True Value Accounting for Everything in the Socio-Enviro-Economic System

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At the present time, in the first quarter of the 21st century, we are blessed with amazing knowledge in science and technology, much of which is knowledge that has emerged from basic research over the past few decades. Many very good things have happened in the last 100 years, but the progress of people in terms of happiness and quality of life is quite modest relative to the amazing progress of technology as regards its power and capacity to compute. The inequitable sharing of the valueadd from investment in technology has resulted in almost all the benefit of productivity and profit flowing to owners with much less going to the support of society and the maintenance of the environment.

Widely accepted principles for corporate double entry accountancy and reporting have a long history going back some 800 years (400+ years since the concepts were famously written about by Luca Pacioli, a Franciscan friar and collaborator of Leonardo da Vinci in 1494). These fundamental concepts have stood the test of time and are very powerful and are used at the core of every corporate management information system. The prevailing accountancy ecosystem comprises corporate accounting systems, related management information systems, regulatory agencies, and financial analysts as well as an accounting profession that was established in the 19th century to help ensure that corporate reporting was honest and useful for investors. The use of corporate 'audits' has continued to the present time.

Money as a medium of exchange has a very long history going back several thousand years and money has also been used as a store of value. The nature of money has changed significantly over time, usually in ways that have been to the benefit of the people in power. For most of history, money had a tangible value, with coins being made of durable valuable metals like gold, silver or copper. For convenience paper money representing promises to deliver tangible value (specie) became widely used as the industrial revolution progressed and the economy expanded. Eventually much more paper money was issued than was backed by the valuable metals and fiat money emerged. Today money is no longer a substance (precious metal) of value, nor even paper representing the metal, but simply an electronic entry in an accounting ledger. This is efficient, but is it to be trusted? The purchasing power of money has declined precipitously since the beginning of the last century.

Economics emerged as an area of philsophical study in the 18th century. One of the early thought leaders, Adam Smith, wrote extensivley and in 1776 published 'The Wealth of Nations' which is still quoted widely to justify the wisdom of a market driven economy no matter that the global economy 250 years later is very different. Economists have created a role for themselves as advisers to policy makers based largely on the idea that study of the past and relevant modelling enables prediction of the future and effective selection of optimum policy options. Over the past 50 years econometrics has been

used to model profit improvement and stock market wealth creation without taking into consideration the impact on social progress and environmental sustainability which are almost totally ignored.

In parallel with the modern industrial revolution, during the past few hundred years a money and finance ecosystem has emerged that has enabled social, economic and technical innovation to be funded at scale. Banks are part of this ecosystem together with capital markets and innovations like the joint-stock company. This ecosystem relies on the metrics of money accountancy.

During the past 50 years, in mature economies there has been enormous growth in the wealth of those who are owners and almost no growth in the wealth of those who work for a living. Stock market financial wealth goes up while quality of life for the majority of the population goes down. The problem of inequality has been recognised, but policy options to address the problem are incoherent in large part because they are based on inadequate metrics and limited understanding of how the modern socio-enviro-economic system works.

True Value Accounting (TVA) ... Multi Dimension Impact Accounting (MDIA) ... is not only about accounting for money transactions and their impact on financial capital but also to account for how economic processes impact people and nature. In TVA there is accounting for what a simple economic transaction does to impact ALL the capital of the complete socio-enviro-economic system. It is often said that you manage what you measure, and it is also said that if you want to change the way a game is played, change the way the game is scored. TVA/MDIA is being designed to change the way accounting is done so that all aspects of the socio-enviro-economic system are included in the scorekeeping.

Using conventional accounting, financial analysis and portfolio planning it has been relatively easy to maximize the growth of financial capital, however, conventional accounting and the related analysis ignores depletion of social and human capital and ignores the degradation of natural capital in all its forms. The problem is aggravated by the widespread use of GDP as a proxy measure for the health of the economy as a whole including the social and environmental dimensions which in fact are ignored.

TVA/MDIA sets out to change decision making behavior by changing the way the accounting is done.

In TVA/MDIA there a several different UNITS OF ACCOUNT. Instead of accounting simply using money as the unit of account, there are separate units of account to reflect changes in each of the capitals. In earlier versions of the framework reference has been made to metrics / measurements / values / numbering / etc. but by thinking of these as UNITS OF ACCOUNT, it becomes easier to bring conventional accounting and TVA/MDIA closer together. In conventional accounting there are already a lot of generally acceptable rules and principles associated with MULTI-CURRENCY ACCOUNTING and how the presentations change depending on the ways EXCHANGE RATES change.

So in the TVA/MDIA data architecture there are these UNITS OF ACCOUNT associated with multiple capitals:
..... there is MONEY
..... one for each CURRENCY
..... there are units of account for PEOPLE

..... one for LIFE ITSELF
..... one for QUALITY OF LIFE (perhaps with further sub-divisions)
..... there are several units of account for NATURE
..... one for LAND
..... one for WATER
..... one for AIR
..... one for Carbon/GHG/Climate
..... one for BIO-DIVERSITY
..... one for ECOSYSTEM SERVICES
..... one for RESOURCE DEPLETION

Note that in TVA/MDIA it is relatively unimportant how the multiple capitals are segmented and labeled, what is important is that in total the capitals reflect the complete socio-enviro-economic system rather than simply one little piece of the complete system which is what we have had using conventional accounting and Financial Capital in the past.

In the TVA data architecture there are multiple PERSPECTIVES. These might also be thought of as different REPORTING ENTITIES.
..... PEOPLE
..... PLACE
..... ORGANIZATION
..... PROCESS
..... PRODUCT

In conventional accounting and financial analysis of the ORGANIZATION there is a lot of thinking about COST and PRICE in order to generate PROFIT and improve the stock market value of the company.

A first step is to think in terns of COST, PRICE and VALUE. VALUE and PRICE are the determinants of the buy or not-to-buy decision. However, in prevailing decision making the IMPACT on PEOPLE and PLANET is ignored, with PRICE only representing the FINANCIAL dimension of the IMPACT. There needs to be a complete accounting for ALL the UNITS OF ACCOUNT for everything that is flowing through the system.

Another thing to think about is the relationship between an OPERATING STATEMENT or PROFIT and LOSS ACCOUNT, and a BALANCE SHEET. These reports describe both the FLOW or ACTIVITY and the STATE in a very succinct way. In conventional accounting this is only about the MONEY UNIT OF MEASURE. In TVA this is expanded to reflect ALL the UNITS OF MEASURE.

Every REPORTING ENTITY has a HISTORY that is reflected in the BEGINNING STATE or BALANCE SHEET of the ENTITY and its ACTIVITIES are reflected in the OPERATING STATEMENT for the ENTITY. The ACTIVITIES of the ENTITY result in an ENDING BALANCE SHEET.

PROFIT is the MONEY measure of PROGRESS for the ENTITY and is the CHANGE in the MONEY BALANCE SHEET from the beginning to the end of the period.

In TVA the PROGRESS is determined by the CHANGE in the BALANCE SHEETS for ALL the UNITS OF MEASURE for the ENTITY from the beginning to the end of the period.

The good news is I learned a lot ... not least is that we need a PEOPLE focused socio-enviro-economic management information system that also has a data architecture that works for NATURAL CAPITAL in all its forms and for everything else that has been put together ... something I call PEOPLE BUILT SYSTEMS which comprise our FINANCIAL CAPITAL system, all the PHYSICAL CAPITAL systems and structures, and INTANGIBLE CAPITAL that comprises enabling environments, laws, governance, knowledge, institutions, etc etc.

PEOPLE are the central focus, and they live in a PLACE, and they work in an ORGANIZATION, and they use PRODUCTS to support their QUALITY OF LIFE.

NATURE supports everything. All FINANCIAL WEALTH has its origins with NATURE, and all PHYSICAL CAPITAL has been transformed in some ways (PROCESSES) from NATURE.

PRODUCTS flow through a supply chain (I prefer a supply stream) accumulating their own profile (cumulated balance sheet, if you will) going from process to process, from organization to organization, from place to place and eventually are the buy or not to buy decision for PEOPLE in support of their quality of life.

PROCESS needs to be better understood ... the goal needs to be not so much to have a profitable process, but a process that is efficient from the point of view of impact on both society and the environment. The United States has some very profitable processes, but at the same time some of the most inefficient in terms of social and environmental impact.

ORGANIZATIONS already have very powerful accounting for all their money transactions and related reporting. There are rapidly growing efforts to improve the reporting around social (CSR, ESG, etc) and environmental (IR, GRI, etc) matters, but in general these systems are not accounting but something far less rigorous. My goal is to get to a system that is based on standard impact profiles rather like standard costs that flow through impact accounts.

PLACE is where PEOPLE live and everything else happens. The QUALITY OF LIFE for PEOPLE is the most important characteristic of a PLACE while doing the least amount of damage to the ENVIRONMENT / NATURAL CAPITAL. All sorts of PEOPLE BUILT SYSTEMS are required to support QUALITY OF LIFE and all sorts of PRODUCT flows.

So ... the big question! What is going to be the best way to get information about a PLACE so that better decisions can be made for the benefit of the PLACE and the PEOPLE in the PLACE. How should information be collected? How should information be stored? How should information be used? The good news is that technology is a whole lot more powerful than when I first installed a mainframe computer in 1967 .. 4K of memory and the size of a Starbucks coffee shop. At this point technology does not seem to be the constraint, but much more my own capacity to know what to can do and how to

do it. I really do not have much interest in data per se, but a deep interest in what can do to help make better decisions.