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Abstract:

The paper presents a goal of developing an integrating and comparable system of accounts based on Genuine Progress Indicators. Genuine Progress Indicators (GPIs) are an alternative to the practice of equating progress with economic growth alone. The GPI links the economy with social and environmental variables to create a more comprehensive and accurate measurement tool. The GPI assigns monetary value to the value of human, social, and natural capital, in addition to standard measures of produced capital, and assigns value to assets like population health, educational attainment, community safety, voluntary work, and environmental quality. The benefits to New Zealand can be immense, giving us a measurement tool that challenges the misuse of present indicators and enabling us to have a policy tool that will benefit our social, cultural, economic and environmental performance as a nation. This policy tool could in turn be communicated to the general public.

Measuring Real Wealth in New Zealand

Wealth is defined as the “condition of well-being” of the whole of our life – which includes the human, social, cultural, natural, produced and financial dimensions. In this “whole of life” model, it is the relationships and interdependencies between these different dimensions which is of paramount importance if we are to understand our impacts on the world around us. This holistic wealth model (GPI) enables us to assess the cost of unlimited economic growth (X% GDP pa) on our environment and our society.

Introduction

There is significant work going on in New Zealand on progress indicators. The Ministry for Social Development’s annual Social Report and the Ministry for the Environment’s indicator framework are world leaders. Along with these “national policy level” indicators, the Community Outcomes work of the LTCCP (Long Term Council Community Plans) is producing community level social, cultural, economic and environmental well-being and sustainability indicators of progress. These and others place New Zealand in the forefront of industrialized nations in the field of progress indicators.

The challenge for New Zealand is to achieve integration and comparability of these diverse indicator sets. We also need to use a system that challenges the misuse of the GDP (Gross Domestic Product) as a key indicator of societal well-being. The GDP is presently the primary guide in policy making.

A key question arises *“How can we create an integrated system of indicators that enables comparability across national, regional and community levels and combines present well-being with long term sustainability – while challenging the misuse of GDP (Gross Domestic Product) as being the basic indicator of societal well-being?”*

The purpose of the paper is to catalyse the use of GPI progress indicators in New Zealand in a way that answers this key question.

Current Measures of Progress (the GDP)

The history of the current measures of progress goes back to the Second World War. As the United States prepared for conflict, the government needed to allocate resources between the war effort and the home front. Consequently the Gross National Product (GNP) was invented to track the gross inventory of monetary transactions. (This later “morphed” into what is now the GDP.) It was developed as a planning tool, a spreadsheet for national economic management. It was never intended to be used as it is today.

Simon Kuznets, the Nobel Prize-winning economist and one of the principal architects of the GDP, never endorsed its modern use as an overall measure of progress. As early as 1934, Kuznets warned the U.S. Congress; *“The welfare of a nation can scarcely be inferred from a measurement of national income”* and in 1962 Kuznets was writing that national accounting needed to be fundamentally rethought; *“Distinctions must be kept in mind between the quantity and quality of growth, between its costs and return, and between the short and the long run. Goals for more should specify more growth of what and for what”*(cited by Colman 2004, page 51). Throughout his life Kuznets emphasised the need for better and more inclusive measures to assess a national economy.

The GDP embodies at least four major fallacies (Colman 2004):

1. It does not differentiate between good and bad expenditure. For example, GDP counts crime, war, sickness and pollution as positive contributions to the GDP.
2. GDP does not recognise activities in where no money changes hands. Parenting, voluntary work and the contribution of open spaces, rivers, and oceans do not register.
3. GDP only considers the present. For example a tree only has value when it is converted into something having monetary value. The loss of the forest is not shown in the accounts as a draw down on capital.
4. The GDP totally ignores the distribution of income. There is evidence that as the economy grows the financial benefits go to the haves, more than the have-nots. The gap between rich and poor grows.

Four hundred leading economists and other leading thinkers, including Nobel Laureates, have said: *“Since the GDP measures only the quantity of market activity without accounting for the social and ecological costs involved, it is both inadequate and misleading as a measure of true*

prosperity...New indicators of progress are urgently needed to guide our society...The genuine Progress Index (GPI) is an important step in this direction.” (Cob et al 1995)

Genuine Progress Indicators

Dr. Ron Colman, Founder and Director of GPI Atlantic says, “What we measure is literally a sign of what we value as a society. If critical social and ecological assets are not counted and valued in our measures of progress, they receive insufficient attention in the policy arena.” (Colman 2004)

The Genuine Progress Index is an alternative to the practice of equating progress with economic growth alone. The GPI links the economy with social and environmental variables to create a more comprehensive and accurate measurement tool. The GPI accounts for the value of human, social, and natural capital, in addition to standard measures of produced capital, and assigns value to assets like population health, educational attainment, community safety, voluntary work, and environmental quality.

One example, The Nova Scotia GPI consists of 22 social, economic and environmental components:

Time Use

- Economic Value of Civic and Voluntary Work
- Economic Value of Unpaid Housework and Child Care
- Work Hours
- Value of Leisure Time

Natural Capital

- Soils and Agriculture
- Forests
- Marine Environment/Fisheries
- Energy

Social Capital

- Population Health
- Educational Attainment
- Costs of Crime
- Human Freedom Index

Environmental Quality

- Greenhouse Gas Emissions
- Sustainable Transportation
- Ecological Footprint Analysis
- Air Quality
- Water Quality
- Solid Waste

Socio-economic

- Income Distribution
- Debt, External Borrowing, and Capital Movements
- Valuations of Durability
- Composite Livelihood Security Index

One of the design decisions in developing a GPI system is whether to aggregate or not. Dr. Colman does not advocate aggregation for the following reasons (Colman 2004):

1. A single bottom line GPI requires subjective and judgmental weighting over a diverse set of social, economic, and environmental variables.
2. Aggregation requires the use of a common metric (such as money) that may not be suitable to all indicators.
3. The broad assumptions required may mask the full story, e.g. if the GPI excludes government spending as defensive expenditures, so a “cost of crime” analysis cannot provide a complete picture of the true cost of crime to society.
4. “Bottom line” indices are vulnerable to challenge on the basis of their starting point as well as their end point, e.g. the US GPI begins with consumption expenditures then adds activities judged to be valuable (like volunteer work and unpaid household work) and subtracts liabilities like crime and loss of wetlands. This approach may easily confuse stocks and flows and is questionable from the perspective of sustainable development where increased consumption may produce resource depletion.
5. Aggregation has limited usefulness from a policy perspective. Planners need to know what is going up and what is going down and why.

Yet it is recognised by some practitioners that aggregation does have some advantages of simplifying a complex situation and enabling a comparison with the GDP – and if aggregated after the usefulness of the disaggregated information is fully exploited, may provide a middle ground for many. In this way the disaggregated information is the primary measurement tool and aggregated is ancillary.

GPI Full Cost Accounting – Leading to a National Set of Accounts

What is Full Cost Accounting?

Full cost accounting is a method of accounting in monetary terms what the total costs are on each element being measured. This is done in GPI whenever possible.

Those activities that are part of the market (like the costs of labour, police, service, etc.) are straight forward to assess. Those not part of the market (like emotional costs, and the “free” life support services provided by our environment) are not as straight forward. Particularly in the case of those activities not part of the market, the value judgements used must be transparent and open for public discussion.

Full cost accounting of course takes into account revenues or benefits as well as costs and capital. Such accounting can be applied not only at a community level but also to regions and countries as a whole. Hence a national set of accounts.

The Costing of Intangibles

The complication of course is trying to put monetary values on feelings, emotions and other intangibles such as; the immeasurable value attached to treasures lost or damaged; photos and family heirlooms; the feelings of loss of security, the cost of taking time off work to attend to replacing the stolen items and the time filling out insurance claim forms and assisting the Police – time we could be using for other things.

On a national scale and across whole societies there are many such issues, but if broken down in to bits – just as the pyramids are built from many individual bits – it is expected to be possible to come up with a figure (or figures) which give an indication of the size of the issue. For some items a pseudo monetary value may need to be ascribed – how does one value the loss of a species, a mountain, or emotions? While clearly not able to assign monetary values to all of these things GPI attempts to do so to items where it is reasonable.

Attaching Monetary Values Where Reasonable

The answer then is to attach monetary values to indicator items where it is reasonable to do so, and to ring-fence some components and to perhaps exclude others all together as they are just too hard or problematic.

Why use money?

Even though money is a very poor tool to value most non-market services (and was never intended for that purpose), economic values nevertheless dominate the policy arena, so the assignment of dollar values has the strategic advantage of demonstrating that our social and environmental assets do actually have economic value that is not captured in the conventional set of accounts.

The following is an example of how “replacement valuation” is a good example of using monetary assessment. New York City saved billions of dollars in not having to build an expensive water filtration plant for its water supply simply by maintaining a healthy standing forest in upstate New York that served the natural function and provided the “free” service of filtering the water. The dollars saved on the filtration plant are a proxy (replacement valuation) for the invisible economic value provided by that healthy standing forest, whose economic value is conventionally only recognized after it is cut down for timber sent to market (the economic value of the standing forest remains unrecognised in conventional accounts). We are used to valuing services provided by people, so to we can value the services provided by nature due to its ecological functioning.

The Six Capitals of Wellbeing

The capital approach is based on the concept of maintaining our natural, economic and social base over time so that future generations have the means and options to pursue their own goals. Much work on sustainable development starts with the capital base. Sustainability occurs when development does not erode, but rather enhances environmental, economic, social and human capital.

Five capitals are often cited in the GPI work internationally: natural, social, human, financial and produced capital. Here we add cultural capital to reflect its importance to New Zealand and the direction that our societal has and is taking. The following definitions of capital are largely taken from the work of Statistics New Zealand (Statistics NZ 2002):

Produced (Built) Capital = the produced means of capital like machinery, equipment and structures also non-production related infrastructures and non-tangible assets.

Financial Capital = financial or credit capital (financial wealth) is the form of money or monetary equivalents. This includes fiat currency, debt-based money instruments (loans, mortgages, bonds), financial savings and investments by households, business and government. A serious logical dilemma is created in relating this form of capital with others. A question

remains how we should reconcile physical accounting of living capital with accounts of financial assets?

Cultural Capital = the set of values, history, traditions and behaviours which link a specific group of people together. This has been considered an integral part of sustainable development for New Zealand.

Human Capital = the knowledge, skills, competencies and attributes embodied in individuals that facilitate the creation of personal, social and economic well being. It is created through lifelong learning and experience, as well as formal education.

Social Capital = the networks of shared norms, values and understanding that facilitate co-operation within and between groups.

Natural Capital = the renewable and non-renewable natural resources which enter the production process and satisfy consumption needs, as well as environmental assets that have amenity and productive use, and are essential for the life support system.

A Cautionary Note

“The GPI assesses the economic value of social and environmental assets by imputing market values to the services provided by our stock of human, social, and environmental capital. But this imputation of market values is not an end in itself. It is a temporary measure, necessary only as long as financial structures, such as prices, taxes, and monetary incentives, continue to provide the primary cues for the actual behaviour of businesses, consumers, and governments.”

“Monetization is only a tool to communicate with the world of conventional economics, not a view that reduces profound human, social and environmental values to monetary terms. It is a necessary step, given the dominance of the materialistic ethic, in order to overcome the tendency to undervalue the services of unpaid labour, natural resources, and other “free” assets; to make their contribution to prosperity clearly visible; and to bring these social and environmental assets more fully into the public arena. Monetization also serves to demonstrate the linkages and connections between non-market and market factors, such as the reality that depletion of a natural resource will eventually produce actual loss of value in the market economy. But monetary values should never be taken as a literal description of reality.” (Colman 2004)

Catalysing GPI in New Zealand

There is substantial work ongoing in New Zealand to create well-being and sustainability indicators – with New Zealand being a leader in global action due to their current indicator work (e.g. Ministry of Social Policy, Social reports, www.mosp.govt.nz) and the Local Government Act of 2002 (LGA 2002) and many other leading contributions. Yet with its wide range of methodologies, New Zealand has no unified strategy for producing an integrated measurement system that includes both the assessment of present well-being and long-term sustainability – one that ensures comparability between regions and between policy level and community level.

There is no consensual method for challenging the status quo in the misuse of the GDP to assess societal progress.

Because New Zealand is a global leader in progress indicators, we are in the best position to proceed to the next stage of indicator development – to use a system that challenges the current misuse of the GDP and develops an integrated national system of accounts. A GPI system can be designed to meet these requirements.

The question emerges, *“How can we develop a strategy which addresses these issues and catalyses the use of GPI in New Zealand?”*

Answers include:

1. Assisting **local government** adoption of GPI.
2. Develop a **Tool Kit** to stimulate and help resource local government to choose GPI.
3. **Network** practitioners in the field of progress indicators (including consultants, universities and local government users across NZ) to assist in developing #1.
4. Encourage government and private **research institutions** to become interested in resourcing the local government work.
5. Ensure **comparability, vertical integration, full cost accounting** and processes that reveal the systemic nature of the social-cultural-economic-environmental system.
6. Develop an **international comparability model** with 6-8 other countries.

Answer 1 - Local Government

Local government is best placed for achieving results in the short term. The reasons include being “close to the ground” and requirements in their 10 year plans (LTCCP).

Greater Wellington Council is committed to the use of GPI with full cost accounting. Christchurch has for a number of years been seriously interested in GPI, with both Waitakere and Nelson and Tasman Councils generating more recent interest. With a number of local councils piloting the GPI, central government would be highly persuaded to take GPI seriously.

Outcomes of the LTCCP (Long Term Council Community Plans) need aligning with the higher-level indicators of the region and the nation. Identifying “common themes” that run vertically through all levels is the first step.

Answer 2 – Tool Kit

Anew NZ is beginning to develop a GPI Tool Kit that will assist local government to develop pilots that can contribute to building the infrastructure for creating a GPI based national system of accounts in the long term. The Network cited below will be developed in service of these objectives.

Answer 3 - Form a Network

There are many practitioners in the field of progress indicators who have an interest in contributing to a national project. These form a most valuable resource for local government. Developing a dedicated network of practitioners is therefore an important strategy to catalyse the use of GPI in New Zealand – harnessing the multitude of skills and interests to make it happen.

Answer 4 - Research and Resourcing

Genuine Progress Indicators require a substantial research capacity to support their existence. Much of this data can come from government departments, such as Statistics New Zealand,

Ministry for Social Development, Ministry of the Environment, Ministry for Economic Development, Ministry for Cultural Development, Ministry of Health, and Ministry of Education. These departments by in large are already producing their own reports, e.g. The Social Report 2006. The missing ingredients are largely the “full cost accounting” data, perhaps the regional data and integration between the topics of focus of these reports.

Academic institutions also provide a valuable resource for GPI. For instance, Massey University is presently managing the project for the Ministry of the Environment to produce environmental GPIs. Many of the other academic institutions can be engaged for this purpose to cover the social, economic and cultural dimensions. Identifying in which institutions the skills and interest lie is a first step.

Answer 5 – Comparability, Integration, and Full-cost Accounting

The Practitioner Network can develop these capacities and offer a most valued resource to local governments engaged in the development of GPI to ensure comparability across regions and integration between the many different facets of genuine progress. Full-cost accounting helps to put monetary terms to the many different facets, both tangible and intangible to get a better appreciation of the full picture. These factors enable the orthodox view of economic growth solely dependent on GDP to be challenged and transformed – a prerequisite for societal change toward a better society for our children and our children’s children.

Answer 6 – International Comparability Model

The universal use of the GDP and the development of a national set of accounts have been a most remarkable global development over the years. Every nation builds its monetary accounting systems on this foundation. The universal appeal comes from the level of agreement on how the GDP is measured and what it means.

This is a worthy model to emulate in the global development of the GPI. In order for it to be sufficiently robust there must be common objectives, a common language, and common approach to conducting the research. This of course is challenging because of language and cultural differences. It just requires vision and commitment.

It is therefore suggested that New Zealand could host an international workshop that engages 6-8 countries that are presently prepared to explore the territory. Setting aside 2-3 weeks in an isolated location, these committed experts could develop a research model to be used in each of the countries. One of the tasks would be to review survey questions from the 6-8 countries to ensure the key questions are asked in the same way to produce internationally comparable results and that the experts should recommend a core set of common and comparable indicators that will be used internationally. An international conference sponsored by New Zealand could be staged subsequently using the outcomes of the working group as the agenda for the conference. This might fast track political will towards action. This could be quite congruent with the work the OECD is doing in this area.

At this point opening up the Practitioners Network to engage international experts would be most helpful. Attracting international involvement can solidify New Zealand’s commitment to being a GPI global leader. The work could then move from local government pilots to a full national set of accounts supported fully by Government.

Conclusions and Recommendations

It is concluded that having a goal of developing an integrating and comparable system of accounts based on Genuine Progress Indicators is possible and desirable. The benefits to New Zealand can be immense, giving us a measurement tool that challenges the misuse of present indicators and enabling us to have a policy tool that will benefit our social, cultural, economic and environmental performance as a nation. This policy tool could in turn be communicated to the general public.

Application at the level of Local Government is a logical first step, by establishing pilots across the country – with Wellington already committed and possible interest in Auckland, Christchurch and Nelson / Tasman. These projects can be properly resourced by Government and academic institutions. These in turn can precede the development of national GPI indicators which would integrate much of the work already in process in New Zealand.

The development process will take time but is worthy of early commitment to enable the required steps to be planned and implemented. Six steps to catalyse New Zealand are recommended as a course of action together with monitoring closely the work being developed overseas.

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