economy and its components, including government. All measures require data about capital.

Ecological economists emphasize that natural capital provides the materials and energy to construct and to sustain built capital. And obviously human capital is necessary for a (human) economy.

One measure of sustainability is based upon the quantity of natural capital, and another measure is based upon its economic value. Both measures consider the extent to which depletable natural capital is used to create durable renewable substitutes. For example, it is more sustainable to use iron ore and fossil fuels to create wind turbines than

disposable packaging. Some jurisdictions with depletable capital use a financial “fund” to facilitate the transition of their economy from depletion to sustainability.

Budgets rarely report on changes to human, built, and natural capital

Governments affect the amount of capital in the economy. Natural capital is depleted when non-renewable natural resources are consumed, and when renewable resources are consumed faster than they are renewed. Built capital depreciates by wearing out over time, and by deliberately being consumed. Human capital is depleted through illness, and can depreciate when it is not updated with new knowledge.

Investment spending can offset capital depletion and depreciation. But the net effect of these changes can only be determined if investment and depletion and depreciation are measured and reported. Unfortunately governments do a poor job accounting for public capital, with the result that its changes are rarely reported in budgets.

Budgets should include a balance sheet of capital assets and liabilities

A balance sheet is an inventory of the stock of capital assets and liabilities. It reconciles the effects of a given budget against the accumulated effects of past budgets. New capital is added, depleted capital is removed, and depreciation is applied. Liabilities are added or removed.

Corporations maintain a balance sheet that's published with their income statement. Statistics Canada publishes an economy-wide balance sheet, detailed by sector. But governments rarely include a balance sheet in their budget document. One has to sift through very detailed Public Accounts to find information about public assets and liabilities, and how they changed over the past year.

Government budgets should include a balance sheet, so that annual changes in capital can be compared with the accumulated stock of capital. Budgets should also comment upon if, and how, the government's plans will affect the balance sheets of other sectors.

Without including a balance sheet, government expenditure can seem excessive even if it is necessary to sustain public capital for sustainability. Also, privatization of public assets, and/or government thrift on capital depreciation, can misleadingly seem to be beneficial.

A budget Surplus or Deficit is not a measure of sustainability

A deficit budget results when expenditures exceed own-source revenues, meaning revenues from taxes, fees, fines, and sales. The difference is financed by external-source borrowing. *A surplus budget* results when revenues exceed expenditures.

A government's budget balance does not indicate whether it is economically sustainable. An assessment of

sustainability requires information from the balance sheet.

A budget deficit could be economically sustainable if it was equal to net investment, since the deficit would have financed the investment of capital assets that were added to the balance sheet. A surplus could be economically unsustainable if it was generated by the net depreciation of existing capital.

Without a balance sheet, and without a distinction between operating and capital expenditures, there is no way to judge whether a specific deficit or surplus is sustainable.

This judgement is further complicated by the fact that a government's deficit generates a surplus of earnings in the rest of the economy. A government's deficit could be judged to be economically worthwhile if the rest of the economy is judged to be needing a stimulus. This is more applicable to the Federal government, since its spending usually affects its own jurisdiction's economy more than lower-levels of government can affect their own. Also the Federal government is less economically constrained since it manages Canadian monetary policy.

Other budgetary innovations support sustainability

Budgetary accounting relates to national, international, and professional conventions. Recent innovations in the international System of Environmental

and Economic Accounts support greater transparency about natural capital and its economic valuation. This system is gradually being applied by Statistics Canada. Many non-governmental efforts are advocating for its consideration by governments and corporations.

The town of Gibsons in British Columbia is one of a few in Canada that are working to incorporate its existing natural capital into its municipal asset management systems and software.

Some governments are adopting multi-year budgets. These are supportive of sustainability initiatives that depend upon predictable multi-year financing.

Beyond the content of a budget, the process of its creation is important. Innovations abound for enhancing participation during the budgetary process, from coalitions (such as the [Green Budget Coalition](#)) to citizen forums and electronic-mediated engagements. Participatory budgeting often enhances the economic consideration of human and natural capital, and often broadens the horizon over which plans are considered.

If sustainability mattered, government budgets would clearly differentiate between consumption spending and investment spending. Investment spending would affect the amount of capital on a balance sheet. Capital would include built capital, human capital, and natural capital. A balance sheet would be published with the government's budget, to clearly report on the accumulated stock of public capital and liabilities, and how these were affected by the budget. Capital depletions and depreciation would be clear, with a net tally of the amount of capital available for the next time period. This greater transparency would be a commitment to sustainability, and would support further efforts to advance natural capital accounting and valuation.

This brief is authored by [Eric Miller](#), an independent consulting economist.

This publication is supported by the [Ivey Foundation](#), as part of a broader Economic Literacy Project that's managed by the [Sustainability Network](#).

