

Methods note · Everyday practice

When sharing changes demand: a rebound audit for community services

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Fictional author and institute · Editorial demonstration, not peer reviewed

ABSTRACT

Shared ownership can change demand as well as the resources required for a fixed service. This methods note uses a fictional equipment library to examine purchase substitution, newly enabled activity, collection journeys, indirect spending, and organisational expansion. Its selective synthesis draws on Martin and Shaheen's original carsharing survey, the GHG Protocol Policy and Action Standard, and the IPCC demand-side assessment. It distinguishes household purchasing decisions from individual loans and explains why membership cannot carry an identical avoided-production credit. Improved access remains an independent public objective rather than an accounting failure. No rebound percentage or climate saving is estimated. The resulting evaluation approach prioritises credible alternatives, follow-up evidence, and transparent limits instead of assuming that all sharing either succeeds or fails environmentally.

Keywords: shared services · rebound · counterfactuals · equipment libraries

A source-based editorial text, not a report of original Still North research. Examples and imagery are illustrative.

Sharing changes more than ownership

A shared service can make an expensive object available without requiring each user to own one. That is a credible reason to establish a tool library, cargo-bike pool, or community laundry. It is not, by itself, evidence that total emissions fall. Sharing changes prices, convenience, reliability, and access, each of which can change how much service people use and what they do instead.

This methods note asks how a community service can examine those changes before making a climate claim. It combines an original North American carsharing study with the GHG Protocol Policy and Action Standard and the IPCC's demand-side assessment. The synthesis is selective and mechanism-led, not a pooled estimate of rebound. A fictional equipment library provides the worked case. No participation, purchasing, or emissions outcomes are reported for a real service.

The central distinction is between a more efficient way of supplying a fixed amount of service and a change in the amount or composition of service demanded. A drill used by several households may substitute for several purchases. It may also enable additional projects, generate collection journeys, and require more frequent maintenance. Both descriptions can be true, and neither determines the net result without a counterfactual.

Specify what would happen without the service

The relevant baseline is not universal individual ownership. Some users would buy new equipment; others would borrow, hire commercially, employ a tradesperson, postpone the task, or do without it. These alternatives have different consequences. The GHG Protocol Policy and Action Standard distinguishes an intervention scenario from a baseline scenario and calls for relevant indirect

effects. This makes it a better starting point than multiplying loans by a product footprint.

State the unit and period before counting. A household's purchasing decision over a year is different from one equipment loan. Repeated loans to the same household must not repeatedly claim the same avoided purchase. A household that would have hired an existing drill has not necessarily prevented another drill being manufactured. The question is what production, use, and supporting activity the shared service changes.

Baselines also evolve. A service may eventually influence expectations about ownership or stimulate a commercial hire market. Those effects deserve attention, but they need evidence and a time horizon. Do not assume a permanent purchase substitution from a member's answer during their first visit. Record intention as intention, and distinguish it from a later, observable purchasing decision.

A fictional equipment library

Suppose a fictional neighbourhood library records eighty loans during a trial period. When asked what they would otherwise have done, users describe a mixture of buying, borrowing, hiring, and abandoning projects. These answers are useful for understanding alternatives, but they are not eighty independent estimates of avoided production. One household may make several loans, and a member's stated intention may change after seeing the question.

The library can follow a consenting panel of households, asking about equipment acquired or retired, tasks completed, and alternative services used. Keep the questions neutral. Ask about a specific recent loan rather than whether sharing is environmentally helpful. Include people who register but never borrow, people unable to

collect an item, and people who leave. Active enthusiasts alone cannot describe the service's reach or substitution pattern.

For the equipment itself, record purchases, donations, repair parts, actual retirement, and use. A donated drill does not make every later loan impact-free. Its prior production belongs somewhere in an accounting boundary, and keeping it usable still requires resources. For a prospective decision, also ask what would have happened to that drill without the library: continued private use, storage, resale, or disposal.

The simplest honest output is a flow account with unresolved links. It can identify which loans plausibly substitute for acquisition, which replace existing hire, and which enable new service. It should not invent a carbon value for each category. Where multiple plausible base-lines remain, retain them as scenarios and show which missing evidence would change the programme's interpretation.

Separate three rebound pathways

First, direct demand may expand because access becomes cheaper or easier. Someone who would not own a carpet cleaner may clean more frequently once borrowing is available. This is a possible mechanism, not a criticism of the person. The additional cleaning might meet a previously unmet need. Describe the extra service and its resources without labelling all new access as waste.

Second, money or time released by sharing can support other activities. A household may spend less on equipment and more on travel, food, rent, or savings. The associated emissions differ, and the spending may occur later. Applying a generic rebound percentage to every library is not an empirical substitute for understanding those pathways. If indirect expenditure is unmeasured, disclose that limit rather than silently setting it to zero.

Third, the organisation may expand capacity in response to success. New premises, delivery rounds, or additional equipment can improve access while increasing resource requirements. These are not necessarily household rebound in the narrow economic sense, but they belong in a whole-service assessment. A good evaluation names its terminology instead of treating every unanticipated emission as the same phenomenon.

What the carsharing evidence teaches

Martin and Shaheen's 2010 carsharing report uses a member survey to examine changes in vehicle ownership and travel. Its account explicitly distinguishes households whose emissions increase from those whose emissions decrease. That heterogeneity is the relevant lesson here. A system-level conclusion does not imply that every member changes in the same direction.

The report is not a randomised evaluation of all sharing services. Its respondents, urban context, transport alternatives, and retrospective reporting limit transfer to a tool library or rural equipment pool. Its numerical estimates are not imported into this note. Instead, its design illustrates the need to examine prior ownership and changing activity, rather than assigning an identical environmental benefit to membership.

The IPCC's demand-side chapter places sharing and digital services within wider infrastructures, incentives, and consumption. It cautions against assuming that alternative service models automatically deliver mitigation. This does not mean sharing is futile. It means the service design, the displaced alternative, and the surrounding choices are part of the intervention, not inconvenient background details.

Design for substitution without excluding need

A library can favour durability and genuine substitution by maintaining reliable stock, allowing sensible loan periods, and making booking information clear. Reliable access matters because users may buy backup equipment when borrowing repeatedly fails. Repair capacity and spare parts can protect a small stock from frequent replacement. These are operational choices with testable mechanisms, not guaranteed climate savings.

Collection policy deserves explicit treatment. A delivery service can prevent individual journeys or create new ones, depending on routing and what users would otherwise do. Record consolidated rounds and dedicated trips separately. Do not count a whole shopping journey as caused by collection if the item was picked up on the way. Equally, do not assume every return journey is already happening.

Access should remain an independent objective. A programme may reasonably provide equipment to people previously excluded by cost, storage, disability, or tenancy conditions. Its public value should not depend on pretending those users would otherwise have bought expensive new products. Report improved access and the environmental account side by side. Transparent objectives make it possible to improve both without constructing a flattering baseline.

Limits and an accountable claim

Self-reported alternatives are uncertain, production responses may be delayed, and wider spending effects can exceed a small organisation's research capacity. Product inventories also require consistent boundaries. A practical evaluation may therefore support a narrower claim about equipment utilisation or access, while leaving the net climate effect unresolved. That is a legitimate conclusion when it matches the evidence collected.

The useful question is not whether sharing is good in the abstract. It is whether this service meets its access goals while replacing resource-intensive activity under credible alternatives. Rebound analysis makes that question more exact. It can guide repairs, routes, stock, and pricing without requiring a universal percentage or treating users' improved lives as an accounting error.

References

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