



Barriers and Opportunities: the Use and Impact of the German National Welfare Index (NWI)

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Executive Summary

The aim of BRAINPOoL's action research with the National Welfare Index (NWI) is to explore and describe the full range of barriers affecting the indicator and where possible illustrate ways of exploiting potential drivers and opportunities. In this way the study aims to develop a greater understanding of the challenges faced by a national case example in institutionalising a 'Beyond GDP' approach to the use of indicators that could have relevance for others working in this field.

The National Welfare Index is the only index funded as a research project by the German government through the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and Federal Environment Agency (UBA).

The index attempts to act as a catalyst for the debate about what kind of growth we actually want for society and how we can best include sustainability and social prosperity into our measurement systems. It does this by correcting the long-standing 'problem' with GDP that it interprets every expense as a positive and does not distinguish between welfare enhancing activity from welfare-reducing activity.

Thus from the starting point of private household consumption, the NWI adds monetarised values for selected welfare-increasing components such as domestic or voluntary work, deducts components that detract from welfare such as the costs of environmental damage and the reduction of natural capital and adjusts for social factors such as public spending on health and education.

The results have so far confirmed the theoretical assumptions of ecological economics, according to which not all results stemming from economic growth contribute to improvements of social welfare. As well as raising important questions about economic sustainability in Germany the index has also inspired initiatives both regionally, in many German Länder, and internationally where welfare indices based on the NWI methodology are being calculated.

The index, however, faces a number of barriers ranging from the economic context to methodological criticisms and political resistance.

In terms of barriers related to the NWI's context, the economic crisis, European sovereign debt crisis and resurgence of the 'pro-growth' agenda has led to a marked shift in German public opinion away from support of 'Beyond-GDP' approaches. The report suggests one method of countering this drop in support could be to develop tools to give the NWI message greater resonance with those groups that have seen the largest falls in support, for example by relating the index to justice and equity issues.

Further factors relating to the economic and political context include a reduction in resources available for data collection at both the Federal and regional level, and the conflicting timescales between short term political cycles and indicators like the NWI associated with long-term sustainability. Interestingly our analysis shows that the challenging political and economic situation in Germany has not prevented a historically high number of Beyond GDP initiatives being undertaken at all governance levels by a wide variety of actors.

In terms of barriers related to the index itself, the study shows there are a number of pertinent factors. These include questions around data availability (particularly at the regional level), data robustness (with many of the NWI's components based in studies rather than 'hard data'), timeliness (there is currently a 1½ year time-lag) and the use of taboo words (the word 'welfare' has some negative connotations).

There are also a number of barriers related to the beliefs, capacities and expectation of potential users of the NWI. Indicators like the NWI based on the methodology of the Index of Sustainable Economic Welfare (ISEW) have in the past been accused of lacking a coherent theoretical foundation which its critics believe results in corrections being applied to economics data without giving any theoretically sound justification for doing so.

Some critics also showed strong resistance to the monetarisation technique which is used to transform the NWI's components into a common monetary unit. Despite its neutral scientific framework the NWI's neutrality was also raised due to the strong correlation of uptake in Länder that are associated with the Green party.

These barriers to the NWI are counterbalanced by a number of further opportunities that have been identified as offering a potential catalytic effect to the use and influence of the index. These include the compelling communicational abilities of the index which as a composite indicator can usefully provide the 'temperature' of welfare in Germany through its single number and the potential opportunities for political impact through clearly identifying and engaging with potential users.

If the NWI is to be used more widely, however, the paper concludes that it will have to solve some of the barriers highlighted in this paper, particularly perceptions of political neutrality and robustness and will have to tailor its communication to project a message that has greater resonance to a broader audience.

This process should not be insurmountable, however, as there is clear international public support for using health, social and environmental statistics as well as economic statistics to measure societal progress and human well-being, and the positive outcomes for society resulting from such a shift are becoming increasingly clear.

Moves towards environmental protection, social equity, better product quality and durability, and more efficient resource use are already underway in many countries and regions. Alternative measures of progress, like the NWI, can be useful tools to help chart the course and assess progress along it if appropriately understood and used.

Methodology

Several complementary research tasks provided the basis for the results presented in this report.

Firstly a review was undertaken of the range of alternative indicator initiatives that have taken place in Germany in order to understand the broad institutional context of the Beyond GDP agenda in which the NWI is situated (see Fig. 3 for an overview).

Interviews were then conducted with a broad range of relevant actors. These included a lead scientist¹ involved in developing and calculating the indicator and two officials² from the German Federal Ministry for Environment (BMU), as one of the joint commissioners of the index, to gain a clear picture of their intention and experience working with the NWI and the challenges they have encountered.

Further interviews were conducted with key actors who could provide a mainstream or critical perspective of the NWI and identify potential barriers or opportunities to its wider acceptance and use within the political and statistical community. These included two senior officials³ from the German Federal Statistical Office (DESTATIS) and three members⁴ of the German Parliament's 'Enquete Commission on Growth, Wellbeing and Quality of Life' which was tasked with developing a holistic indicator of welfare or progress as part of its investigations.

These internal/external perspectives were supplemented with interviews with a number of German indicator experts⁵ who gave their assessment both of the key events and current state of the Beyond GDP movement in Germany and of their assessment of the specific barriers and opportunities facing the National Welfare Index.

The interviews were supplemented by desk research applying the findings from earlier BRAINPOoL studies (e.g. on the 'success factors' and 'demand' for Beyond GDP indicators) to the NWI.

Finally a workshop was held between the BRAINPOoL project and key personnel from the Protestant institute for interdisciplinary research (FEST) and the BMU to discuss the results and agree on further actions.

The aim of the NWI

The National Welfare Index (NWI) attempts to act as a catalyst for the debate about what kind of growth we actually want for society and how we can best include sustainability and social prosperity into our measurement systems.

¹ Prof. Dr. Hans Diefenbacher, Professor of Economics, Kassel University; and FEST – Protestant institute for interdisciplinary research, Heidelberg.

² Dr. Jörg Mayer-Ries, General Aspects of Environmental Policy, German Federal Ministry for Environment (BMU); and Frank Hönerbach, General Aspects of Environmental Policy, Environmental protection and sustainability strategies, BMU.

³ Albert Braakmann, Head of Division, Destatis; and Ulrich Spoerel, Head of Section 'Concepts of Welfare Management, Destatis

⁴ Hermann Ott (Green Party), Ernst Ulrich von Weizsäcker (SPD) and Albert Braakmann (Destatis)

⁵ Stefan Bergheim (Centre for Societal Progress), Andreas Kraemer and Lucas Porsche (Ecologic), Kai Schlegelmilch (Green Budget Germany), Prof. Heinz-Herbert Noll (GESIS, Mannheim), Hans Thie (Bundestag Indicators Group)

For the BMU, the debate that sprung up about GDP as one of the 21 key indicators in Germany's National Sustainable Development Strategy was a primary driving force for the Ministry's continued involvement in beyond GDP indicators and their interest in the NWI.

For the scientists calculating the NWI its genesis stems from an unease with the narrow pursuit of economic growth and the disregard for the negative environmental and social side effects which are often associated with growth that threaten to cancel out a certain proportion of the benefits.

The index thus aims to correct the long-standing problem with GDP that it interprets every expense as a positive and does not distinguish between welfare enhancing activity from welfare-reducing activity. By including these distinctions the NWI aims to reveal a more qualitative kind of growth, which also takes into consideration the available natural and social capital.

The purpose of the NWI is, however, not to replace GDP but rather to 'complete' it, filling in gaps in information and improving specific areas of the national accounting system. In highlighting these differences, the index aims to support the development of new opinions on the nature and aims of social progress and better inform the policy-making process on the potential risks and side effects of both the goal of economic growth and the related market processes that are promoted.

Genesis of the NWI

The National Welfare Index is jointly managed by the Protestant institute for interdisciplinary research (FEST, Heidelberg) and the Free University of Berlin (FFU). The first stage of the research work was funded by Germany's Federal Environment Agency (UBA) with the second part funded by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). This process was initiated after a joint BMU/UBA conference in 2008 after which the key scientific actors Prof. Hans Diefenbacher (Professor of Economics at FEST, Heidelberg) and Roland Zieschank (Sociologist at the Environmental Policy Research Centre of the Free University of Berlin) were given the brief to start developing the NWI methodology and variables.

The NWI is conceptually based on the ISEW (Index for Sustainable Economic Welfare) and Genuine Progress Indicator (GPI) but makes efforts to improve on these methodologies both for reasons of data availability and in response to historical theoretical criticisms (e.g. from Neumayer, 1998ⁱ)

Trend results of the National Welfare Index were first publicly reported in 2009 but have been retrospectively calculated back to 1990. Results are added and reported periodically with a time-lag in the data of 1½ to 2 years. The latest edition, released in January 2013 as a revised 'NWI 2.0', includes new data and an updated list of twenty components.

Components

The index starts from the basic quantity of 'private consumption', a key component of traditional GDP, based on the assumption that the consumption of goods and services on the part of households generates positive utility and contributes to welfare. This is then weighted with an index of income distribution (the Gini Coefficient) according to the notion of diminishing marginal utility of income where

additional income for a poor household translates into higher additional welfare than for rich a household.

From this starting point selected welfare-increasing components such as domestic or voluntary work that are not included in GDP are added, while components that detract from welfare such as the costs of environmental damage (e.g. on air, soil, water) and the reduction of natural capital (on land, forests, non-renewable resources etc.) are deducted. Social factors such as public spending on health and education and the costs of crime are also included in the NWI. Finally, adjustments are made for the timing mismatch between expenditure and benefits.

Individual variables that are included in the NWI can also be presented separately to make their respective impact more transparent.

Table 1: Components of the 2013 'NWI 2.0'

No.	Components	+ / -
1	Index of Income Distribution	
2	Weighted consumer spending	+
3	Value of domestic work	+
4	Value of voluntary work	+
5	Public spending on health and education	+
6	Costs and benefits of consumer durables	+ / -
7	Costs of commuting between home and work	-
8	Costs of traffic accidents	-
9	Costs of crime	-
10	Costs of alcohol, tobacco and drug use	-
11	Social costs of compensation for environmental damage	-
12	Damage due to water pollution	-
13	Damage due to impacts on soil	-
14	Effects of air pollution	-
15	Damage due to noise	-
16	Loss or gain through changes to habitat	+ / -
17	Damage due to loss of arable land	+ / -
18	Substitution costs generated by exploitation of non-renewable resources	-
19	Damage due to CO2 emissions	-
20	Costs of nuclear energy use	-

Results of the NWI

The calculations and results of the NWI have so far confirmed the theoretical assumptions of ecological economics, according to which not all results stemming from economic growth contribute to improvements of social welfare and periods of low or negative growth do not necessarily equate to a drop in overall welfare.

Thus, for example, the NWI results showed that in 2008 and 2009 Germany's true prosperity levels had risen rather than declined, even though GDP collapsed

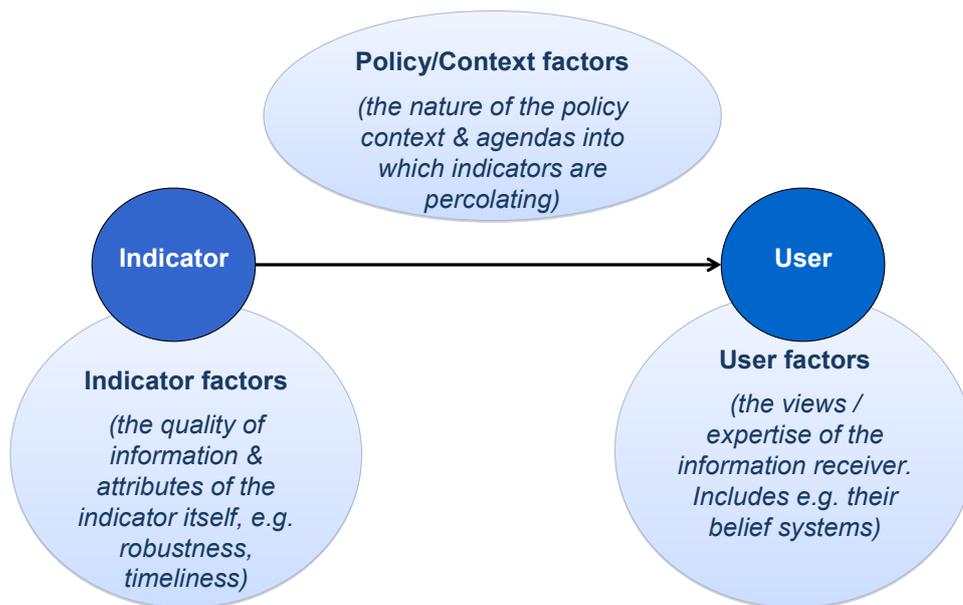
dramatically. This result was due largely to the fact that personal consumption remained strong, CO2 emissions shrunk as some energy-intensive industries reduced production and more people became socially engaged.

It is results like this, which seemed to match how most of the German public were actually feeling, that has led figures like Albert Braakmann, a Head of Division at Germany's National Statistical Office Destatis to comment that "in years like 2009, my personal opinion is that the NWI better reflects the experience of people on the ground".

Barriers to use and influence

The BRAINPOoL project's analytical framework explores the uses of indicators through three types of factors which can enhance or hinder their influence and uptake into policy arenas. We will use these three broad factor areas to explore potential barriers and opportunities for the National Welfare Index.

Fig. 1 Three types of factors which can act as a barrier



'Context' Factors

The nature of the policy context and policy agendas and arenas which make up the setting into which indicators percolate (or not), are identified as 'policy' or 'context' factors. Governance and actor coalitions as well as the policy issue at hand frame specific policy arenas and agendas and this setting (which shifts over time) determines the processes and level of institutionalisation of specific indicators.

It is the nature of policy factors which contribute to the legitimisation and formalisation of the concepts and methods underlying an indicator. Extending from the work of Kingdon (e.g. 1984) on the development and evolution of policy windows and opportunities, the use of a specific indicator can be explained via the (mis)match between the indicator-based reporting/monitoring of the policy problem and the main policy idea, as well as the existence or emergence of a favourable political environment.

The economic context and resurgence of the growth agenda

The economic crisis is viewed by many of the interviewees (including members of the BMU itself) as a serious challenge for the Beyond GDP agenda as it seems to have decisively shifted the policy focus. Since the onset of the financial crisis but particularly since the escalation of the southern European sovereign debt crisis there has been a renewed force to arguments in favour of economic growth in Germany (as elsewhere). This is highlighted by the clear, stated focus of the Federal Government to achieve “long-term and continuous economic growth” on the basis of “free competition, individual responsibility and subsidiarity”ⁱⁱ.

The Federal Minister of Economics and Technology Philipp Rösler has been vigorous in his campaign for GDP increases and his belief that environmental legislation is a barrier to growth and needs to be cut back. Politicians from across the spectrum have touted Germany’s status as a country reliant on manufacturing output and exports which must be supported at all costs.

Several interviewees suggested that in recent years the arena for the discussion of alternatives to growth has worsened in Germany with many mainstream actors viewing well-being as a distraction.

Affects on public opinion

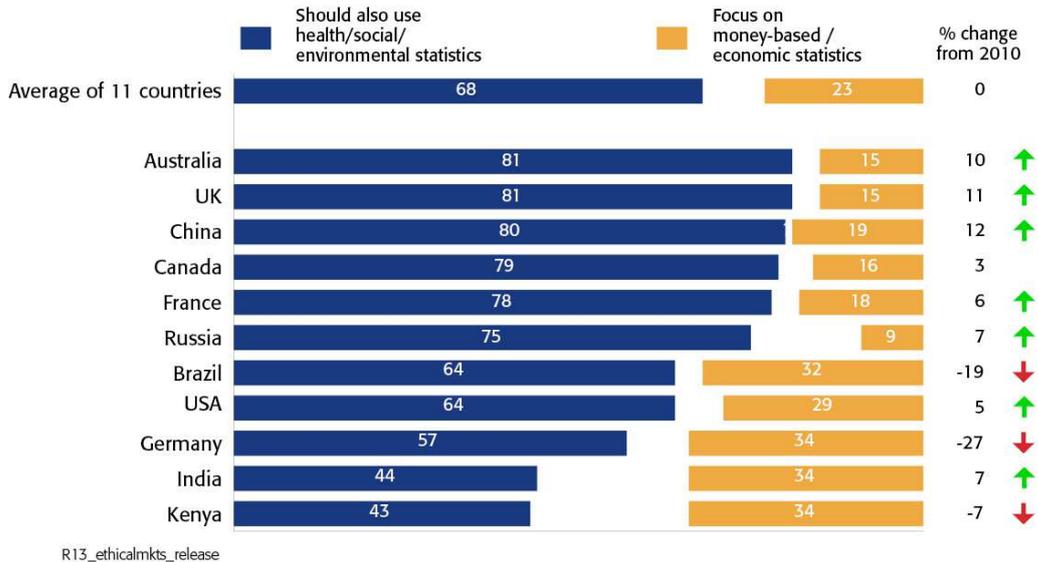
This perception amongst the interviewees seems to be borne out by a marked shift in German public opinion towards support for ‘going beyond GDP’ between the years 2010 and 2013 which highlights the importance of context as potential barrier. While in 2010 Germany was the country most in favour of using alternative methods to assess a country’s progress, by 2013 the country had seen the biggest shifts in favour of traditional, economic models (see Fig 2) ⁱⁱⁱ. Along with Kenyans and Indians, Germans are now the most likely to prefer a focus on economic statistics (34% in each country).

The changes in German opinion highlight that public attitudes on this issue can remain a hostage to wider factors, particularly the media profile of the high levels of public indebtedness and economic stagnation in southern Europe over the last few years and the feeling in Germany that they are bankrolling much of the rest of Europe.

It is worth noting that despite this 27% fall in support, Germany still enjoys a majority of the population (57%) who support using health/social and environmental statistics as well as economic statistics to measure progress.

Fig. 2 Globescan/Ethical Markets survey on 'Going Beyond GDP', May 2013

Trends in Support for "Going Beyond GDP"
2010–2013



The white space in this chart represents "DK/NA."

Column of figures and arrows on outside left refers to % change in support for using health/social/environmental statistics since 2010

One potential method of countering this drop in support is to effectively demonstrate the salience and relevance of the Beyond GDP agenda to a wider audience. For example, even though a greater focus on social and health issues would likely be of greatest value to disadvantaged sections of society, the Globescan opinion poll showed that the largest drop in support came from low-income and less-educated groups who increasingly favoured a focus on purely economic statistics.

This drop in support could also be tied to a familiar mainstream (mis)perception that Beyond GDP indicators are linked to an electorally unattractive change agenda that is out of touch with most people's everyday concerns and necessarily includes rather radical (even revolutionary) societal changes and reductions in living standards. The message needs to be reinforced that the NWI is a weighted economic statistic that primarily aims to better describe the welfare that derives from economic activity than GDP does.

Part of the barrier to greater demand, use and acceptance could, therefore, be a presentational or communication issue. In order to gain broader appeal, arguments, communication strategies and tools around going 'beyond GDP' should be developed in a way that gives them greater resonance for those without high incomes or university educations.^{iv} The potential for policy change and positive outcomes for society resulting from such a shift needs to be clearly, simply and persuasively articulated, using communication messages (that show for example how the NWI relates to justice and equity issues) and using tools aimed at these specific target groups (e.g. social or populist media).

The financial crisis as a driver

As we have seen in our previous BRAINPOoL research⁶ the financial crisis appears to provide support to various – often conflicting – beliefs. So while on the one hand there is a widespread mainstream perception that the crisis is preventing any concrete Beyond GDP agenda from being implemented due to a resulting lack of financial and political means to do so, at least at the regional level in Germany the crisis seems to be acting as a strong driver for the NWI by clearly highlighting the limitations of the current economic system.

This groundswell of support for the NWI at the regional level has seen Ministries of the Länder (or the delegates of the Green Party to the Länder parliaments) in Schleswig-Holstein, Rheinland-Pfalz, Thüringen, Bavaria, Sachsen and the city of Hamburg asking FEST/FFU to calculate a Regional Welfare Index (RWI) using the same variables and methodology as the national NWI. Interestingly the primary motivation for calculating regional welfare seems to be a critique of the official GDP figures and particularly the exclusion of environmental factors from the traditional economic data.

For these primarily Green Party groups, the NWI/RWI allows them to paint a different picture that demonstrates that our collective welfare is not necessarily connected to increasing *or* decreasing growth levels and that economic expansion often comes at the expense of our environmental stocks. Far from being an electorally unattractive agenda (in Nordfriesland Green party members voted ‘alternative indicators’ as the most important out of 58 potential policy topics to be pursued if they were elected) the NWI seems to support the Green Party message that change is both necessary and possible and can actually enhance welfare. For Robert Habeck, leader of the Green Party in Schleswig Holstein’s state parliament, these calculations now “offer the burden of proof for a new economic policy discussion.”^v

Constrained budgets

Despite this ‘bottom up’ support for the NWI methodology, one unavoidable side effect of the financial crisis has been a reduction in resources available both for statistical services in general and for data collection across Europe which is often cited as a key context-related barrier. In Germany, for example, financial support for data collection is a problem at both Federal and regional level as budgets for the production of official statistics have been cut and there is reduced funding in the environmental accounting departments at Destatis (NSO) and in the German Länder.

Another factor here is not just reduced funding but also budgetary continuity which is essential if an indicator takes the form of a time-series which is calculated regularly and therefore has continuing needs for reliable data. This has already been a factor for the NWI at the national level (with uncertainties about who will fund its continuing calculation) and could also affect the Regional Welfare Indices in the Länder should they choose to update their calculations through a regular time-series.

Factors related to the political context

One of the primary factors acting as a barrier to Beyond GDP indicators is a lack of political will confronting actors working in this field.

⁶ See for example Thiry, G. et al (2013), ‘Characterizing Demand for Beyond GDP’ Brainpool Project deliverable 2.1

A primary reason for this is a conflict in time-scales that alternative indicators often experience within the political sphere. In other words, if measures that are desirable for long-term sustainability also somehow imply short-term 'pain', they are less liable to be adopted by those engaged in the short-term focus of political decision-making. This is particularly the case in an election year, as is now the case in Germany, when politicians and Ministers are playing to a domestic audience and need to be seen to be acting in voters immediate (often economic) interests.

As one of the key aims of the NWI is to act as catalyst for the debate about what kind of growth we actually want for society and how we can best include long-term issues (such as sustainability) and long-term trends (such as changes in welfare) into our measurement systems, it will inevitably be resisted by those engaged in such short-termist agendas.

Situation on the ground

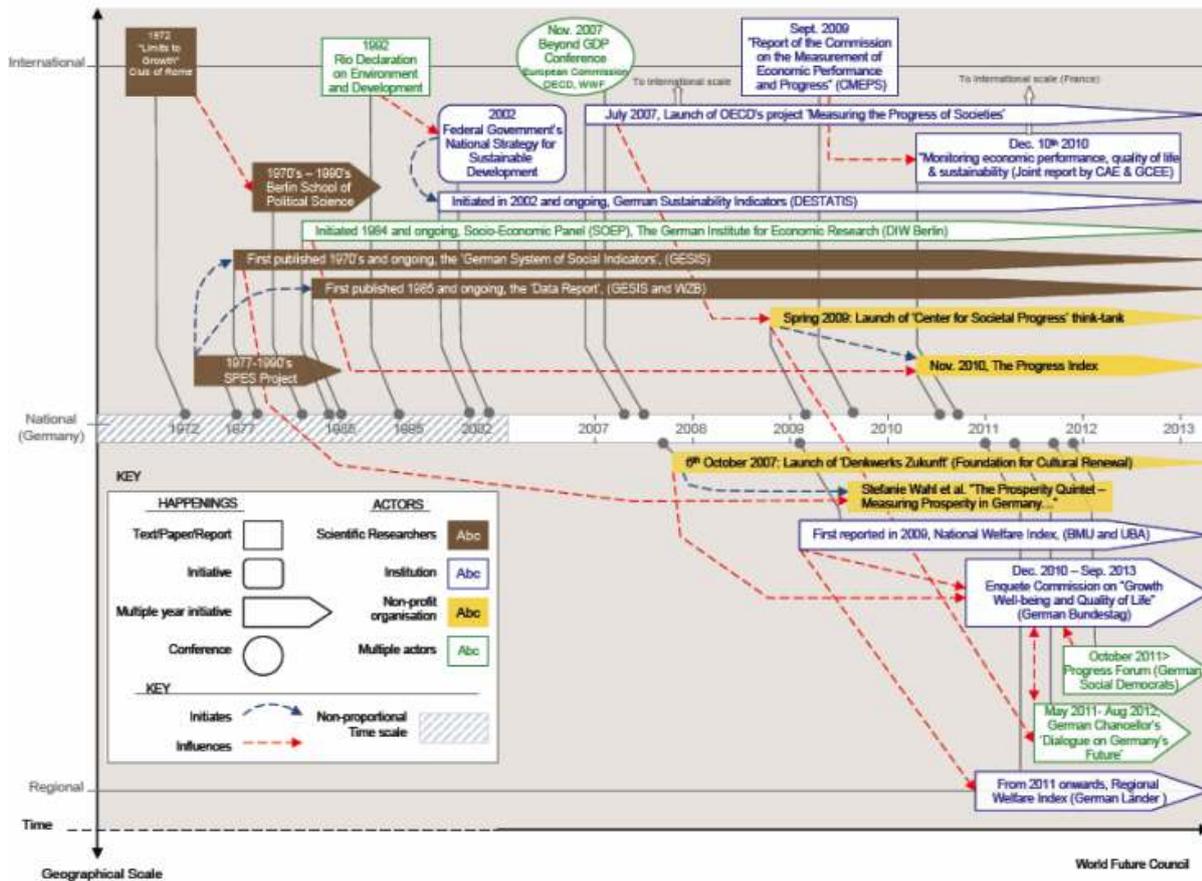
Interestingly, the challenging economic and political situation described above seems to contrast somewhat to the historically high number of Beyond GDP initiatives that have commenced in Germany since 2009.

These initiatives have involved a very wide variety of actors from governmental and parliamentary to the national statistical office (Destatis), from the scientific and academic communities to non-governmental (NGO). They have also taken place at all levels of governance from international (the joint report by the French Council of Economic Analysis and the German Council of Economic Experts) down to regional level (see Fig. 3). At the local level, at least 300 cities, towns and villages in Germany have also introduced a local indicator system for sustainability reporting with about a third of these cases undertaking this reporting at least twice and some continuing it regularly.⁷

The proliferation and diversity of these initiatives shows that the state of the Beyond GDP agenda in Germany is by no means bleak and that many of the barriers related to context have perhaps hindered, but certainly not eliminated, effective action in this area.

⁷ Source: calculations by the Ministry of Environment, Baden Württemberg

Fig. 3 Alternative indicator ‘happenings’ at the international, national and regional level (Germany).



Factors related to the ‘Indicator’

The quality of the information itself, which we refer to as the ‘indicator factors’ relates to the attributes of the indicator itself (i.e. robustness, timeliness etc.). These include the quality of the underlying data, the configuration and classification of the indicator and the variables which constitute it, the development of the weighting scheme (in the case of indices), the accuracy of the data sources used, the presentation and communication of the indicators. Indicator factors determine the validity, reliability, specificity and sensitivity of an indicator (and the underlying data) as well as the adequacy of the communication and dissemination processes.

Indicator factors and the NWI

The factors that were repeatedly mentioned in the interviews as a source of quality are: data availability, robustness, recognition by NSOs, choice of variables, verifiability and timeliness.

Previous BRAINPOoL results have found that methodology is often used as an excuse to reject an indicator which a user dislikes due to its results or rankings. There is also a strong perception from alternative indicator practitioners that a higher test for accuracy is set for new indicators than is set for the continuation of existing,

more institutionalised, indicators (for example GDP has recently been shown to be grossly inaccurate in many Sub-Saharan African countries and yet is still used by these countries as their primary international benchmark⁸). Regardless of whether all the methodological criticisms levelled at an indicator are valid or not, they still represent a potential barrier to its use and impact so it is worth seeing how each of these factors relates to the NWI:

Data availability

The novelty and complexity of the issues tackled by the NWI means that in some cases the necessary statistical tools and data aren't yet available for the index. This is particularly true at the Länder level, where, for example, it has been very difficult to obtain monetarised values for environmental costs which are needed for the calculations, a problem that cannot be solved without significant increases in funding.

Robustness

Several of the interviewees expressed the view that not all the NWI variables are based on robust data or as one Destatis official put it "many of the numerical foundations are based on assumptions or studies rather than hard data".

Others mentioned the challenges, for example, of calculating the costs or benefits of consumer durable goods over time (e.g. the difficulties of finding a suitably reliable method of estimating the yearly benefits to a person of e.g. a tumble dryer versus its depreciating costs).

It should be noted that where there are methodological problems the producers of the index are well aware of these limitations and they are explained in detail in the NWI reports for each variable.

Recognition by NSO

Generally statisticians have been a bit defensive about the NWI and no moves have been made to include the index as part of the official data largely due to perceived weaknesses in the methodology and the conviction that data from an NSO should largely be devoid of normative assumptions or personal judgement.

In 2012 the German Advisory Council on the Environment (SRU) issued a report which highly commended the NWI and recommended that the government should commission Destatis to develop a "robust, standardised methodology for an aggregated welfare index" based on the NWI to be published prominently and at regular intervals.^{vi}

In interviews, Destatis officials responded by saying that this would indeed be "technically possible" but they would need a firm signal from government and the decision would have to be negotiated at cabinet level.

Timeliness

While the NWI results are reported periodically there is currently a time-lag in the data of 1½ to 2 years. Interviewees from both Destatis and the Enquete Commission

⁸ See for example Morten Jerven's book 'Poor Numbers: How we are misled by African Development Statistics and What to Do about It' which details how in 2010 Ghana's statistical office announced it was revising its GDP estimates upwards by over 60%, suggesting that in the previous estimates about US\$13bn worth's of economic activity had been missed.

mentioned that to have greater policy relevance you need to shorten this time lag as particularly for politicians there is limited utility in knowing, for example, that things were bad 3 years ago and then got a little bit better 2 years ago.

There was a strong consensus that if we are to balance the over-reliance on GDP there is a need for alternative indicators to be released sufficiently promptly to reflect events and trends that have occurred recently. Policy makers, media and other stakeholders would then at least be given the option of comparing the picture provided by the alternative data with the conventional economic statistics, opening up the possibility for different policy outcomes to be pursued.

There was recognition from Destatis officials, however, that GDP itself started as just an annual number and that there are significant issues with striving to release data too promptly or regularly, as can be seen with GDP's first quarterly estimates which are often unreliable and occasionally have to be revised significantly.

As it stands, the producers of the NWI do not use forecast data and are therefore constrained by the delivery of data and statistics produced by third parties (e.g. time-use studies that are only produced every 10 years). The second issue around timeliness is also purely practical based on a need for additional funding, particularly at the regional level, to improve the data sources.

Choice of the components

The choice of components and how they are weighted can often elicit the strongest resistance from critics of an indicator. But the selection of components has also been a challenge for those who produce and calculate the NWI, as it was for the ISEW/GPI from which it developed.

The difficulty for those producing the ISEW/GPI/NWI has been that there is no definitive agreement on the selection of the components or a common methodology for calculating them which has led to a proliferation of alternative approaches and disagreements about which is superior.

This is very likely to be acting as a barrier to other actors adopting the indicator as not only are there competing methodological approaches to choose from (which makes comparison between entities more difficult) but also competing aims or 'storylines' attached to the different approaches (as a replacement for GDP, as a complementary source of information to the standard economic data, as a policy guide for a more sustainable future etc.).

We have seen in previous BRAINPOoL studies^{vii} how the multiple meanings and interpretations (e.g. of terms such as 'progress', 'welfare' and 'sustainability') and the competing aims of Beyond GDP indicators (e.g. to improve the operation of the current economic model vs to help move beyond the current economic model) has led to confusion and exacerbated non-use of alternative indicators by statisticians and policy makers, so this should be avoided as much as possible.

In an effort to solve this problem and harmonise the methodology, the producers of the German NWI are working with a number of other groups to undertake comparative national studies which use the same methodology and variables. These include Ireland (in collaboration with Feasta – the Irish Society for Sustainable Development) Poland (developed by a Polish academic Prof. Dr. Jerzy Sleszynski, University Warszawa) and other studies likely to be undertaken by academics in Italy and Belgium.

Further discussion of the NWI's components, relating to barriers around the perceptions of its users and critics is included under the section on 'User Factors'.

Verifiability

Each edition of the NWI has included a description of the characteristics of each partial variable as well as the data sources, which provides a good level of transparency and verifiability.

Measuring things that can be influenced by policy

Indicators tend to be successful when they have real relevance for policy makers and crucially if they can measure something that policy makers believe they can influence. This can be problematic for indicators like the NWI that seek to measure overarching concepts such as welfare which have a wide range of influencing factors.

Despite the fact that consideration was given to the relevance and susceptibility to political influence of each of the NWI variables during the selection process their broad nature does seem to be acting as a barrier.

Because the NWI variables span economic, social and environmental topics the index itself doesn't fit neatly into any departmental or ministerial mandate in government. According to Federal Environment Ministry (BMU) officials this makes it difficult to champion and promote externally, even for the BMU's own Minister, as the results will automatically apply to and affect other departments.

Need for inter-disciplinary competences

The holistic nature of the NWI, while providing many obvious benefits in terms of the broad picture of welfare the index can convey might provide an additional barrier in that it requires the expertise of a broad spectrum of disciplines and competences both in its construction process and effective use. While these competences and inter-disciplinary skills are certainly desirable in statisticians, policy makers and the media they are unlikely to be common, providing potential limitations to a very broad diffusion.

Use of taboo words

One of BRAINPOoL's findings from its 'Review report on Beyond GDP indicators'⁹ was the importance of avoiding taboo words if an alternative indicator is to be successful. This factor also appears to be acting as a barrier to the NWI as the word 'welfare' (and similarly 'Wohlfahrt' in German) has some negative connotations in its associations with aid or financial handouts from the government. This was cited by one Member of Parliament as one of the key reasons why the Green Party at the national level had been unable to agree on choosing to support the NWI.

Regional issues

Some indicator factors are specific to the calculations made at the regional level. These include how to tackle commuting, with many people living and working in different Länder and the challenges of adjusting the data accordingly.

⁹ See Tomas Hak et al. (Jan 2013), Chapter 6 of 'Review report on Beyond GDP indicators: categorisation, intentions and impacts', BRAINPOoL deliverable 1.0

Factors related to 'Users'

The level of experience and of expertise of the information receiver, i.e. the capacity and repertoires of the person effectively using the information, we term "user factors". User factors include the mental models, belief systems and expectations of the user with regard to the indicator, but also partly depend on the administrative/institutional cultures and practices the user belongs to. User repertoires have been conceptualised as "stabilized ways of thinking and acting (on the individual level) or stabilized codes, operations and technology (on other levels)"^{viii}. User factors are crucial to understand the (mis)match between the conceptual models (implicit and explicit) which frame an indicator (and the way it represents and relates to reality) and the conceptual framework of a user and his/her organisation.

There are a number of areas where the views of potential users of the NWI could be acting as a barrier:

Link between the indicator and a societal 'model'

One of the most consistent elements of distrust of Beyond GDP indicators we have seen from mainstream actors throughout the BRAINPOOL project is the perception of a lack of realism in the hypotheses, alternative models and assumptions underlying certain alternative indicators.

Although the NWI doesn't provide an exact reproduction of the categories in the national accounts, because the basic quantity of the NWI is private consumption (which is one of the sub-components of GDP) and it aims to fill in the gaps in this data rather than replacing it, to a certain degree it avoids criticism of being based on an unrealistic alternative model.

The index falls under the category of 'enlarged GDP indicators' and as such remains strongly connected to the traditional reference frame of economics. As we have seen from Brainpool's WP2 Report, indicators which do not suggest an entirely new model and remain coherent within the present economic paradigm have a much higher likelihood of being accepted and used by mainstream actors, even if their results may point out the need for change.

That being said, indicators such as the NWI that are based on the methodology of the Index of Sustainable Economic Welfare (ISEW) have in the past been accused of lacking a coherent theoretical foundation which its critics believe results in corrections being applied to economics data without giving any theoretically sound justification for doing so.^{ix}

Choice of components

Indicators based on the ISEW/GPI methodology have also been criticized for being arbitrary in the components they include or (implicitly) exclude as contributors to welfare, which they suggest are open to subjective judgement. Eric Neumayer notes, for example, that if you include a correction item for income inequality why not include a correction for the degree of political freedom or equality between sexes?^x

But an item such as the political freedom enjoyed by a nation's citizens is not included because it is not the aim of the NWI to measure all welfare-related factors but rather the economic welfare generated by economic activity and whether that activity is increasing benefits more than costs (or vice versa).

Some Enquete Commission members were also not convinced that the NWI's social indicators were the "definitive" ones with one member criticizing the idea that you "can create growth in the index by avoiding traffic accidents". While no doubt acting as a barrier in this context (the Enquete Commission ultimately rejected the use of the NWI as a model for producing its own welfare/progress index) it is important to note that any aggregate indicator, including GDP, involves subjective judgments about the choice of variables and the effects they create on the results. GDP, for example, could be equally open to criticism for creating positive growth through the *inclusion* of the costs of traffic accidents.

Distrust of monetarisation

Some members of the German Parliament's Enquete Commission also showed resistance to the monetarisation technique which is used to transform the NWI's components into a common monetary unit.

While the scientists calculating the NWI sympathise with some disquiet about the monetarisation of natural capital (e.g. an apprehension about reducing all value to monetary value and assigning a market price to things some believe should be valued intrinsically), they believe the strong resistance in the Enquete Commission was towards any form of monetarisation, independent of a critique of the NWI.

This strongly suggests that for some actors there are 'taboo' methodologies or valuation techniques which, if used in the production of an alternative indicator, can act as a barrier to its acceptance and diffusion.

At least from the perspective of the current producers of the NWI, as long as you recognise the limits and problems associated with monetarisation, the pragmatic benefits of producing a monetarised indicator that can be easily compared with GDP and that communicates an alternative message in the language of economists, far outweighs any benefits of not having the indicator.

Psychological and institutional barriers

The strong resistance from some Enquete Commission members to the NWI was also viewed by BMU officials to have certain psychological and institutional elements to it.

Firstly there was a perception that the ideology of these critics played a part as very few scientific or rational arguments were put forward for rejecting the index. By way of example, the Ecological Footprint which shares similar methodological traits to the NWI's monetarisation technique in its own conversions to global hectares did not receive the same resistance.

A second factor suggested as acting as a barrier in this context was competing institutional allegiances. Simply put, there was a huge opportunity to be had for those producing Beyond GDP indicators in Germany to showcase their approach to a high profile and cross party audience, and the experts that were brought in inevitably sought to influence the members of parliament towards their own index (and away from others).

Concerns regarding composite indicators

Some interviewees expressed the worry that aggregation into a single figure can hide crisis situations associated with a particular component. While this is undoubtedly the

case, this criticism is true of all composite indicators (even GDP) and thus is not a problem which is specific to the NWI.

Being (or appearing) neutral

Aside from the requirement of quality data, BRAINPOoL's prior research has shown that the appearance of neutrality is seen as the best route for an index to achieve credibility and legitimacy.

While the NWI works within a neutral scientific framework of providing information that is freely available for any actors to use and is not affiliated to any political party, at least one of the interviewees mentioned that there "must" be a connection to the Green Party, due to the strong correlation of uptake in Länder that are associated with them.

There is a question here about the extent to which it is a good thing for an indicator, at least initially, to be linked to a particular political position or party. Thus the strong vanguard support from the Green Party for the NWI could actually be acting as a barrier to other actors or political groups supporting the index.

However, as we have seen the selection of variables of a composite indicator always has a normative element to it and only political actors that are actually interested in changing the system will be attracted to an indicator, like the NWI, whose results suggest this needs to happen. The German conservative (Christian Democratic Union) and liberal (Free Democratic Party) parties who are not interested in changing the current economic model are therefore naturally wary of the NWI.

Further Opportunities for the NWI

Alongside the barriers and drivers mentioned above there are a number of further opportunities that have been identified as offering a potential catalytic effect on the use and influence of the National Welfare Index.

Media opportunities

While the media have largely avoided reporting on the methodology, they have responded positively to the communicational abilities of the NWI which as a composite indicator can usefully provide the 'temperature' of welfare in Germany through its single number.

However, given the background context of the financial crisis, the continuing questions about the future of economic growth and the compelling alternative story provided by the NWI about welfare, growth, and resource use, we believe there are a number of additional media opportunities that could be exploited.

The NWI produces figures that are easy to compare to GDP and often show a substantial difference, giving the clear message that if we were to value and measure different things our indicators would start giving us very different signals about progress. These attributes could be highlighted further through a range of different media.

Identifying and connecting with other potential users

Despite the firm view of the scientists who calculate the NWI that there should be clearly defined and separate roles for scientists and policy makers and that any

political or normative implications of the results should be left for others decide on and undertake, it would be a useful exercise to apply the NWI results to real current political problems. Clearly identifying the types of problems the NWI could help to solve and therefore which policy makers, politicians and officials it could be useful for would be a good basis for catalysing greater political use.

This practice of clearly identifying potential users has been confirmed as one of the key success factors for alternative indicators in BRAINPOoL's previous work¹⁰ which found that developing the indicators with the audiences at whom they are targeted was vital to their use and impact. The importance of relationship building also applies to policy makers with most initiatives that had achieved policy success citing direct face-to-face channels as key to their success.

Turning calculations into policy applications

Furthermore, previous experience with the ISEW/GPI methodology has shown that while the headline figure that is produced by these indices does not, in itself, communicate a very distinct message that could be used policy makers or politicians, one of the key benefits is that it allows the key stakeholders to start talking to each other about what kind of progress they are seeking to pursue. Once these actors start to deconstruct the variables, they can see in which areas their country, region or city is doing well or badly, which can then inform a debate about policy priorities.

Conclusion

It is increasingly recognized that GDP was never designed as a measure of economic welfare and the pursuit of GDP growth as an end in itself is no longer an appropriate national policy goal.

The National Welfare Index, while certainly not perfect, has been used effectively in Germany as a headline indicator to monitor the progress made towards an inclusive multi-purpose economy that generates welfare in a sustainable way, both at the national and regional level. In this way, it could be argued that the NWI is a better approximation of economic welfare than GDP.

What this study has shown, however, is that there are a number of different barriers and hurdles that have, in different ways, affected the level of use and impact that the index has achieved. These include barriers associated with the political context such as the European sovereign debt crisis, barriers connected with the indicator itself such as its robustness and timeliness and barriers linked to potential users including perceptions about its neutrality.

In this way this study has developed a greater understanding of the challenges faced by a 'Beyond GDP' indicator in institutionalising an alternative approach to measuring progress both from the perspective of the producers, users and detractors of the index.

Of broad interest is the understanding that if an indicator is going to be used politically, it needs to solve somebody's problem. The question for the NWI is whose problem it solves? One potential answer is that it is the Green Party's problem, who

¹⁰ See Tomas Hak et al. (Jan 2013), Chapter 6 of 'Review report on Beyond GDP indicators: categorisation, intentions and impacts', BRAINPOoL deliverable 1.0

can continue to use the NWI in an effort to show that by following 'green' policies they can improve the welfare of those living in the regions they govern.

If the NWI is to be used more widely, however, it will have to solve some of the barriers highlighted in this paper, particularly perceptions of political neutrality and robustness and will have to tailor its communication to project a message that has greater resonance to a broader audience.

This process should not be insurmountable, however, as there is clear international public support^{xi} using health, social and environmental statistics as well as economic statistics to measure societal progress and human well-being, and the positive outcomes for society resulting from such a shift are becoming increasingly clear.

Moves towards environmental protection, social equity, better product quality and durability, and more efficient resource use are already underway in many countries and regions. Alternative measures of progress, like the NWI, can be useful tools to help chart the course and assess progress along it if appropriately understood and used.

Endnotes:

ⁱ Neumayer, E., Sep 1999, 'The ISEW – Not an Index of Sustainable Economic Welfare, Social Indicators Research, Kluwer Academic Publishers.

ⁱⁱ BMWi website, accessed on 16.04.2013 at <http://www.bmwi.de/English/Navigation/Economic-policy/economic-policy.html>

ⁱⁱⁱ Globescan, (June 2013), press release at <http://www.globescan.com/commentary-and-analysis/press-releases/press-releases-2013/98-press-releases-2013/278-public-backing-for-going-beyond-gdp-remains-strong.html>

^{iv} Ethical Markets, (July 2013), http://www.ethicalmarkets.com/wp-content/uploads/2013/05/Beyond_GDP_Poll_2013_Summary-Report-final-280513.pdf, p.6

^v Michael Bauchmüller (19th May 2011), 'All for the comfort factor: Welfare Index instead of GDP', Süddeutsche Zeitung, accessed on 11. 07.2013 at: <http://www.sueddeutsche.de/wirtschaft/bip-alles-fuer-den-wohlfuehlfaktor-1.1099345>

^{vi} German Advisory Council on the Environment, (June 2012), Environmental Report, 'Chapter 1: The New Growth Debate', p. 18, http://www.umweltrat.de/SharedDocs/Downloads/EN/01_Environmental_Reports/2012_06_Environmental_Report_Chapter_01.pdf?__blob=publicationFile

^{vii} See Thiry, G. et al (2013) (U. Toulouse, 'Characterising demand for Beyond GDP', Brainpool Deliverable 2.1

^{viii} Van der Meer, F.B. (1999), "Evaluation and the Social Construction of Impacts". P.390

^{ix} Neumayer, E., (1999), 'The ISEW – Not an Index of Sustainable Economic Welfare, Social Indicators Research, Kluwer Academic Publishers, p. 82

^x Ibid, p.83

^{xi} Ethical Markets, (July 2013), http://www.ethicalmarkets.com/wp-content/uploads/2013/05/Beyond_GDP_Poll_2013_Summary-Report-final-280513.pdf.