

Measuring the Value of Official Statistics: testing and developing a measurement framework

Summary report

UNITED NATIONS
ECONOMIC
COMMISSION FOR
EUROPE



Preface

'Paradigm shift' can be an overused phrase. It often seems to get deployed to dress up unremarkable proposals in overly dramatic language.

Yet when used in its proper sense, it describes a revolution in thinking, which makes us look at issues and problems from a completely new direction. And that's the case with this Conference of European Statisticians work on Measuring the Value of Official Statistics.

Because the 'paradigm shift' phrase is very well deserved to describe this superb piece of work. The report proposes moving away from an indicator-led approach. Instead, it argues that we should be working out what it is that people really value, and build from there – an outside-in perspective as opposed to the top-down, inside-out approach that can easily prevail. This perspective represents a twist of the lens to one that brings everything into sharper focus, and highlights new perspectives. For example, the report makes the profound point that quality is not the same as value; and similarly it argues that an organization's values are not the same as what its users value about its outputs. And above all, the report proposes understanding value by asking people what they care about and how they use statistics.

The report also demonstrates an impressive humility and honesty. It describes the process that the Task Force went through. The Task Force started with an indicator set before realizing this was precisely the wrong place to start. Instead, it shifted to a focus on clarifying the concept of value, leading to a broad, rather than narrow, conception of value. In this broad idea of value, a distinction is drawn between measuring value with indicators that monitor production, and measuring value from the point of view of consumers. It is the latter, of course, that statistical producers should be trying to optimize as providers of a public good. In setting out this process, the authors not only help us understand how they got to the shift in thinking; but they also demonstrate the openness and rigour of the national statistical organization at its best – never shying away from addressing a difficult question. As the report says at one point: "Indeed, we of all people, as statisticians, should not fall into the trap of saying that if something is hard to measure then we won't even try: instead we should attempt to develop a way to measure it!"

I am very impressed with this report, which sets a new agenda for thinking about value. At its heart the report is a simple yet passionate plea to start from the perspective of the user.

Is this a paradigm shift? Absolutely it is.

Ed Humpherson
Director General for the United Kingdom's Office for Statistics Regulation

Reviewing a measurement framework to understand the value of official statistics

A Conference of European Statisticians Task Force on “Measuring the Value of official statistics” (chaired by the UK, with UNECE as secretariat) was established to pilot test a measurement framework comprising a set of possible indicators and suggested methods for producing them, which had been set out by a previous task force in “Recommendations for Promoting, Measuring and Communicating the Value of Official Statistics (2018).

The work began with an initial kick-off event, followed by a detailed programme of work that began with NSOs in ‘pathfinder countries’ providing information about work being undertaken on a variety of the indicators of value that formed part of the proposed measurement framework (covering a range of objective, subjective and monetary indicators). The group collated a wide range of supporting case studies, detailing experiences, practices, methodologies and lessons learned. They concluded, that the framework of measures previously proposed needed refining and further development. While some had the potential to be measures of value, a large proportion were not really illustrating the value of official statistics, at least not in the way that was intended. ‘Measuring value’ turned out to be much more complex than it initially appeared.

This led the Task Force down a path that went beyond the original scope of the work, not only in terms of how value might be quantified but more fundamentally, in how it should be understood conceptually. Such conceptual examination revealed that many of the original measures were based principally on a production-based understanding of value: quantifying value in terms of prices, revenues and ‘willingness to pay’ —an easy-to-understand view of value that corresponds with how we usually value market goods. This perspective permits the statistical office to measure things from the point of view of their own production of statistical products and services, for example with measurements of statistical quality, which can serve as useful proxies for some aspects of value. The task force argued, however, that while relatively easy to understand, we need to use caution when applying this perspective to try and understand the value of official statistics. Any attempt to quantify how valuable official statistics are needs to incorporate a consumer-based perspective, one which allows for subjective, emotional and dynamic perceptions.

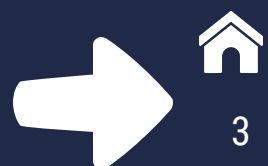
Why are NSOs trying to measure their own value?

NSOs have a variety of reasons for wanting to measure the value of what they do. They want both to prove that their work is worth it, and to improve what they are doing - for which they need benchmarks against which to measure improvement.

Proving value means providing evidence to Government, other funders, and society that the money invested in official statistics is a good use of public resources that offers a good return on investment. Improving value means better meeting needs, doing more with less, and monitoring the effectiveness of efforts so that we can see what works and what doesn't.

Whose value do we want to measure?

When devising and producing measures for assessing the value of official statistics, it is important to ask “whose” value is being measured? A core argument put forward by the task force is that ‘value’ is determined by the customer. Hence any attempt to quantify how valuable official statistics are must begin with an investigation into what it is that people, users, stakeholders, and others, actually value. People will value what fits their needs. Therefore, value is inherently subjective and cannot be determined without reference to the perception of the one doing the valuing.



How is value different from quality? And how does this align with the values of National Statistical Offices ?

Value and quality are very closely linked and overlapping. In everyday language they mean almost the same thing. In official statistics, quality is already a well-defined concept with clear and agreed dimensions. It amounts essentially to 'how good our statistics are'. Quality, in essence, is the 'degree of excellence', while value is the subjective assessment of that quality that makes something desirable. Some people might place a high value on one quality dimension but not care at all about another, while a different user might have entirely the opposite view.

Similarly, the value of what we do and the values to which we adhere are closely—and sometimes confusingly—linked. Values are the things that drive and motivate us, the reasons we do what we do. Value is what our work is worth, the degree to which it's doing what people want or need and its usefulness in the eyes of our users and for society. We mustn't assume that they are the same: just because something is important to us, doesn't mean it should be important to others.

We measure quality to ensure that we are producing the best statistics we can; we measure value to ensure we are doing what people want; and our values underlie and motivate what we do, and, we hope, result in features of our work that society will value

Conceptual framework – assessment of value from the perspective of the consumer or the producer?

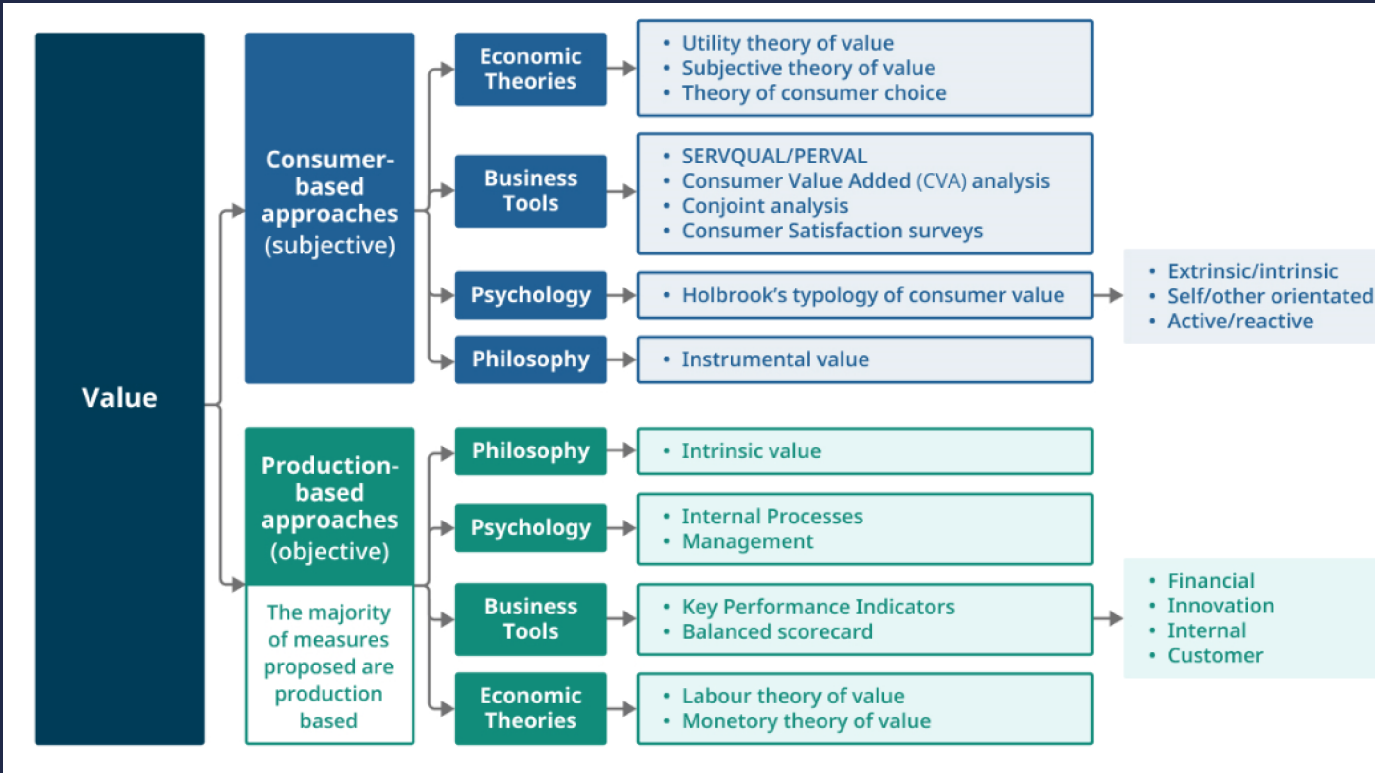
Why distinguish between production-based and consumer-based concepts of value? How does this lead to different approaches to assessing value?

Many measures in the proposed framework and in statistical organizations more generally are geared towards the production of high quality statistics, along dimensions such as accuracy, timeliness and reliability, i.e. "how good" official statistics are. These are important and essential measures premised on quality frameworks and well-established procedures that ensure that high quality statistics are produced by NSOs. These can in general be objectively measured, often based on things that can be relatively easily measured inside the NSO, and tend to fall into the category of production-based measures. Useful as they are, for many reasons—operational and budgeting, management, transparency etc.—they are not on their own a substitute for consumer-based measures that illustrate customers' subjective perceptions of value.

When NSOs begin developing ways to measure their own value, they often have a strong focus on the production-based measures. They may even feel that they are incorporating a user perspective, augmenting the measures relating to characteristics of the products and services themselves (e.g. availability of metadata, measures of timeliness, punctuality and accuracy) with measures of usage, access, and interaction with their products. But even these are only proxies for value, based on an assumption that if a user accesses our products then that means they find them valuable. In contrast, genuinely consumer-based measures need to involve interaction with the user to get really to the heart of what they value and why.

The task force developed a conceptual map to help show the wide range of ways in which value can be understood, illustrating the high-level division between the consumer-based and production-based approaches to understanding and measuring value.

Figure 1 - A conceptual map of 'value' in different schools of thought.

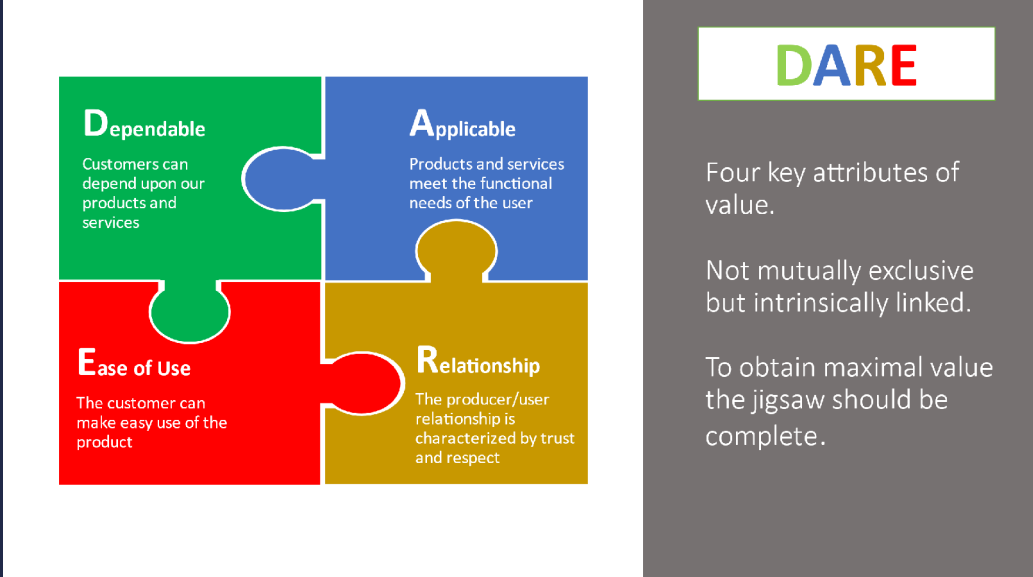


DARE to be different: a new proposal for understanding what customers value

How do NSOs know if they are producing what people need?

The task force developed a model, called DARE, which builds on a previous framework developed by Stats NZ in 2018-19. The model offers a customer-centric approach, based on four (not mutually exclusive) interlinked attributes: "Dependable, Applicable, Relationship and Ease of use". Collectively, these four attributes provide a set of lenses through which to contextualize the customer perspective of value given product or service.

Figure 2 - Dare Model



DARE to be different: a new proposal for understanding what customers value

There are many possible value criteria within each dimension. Within 'ease of use', a school student might value easy website navigation, while a civil society activist might value clearly explained visualizations. Within 'relationship', some may find rapid customer service responses to be valuable while others are impressed by outreach sessions on planned census dissemination products. Dimensions may overlap, for instance where the extent to which a statistical product meets a user's needs (applicability) is seen by that user as resulting from effective NSO-stakeholder consultation (relationship).

Maximum value is delivered where all four attributes are present, but the importance or weight of each of the four dimensions can vary between different users. For example, a corporate customer might attach more value to dependability than to relationships, whereas an ordinary citizen might favour ease of use. The more the customer's specific needs are met in a product, the higher the value proposition for the customer. Customer-perceived value will differ across customers, specific uses and over time. The model suggests, therefore, that thinking about value must be flexible, outward-looking and inclusive of these dynamic subjective perspectives.

The DARE model is not a measurement framework offering indicators or scales. Rather, it provides a framework to guide thinking, to help NSOs identify areas where the value proposition can be improved and target their efforts towards maximizing the value of their work in the eyes of their customers.

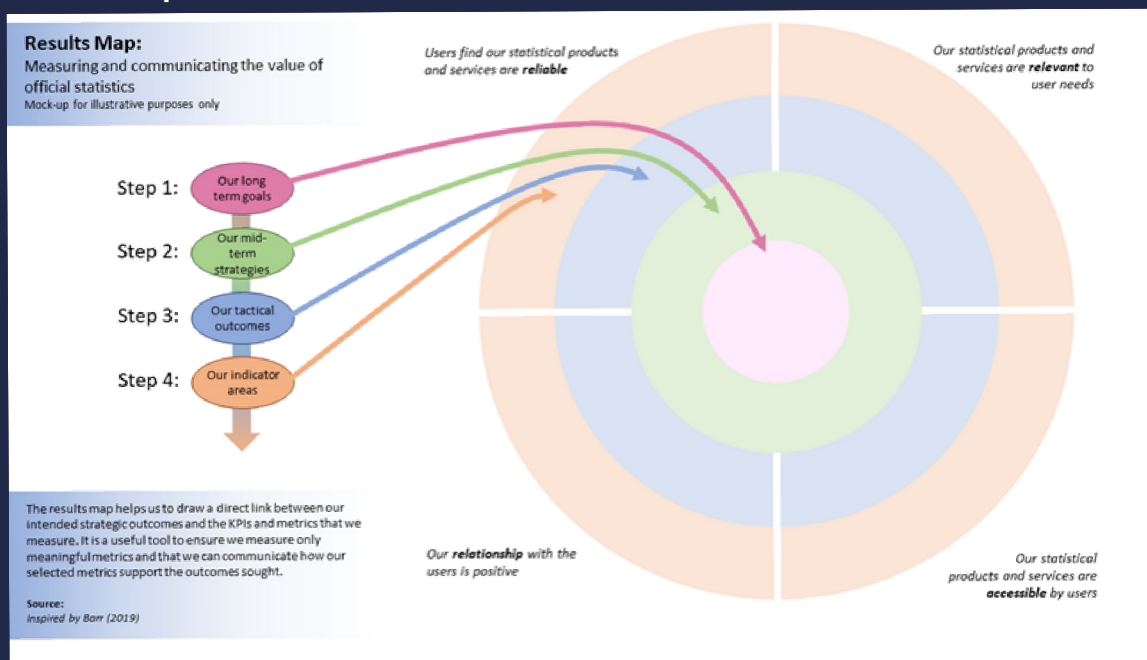
Using a Results Map to develop measures of value

So how can NSOs develop measures to report on their own value and ensure that only meaningful metrics are reported on?

The task force proposes that NSOs develop their own value-measurement frameworks in a results-oriented manner. They suggest using a 'Results Map' tool (inspired by Barr, 2019) that starts by placing an agreed organizational goal or mission statement at the centre. From there, pathways are traced outwards, through a hierarchy of layers from the more general to the more specific, ending in measurable indicators in the outer layer.

The four attributes of the DARE model are overlaid on the Results Map to help see how the various pathways are distributed across the four dimensions of value (another potentially helpful means of identifying gaps where success is not being sufficiently monitored).

Figure 3 - Results Map



Using a Results Map to develop measures of value

This approach turns value “inside out”. This contrasts with an “outside in” approach, so commonly practiced by NSOs (and other industries), in which measures are produced based on whatever information is readily available and easy to analyze, rather than being specifically crafted to measure what needs measuring.

All too often, organizations come up with key performance indicators without linking them directly to an overall strategic goal. This can result indicators that don’t actually measure things that would lead to progress towards a goal. or example, let’s imagine a measure of social media interaction: a simple count of interactions may be used as an indicator of public engagement with an NSO, on the assumption that more engagement means we’re providing greater value. But there is a danger here that the indicator becomes the target. Deliberately or sub-consciously, teams may focus their efforts on obtaining more interactions, as they’ll be evaluated on this. But that could have a negative impact on the quality of content being distributed on social media, perhaps lowering the value offered by the NSO in the eyes of some stakeholders.

By employing this “inside out” approach starting with a central goal based around creating and improving value, the NSO can meaningfully formulate the actions needed to achieve that goal, and then move to ways in which the effectiveness of those actions can be tracked and monitored. Instead of starting with ‘what can we measure and what does it tell us?’, we ask ‘what do we need to know, and how can we measure it?’. The goal comes first and the measures come last.

Guiding principles for NSOs developing measures of value

The task force developed some guiding principles for determining whether a measure might be helpful as an indicator of value:

- **Measures should be clearly indicative of some aspect of the value of official statistics. This’ simply mean measuring quality; there needs to be evidence that the quality being measured is valued by someone whose needs we are trying to meet.**
- **Measures should be (at least theoretically) quantitative and have a monotonic relationship with the aspect of value being measured, i.e., a greater measurement indicates more value and a lower measurement indicates less value.**
- **Measures should be able to lead to actionable targets. It should be evident what a ‘good’ level of the measure would look like, giving us evidence to inform some action or behaviour that we could take to improve the aspect of value being measured.**
- **Measures of value should not be ends in themselves. They should be a means to help achieve a goal. when we measure something we may turn it into a goal or target, and this can affect the behaviour of those whose actions contribute to the thing being measured. It is important to be mindful of such potential unintended consequences when adopting something as a measure of value.**

The review of the measurement framework revealed that many countries have been producing some measures routinely for some time, some even for many years, but when they reflect deeply on their usefulness as indicators of value they are not always found to be all that informative. When measures are created and defined in terms of the statistical office’s production processes, they often end up as production-based measures which, while they maybe useful for other reasons, they don’t fulfill the criteria above to make them helpful measures of the value of official statistics. By switching to a more consumer-based conceptualization of value, the range of possible measures is different, broader and potentially more helpful for informing targeted endeavours to improve the value of official statistics.



Next steps and further work

The group now plans to:

- Propagate and foster practical application of the core message of the work— ‘ ‘ must be customer-defined—and will endeavour to spread widely among NSOs the argument that this necessitates a paradigm shift in thinking and practice at all levels.
- Continue international collaboration to share and improve: to test, develop and trial the various approaches set out in the Task Force report - explaining and trialing the Results Map approach and gathering working examples to be shared internationally.
- Continue to gather, share and analyze examples from countries of their efforts to assess and understand the value they create, extracting lessons learned from these examples and distilling best practices for understanding and enhancing value.
- Develop a new core set of measures for understanding and assessing value. Continue to collect case studies and share methodologies between countries.

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