



Australian
Competition &
Consumer
Commission

ACCC

Tests for assessing cross-subsidy

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1. ACCC tests for assessing cross-subsidy

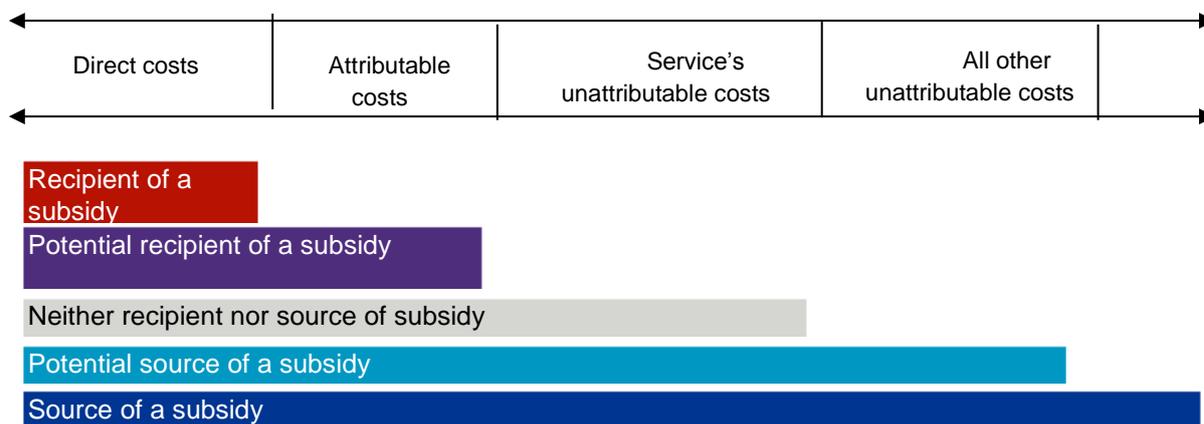
The formal definition of cross-subsidy that has developed in the economic literature comprises two tests that compare a service’s revenues to different cost concepts¹:

- The stand-alone cost test for whether a service is a source of cross-subsidy (refer section 1.1)
 - The lower bound of the stand-alone cost test is the service’s fully distributed cost (FDC). Where the service’s revenue exceeds fully distributed cost (i.e. the sum of the service’s direct, attributable and unattributable costs), it may be a source of subsidy.
 - The upper bound of the stand-alone cost test is the sum of the service’s direct and attributable costs, and the total of all of Australia Post’s unattributable costs. Where the service’s revenue is above this upper bound, it is a definite source of subsidy.
- The incremental cost test for whether a service is a recipient of cross-subsidy (refer section 1.2)
 - Where revenue is less than direct costs, the service is a recipient of a subsidy. This is the lower bound of the incremental cost test.
 - Where revenue is sufficient to cover the direct costs, but less than the sum of direct and attributable costs, the service group may be the recipient of a subsidy. This is the upper bound of the incremental cost test.

The range of potential cross-subsidy results is presented graphically at Chart 1.1 below.

Chart 1.1 Range of possible cross-subsidy results

Service revenue recovers:



These tests, as applied to Australia Post by the ACCC, are discussed in sections 1.1 and 1.2 below.

¹ GR Faulhaber, 'Cross-subsidization: pricing in public enterprises', American Economic Review, 65(5), December, 1975, pp. 966–77.

1.1. Test for whether a service is a source of a subsidy

A service (or combination of services) is a source of subsidy if the revenue generated by that service (or combination of services) is greater than the stand-alone cost of the service. This test is referred to as the stand-alone cost test.

- The stand-alone cost of a service is the cost of producing that service in isolation.
- Whether a cross-subsidy has occurred depends on the second test being satisfied. That is, revenue greater than stand-alone cost is not, of itself, evidence of a cross-subsidy—the firm may simply be making economic (or excess) profit on the particular service.

The stand-alone cost of a service typically lies between:

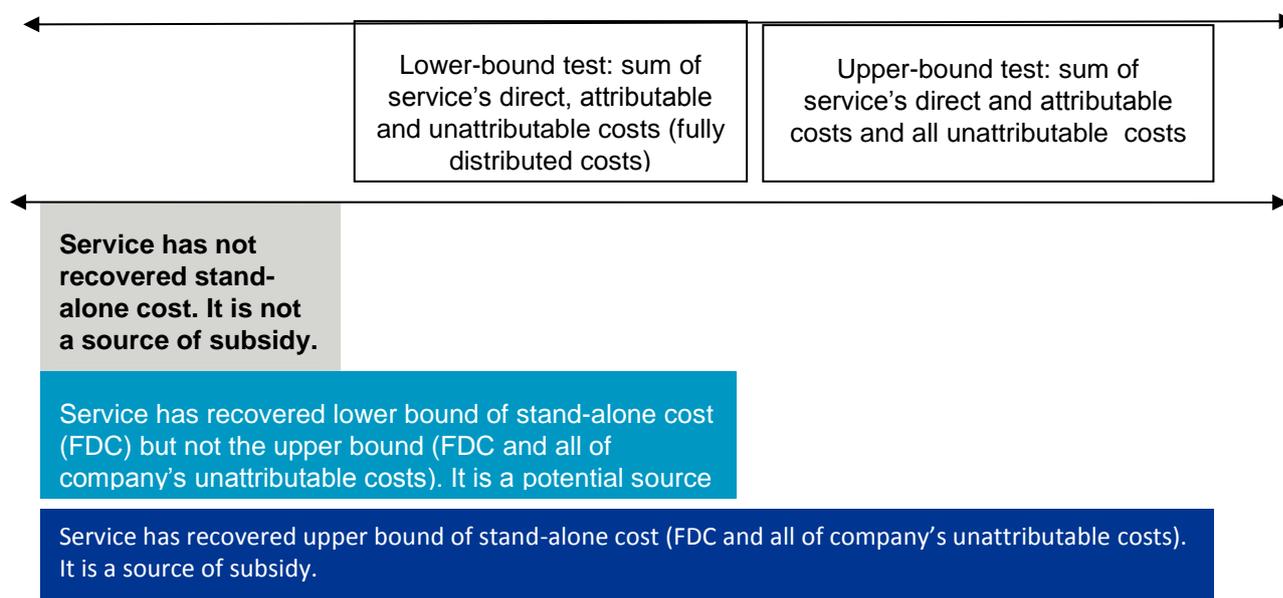
- the sum of direct, attributable and unattributable costs (this amount is known as the fully distributed cost) allocated to the particular service and
- the sum of direct and attributable costs for that service plus all of the company's unattributable costs.

This approach establishes fully distributed costs as a lower bound of stand-alone cost, and fully distributed costs plus all unattributable costs allocated to other services as an upper bound of stand-alone cost for any given service.

The way in which the stand-alone cost test is applied to Australia Post is illustrated in Chart 1.2.

Chart 1.2 Stand-alone cost test

Service revenue recovers:



The results of this test will only be valid to the extent that the service's direct and attributable costs are an accurate reflection of the incremental costs of the service concerned.² In assessing Australia Post's regulatory accounts for the presence of cross-subsidy, the ACCC relies on accounting proxies for economic stand-alone and incremental costs.

Further, there may be more than one source of subsidy. Where a particular service receives a subsidy and there are multiple sources of subsidy, it is impossible to determine which particular group of services provides the subsidy or what each group's contribution to the subsidy is.

Alternatively, if revenue from total reserved services is less than the stand-alone cost of providing these services, there can be no cross-subsidy from reserved to non-reserved services. In this case, even if a non-reserved service (or group of services) is the recipient of a subsidy, there must be an alternative non-reserved source of subsidy, or the company is operating at an economic loss.

Lower bound for stand-alone test—service's fully distributed costs (if satisfied, service is a potential source of subsidy)

The fully distributed cost of a service is defined as the sum of the service's direct, attributable and unattributable costs, as per Australia Post's cost allocation system. If a service does recover its direct and attributable costs but does not recover its fully distributed costs, it is not a source of subsidy—but it is also not a recipient of a subsidy.

In Australia Post's case, it appears likely that fully distributed costs may underestimate stand-alone costs in some cases. This is especially so for reserved services, because of the large proportion of attributable and unattributable costs common to more than one 'letters' service group. For example, the labour costs associated with the delivery of letters is largely driven by the number of delivery points and the frequency of delivery rather than by the number of letters delivered. If non-reserved letters services were no longer offered by Australia Post, this would be unlikely to significantly reduce Australia Post's labour costs associated with outdoor delivery.

Upper bound for stand-alone test—sum of service's fully distributed cost and company's total unattributable costs (if satisfied, service is a definite source of subsidy)

The sum of a service's fully distributed costs, and all of the company's remaining unattributable costs forms the upper bound of the stand-alone test. That is, for a service to be a definite source of subsidy its revenue would need to recover the sum of:

- those costs that are allocated to it (i.e. its fully distributed cost) and also
- the company's remaining unattributable costs (these costs have been allocated to other services but, because unattributable costs are not readily identifiable to any particular service by a separable cause-and-effect relationship, some of these costs may actually form part of the stand-alone cost; i.e. they may still be incurred if the service is produced in isolation).

In theory, if revenue is above the upper bound of stand-alone cost, that particular service is a source of subsidy. However, this does not necessarily mean that a cross-subsidy has occurred—it may be that Australia Post is simply earning positive economic profit on that service. For a cross-subsidy to have occurred, it is necessary that there is also a recipient of the subsidy (i.e. the incremental cost test described in section 1.2 also needs to be satisfied).

² In assessing Australia Post's regulatory accounts for the presence of cross-subsidy, the ACCC relies on accounting proxies for economic stand-alone and incremental costs. Further information about the cost proxies relied upon by the ACCC are detailed in the ACCC's annual cross-subsidy reports.

It is worth noting that the upper bound of the stand-alone test appears to yield more reasonable results when it is applied to a wider group of services (for example, parcels and express, compared to just parcels). This is because it is likely that a large proportion of the business's unattributable costs would not be incurred if an individual service group (e.g. large PreSort letters) was produced in isolation. In contrast, if a wider group of services (e.g. all letter services) was to be produced 'in isolation', then a larger proportion of the business's unattributable costs would still be incurred. Thus,

- adding all of Australia Post's unattributable costs to the direct and attributable costs of an individual service group (e.g. large PreSort letters) is likely to overestimate the stand-alone cost of providing that service
- when adding all of Australia Post's unattributable costs to the direct and attributable costs of a larger group of services (e.g. all letter services), the amount of the overestimation is likely to reduce.

1.2. Test for whether a service is a recipient of a subsidy

A service (or combination of services) is the recipient of a subsidy if the revenue generated by that service (or combination of services) is not sufficient to cover the incremental cost of providing it. This test is referred to as the incremental cost test.

- The incremental cost of a service is defined as the additional cost incurred in producing that service (in addition to the other services the firm produces). Another way of considering incremental cost is to ask what costs would be avoided, in the long run, if the service were no longer offered.
- If the revenue from each service is at least as great as the incremental cost of that service, no cross-subsidy exists.
- If a service is the recipient of a subsidy, for a cross-subsidy to occur it is necessary for there to also be a service that has revenues greater than the stand-alone cost of providing the service (i.e. as per the stand-alone test above at section 1.1). If there is no source of subsidy available, Australia Post is simply incurring an economic loss on the particular service.

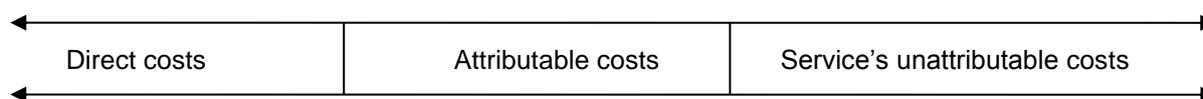
As previously noted, the ACCC relies on Australia Post's direct, attributable and unattributable costs as proxies for economic costs. The proxies are used in the following way:

- Costs that are direct to a particular service will be incremental to that service as they are 'solely associated with a particular service' and would therefore be avoided if that service were no longer offered.
- A cost that is attributable to a group of services is incremental to that combination of services (i.e. if that combination of services were no longer offered, the cost would be avoided) and may be incremental to a particular individual service. The extent to which a particular attributable cost is incremental to a particular individual service depends on the extent to which Australia Post can avoid this particular cost by not providing that particular service.
- Costs that are unattributable are defined as being a part of a pool of common costs but are not readily identifiable (in whole or part) to any particular service by a separable cause-and-effect relationship. By nature, many of these costs are unlikely to be incremental to any particular service (for example, head office costs are unlikely to be able to be substantially reduced if an individual letter service was no longer offered).

The way in which the incremental cost test is applied to Australia Post is illustrated in Chart 1.3, and discussed below.

Chart 1.3 Incremental cost test

Service revenue recovers:



Service did not recover incremental cost—recipient of a subsidy.

Service may not have recovered incremental cost—potential recipient of a subsidy.

Service has recovered incremental cost, but not its fully distributed cost. Not a recipient, but service fails (more stringent) incremental cost test.

Direct costs test (if satisfied, service is a definite recipient of a subsidy)

Where a service's revenue is less than its direct costs, the service is a definite recipient of a subsidy. This is the lower bound of the incremental cost test.

Direct and attributable cost test (if satisfied, service is a potential recipient of a subsidy)

Where a service's revenue is sufficient to cover the direct costs, but less than the sum of its direct and attributable costs, the service may be the recipient of a subsidy. This is the upper bound of the incremental cost test. Whether the service is actually the recipient of a subsidy in such a case depends on the extent to which the costs attributable to the service are incremental to that service—that is, the extent to which they would be avoided if the service were no longer provided.

Fully distributed cost test (a more stringent test than incremental cost test)

Fully distributed costs are compared with revenue to show whether each of the services is, in addition to meeting its estimated incremental cost, also meeting Australia Post's allocation of common (unattributable) costs. It may be that, for example, some of these unattributable costs are in fact also incremental to the provision of the service. The fully distributed cost test is more stringent than the incremental cost test described above, in that it requires the service's revenue to exceed a higher level of costs.

A service that recovers its direct and attributable costs but does not recover its fully distributed costs is not a recipient of a subsidy, but it is also not a source of cross-subsidy either (i.e. it is below the lower bound of the stand-alone test described in section 1.1).