Foundation

Global Safety Evidence Centre

Valuing Global Safety Topic Note #3: Equity, Transferability and Global Application

Charity Impact

Tools & Methods

Resource

About the Lloyd's Register Foundation Global Safety Evidence Centre

The Lloyd's Register Foundation Global Safety Evidence Centre is a hub for anyone who needs to know 'what works' to make people safer. The Centre collates, creates and communicates the best available safety evidence from the Foundation, our partners and other sources on both the nature and scale of global safety challenges, and what works to address them. It works with partners to identify and fill gaps in the evidence, and to use the evidence for action.

To find out more about the Global Safety Evidence Centre, visit *gsec.lrfoundation.org.uk*

About Lloyd's Register Foundation

Lloyd's Register Foundation is an independent global safety charity that supports research, innovation, and education to make the world a safer place. Its mission is to use the best evidence and insight to help the global community focus on tackling the world's most pressing safety and risk challenges.

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doi.org/10.60743/BEFP-ZE57

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Summary

The *Global Safety Value Bank* allows existing research on safety outcome values to be used in new contexts – a method known as value transfer. Rather than commissioning new research every time a safety intervention is appraised, analysts use existing estimates of the value of an outcome and apply them, with care, to a new decision context.

Most cost benefit analysis relies on some form of value transfer, which is why a great deal of research goes into some of the most common monetary values used in economic appraisal – such as those associated with preventing fatalities, workplace injuries, life satisfaction, or various environmental outcomes like air quality and greenhouse gas emissions.

In the UK, the Greater Manchester Combined Authority's *Unit Cost Database* has been formally adopted by HM Treasury as a supplement to its *Green Book* appraisal guidance. Similarly, the *New Zealand Treasury's CBAx* spreadsheet model contains a "common database to help agencies monetise impacts and do return on investment". Internationally, the Ecosystem Services Valuation Database (ESVD) gathers economic welfare values related to ecosystem services, measured in monetary units. Many *private companies aiming to build a resilient economy* are embedding the value of all capitals – natural, social and human – in their decision making.

The practical question is not whether these transfer values are perfect. They never are. The question is whether they are good enough, transparent and appropriate for use in a global safety context.

Topic Note 1 set out the overall framework for using monetary valuation in safety appraisal. Topic Note 2 considered how we might expand the typical health-related valuation set to incorporate wider wellbeing outcomes from safety. This note asks whether and how such safety values can be transferred and applied across countries.

That question matters because many of the values currently available for safety appraisal are derived from evidence in the UK and other high-income countries. Since Lloyd's Register Foundation works globally, we need to consider whether a value derived in one country may be useful in another.

This note addresses three main questions. First, how far can values travel? Second, how can values be adjusted when they cross borders, to reflect local conditions? Third, when does value transfer create issues, particularly around fairness?

For within-country decisions, local adjustment is usually appropriate because both costs and benefits are being assessed in the same economic context. For cross-border decisions, social values should not be adjusted downward for lower-income countries, because doing so risks embedding global income inequality into safety decisions. Economic and fiscal values may still need local adjustment, because wages, prices and public costs differ across countries.

In the *Global Safety Value Bank* we provide two Red, Amber, Green (RAG) ratings to support value transfer. The first RAG considers the overall quality of the evidence used to derive the value; the second RAG gives our subjective view on how transferable each value may be, when using the value in a non-UK context. This Topic Note provides the high-level thinking behind these judgements.

Introduction: value transfer and the Global Safety Value Bank

The Foundation's 2024–2029 Strategy spans multiple countries and regions, from maritime safety in South-East Asia to the enhancement of safety skills for engineers and practitioners in the construction industry in Kenya. The values used to assess whether safety interventions represent good use of resources therefore need to work across diverse contexts.

This does not mean every intervention needs new valuation research. That would be costly, slow and often disproportionate. Instead, economic appraisal usually relies on **value transfer**, sometimes called **benefit transfer**: the practice of taking an estimate from one context and applying it, with judgement, to another.

That is the logic of the *Global Safety Value Bank*. It brings together unit values for outcomes that matter to safety, including deaths avoided, injuries prevented, health improved, wellbeing increased, environmental damage avoided, productivity protected and public costs reduced. These values are drawn from existing research and official sources, then made available for use in new appraisals.

This is fundamentally useful. Without value transfer, most safety interventions would never be valued at all. Few organisations have the time or budget to commission primary valuation studies for every new grant, programme or policy. A Value Bank makes existing evidence easier to use, while encouraging consistency, transparency and proportionality.

But value transfer always involves judgement. A value estimated in one setting may not apply cleanly in another. The more different the contexts, the more care is needed. Transferring a UK value to another high-income country may be reasonable in many cases. Transferring the same value to a lower-income country, a different institutional setting, or a community facing different safety risks may be more uncertain.

The international context also raises a second issue: adjustment. If the costs of an intervention differ across countries, should the benefits be adjusted too? In many cases, yes. A value expressed in pounds or dollars may need to reflect what money can buy locally. Purchasing power parity, or PPP, is the usual method for doing this.

But a third issue then arises. If social values are adjusted downward in poorer countries, the same injury avoided or life improved may appear less valuable simply because local incomes are lower. That creates an equity trap. A method designed to improve realism can end up making safety improvements in poorer countries look less valuable. This note explains how to use value transfer responsibly in that context. It asks when values can travel, when adjustment is appropriate, and when adjustment should be avoided.

Why value transfer matters

Value transfer is common in applied economics because it is practical. Analysts draw on established values consistently, assess whether they are relevant, and apply them to the decision at hand.

Each value aims to represent the best available estimate of the unit value of an outcome. If an intervention is expected to prevent ten injuries, the analyst can multiply the estimated number of injuries avoided by the unit value of an avoided injury. If an intervention is expected to improve life satisfaction, the analyst can use a consistent value endorsed by the UK Treasury.

This is not exact science. The quality of the result depends on the quality of the original evidence and the relevance of the value to the new context.

This is why confidence grading matters. A value based on strong evidence, from a similar context, and applied to a clearly measured outcome should carry more weight than a value based on limited evidence, transferred across very different settings, and applied to uncertain impacts.

The question is not whether the transferred value is perfect. The question is whether it is proportionate and useful for decisions. For many safety interventions, value transfer will be the only feasible way to bring monetary evidence into value for money analysis.

Challenge 1: how far can values travel?

If a value was derived from UK evidence, how applicable is it in Bangladesh, Brazil or Botswana?

The answer depends on what is being valued and how similar the contexts are.

Some values are more transferable than others. The health impact of a physical injury may be broadly similar across countries, at least in physiological terms. A broken limb, serious burn or disabling injury affects people's lives everywhere. The intrinsic importance of preventing death is also widely recognised across contexts, even if monetary estimates of that value differ.

Other values are more context-dependent. The wellbeing impact of trust in institutions, social connection or perceived safety may vary between societies. A workplace safety intervention may have different effects depending on labour markets, enforcement, training norms and safety culture. Environmental values may depend on local ecosystems, livelihoods and cultural significance.

Fiscal values are particularly context-specific. A value estimating public costs avoided assumes something about the public services in place. Preventing an injury in the UK may avoid NHS treatment costs, benefit payments and administrative costs. The equivalent fiscal saving may look very different in a country with limited public healthcare provision or different social protection systems.

Economic values also need care. Productivity effects depend on local wages, labour markets and employment conditions. A day of work lost has different market value in different economies, even if the human experience of injury is no less serious.

This means value transfer should follow a simple discipline:

- document the source of the value;
- identify what type of value it represents: social, economic, fiscal, environmental or other;
- assess how similar the original and target contexts are;
- grade confidence where possible;
- use sensitivity analysis where the transferred value materially affects the conclusion;
- avoid monetisation where the transfer is too stretched to be credible.

In short, value transfer is not a licence to use any value anywhere. It is a practical method that depends on judgement. The more distant the context, the more explicit that judgement needs to be.

Challenge 2: how should values be adjusted?

In many cases, transferred values should be adjusted to reflect local economic conditions. This is especially important when an appraisal is asking whether an intervention represents good value within a particular country.

The reason is straightforward. Costs and benefits are being compared in the same local economy. If the cost of staff time, equipment, services and public budgets all reflect local prices, then the value of benefits should also be adjusted to reflect these local market conditions.

A common approach is to adjust for Purchasing Power Parity, or PPP. PPP adjusts for what money can actually buy in different places. The same amount of money does not buy the same basket of goods and services in every country.

PPP is different from a simple exchange-rate conversion. Exchange rates convert one currency into another at market rates. PPP adjustment changes the real value used in the analysis by accounting for local price levels. A familiar illustration is the *Big Mac Index*: the price of roughly the same product differs across countries, showing that exchange rates do not fully capture differences in purchasing power.

Other organisations use related approaches. The World Health Organization's *CHOICE model* has historically used GDP-per-capita-based thresholds in cost-effectiveness analysis. Similarly, the *OECD global meta-analysis of the Value of a Statistical Life* also proposes scaling estimates to individual countries using GDP per capita ratios. *State of Life and Tearfund* have applied country-specific income adjustments to wellbeing values in African countries and Bangladesh. In environmental economics, the *Ecosystem Services Valuation Database* uses PPP adjustments to transfer environmental values across countries, as we do in the *Global Safety Value Bank*.

These examples show that adjustment is a standard response to the fact that values estimated in one country often need to be made usable in another. For the Value Bank, PPP is the preferred adjustment because it is directly concerned with purchasing power. However, we recognise that GDP per capita offers a suitable alternative, and we hold no strong opinion on the choice between them.

Challenge 3: when does adjustment create inequity?

The equity problem arises when income-adjusted or PPP-adjusted social values are used to compare investments between countries.

The clearest example is the Value of Statistical Life. VSL estimates are generally higher in richer countries because they are closely linked to income, wages and willingness to pay for risk reduction. *OECD* estimates illustrate the scale of this difference.

	Country A: low- or middle-income	Country B: high-income
Illustrative Value of Statistical Life	Around $1 million	Around $7.1 million to $8.5 million

This is not because a life is intrinsically worth less in Country A. It is because the monetary estimate reflects local income and ability to pay. That may be defensible for some forms of appraisal, but it becomes problematic when used to compare the value of life across countries.

This is the equity trap. A method designed to make values locally realistic can, when used for cross-border allocation, make safety improvements in poorer countries appear less valuable. The result may be exactly the opposite of what a global safety foundation intends. It can direct attention away from places where risks are highest, need is greatest and intervention costs may be lower.

For cross-border allocation, the Foundation should therefore treat social values differently from economic and fiscal values.

Social values represent the intrinsic welfare value of improved lives, avoided harm and increased wellbeing. For cross-border allocation, these should not be adjusted downward because beneficiaries live in lower-income countries. A life saved, an injury avoided or an improvement in wellbeing should not be assigned a lower social value because local incomes are lower.

Economic and fiscal values are different. They represent monetary flows, wages, productivity, public costs and budgetary consequences. These do vary across countries and may need adjustment. Lost productivity depends partly on local wages. Public healthcare savings depend on the health system in place. These values should reflect local conditions, with particular caution around fiscal values because public services differ sharply across countries.

This distinction is the key to using the Value Bank internationally. Adjustment is useful when it helps compare costs and benefits within a local economy. It becomes problematic when it allows global income differences to decide whose safety benefits count most.

Our recommended approach

The right treatment of transferred values depends on the decision context.

For **cross-border allocation**, use common social values. A prevented fatality, avoided injury, QALY gain or WELLBY improvement should carry the same social value regardless of country. Lower local incomes should not reduce the value assigned to people's safety when a global funder is choosing between countries.

For **within-country appraisal**, PPP-adjusted values may be appropriate. If the question is how best to use resources within one country, costs and benefits should be assessed in the same local economic context.

Economic and fiscal values need separate treatment. Productivity, wages, public costs and fiscal savings reflect local monetary flows, so they may need adjustment even in cross-border analysis. Fiscal values need particular care because public services differ sharply across countries.

Decision context	Social values	Economic and fiscal values
Cross-border allocation	Use common unadjusted values.	Adjust where local wages, prices, productivity or public costs differ.
Within-country appraisal	PPP-adjusted values may be appropriate.	Use local costs, prices, wages and public-sector assumptions.

Currency conversion is a separate presentational step. Converting results into local currency can make the analysis easier for decision-makers or local stakeholders to interpret, depending on where they are based. It should not materially change the value for money analysis. The analytical choice is whether to adjust values for local purchasing power, not which currency symbol appears in the final table.

Looking ahead

Topic Note 1 established the overarching framework for using monetary valuation in safety appraisal. Topic Note 2 considered when to use health valuation, wellbeing valuation, or both. This note has addressed the question that follows: how values can be transferred and applied across countries.

There appears to be no widely adopted global safety valuation framework. Global health has well-established approaches, particularly through DALYs. Environmental economics has developed international value databases, such as the Ecosystem Services Valuation Database. But neither covers the full range of safety outcomes the Foundation is seeking to value: health, wellbeing, economic, fiscal and environmental impacts across countries.

The Foundation's Global Safety Evidence Centre is well placed to help fill this gap. It leads the World Risk Poll, which provides data on safety risks, perceptions and life satisfaction across more than 140 countries. It also has practical experience of grantmaking across diverse contexts.

The Global Safety Value Bank can turn this work into practical guidance: when values can travel, when they should be adjusted, when common social values should be used across countries, and when monetisation should be avoided.

The central message is simple: value transfer is useful, but it needs discipline. Values can travel, but only with judgement. Adjustment can improve appraisal within a country, but can create inequity when used to compare countries. Currency conversion can help communication, but should not be confused with analytical adjustment.

The next step is to translate this into practical guidance for the Global Safety Value Bank, including how confidence in transferred values should be graded, how many country-specific adjustments the tool should support, and what role the World Risk Poll might play in improving the evidence base.

By setting out a clear approach to value transfer, adjustment and equity, the Foundation can help build a field that values global safety without letting income differences decide whose safety counts most.

Key terms

Term	Definition
Cross-border appraisal	Economic evidence to support decisions about how to direct resources between countries. This note recommends that monetary values are not scaled down for lower-income countries in this context.
Disability-adjusted life year (DALY)	A measure of the burden of disease, expressed as one year of healthy life lost. The standard health metric used by the World Health Organization and widely applied in global health.
Economic value	Wider effects on the economy, such as productivity protected or damage to productive assets avoided. May vary across countries with local wages and labour markets.
Equity paradox	The finding that standard income-based or locally-calibrated value adjustments systematically attribute lower monetary values to safety improvements in poorer countries. Applies to health, wellbeing and any approach that scales to local economic conditions.
Exchange rate conversion	Converting a monetary value from one currency to another at market rates. A presentational step that does not change the real value of the outcome.
Fiscal value	Costs and savings to the public sector. Particularly context-specific because public services and social protection systems differ sharply across countries.
Global Safety Value Bank	An experimental digital tool published alongside this series, providing unit values for safety-relevant outcomes and guidance on transferring them across contexts.
Green Book	The UK Government's central guidance on appraisal and evaluation, published by HM Treasury. The methodological anchor for this series.

Term	Definition
Purchasing power parity (PPP)	An adjustment that accounts for what money can actually buy in different countries. Applying PPP changes the real magnitude of a value: the same number of pounds buys more in a lower-income country, so a PPP-adjusted value will be lower in monetary terms.
Quality-adjusted life year (QALY)	A measure that combines length of life and health-related quality of life. One QALY equals one year of life in perfect health.
Social value	The intrinsic welfare value of improved lives, avoided harm and increased wellbeing. This note recommends that social values are not adjusted downward in lower-income countries when allocating resources across borders.
Value of a statistical life (VSL)	The social value of a small reduction in fatality risk across a population. Estimates are typically higher in higher-income countries because they reflect local income and willingness to pay.
Value transfer	Also known as benefit transfer. The practice of using values derived in one context (such as the UK) to estimate the value of outcomes in another. Standard practice in applied economics, requiring transparency about assumptions and sensitivity analysis.
Wellbeing year (WELLBY)	A one-point change in life satisfaction on a 0-10 scale, sustained for one person for one year. The principal measure used in wellbeing valuation.
Within-country appraisal	An assessment of how best to use resources within a single country, where costs and benefits are compared in the same local economic context and PPP-adjusted values may be appropriate.
World Risk Poll	The world's largest study of worry about and experience of safety risks, led by Lloyd's Register Foundation through the Gallup World Poll. Covers more than 140 countries.

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