

In short, there are many ways that SSA challenges assumptions and projections about global and local development: novel perspectives for political economy may yet come from Africa (Shaw and Nyang'oro, 2000).

See also:

highly indebted poor countries (HIPC) initiative; Lagos Plan of Action (LPA); United Nations Economic Commission for Africa (ECA)

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Also see the website www.un.org/ecosocdev/geninfo/afrec for more information.

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subsidies

A 'subsidy' is defined as financial assistance granted by a government or philanthropic foundation to a person or association for the purpose of promoting an enterprise considered beneficial to the public welfare. Because the motivations and impacts associated with government subsidies differ considerably from those associated with private foundations, the following discussion will be confined to subsidies of a governmental nature.

Subsidies were used in England in the later Middle Ages, when parliament granted funds to the king to augment or replace customs and other taxes collected by royal prerogative; such early subsidies later became the means by which the power of taxation was taken from the king and lodged in parliament. At first a nationwide levy, it became (in the reign of Charles II) a land tax levied annually without the intervention of a parliamentary vote. In France, the king was able to retain his control and acquire financial powers that made him independent of any subsidy granted by the States-General.

The term 'subsidy' has had widely varied usage in the twentieth century. Subsidies may be granted to keep prices low, to maintain incomes or to preserve employment. They are most important as grants to private corporations for performing some public service, such as to shipping companies and airlines for carrying the post or to railways for maintaining passenger service. These are often required where a necessary public service, particularly

one which might otherwise not be profitable, is granted funds to remain in operation.

Today, medical and educational institutions are among the largest recipients of subsidies; in the 1990s, for instance, federal spending in the United States paid on average more than 40 per cent of national medical costs. Subsidies have also been granted by one country to another country to aid it in pursuing a war effort, to gain its goodwill or to help stabilize its economy.

Several issues surround government subsidies. First, subsidies are a major instrument of government expenditure policy. Second, on a domestic level, subsidies affect domestic resource allocation decisions, income distribution and expenditure productivity by reducing the flexibility of the economy. Third, on an international level, increased international INTEGRATION, through trade and the proliferation of multilateral and bilateral arrangements, brings about questions regarding the extent to which subsidies cause distortion in international resource allocation by affecting competitiveness.

Perhaps the greatest concern over subsidies centres on their tendency to create inefficiency in production, in the market and in the economy. Economic analysis suggests that the types and magnitude of inefficiency depend on the types of subsidies the government provides. In partial equilibrium models, a lump-sum subsidy does not affect a firm's production decisions and, therefore, results in no effect on efficiency. However, lump-sum subsidies under a rate-of-return regulation lead to allocative inefficiency and subsidy per unit of output creates deadweight loss in partial equilibrium models.

In general equilibrium models, subsidies create allocative inefficiency in the economy because they transfer resources from industries paying taxes to industries receiving subsidies. Furthermore, input-specific subsidies create allocative inefficiency in firms and RENT SEEKING by subsidized firms results in technical inefficiency. Inefficiency in a firm's operation can occur due to its management. Without competition and under government regulation,

a firm may create technical inefficiency (compare X-EFFICIENCY (XE)) due to its lack of effort to minimize cost. Such a firm may hold too much of one input over others or may pay excessively for an input. For example, with a strong pressure from unions, a firm may hold excessive labour or may pay a higher wage than the market offers. Mismanagement or wrong planning also may cause technical and allocative inefficiencies. An optimistic demand forecast may cause excessive capital investment and inflexibility of management may cause delay in input adjustments to changes in relative input prices from supply shocks.

On the surface, the notion of a subsidy seems straightforward. However, warnings from distinguished economists such as H.S. Houthakker that 'the concept of a subsidy is just too elusive to even define' suggest that a number of (often) arbitrary distinctions are used to define the concept. In the most general terms, a subsidy can be defined as any government assistance that (1) allows consumers to purchase goods and services at prices lower than those offered by a perfectly competitive private sector, or (2) raises producers' incomes beyond those that would be earned without this intervention.

Under this definition subsidies to consumers include cases where the government, as a producer of goods and services, sells its output at a price that does not reflect costs, including a normal return to capital, or compensates the private sector for doing so. Similarly, providing electricity at a price that does not reflect a normal rate of return on capital, even if there is no explicit budgetary cost, should be considered a subsidy. This definition extends beyond the narrower subsidy concepts that are employed in fiscal or national accounts and leaves room for a wide range of government activities to be defined as subsidies. However, such a broad definition is necessary to capture both explicit and implicit subsidy elements that are contained in different forms of government intervention.

While a wide array of government activity may contain subsidy elements, subsidies may be classified on the basis of these categories:

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- 1 Direct government payments to producers or consumers (cash subsidies or cash grants).
- 2 Government guarantees, soft loans (that is, low-interest government loans) or interest subsidies to enterprises (credit subsidies).
- 3 Reductions of specific tax liabilities (tax subsidies).
- 4 Government provision of goods and services at below-market prices (in-kind subsidies).
- 5 Government purchases of goods and services at above-market prices (procurement subsidies).
- 6 Implicit payments through government regulatory actions that alter market prices or access (access subsidies).
- 7 Government equity participation (equity subsidies).

While fairly comprehensive, this classification scheme still has several conceptual and operational limitations. For one thing, the various subsidies contained within each of the seven categories are not homogenous. Second, some subsidies may at least *a priori* belong to several different categories. Finally, there are still ambiguities and measurement problems. For example, overvalued exchange rates affect market prices and access, and while they contain a subsidy element (for example, to those who purchase imported goods), they also entail costs of negative subsidies (for example, to exporters); the full extent of the subsidy element of overvalued exchange rates may be difficult to establish.

It should be noted that the two standard sources on government subsidies, the UN System of National Accounts and the IMF Government Finance Statistics use a narrow definition of government subsidies which includes only unrequited, non-repayable government payments to compensate for losses on the current operations of enterprises. As a result, recorded subsidies most often reflect payments for losses resulting from the pricing policies of the government.

There are numerous reasons why governments may decide to use subsidies as a policy tool. Somewhat cynically, Houthakker (1972) has argued that a main reason has to do with

political vote-buying. From an economic perspective, the main purpose of subsidies is to reallocate resources – that is, to alter economic activity and behaviour to achieve an outcome that is more desirable than what would occur otherwise. Hence arguments for subsidies are often based on some concept of efficiency or economic justice. But even when subsidies generate a more desirable outcome, it does not mean that the entire value of the subsidy is corrective in nature or that the particular type of subsidy used for a given purpose is the best among the available policy alternatives.

Economic arguments for using government subsidies generally fall into four broad categories:

- 1 Offsetting various market imperfections.
- 2 Exploiting economies of scale in production.
- 3 Meeting social policy objectives (including, for example, protecting the poor).
- 4 Changing the distribution of income and increasing or retaining employment.

Often, however, those sectors receiving the largest subsidies do not clearly meet these criteria. Education subsidies in the United States are a prime example. In the early 1990s, the US government was spending nearly \$300 billion on education or around 15 per cent of all government spending, making it the third largest single type of government expenditure behind only national defence and social security. Meanwhile, government revenue collected from education was only around \$30 billion. This \$270 billion subsidy was roughly 5.5 per cent of net national product. Clearly, the choice to subsidize education is an important one and this choice seems to be widely accepted as a good decision. But the reasons why subsidizing education is a good choice are not so obvious.

Unlike a public good like national defence, markets can and do provide education. It is not clear why the government should subsidize this good, rather than let markets work unimpeded. Several normative justifications for subsidizing education have been put forth. There are four main types: equity, paternalistic, borrowing constraint and externality arguments (see EX-

TERNALITIES). None of these is completely compelling, becoming even less so as one progresses from primary to secondary and on to higher education. For example, few would argue against economic equality, especially equality of opportunity. This value judgement justifies helping the disadvantaged gain access to education; it does not, however, justify subsidizing the educational opportunities for all income classes.

Most economists find the second type of argument even less compelling. The various paternalistic arguments are based on the presumption that people do not fully recognize the benefits associated with education and thus do not purchase enough education on their own. Therefore, those who are fortunate enough to fully recognize the benefits of education argue that the subsidy is necessary to induce the less enlightened to make better choices. There are two major problems with this argument, however. It is difficult to objectively justify why many people do not fully appreciate the benefits of education while there are some enlightened ones who do. There is a similar problem in objectively distinguishing the enlightened opinions from the unenlightened.

The third justification argues that many students are constrained from borrowing against their potential future income to finance their education. This capital market imperfection (largely due to government-imposed constraints) may cause many students to acquire less than efficient amounts of education. This obstacle to opportunity may be viewed as inequitable as well. But if this borrowing constraint is the problem, then government-supported loans are the obvious solution. There is no reason to lower the private cost of education and redistribute income to all publicly educated students, as subsidies do.

The fourth justification has received the most attention by economists. If acquiring education produces spill-over benefits, self-interested individuals will acquire less than socially efficient amounts of education. A subsidy internalizes the externality and encourages students to acquire more efficient

amounts of education. A common view, however, is that although these external benefits probably do exist, it is unlikely their magnitude is large enough to warrant a subsidy as large as the one observed, particularly at the level of higher education. It seems improbable that the marginal external benefit is as substantial as the subsidy. If the above arguments are valid, one is apparently left with the disturbing conclusion that subsidizing education, particularly higher education, is mostly a redistribution that is inequitable by commonly accepted standards of equity.

While one has a hard time making the case for subsidies to education in the developed countries, their rationale is easier in the developing world, where market imperfections and poverty are much more prevalent. Here the general rule of thumb is that policies should be promoted by which the beneficiary of education (as opposed to the student's family or society as a whole) would bear a larger proportion of educational costs as they proceed as a student through the system. At the same time, low-income groups should be provided with sufficient subsidies to permit them to overcome the sizeable private costs (including opportunity costs) of schooling.

With regard to market imperfections, economic theory (as developed by ALFRED MARSHALL and particularly A.C. Pigou at Cambridge in the early 1900s) often examines subsidies in conjunction with taxes as a means of bringing marginal private costs or benefits more closely into alignment with marginal social ones. The need for alignment arises when externalities (whether economies or diseconomies) operating at the margin, cause a divergence.

Externalities may be between firms, where they are caused by technological interdependence between production functions – one firm's production function containing an input or an output proper to another firm's. They may be between consumers, with one consumer's utility function containing a variable proper to another consumer. Or they may be between consumers and firms. Optimizing behaviour by consumers and firms implies that

marginal private costs and benefits will be equalized. If these coincide with social costs and benefits, they too will be equalized; if not, there will be a measure of MARKET FAILURE. Market failure means that all mutually beneficial bargains have not been struck and that it is possible to make one or more participants better off without making anyone worse off. Efficient (or Pareto efficient) markets imply the exhaustion of all such opportunities.

In contrast to education, the case for using government subsidies to offset various market imperfections is fairly straightforward, as it is geared towards increasing efficiency. As noted above, the argument applies to a case where markets do not allocate resources to their most efficient use, usually because the owners of these resources cannot reap their full return. In theory, a second-best policy tool such as subsidies may offset market imperfections by changing existing incentives. For example, FREE RIDER PROBLEMS usually lead firms to underinvest in RESEARCH AND DEVELOPMENT (R&D) activities. Firms undertake R&D in the hope of selling products based on the discoveries made; potential competitors, however, may use the knowledge thus obtained and take a share of the profits without incurring the costs.

Clearly, it may be rational for an individual firm (or country) to underinvest in R&D and instead capitalize on the R&D of others. Subsidizing firms to undertake R&D activities would be one way to overcome this problem. Similarly, informational asymmetries can be viewed as an example of a market imperfection. Informational asymmetries, for example between borrowers and lenders of funds, can lead to market interest rates above the social rate of return. This would imply that socially profitable undertakings will not be implemented. A possible remedy is credit subsidies, provided (for example) through subsidized interest rates.

Similar arguments can be used to subsidize enterprises in order to obtain ECONOMIES OF SCALE of production. For example, when foreign-owned firms have a cost advantage because of their larger size, a government subsidy could allow a domestic firm to expand and overcome its initial competitive disadvan-

tage in international markets and therefore compete successfully in the long run. In theory, this could shift enough profits to the domestic firm (that in turn can be taxed) to justify the cost of the subsidy and enhance overall welfare. The subsidized entry into the widebody aircraft market by the European AIRBUS CONSORTIUM is an example of this strategy. The industry is characterized by significant economies of scale and had been dominated by two US producers: Boeing and McDonnell-Douglas. The Airbus Consortium was created when small European firms feared they would disappear if they were to continue competing against each other. The presence of Airbus transferred to Europe some of the profits and other benefits that otherwise would have gone to US producers, although it is still unclear whether the size of the profit transfer alone was large enough to justify the subsidies received.

In both cases, market imperfections and economies of scale, successful subsidization requires that the government is able to make the right decision (that is, pick winners), at least as long as there is a binding budget constraint and the government has to choose between different possible alternatives. 'Picking winners' usually requires good analytical capacities, an in-depth knowledge of different industries and activities, and accurate foresight. In the case of subsidies for R&D, for example, this would require knowing the likely future rates of return to different research projects. In the case of increasing a country's international competitiveness by exploiting economies of scale, the government would need to evaluate the long-run costs and benefits of subsidizing different industries and assess the long-term prospects of competing activities. Also, it must take into account that other countries may retaliate; this could exacerbate international trade tensions and lead to a counterproductive spiral of offsetting subsidies between trading partners.

Finally, as with education, social-policy objectives (such as a more equal distribution of consumption or income) provide important reasons for subsidies. Often, however, these goals are not accomplished, or at least they are

not accomplished at minimum cost. For example, many economies maintain generalized food subsidies in the form of fixed prices for essential staple goods as a key social safety-net. Generalized food subsidies have the advantage of not generating exclusion errors, since nobody is excluded from receiving the benefit, at least in principle. At the same time, they generate inclusion errors and therefore may entail substantial waste, as many unintended beneficiaries (those who do not need the subsidy, or more generally, the non-poor) also benefit from the policy. In addition, they may easily generate adverse supply effects. Clearly, in many cases governments have insufficient information to target efficiently. Providing subsidies in kind (for example, in the form of subsidized goods) instead of cash may target more efficiently people with high needs.

In general, for subsidization policies to be successful, it is necessary to avoid generating rent-seeking behaviour. Frequently subsidies may benefit well-placed groups and distort incentives, which puts the desired distribution and resource-allocation effects into doubt.

The overall micro- and macro-economic effects of subsidies are closely linked to how they are provided. In the short-run, however, subsidies may neither have a direct budgetary cost, nor generate an immediate burden on taxpayers or households. Therefore, the short-term financial cost of a subsidy may not be a good indicator of the real welfare cost and the allocative and distributional implications. Ultimately, however, subsidies must be paid for. Therefore, it is important that subsidies are effective (that is, reach their intended target group) and achieve a given objective at minimum cost (in terms of budgetary outlays and any economic distortions the subsidies may cause).

In practice, subsidies are often ineffective (that is, they fail to benefit their intended target group) and costly (they have adverse real welfare and distributional implications). This is regardless of whether they directly affect public expenditure (for example, cash subsidies or implicit subsidies that are hidden in other expenditure categories or provided through

quasi-fiscal operations) or not (as in the case of tax or regulatory subsidies). Needless to say, the welfare costs of subsidies usually go beyond their explicit or immediately visible budgetary or quasi-fiscal cost. In effect, subsidies lead to overproduction of the subsidized good, since production and consumption are expanded beyond the point where the marginal social benefit of consuming the good is equal or greater than the marginal social cost of production. The efficiency losses associated with subsidy programmes can be substantial.

Subsidies may often have unintended effects on resource allocation. For instance, when introducing a subsidy for imported foodstuffs that lowers the consumer price for these goods, the quantity demanded may increase as well, so that it may become necessary to increase imports in order to avoid shortages. This, in turn, will affect the availability of foreign exchange, leading to pressures to reduce other imports or depreciate the exchange rate.

Adverse distributional effects can be expected to be particularly strong when market imperfections provide opportunities for rent seeking. For instance, price controls on agricultural products that lower the price below the competitive market equilibrium will, in all likelihood, result in shortages if imports are not allowed to fill this gap. The shortage will provide opportunities to earn economic rents for well-placed groups that have privileged access to the product at the controlled price. The poor (presumably the group that the price control seeks to protect) may frequently not have access to the subsidized product at its controlled price. The net result may be that, on average, consumers end up paying a price that is higher than the competitive market price, with the benefit of the price-control policy accruing to traders.

While generalizations are difficult, the literature points to several main findings concerning subsidies:

- 1 Even if there appears to be an economic case for a subsidy, the information needed to calculate the exact rate to offset the market imperfection is rarely available. Too big a

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subsidy could worsen the distortion.

- 2 Governments are generally less adept at picking winners than the private sector. All too often, decisions are clouded by social factors such as job creation.
- 3 Government support of R&D may simply displace private-sector R&D with no overall increase in activity.
- 4 If one government subsidizes an export industry, others are bound to retaliate, triggering a subsidy war.
- 5 Even if a subsidy can be shown to yield a net social benefit, this usually overlooks the economic cost (for example, work incentives) of raising extra taxes to pay for the subsidy.

Reference and further reading

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subsistence wages

In nineteenth-century England, there were many workers who were simultaneously wage labourers and paupers. The wages received by many agricultural and urban workers were so low that these workers could only afford even the most basic of necessities if they also received charity from their parishes. It was necessary to use the Poor Law (enacted to protect the elderly,

sick and orphans) to provide protection for many wage earners, especially during times of economic crisis. In countries where CAPITALISM developed first, the population had to work extremely long hours. In England at the end of the eighteenth century, for example, the working week was six twelve-hour days. Children in workers' families were also obliged to work exhaustingly long hours: the country's labour law of 1833 was enacted to restrict the working day for people between thirteen and eighteen years of age to twelve hours, and for children between nine and thirteen years old to no more than eight hours.

Low wages and long hours of work – the reality of eighteenth- and nineteenth-century capitalism – gave credibility to the theory maintained by THOMAS MALTHUS and DAVID RICARDO, among others, regarding a 'natural rate for wages' – established at the level of physiological subsistence and designed to keep the workers' population reproducing itself at a constant rate. If wages were to be fixed below this natural rate, hunger and sickness would create an imbalance in the labour supply that would lead to an increase in wages until they reached their natural level. If wages were taken above the natural rate, population growth would be stimulated, creating a surplus of workers and thus leading to a drop in wages. Using this theory, Malthus and Ricardo fought against the Poor Law'. Ricardo argued that while legislation for the poor was originally enacted to improve their economic situation, it had only managed to impoverish the rich and, for this reason, all those who were genuinely interested in helping the poor should work to repeal any legislation that obstructed the adjustment of wages to market demands.

In today's industrialized countries, the hopes of the classical economists have been surpassed by reality: the vast majority of the population has reached a satisfactory standard of living. Even in industrialized countries, however, it has been necessary to fix wages at a level that guarantees the subsistence of wage earners. In New Zealand, a minimum wage was established by law in 1894; this standard was later accepted in most other countries. In the United