MEANINGFUL METRICS FOR A SMART SOCIETY

The Basic Concepts of True Value Metrics

CHAPTER 5
STATE, PROGRESS AND PERFORMANCE

DISCUSSION DRAFT
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Chapter 5-1

State

A Balance Sheet Shows State

Facts at a specific moment in time

Core piece of the double entry construct

The balance sheet has been a core piece of financial accounting and reporting for a very long time … it is part of the genius of accountancy and a big reason why accounting is such a powerful system of economic performance metrics. The balance sheet is a financial representation of the "state" of the reporting entity … it reports on the condition of the entity, whether an organization, a nation or a community.

> **If you do not know where you are, it is difficult to know where you are going!**

Money, value and community focus

The money balance sheet

The state of an organization is based largely on information reported in the balance sheet. A for-profit entity had assets, liabilities and the owner's equity … that is the investors' equity. Other entities have money balance sheets that reflect the assets and liabilities of the entity based on the money flows and the balances. In the main, the balances are merely a reflection of the aggregate cumulative money transactions.

The value balance sheet

The value balance sheet is a core piece of the TVM framework of metrics. Instead of the balance sheet being only about money in TVM the balance sheet is about the value of the entity … the present value of what the entity has done and will do for value in society.

Community focus

In the TVM framework, it is community rather than organization that is the primary focus of analysis and reporting. Community is a place where people live, and a place has truly long term if not perpetual existence.

> **Example of Okehampton in England**
>
> Facts about my own little home town of Okehampton in Devon, England are recorded in the Domesday Book compiled by William the Conqueror shortly after his invasion of England in 1066. The town did not grow much in almost 900 years!

The balance sheet of a community is the main analytical and reporting focus. The balance sheets of organizations, projects and other economic activities are subsidiary to the community … and are aggregated or consolidated into the community balance sheet.

Any entity that might use standard money accounting can just as well use the TVM methodology. The system works for all organizations whether or not they are for profit or not-for-profit, whether they are in the private sector or in the public sector, and whether or not they are large or small.

Balance sheet has assets and liabilities

A business balance sheet … a money accounting balance sheet … has assets and liabilities, all of which relate to money transactions of one sort or another. There are money accounting rules about how the assets and liabilities are recorded and included in the financial reporting.

A TVM value balance sheet has asset data representing good things in the community, and liabilities which are bad things in the community. The value balance sheet has much in common with a money accounting business balance sheet. The money accounting balance sheet has assets and liabilities about all the money elements of the community … and these are part of the value balance sheet. In addition the value balance sheet has data about elements that relate to quality of life and the latent potential of the reporting entity.

Assets

The resources of the community are an important part of the foundation for progress of the community. Though the community may not have a lot of money, there may be many other material resources, as well as the human resource that can be the driver of sustainable progress.

There are 7 main asset elements with both money and value dimensions:

1. Land ... natural resources;
2. Labor ... people, human resources;
3. Capital ... money, financial resources;
4. Physical capacity ... infrastructure, production capacity, organization;
5. Intellectual capacity … science and technology, know-how, enabling environment;
6. Organizational capacity; and
7. Governance and the enabling environment.

Value balance sheet starts with money balance sheet elements … but the quantification of the elements is not the same. TVM includes the value of the elements in the balance sheet as well as the cost

Liabilities

Constraints and "lack of" are treated as liabilities in the value balance sheet. While money liabilities have the same form in both money and value balance sheets, the value of activities and issues that constrain progress and performance of the community are the treated as value liabilities. The 7 liability elements mirror the value assets thus:

1. The lack of land ... natural resources;
2. The lack of labor ... people, human resources;
3. The lack of capital ... money, financial resources;
4. The lack of physical capacity ... infrastructure, production capacity, organization;
5. The lack of intellectual capacity … science and technology, know-how, enabling environment;
6. The lack of organizational capacity; and
7. The lack of governance and the enabling environment.

Constraints are liabilities in the value balance sheet. Constraints may be either an active limit on what progress may be achieved, or something passive like the lack of something that is critical. Examples of active constraints may be the enabling environment, the framework of law and insecurity. Examples of passive constraints may be lack of water, lack of money, lack of infrastructure, and so forth.

Elements of the Balance Sheet

Land … Natural resources

As assets

Land and natural resources have been important drivers of wealth creation … and in large part the history of wealth is also the history of natural resource exploitation. Natural resources in a community should be considered as important assets of the community. There are a host of issues associated with natural resources and their use for the benefit of the community. Many of these are constraints that impact the community and the opportunity of the community to make socio-economic progress.

1. Land is an important natural resource and frequently constrained as to use for the benefit of the community by ownership issues.
2. Forest and trees are important
3. Rivers and water are important
4. Minerals and energy resources are important
5. Wind and tide may have value

There are many different resources. In classical economics where agriculture and trade were the dominant economic activities, the resources needed for economic activity were identified as land, labor and capital. Modern economics builds on these ideas and the role of many intangibles is now taken into account in a more complete manner.

Liability is a lack of these things

A community is constrained when it does not have enough land and natural resources. A community may adapt … but it may not.

Labor … People / human resources

As assets

In money accounting, people are not part of the balance sheet, though their performance makes a huge difference in profit performance. In the TVM framework people are reported as the asset they are.

There has to be care in the handling of data about people which may be constrained by legal issues of one kind or another. Many facts about people may not be shared in the public space because of law and regulation.

People are very important. Especially in the community … without people there is no community. It is people that are the beneficiaries of quality of life and opportunity. People are also the source of labor, creative ideas and intangibles like friendship. People are family … and people are community! People are the most important resource in any place … way more important than money.

What value is a person? What value is education until it is part of a person's capacity. So also what is the value of good healthcare unless it is part of a person's capacity. And what value is a person unless there is opportunity to do something of value with the person's capacity! There are multiple attributes that go into building the value of people in society. The value of a person can be quantified based on the various attributes of the people and the community.

Sustainable socio-economic progress depends on people … human capacity and the human resource more than any other resource. In the end, the human resource is the one that will facilitate or constrain progress and performance. The key, therefore is to enable people to be the energy that drives socio-economic activity and the production of goods and services. In a modern society, it is people who get benefit, but it is also people who work to produce the benefit. A program that has people focus and has a dynamic that is people centric can be sustainable.

People define the needs … and people are the most important resource. When this is the thinking behind the way the planning is done, development becomes an investment with a return and not merely an expenditure. Modern economics recognizes the dual role of people … as people with needs … and as people that produce to satisfy needs. In other words, people are more than merely a factor of production, they are also the driver of demand.

Liability is a lack of these things

The lack of labor ... people, human resources is a constraint. The lack of labor is a liability … the lack of capacity in the population is a liability. If people are a valuable resource, the lack of people is a constraint and a liability. The constraints associated with the population are a function of matters like the history of nutrition and health, the history of education and the history of the community.

Capital … money and financial resources

As assets

Money resources are important. Money is needed to serve as a medium of exchange, and to some extent a store of value. But the biggest reason for money resources is to pay salaries and to pay bills and to be part of the broad money economy. Without money an organization has to close down or go into a dormant state. Good ideas disappear when there is not money to sustain a framework for the ideas to develop and perhaps flourish. Almost everything that is needed, whether goods or services must be paid for with money … or money equivalent.

Credit is a money equivalent, up to a point. The assumption is that money will be available in the future … and if this proves to be wrong, then the "credit" disappears.

Liability is a lack of these things

The lack of capital ... money, financial resources … and the lack of credit is a constraint and recorded as a liability

Physical capacity … buildings, infrastructure, etc.

As assets

There are two levels of value associated with buildings (1) the satisfaction of the basic need for shelter; and (2) the buildings needed to support quality of life and the productivity of society.

The basic need for shelter is very important in the present circumstance of Haiti. With as many as 250,000 housing units destroyed in the earthquake there is a very large need for basic shelter.

Many of the major commercial and governmental buildings have to be rebuilt

Roads and bridges determine the efficiency of transport.

Internet and telephone infrastructure determines the efficiency of communications

Various types of equipment determine productivity in the activities of the society

Working capital is part of this. Business activity needs working capital … inventory and the ability to finance trade transactions.

Liability is a lack of these things

The lack of physical capacity ... infrastructure, production capacity, organization … is a liability.

Knowhow … intellectual capacity

As assets

Science and technology … know-how

Know-how is a key enabler of progress. In fact it is the growth of knowledge over the past 200 years that has made it possible for global society to progress so rapidly. The growth in knowledge has been far more rapid than the growth in the application of knowledge. Worse, the application of knowledge has been for both bad and good.

Enabling environment: Governance, Rule of law

Liability is a lack of these things

The lack of intellectual capacity … science and technology, know-how, and an enabling environment are liabilities

Organizational capacity

As assets

Organizational capacity contributes to economic productivity. Organizational capacity has value … it is very important in making it possible for the economic activity of the community to be productive. Productive economic activity is surplus producing and helps a community progress.

An individual is very limited in what he or she can do alone … but when individuals work as a team all sorts of amazing things can get done. Organization is needed so that things can get done … and organizations are a way for organization to take place. It is organizations that do things, create jobs and make it possible for there to be progress.

Organization is needed to have productive activities. Most activities may be initiatives of the private sector … private organizations, and using private capital. In a functioning economy most activities are paid for by the beneficiaries of the activities.

Being organized is an asset. The challenge is to be organized so that there is a structure within which (1) there can be financing; (2) there can be wage employment; and, (3) there can be socio-economic value adding.

There are many legal forms that are possible … depending on the prevailing legal framework and the way the community wants to be organized or structured. From an accountant's perspective the key elements are: (1) the funding of working capital so that wages can be paid; (2) the balance sheet value improvement that results from the work done and the payment of wages; and, (3) the monetization of the value improvement so that the funds mobilized may be repaid or recirculated.

Liability is a lack of these things

Liability is the lack of organization … organizational capacity

Governance and the enabling environment

As assets

Governance is a matter that may facilitate the progress of a community or constrain it ... governance may therefore be an asset or a liability. Governance is an asset when it provides an enabling environment for progress ... otherwise it is a liability.

Money liabilities are amounts owed by the entity to others ... a fairly simple concept.

The concept of liability in value terms is more nuanced. Essentially a liability is a lack of an important asset needed to satisfy community needs.

Liability is a lack of these things

There are two ways in which constraints are manifested: (1) by specific things that stop activities or limit productivity; and, (2) by the lack of things that are needed to have productive activities in the community. Crime is a specific thing that stops activities and limits productivity. Lack of land, for example, constrains agricultural activity.

In TVM value accounting there is value in having the capacity to satisfy needs ... that is Tier 1 needs. Conversely there is a value liability when such capacity does not exist. The same analytical logic applies to all the types of capacity.

The lack of governance and enabling environment

Off Balance Sheet Items

The money accounting rules

The money accounting rules have been changed over time so that many important financial matters are routinely excluded from balance sheet reporting. This is a dangerous state of affairs brought about by "law based" money accountancy that allows wrong principled reporting to take place. It is very convenient for business organizations to be able to legally lie about the financial condition of the organization.

Unfunded pension liabilities are one of several major issues that are reported in a convenient way rather than in a complete and correct way. The leasing of capital assets is another one. There are others.

> **Off balance sheet leasing**
>
> The history of off-balance sheet leasing is an object lesson in the way financial managers sought to build capacity without being limited by traditional financial balance sheet constraints … but in the process were able to move from sensible to foolish without anyone being able to tell the difference. The rules were changed after it became clear that there was widespread abuse.

Contingent liabilities

But the concept is less clear when there is conditionality about what is to be paid and where the calculations are complex. Liabilities that might be very large when a set of conditions apply, but may not exist at all if other conditions apply create a huge risk for anyone relying on financial analysis of the entity.

> I was part of an investment group that almost acquired a shipbuilder in Florida. There was a good business plan and the future of the acquired organization looked good ... but there was one problem. The shipbuilder built mainly fishing trawlers, and there was the potential for a lawsuit related to one of the company's trawlers sinking in a storm in the Atlantic with loss of life. While all the normal insurance protections were in place ... there was a small possibility that there might be a counter-claim about a deficiency in design, or something along those lines. Even though several hundred vessels of this or similar design were in use ... this contingent liability was sufficient to stop this transaction from closing.

Risk

Change is a risk … and a poor community is likely to be risk averse for good reason. The matter of risk must be taken into consideration and risk managed appropriately.

It should be noted that “risk” is an issue that is almost totally ignored by the wealthy who one might say “self insure” and do not hurt when things go wrong … while the poor have to endure even more hardship when risks hit society, and they are caught up in the damage that ensues.

Chapter 5-2

Progress

Winning the Game! What Game?

More and more … of what?

So much of modern progress has merely been doing more and more of what, arguable, the world neither wants or needs. A huge effort has been expended in trying to create wants and needs … for not good reason.

The world has achieved an amazing capacity to produce … something never achieved before at any time in human history, but the metrics about socio-economics are pushing for production of all the wrong things … for things that produce profit and rarely if at all those things that would satisfy needs … be valuable, without being profitable.

The prevailing metrics are wrong most of the time, something that is terribly dangerous for the future of humankind andf the p[lanet.

Maximizing quality of life

In the money metrics construct winning is more and more of money and material goods … with quality of life assumed to improve with more and more of these things.

> **Keeping Score**
>
> In sports, scorekeepers keep score and the score tells which team it is that wins. Society is similar … with the present money metrics system of scoring, winning is about more and more money. In a value based society winning will be maximizing quality of life … the values that make life worth living.

TVM thinks of progress as winning the game … and maximizing quality of life. This is not a money construct but a value construct and way more complete as a system of metrics than mere money and money accounting that has changed rather little since it was devised in its modern form some 400 years ago. In TVM, progress … maximizing the quality of life … has a central role, just as profit has a central role in the business entity and the money metrics of capital markets.

Progress Is Balance Sheet Change

Corporate business accounting has well defined ways of computing profit for business. This definition of profit by Lord Benson over 60 years ago is very simple!

> In the 1950s, Henry Benson … a senior managing partner at Cooper Brothers in the UK was asked while testifying in a British High Court to define profit. After a short moment of reflection he replied “My Lord, a profit is the difference between two balance sheets”
>
> Henry Benson subsequently became Sir Henry Benson and later on Lord Benson. Cooper Brothers combined with Lybrand, Ross Bros and Montgomery of the United States to form the international firm of Coopers

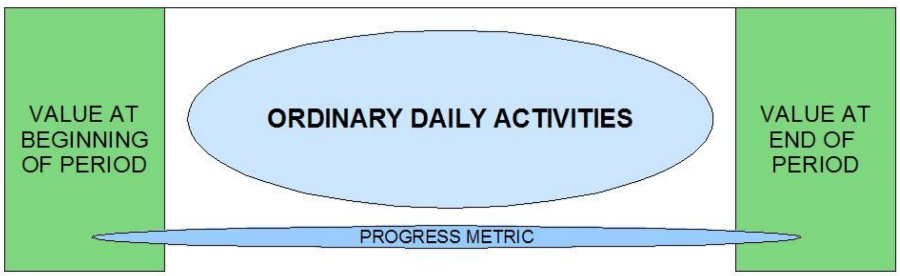
and Lybrand which in turn became a part of PriceWaterhouseCoopers PLC

This definition is one of the most elegant definitions about anything anywhere. It is such a contrast to the way profit gets defined in law and regulation … and the FASB standards and IASB standards, where different rules can be applied in a variety of different circumstances, and in the end, there is no certainty about anything.

How change in state shows progress

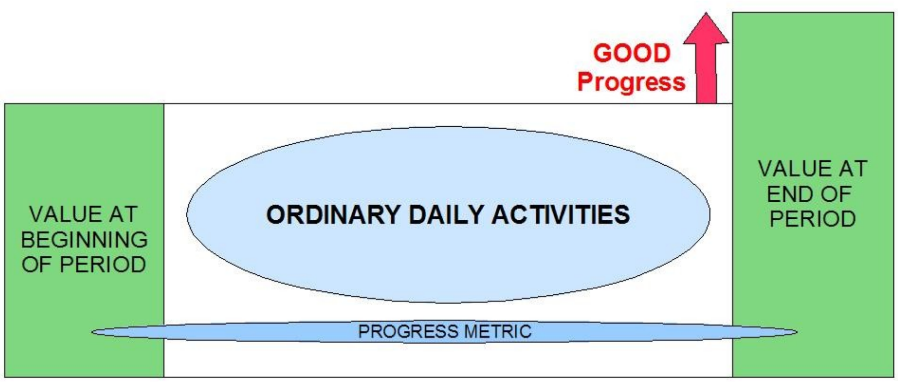
Simple balance sheet ... the steady state situation

In this image, the value of the community is the same at the end of a period as it was at the beginning ... ordinary daily activities produce what is consumed ... it is a stable steady state situation.

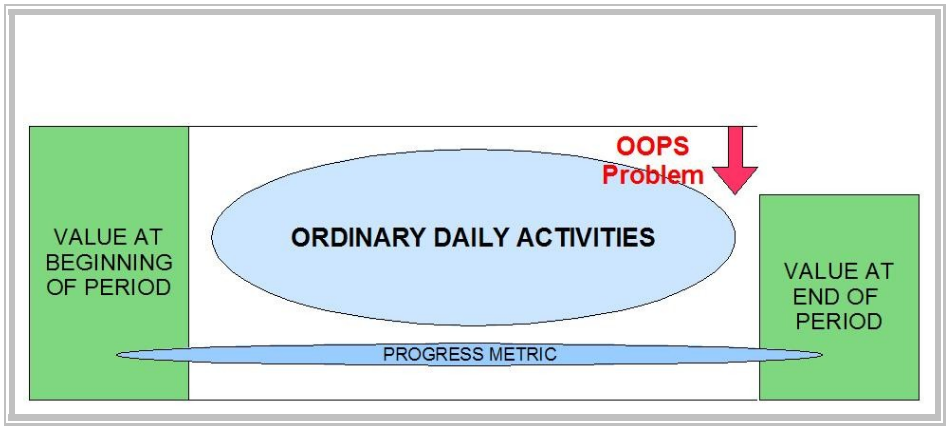


Balance sheet progress ... and regression

The steady state situation is unusual. What is normal is either progress or regression. In this next case the value of the community is more at the end of a period than at the beginning of the period ... ordinary daily activities produce more than is consumed.



In this last case the value of the community is the less at the end of a period than at the beginning of the period ... a problem because activities produce less than are consumed.



Progress … incremental value over time

Progress is incremental value … that is improved quality of life … improved social value that makes quality of life better.

Socio-economic value progress is one of the core metrics for a smart society … yet almost absent from the money related metrics used by the corporate community, capital markets and the broader society at the present time.

TVM has a community focus treating the community as the reporting entity. The rules for consolidating accounts apply as all the subsidiary units doing economic activities in the community are brought into account. TVM includes transactions that reflect value as well as the normal money transactions.

TVM is more accountancy than a statistical construct. The data are as simple as possible ... the transactions as small as possible, as many as possible and as clear as possible. Some of the value of TVM derives from how TVM can do accounting for community progress. In the following graphic ... the value of the community at the beginning of the period is the same as it is at the end of the period ... the community has gone about its business for the period, the time has gone by, but nothing has changed.

Data about the daily activities is not needed in the TVM system in order to be very clear about progress ... whether it is progress or problem. All that is needed is data about the value changes that have taken place from the beginning of the period to the end of the period as shown below.

Progress is about an improving quality of life … it is not merely having more profit or more growth, though these may be part of the assessment. In the TVM methodology the primary measure of progress is the value increment accruing to a society … the net of value consumed in the period and the value created during the period taking into consideration all the activities of the community. The framework for quantifying value transactions have some similarities with those of business accounting.

The three key datapoints in TVM are cost, price and value. Value is the key datapoint in measuring progress or problem. Cost is a function of and derivative of productivity and important in the analysis of activities. Price is important in money accounting and how value creation is allocated to different groups.

While value is important, it is also a complex datapoint because there may be an unlimited number of views of what the unit or measure of value is for any specific element. This has been embraced for some years now by capital markets as they have created more and more complex financial instruments ... maybe not all of them proving to have substance ... but the basic idea also works for TVM value, and in the case of TVM it has been combined also with standards also drawn from traditional corporate accounting. TVM refers to the unit of value as the CVU ... Common Value Unit. More than anything else, however, TVM is designed to be very practical, very simple, very low cost and very valuable.

Activity Produces Progress

Which changes the balance sheet

Resources are consumed

TVM considers activity as an event that consumes resources and creates outputs like goods, services and happiness. Where value creation exceeds value consumption there is value adding, otherwise value destruction.

TVM treats the period value adding aspect of economic activity in the balance sheet in exactly the same way that period profit is treated in a business balance sheet. The profit of business is the net of changes in all the assets and liabilities of the business balance sheet. Similarly the value adding of economic activities changes the value balance sheet.

The balance sheet concept applies at the level of the activity or of the community. The value balance sheet may be used also for organizations and for individuals or families. The most useful for the “management” and oversight of society and socio-economic performance is, however, the balance sheet of the community.

Value is created

When a resource is consumed in some activity, something is done. It is of interest to know what is done, but normally the objective is not to do something but to have something of value be created. Metrics about the amount of activity in relation to the resources used enables the calculation of cost efficiency … but it is the production of value that is more important and enables the calculation of cost effectiveness.

Where value creation exceeds the value consumption there is value adding … otherwise there is value destruction.

Value adding or destruction impacts balance sheet

Value adding or destruction impacts the balance sheet … the balance sheet of the activity and the balance sheet of the community.

A community balance sheet that incorporates elements of quality of life will change when value adding or value destruction activities take place in the community.

It should be noted that “off balance sheet” transactions are as wrong in TVM value accounting as they are in corporate accounting. The value balance sheet for a community is affected by all socio-economic activities that relate to the community.

Profit versus Value

A value balance sheet for a community that is host to large scale minerals extraction will quantify what it is losing in natural resource value compared to what the community is gaining in value such as employment and perhaps assistance with infrastructure, education, health, etc. TVM value chain analysis and value accounting relative to the business organization may indicate that the profit for the organization is substantial while there is offsetting value destruction for the community.

How can this be? And the answer is that business money profit accounting keeps value “off the balance sheet”! It can be argued that not having value metrics is important to the modern corporate community!

Intangible activity has impact

Policy improvement

There are many intangible activities that can change the value balance sheet of a community … and change it significantly and rapidly.

> **Impact of Policy Improvement**
>
> For example, improvement in the policy framework that expands economic opportunity changes the "value" of many of the community value assets associated with people. TVM enables the dynamic of exponential change to be recorded and be a part of the accountability of decision making.

Improvement in the way decisions are made about allocation of resources to value adding activities changes the value balance sheet. TVM makes explicit the relationship between tangible and intangible activities and value change even though these matters are not linear but multiple sets of complex exponential multipliers.

Security … crime

Security changes a lot … the value of security is high based on all the economic opportunity that exists when there is compared to when there is not. People need security in order to go about their daily lives and engage in socio-economic activities. A high crime neighborhood is associated with a poor quality of life!

Job opportunities

The "value" of a person is diminished when there are no job opportunities where a person may used their skills.

Organization

A place may have people and resources but nothing gets done and there is no progress. This is because there is no capacity for organization. Putting in place an framework of organization adds value to the community and enables resources to be used effectively to create the value for progress.

Chapter 5-3

Performance

Stats on the Game … But What Game?

Better and better quality of life

More and more and more is NOT the game!

The game is better and better quality of life … and the metrics of performance should have a focus on this. Better and better quality of life is the way this game needs to be scored, and the way the game is played. The "stats" should be all in support of this game. This is about social value as well as about business profit … it is about values in society as well as money and material wealth.

The dominant performance metrics are all about money and profit and economic growth based on more and more and more economic consumption. The end game for this system of metrics is a planet that no longer works to support humanity … but will appear "profitable" until it is "too late".

More and more growth is the prevailing metric! This is a dangerous situation … consumption growth and profits are the top metrics and a path that will ultimately … and maybe quite soon end up with global value destruction on an unimaginable scale.

The main metrics for global economic performance are large aggregates and averages about growth and capital market performance. These metrics have some importance in aggregate, but do not inform decision makers adequately. The measures used for global economic performance are interesting, but not very useful. They have connection with correlation … but do little or nothing to help with cause and effect and with making better decisions. TVM aims to change the mindset that economic performance is about more and more but is better when it is about improved quality of life for society.

Wealth

The driving force of modern market economics and capitalism is the simple idea that the pursuit of wealth is the best incentive for people to be fully engaged in activities that produce progress. There is no question that an economy based on this premise is better than one driven by egalitarian sharing of the product of enterprise … as in socialism or communism … but that does not mean that the capitalist market system works very well and is the best that can be devised.

Without an alternative measure of performance the capitalist market system is going to be "the best there is" … but based on true value metrics it is abundantly clear that something better is possible.

Building wealth by the exploitation of the poor is as old as history. There is nothing wrong with the creation of wealth … but there is a lot wrong when there is little progress out of poverty because it is the price being paid for the accumulation of wealth and its concentration in the corporate sector and among powerful individuals in the economic elite. Concentration of economic power was seen as detrimental to society in the era of the "robber barons", and the basic logic of the argument has not changed at all over the years.

Paradigm change

Not only a bigger pie … a better pie!

TVM is aiming for some paradigm change. In the TVM view, global economic performance is the aggregation of socio-economic performance in the individual communities. Progress and performance is a result of tangible activities at the community level … done by real people who understand the cause and effect of actions in their locality.

The history of economic performance has a lot to do with technology and productivity … and much less with issues like monetary and fiscal policy. Technology and productivity are the "changemakers" that enable the creation of wealth, while monetary and fiscal policy, and the framework of law merely reposition wealth among various constituencies in society.

The prevailing metrics suggest that the global economy has done very well when viewed from the luxury of society at the top of the socio-economic pyramid … but the performance of the global economy from the perspective of more than 4 billion people who are poor and hungry, the socio-economic performance is pathetic.

There are chronic problems with the socio-economic system and especially decision making and the allocation of resources and the accountability for resource use … and the prevailing system of metrics does little or nothing to help.

The singular incentive of money, power and profit has created a monster that is difficult to tame … but not impossible. Metrics are very powerful … but the metrics need to be about all the important things and not only about the money profit subset of metrics. There also need to be metrics about important social value matters, even though these are more difficult to quantify.

The way the modern socio-economic systems works is not merely inefficient, it is substantively dysfunctional. It does not have the capability to allocate resources to satisfy the real needs of billions of people, but puts resources into "creating" artificial need for people who already have more than enough for their well-being.

How do Heads of State become billionaires?

There is something very wrong with a socio-economic system where Heads of State in countries that are resource rich become money billionaires while the people of their countries remain in a chronic condition of poverty. This reflects decision making metrics that are money profit weighted with little or no attention to social values … or indeed basic moral values!

Money profit and value performance not the same … they are very different. The economic elite and major decision makers have become comfortable with profit measures that ignore all the value destruction in society that enables profit making at its maximum. The profit money accounting metrics are convenient … but fundamentally wrong.

Activity and impact are different as well … though many people doing academic studies and carrying out ORDA funded projects report mainly about the activities they have done rather than any impact these impact that may have been realized!

Two main measures

Efficiency

Cost efficiency is the simple idea of comparing the actual cost with what the cost should have been. This is a powerful way of getting control of operational performance. How much should it have cost to do what was done? TVM uses the basics of business cost accounting to get metrics about performance efficiency. The simple questions are (1) how much did it cost? and, (2) how much was done? With the answers about cost and how much done, it is possible to calculate the "unit cost" of the work done. Performance is not just an absolute metrics … it is also about how much is achieved compared to what could have been achieved.

So there is a third question (3) how much should have been done with this amount of cost? This is often done in the corporate environment using "standard costs" which are the expected cost for any specific activity.

Efficiency is a function of the difference between the actual costs and the standard costs. Alternatively, efficiency is the difference between what was done relative to what should have been done. Cost efficiency is the simple idea that something should have cost X but in fact cost Y. The cost X is the cost that would be expected with a reasonably high level of performance efficiency ... usually calculated by reference to technical specifications, knowledge of the work to be done, and so on. The actual cost Y is what the accounting shows the item actually cost.

Knowing how much got done is pretty basic. Without knowing how much got done, there can be no oversight, control or accountability ... no inventory control ... no operational analysis ... in other words, without knowing how much got done, the whole process of management falls apart. With cost analysis it is possible to move on to evaluate whether or not the operations are efficient. One way of doing this is to compare what is being achieved with what should be achieved.

What it should have cost is a technical question. The cost that it should be can be calculated based on what needs to be done and the prevailing processes and costs. The cost in one place can be compared to costs in other places. The cost now can be compared to costs in a prior situation.

A standard cost is simply what something should cost based on technical considerations and the prevailing normal prices. A well done calculation of standard cost includes norms for efficiency and what would be usual in the usual setting. In the international context different standards may be used for different countries, and used for comparative analysis.

Why are costs kept secret?

The international relief and development community has been doing "relief and development" for upwards of 60 years. A corporate cost accounting mindset would have set the stage for this community to know quite clearly what things should cost ... but rather than being an "open book" with a full set of accessible standard costs, the cost of everything is treated rather like a "state secret" that will put the nation in danger. Underneath this secrecy ... costs are likely to be way too high and performance way too low ... and no transparency a must.

When there is a variance and costs are significantly higher than they "ought to be" there is almost always a reason. Frequently the reason is that the buyer and the seller ... people usually, but sometimes the institutions ... have some agreement that is not in the best interest of the groups that should be benefiting from the transaction. This is a common problem.

A public TVM database of standard costs will help to identify situations where costs are out of control or have been distorted by inappropriate transactions. A very simple database of costs will enable comparisons to be made ... and judgments made about where costs are out of line. Too low a cost may be an indicator of a problem just as much as too high a cost. Sometimes low cost is achieved by low quality ... and this might well have serious secondary effects.

> Low cost (price) drugs may be because a supplier is forgoing high profits ... which is good ... or it might be because the drugs being supplied are sub-standard and maybe dangerous ... which is bad.

Cost accounting measures performance efficiency. In TVM this is complemented with value accounting elements so that all the socio-economic value flows are taken into consideration.

Effectiveness

Effectiveness is different from efficiency. Effectiveness is a measure related to impact whole efficiency is only about the performance of the activity. A society will progress best when the socio-economic activities are both efficient and effective.

Performance is more than an absolute metrics … it is also about how much is being achieved compared to what should be achieved. Low performance has become the norm because the absolute measure of high performance is unknown to decision makers and their peers! A society progresses when its socio-economic activities are efficient and effective. TVM therefore incorporates cost accounting that measures performance efficiency and value accounting that is the basis of socio-economic productivity.

What progress for the money? In money accounting terms cost effectiveness is progress relative to the money used. What value adding for value consumed? In value accounting terms effectiveness is progress or value adding relative to the resources consumed.

Performance is about impact, not activity. A football game … American football, that is … is won when points are scored, not merely by having the players “in motion”. The amount of “activity” is merely motion, unless the motion results in some sort of impact.

Productivity measures in the main are broad indexes of relationships between for example the revenues of an industry with the payroll of the industry. This measure suggests that productivity is increased when there is more output for less input. But this measure ignores all the value impact associated with, for example, less payroll and therefore higher unemployment and its associated value destruction.

Chapter 5-4

Money Cost / Value Consumption

Money Cost Is Not Enough

Value consumption includes more

Money cost plus social costs

Value consumed is more than the financial costs. Value consumed reflects costs but also includes issues like the damage to the environment ... or the exploitation and consumption of natural resources that have taken millions of years to create as in the petroleum industry.

The consumption of value is a bigger idea than money cost. Many products have an impact on society that are not accounted for in money accounting transactions … and mostly these impacts are important.

In many situations it is possible to use money cost as a proxy for value consumption. This works acceptably well in small business, but does not work at all well in large scale integrated businesses and large complex businesses that trade across country borders and with many different products and services. Very large corporate organizations are now the dominant form of organization … and many are larger than many national economies!

Oil industry … incomplete costs

The oil industry is doing money accounting and reporting substantial profits which it shares with its stockholders. But value accounting shows that the true economic impact of oil extraction is very different because value accounting takes into account the fact of the depletion of the oil stocks in nature. Responsible full value accounting would call for some sort of very large provision to be made for this depletion so that society would not be "energy bankrupt" in the future.

What is this? In the case of the oil industry, the costs of crude oil production include payments made for royalties, licenses, etc, as well as the costs of exploration, drilling and extracting the oil from the oilfield, and shipping the product to refineries and to market ... but the costs do not take into account in any financial metric the depletion of the resource, and what it would take to replace this resource. This is a huge problem, because the resource being depleted has taken many millions of years to accumulate, and the replacement cost of this is completely missing from the accounting!

Whenever there is economic activity there is consumption of resources that translates into some value creation … which may be more than the consumption of value to create value adding or less in which case there is value destruction.

The consumption of value is a bigger idea than money cost. Many economic activities have impact than are not represented by any money transaction … but are nevertheless very important. In the following example from the oil industry the calculation of cost is only about the money costs, and totally ignores the value associated with the consumption of the natural resource:

What is the cost? … a simple question

Sometimes a secret … other times just “don't know”

Surprisingly, the answer to this question is rarely known. People who do not know how much things cost are not managers … they are not managing. For some reason, experts in community development … and in all sorts of social sector disciplines have little understanding of how much things should cost ... how much things do cost … and about the behavior of costs. This is an indictment of the experts and the whole of the international official relief and development assistance (ORDA) community … as well as a lot of government procurement work.

There was a time when managers in the business world knew a lot about what things cost … but this might have changed. Large parts of the private enterprise sector now also seem to know little about behavior of cost and value. This is difficult to explain politely, but it seems to be a result of poor understanding of the real world on the part of high level educators and the increasing subservience of accountancy and metrics to legal and mathematical constructs rather than technical and engineering realities.

How much did it cost … the money cost?

When cost is known, then a lot is known about performance. In modern society there is surprisingly little information about cost … much more about price.

Getting costing right is very important

I have done corporate cost accounting in many settings, and have become sensitive to the need for cost accounting to be relevant to the management issues at hand. In the 1970s Rolls Royce had very precise cost accounting … but the RB211 jet engine development went over cost estimates by hundreds of millions of dollars. Meanwhile, Pratt and Whitney had quite sloppy cost accounting, but knew much more accurately the executive information they needed to know.

Society does not need to have precise cost information, but there should be a good understanding of the underlying costs of everything and the way costs behave.

Knowing how much something costs is pretty basic. Understanding cost and cost behavior is central to the TVM system of metrics. It is appalling how little data about cost is reported, and how little information about cost is understood and appreciated by people with responsible jobs. Because there is so little understand of cost ... cost gets used to justify bad practice of all sorts.

Cost is very basic ... but even though it is a fundamental building block of analytical understanding, it is very rare that the data are presented clearly ... if at all.

Cost accounting is very well established inside corporate operations ... but little of this emerges into the public space. The level of public ignorance about costs ... and the behavior of costs is terrible low. Cost accounting is not particularly difficult ... it is not rocket science! It is facilitated when there are trained staff and there is accounting and MIS system that incorporates costing.

Cost accounting is painfully tedious and difficult when the record keeping is poorly designed and critical data not available. This is a reflection of management competence and priorities. As in many things, more and more does not mean better and better. It is very easy for cost accounting to produce massive amounts of data, and almost no usable information ... on the other hand, cost accounting data can save millions of dollars and produce success rather than failure.

> **The power of good cost information**
> Early in my career, I did an analysis of construction costs on a large pulp and paper mill project. After about three days of survey and analysis work and I was able to show that the contractors were spending twice what the budget allowed ... by my analysis they had spent 2% of the money and done just 1% of the work. My boss in the consulting firm took this up with the contractor ... a critical feedback piece of the process ... and a crew of 1,400 workers was reduced to just 700 starting next day! This was a cost plus contract. The savings to the owner were probably some $150 million in 1966 dollars!

There are two main ways to get at cost. One is to add up the detail, and the other is to drill down from the total. The best ... that is the most reliable ... cost data are obtained when both techniques are used and a similar result is obtained. Another important approach is simply to know the business and to keep eyes and ears open ... it is amazing how much useful information is circulating that helps to determine how much things cost.

Much cost analysis may be relatively easy and useful. What else is known? What are the wage rates of the people working for the organization. A single expatriate is expensive and not cost effective unless he/she is doing important valuable work.

What cost? … How much was done?

This is absolutely basic performance information. Every organization … every economic activity should have these key numbers every day, everywhere for everything. Most well managed corporate business organizations keep the money cost accounting for their activities along these lines and are able to manage their resources for profit maximization very well. But this is not true for most government programs, most not for profit organizations, and indeed for banks and financial sector institutions.

If the decision makers know what something cost, they are also likely to know what it should have cost. This is cost efficiency and important in the management and oversight of an activity.

Money costing is done using data from a money accounting system. The costs are the "expenditures" associated with any specific product or service … with the analysis done usually as an integrated part of the accounting system. All the elements of cost should be included in the cost.

Unit cost is the total cost divided by the number of units.

Without costing … anything goes!

Without costing … anything goes! This is a critical matter, because optimized performance requires that decisions are made with a good understanding of how much things cost … and how much things should have cost.

Knowledge is part of "internal control". Cost is part of a meaningful system of internal control and where it is missing it is difficult, if not impossible to manage.

When people who are responsible for something do not know what things should cost, and what they do cost, there is a huge problem. These people are being paid, and paid well, but they are not managing! This may be legal, but it is wrong and it opens the door to criminal gain for themselves or for others involved with the activity.

Missing cost information

The institutions of the official relief and development assistance (ORDA) community … World Bank, UN, NGOs, Bilateral government donors and philanthropies … have little or no institutional records of how much things have cost, nor what they should have cost. This is one of the important factors that has made possible the huge corruption and mismanagement of resources that has been seen over the years. Without cost information corruption is so much easier … and virtually unlimited in scale.

Procurement process … criminal intent

The World Bank has very comprehensive procedures for the oversight of procurement, its tendering process and the vetting of contracts … but, I would argue, it does not work … and has not worked for the best part of 70 years. It is essentially a legalistic process that is very cumbersome and fails to ask the very simple question at the start and at the end … at the start, are the contractors offering value for money, and at the end, did they offer value for money. If there is value for money … there is no room for corruption. However, nobody will ever have the answers to these questions if people do not know what things "should" cost and what things "do" cost … and mostly there is no interest in finding out these things.

Government procurement at all levels is frequently compromised. Part of this is because the procurement process is wrong, and part of this is because people do not follow the rules and go about making benefit for themselves.

MTA procurement in New York

What went wrong is not clear … but the escalators at the relatively new subway station at 63rd and Lexington Avenue on the F line are always breaking down. It is a deep station with five banks of escalators from the street to the subway platform level. Almost always one or two are not working … waiting on repair or being repaired. Some time back, I grumbled to one of the maintenance mechanics who laughed at me … with good reason. He pointed out that the elevators were rated for light duty applications, inside a department store, for example … not for 24/7 use in a transport environment. These are OTIS escalators … made by a US company with a good technical reputation that ought to know what it is doing. My guess is these escalators were bought using a public sector tendering process where the paperwork and legal form … not to mention bribery and kickbacks … were more important than value for money and good engineering. The tragedy for society is that there is almost no way to hold the responsible decision makers to account … maybe nothing was illegal, but the outcome is clearly rotten!

The analysis of big projects is often more about political benefit than economic benefit … especially when there are public funds involved.

Port Authority of New York and New Jersey

The Port Authority of New York and New Jersey jointly operate some services associated with transport and crossing the Hudson River between New York and New Jersey … services used every day by many people. They do not seem to be very good at cost accounting … certainly not at the higher levels where big decisions get made. The performance of their infrastructure and services affects the commute of millions of people … and the costs have never (it would seem) been optimized.

The Port Authority Bus Terminal in Manhattan (New York) was rebuilt in recent years … but in spite of a dedicated bus lane, buses crawl for several miles to reach the terminal at a huge cost in bus operating cost and in passenger travel time. A much more cost effective approach would have been a new transfer station from bus to subway on the New Jersey side of the Hudson River.

The analysis of this is pretty clear using the TVM approach … less so using typical government and public sector accounting where the distinction between capital costs and operating costs becomes blurred. High speed high capacity subway service from the Meadowlands area in New Jersey to the existing subway network of New York City would have improved the transports connections measurably. What was done helped at the margin … but not for very long and not by very much.

Original analysis done in early 1980s for the DeCamp Bus Riders Association

Elements

Elements of both cost and value consumption

The following elements comprise the money or financial dimension of costs … together with the complementary value aspect. All the cost elements have a value dimension which is sometimes more significant than the money aspect.

1. People cost … with a value dimension that is huge;
2. Material cost … consumption of value;
3. Land, facilities and equipment cost
4. Operating overhead cost
5. Admin and general overhead cost
6. Financial costs

In the TBM/TVM system there in addition these value elements of cost that do not figure in the money costing system:

1. Profit as a cost
2. Off balance sheet elements
3. Cost of external constraints

Data about elements of cost are important because the elements change in different ways ... have different behaviors ... and create different impact on the community because of their associated value chain.

The purpose of data in the TVM environment is to have data to understand ... and to use this understanding to improve decision making and the quality of life!

People cost

People cost depends on (1) how many people and what skills and job types; (2) the wage rates for each group; (3) the benefit costs associated with each group. The costing is complicated by matters such as training and the use of consultants and service contractors instead of direct paid staff.

People costs vary enormously depending on the mix of local and international staff. Local staff are usually paid much less than international staff. There might be a cost offset to the extent that international staff can do some work more efficiently than local staff due to their knowledge, training and experience.

A profile of salary and wage rates together with present benefits and future cost and benefit commitments, shows a lot about the role of the people dimension in the performance of society and quality of life.

But people cost is also associated with a complex set of value flows. These value flows are critically important in any modern economy, but completely ignored in most financial and economic analysis, or at least only considered in a very superficial manner. Economists use the multiplier concept which comes about in part because of these value flows … but financial reporting includes on the simple money cost.

The value flows start with the value of a person getting remunerated, and how this impact the individual and the family … and in turn how the family money then gets used in the broader economy to pay for things that the family needs … or the family wants.

In turn employment and employment opportunities have an impact on the general quality of life in the community … in improving aspects of quality of life like reduced stress and comfort from job security and financial security.

Material cost

Material costs are a function of a bill of material and the purchase price of the materials. Technical production factors like the scrap factor should be included so that material costs reflect reality. Many production processes require considerably more raw material inputs than there is output because of process losses (in machining, in casting, etc.).

The value flow associated with materials may be positive or it may be negative. The factors are complex. Converting a low value raw material into a high value product using labor and equipment may be a value creating activity for the community … though it may not be. The full value chain for the materials needs to be understood and taken into consideration … as for example when sourcing raw material is associated with obscene levels of toxic waste.

In money profit accounting, the full consumption of value is usually ignored with the effect of overstating profit returns … in some cases by obscene amounts. For example, in the extractive industries the money profit accounting costs only include the money expenditures associated with the extraction … the fact that the materials being extracted no longer exist is not part of the accounting. This is very convenient because the value consumption associated with the materials no longer existing is enormous … and avoided using the excuse that the valuation is subjective and difficult to quantify.

The value flows associated with materials are a critical part of understanding business performance … and community performance.

Land, facilities and equipment cost

In money accounting, land is thought of as a non-depreciating asset … but it is an element in the balance sheet that may have an impact on value performance of both community and the organization. Land is potentially a way to progress, or may be a constraint on performance.

Equipment costs do not behave in a simple way, and care must be taken in costing equipment use appropriately. In many cases, the cost of using equipment may be expressed as a "cost per machine-hour". Some of the characteristics that must be taken into consideration include (1) the life of the equipment in elapsed time; (2) the life of the equipment based on usage; (3) the utilization of the equipment in any given period; (4) the costs associated with running the equipment such as fuel and maintenance; (5) the cost of periodic major maintenance, etc.

For the community or society the infrastructure is part of this section … and the cost associated with an infrastructure that is highly efficient or very inefficient.

The analysis of big projects is often more about political benefit than economic benefit … especially when there are public funds involved.

Congestion Pricing … or Congestion Costing

New York City tried to introduce congestion pricing in order to reduce congestion in the center of the city … perhaps quite a good idea. The citizenry did not want to [pay the price! But the day to day reality is that everyone is experiencing the costs of congestion every time they try to move through the city. Taking an hour to go somewhere that should take 5 minutes is a very real cost … but not in any accounting!

Depreciation is a part of the cost framework. It is a concept that is derived from the economic life of an asset ... and in this context has nothing to do with tax law and allowable write-offs. The aim of depreciation is simply to relate the cost of using an asset to the activities the asset is used for. If an asset has a three year life, and is used most of the time, each of the year periods should be charged one third of the capital cost. This would give a reasonable result. On the other some equipment has a life that depends on how much it is used (for example, an aircraft). If some equipment has a useful life of (say) 50,000 hours, the hourly cost can be computed and the asset charged to the activity for each hour it is used.

Maintenance is a potentially important part of the cost of the use of equipment and facilities.

Operating overhead cost

Operating overhead costs are costs associated with the supervision and management of operations. They are made up of elements of cost (1), (2) and (3) above, and allocated to specific units of activity. TVM tries to include data about operating overhead cost in the analysis because the productivity of many work activities depends on the effectiveness of the workers at the lowest levels, and this requires good supervision and on the job real time intervention.

Financial costs

Cost of capital employed is the cost of using fixed and working capital. It is calculated by reference to the investment made in equipment, buildings vehicles, etc (fixed assets) and the investment needed for material inventory, work in progress and finished goods, receivables and cash (working capital) that are used for specific activities.

The calculation uses a cost of capital rate that varies depending on the ownership structure of the operation and the goals of this ownership. The cost to "rent" capital may vary from 2% to in excess of 200% per annum. This has become one of the most expensive aspects of modern capital market capitalism.

Admin and general overhead cost

The general overhead cost is similar to operating overhead. It is made up of the same elements and allocated to operating activities o a basis that reasonably reflects the structure of the organizations and activities.

Cost is a key metric ... while it is usually the subject of intense analysis within an organization, it is difficult for the public to get access to cost information. In the corporate for profit business, reducing cost is a way to increase profit ...other things remaining the same. Little is put into the public domain about costs ... but cost is a critical part of performance metrics both for determining money profit and also socio-economic performance.

Profit as a cost

One of the biggest elements of cost in modern business is the cost of capital ... which is essentially the idea that profit becomes an essential part of the cost of product or service. In a system where the computation of (corporate) value is a function of the level of profit and the growth of profit ... then the profit behaves more like a cost than merely being the derivative of corporate performance.

Ex factory cost only 20% of price

I have been told that the cost of distribution is more than 80% of the price … which makes one think. How much, one wonders is the profit in the distribution … and high salaries for people who sit on top of these channels. Moving goods and services from place to place should not be so costly … seems we would be better placed if more goods and services originated locally with high ex-factory prices and maybe less channel cost and less profit at every turn. My guess is that this will happen in time, but because low wage exploitation is ending and not for any other reason!

Missing unfunded from the balance sheet

One of the problems with the modern balance sheet is that "by law" it is possible to exclude important economic and business realities from the balance sheet. This makes it difficult to know what is going on "in reality" compared to what is being reported. In turn this means that the profits are distorted and the funding of important future obligations does not get done in a timely manner.

Risk is another issue where accounting rules are inadequate so that risk may be ignored in balance sheet reporting. The mathematics of risk do not easily translate into accounting because of the incredibly imprecise quantification of the cost of disaster when the disaster is big. There is no linear relationship between the small risk and big risk … there are multiple exponentially related factors which produce the potential for out of control failure of society when not taken into consideration and planned for! In turn this means that profits are not charged for the cost of risk in the period and risk is left unfunded.

External constraints are something that have to be quantified and included in the balance sheet reporting for a community. Doing everything right and not getting any benefit from this may be a function of external constraints that should be in the analysis. A framework of governance that works or not is an example of an external constraint that should be accounted for.

Chapter 5-5

Money Revenue / Value Creation

Money Revenue is Not Enough

Value creation is important also

For business … more and more revenue

Revenue is a big driver of corporate performance and economic metrics like GDP. Revenue is a derivative of price and affected also by aggregate demand and the specifics of the product or service.

However, revenue does not correlate at all well with value creation. Much of the revenue proposition ends up being zero sum and value neutral … or worse.

To illustrate this idea … when an affluent person who has many pairs of shoes buys another pair of shoes there is an exchange of money and an increment to revenues, but rather little or nothing changes in terms of the quality of life of the shoe owner. In money terms the business accounting shows revenue and profit increase together with asset cash up and asset stock down.

When a poor person who has no shoes gets a pair of shoes, the economic value proposition is very different. Quality of life for the poor person is substantially enhanced and the value increment is positive. What happens in the shoe supplier business, however, may not be money profit positive … in fact there may well be a money loss. In TVM the money loss to the business and the value adding to the beneficiary … to society … are taken together. In TVM, a business that has an activity that runs at a money loss while producing a social value should be judged on both the money dimension and the value dimension together.

For society … value creation

In money profit accounting the creation of value is usually excluded from the accounts. This makes money profit accounting easier to understand, but it creates a serious flaw in the way markets perceive corporate performance. In the prevailing money profit reporting of performance, high profits doing nothing of social good are preferred over lower profits that include value creating activities that produce enormous social good.

In the case of social sectors like education, the money profit accounting associates education with costs in a systemic way, but does nothing to associate the value creation of education with these costs. In the case of health … the value of good health is not included in any money profit accounting system, while costs are accounted for rigorously.

Value creation happens when existing resources are used and something of more value than the resources used is created. In corporate accounting profit is revenue less cost ... in TVM, value creation is the resultant value less the value consumed.

Emerging new metrics

Many attempts have been made to introduce more comprehensive metrics with little success. Most of the attempts are either refinements of GAAP accounting to get more detailed reporting or attempts to have specific measures to suit some specialized area of society. It is unlikely that TVM is unique, but it may be because (1) it uses a framework that originated as an accounting construct; (2) it does the accounting with money and value; and (3) it has the community as the primary reporting entity with everything else subsidiary to this.

In the area of Corporate Social Responsibility (CSR) attempts are being made to present corporate activities favorably with respect to impact on society. The idea is good … but it is difficult to give CSR much credibility without relevant metrics. Corporate CSR units do not have metrics that have anything like the same power as the money revenue metrics of the business organization. Deployment of TVM has the ability to change this.

More on price

Revenue is a function of price … and price data are among the most prevalent, and also very interesting. Prices are very much suited to time series analysis. Time series of prices are simple, clear and powerful. There is a lot that may be learned from the study of prices.

Prices ... 30 years by month

As a new CFO in the fishing industry ... a major producer of marketer of shrimp worldwide ... I made a very simple plot of prices of shrimp in the New York market month by month over a period of nearly thirty years .. from 1946 to 1974. By doing this I gained a deep perspective of the shrimp industry that was better than most people had and enabled me to interpret the history of the industry very well. Because of this I was able to make robust predictions of how the oil shock turmoil of the 1970s would impact our company and arrange to position the company for success.

Organizations like the World Bank and the United Nations that are engaged in economic development initiatives … not to mention the IMF … have much data about prices but they are not good at using the data for good decision making. They seem to have an academic view of the data rather than understanding the data as it evolves in real world markets.

This is an example of price analysis from Kuwait

How can this be explained?

How can one organization selling in a fish market have average prices almost 25% higher than the prevailing average prices of the market as a whole … not just once or twice but every day for years?

I did a small study of market activity throughout the day and noted that on some days prices increased towards the end of the day, and on other days the prices declined. The organization is question had a cold store … and when prices started declining, they stopped selling and waited till the next day. Most others in the market did not have this option!

Kuwait fish market study for Kuwait Institute of Scientific Research

Prices can be an important part of value chain analysis. Knowledge of prices in different markets is a way to understand something of the source of profit in the value chain. Price is related to revenue and profit … which in turn is linked to the implementing organization and the identity of the profiting beneficiary. While the value chain for the item throws off certain value information … secondary value chains associated with each element of the value chain adds another level of interesting complexity … specifically the labor and remuneration which becomes buying power to satisfy needs, and purchases of local goods and services which also produces a multiplier impact in the place where the activities are located.

Behavior in the value construct

Missing value creation

The computation of Gross Domestic Product is a terrible hodge-podge … surprising for such a widely used metric. It mixes costs and products depending on convenience … not to mention consumption and production. It is a mess. The only advantage it has is its longevity and its consistency … albeit wrong and really quite stupid.

There has to be a better way … TVM could be a much better way.

Good health is product … medical bills are cost

The cost of medical care in an society like the United States is high … projected soon to be 17% of GDP. With conventional GDP calculations it will go higher and higher as the country becomes more and more obese and more and more in need of medical care. This is the growth that the USA can look forward to … and metrics that encourage this. The TVM paradigm shift treats good health as the product … a value in society … and the costs of medical care as a consumption of value. Bad health is a value reduction from good health. Cure is a value creation. Low cost cures are likely to be value adding … high cost medical procedures with dubious health improvement impact are likely to be value destruction.

Win-win value creation

Value creation may be a result of the consumption of value resources … or value creation may be something that does not have any associated value consumption. Value creation may be costly in terms of resources consumed, or not. There are many examples of value creation that are pure win-win.

No cost … but big value

A polite society is derived from people behaving nicely … something that has no material cost, nor any consumption of value … but does have a significant value outcome.

Ubiquitous value eradication

Value eradication takes place very easily … civil society is not as firmly entrenched as maybe we think, and not as strong as we would like.

Value eradication when crime goes up

People like to be safe. It is a big part of quality of life and badly affected when crime goes up. One criminal can have a big impact on quality of life … the whole population of the community is affected by the acts of a single person. Police are expensive … but when the police keep crime down they are a lot more value effective than when police costs are reduced and crime is up.

Many aspects of society have money costs and value impact. Police, fire and other emergency services come to mind. Other elements of society that have important value impact are things like infrastructure for transport, water supply and sewage treatment, electricity, telephone and Internet.

A large amount of modern wealth is derived … no pun intended … from all sorts of derivatives associated with capital and other markets. Families are money wealthier because the value … actually the money price … of their house has increased since when it was purchased. Stock market investments go up and down … money wealth fluctuates all the time.

Stock market … profit and value questions

The stock market has the appearance of creating wealth. An investor buys some stock for $10,000 and a short time later the price has increased so the investor can sell the same stock for $20,000. What are the money accounting and value accounting elements in this?

In money terms, the investor has more money. There is a money profit. In money terms there is someone who has paid $20,000 for something that only a little time ago was only priced at $10,000. In money terms there is also an investor that sold for $10,000 and perhaps now could still have been the owner and sold for $20,000. In other words, in money terms, all that is happening is that there is a wash and really no added profit is coming out of the whole set of transactions. There is only a wealth increment when one looks at one out of the three investors involved … taken together the community is pretty much where it was at the start.

If the company has improved then maybe there is a real value increment.

Depending on the wealth and comfort levels of the various investors there may be net change in the quality of life of the three people … up or down or nothing.

What is going on with value wealth … is the quality of life getting better or worse. Money wealth is a component of quality of life … but in most families it may not be by any means the dominant piece. Happiness … friends … children … grandparents … connections … good health … access to education … job opportunities … safe neighborhood … low crime … reliable utilities … good services … all add up, and multiply, to build quality of life.

Chapter 5-6

Money Profit … Value Adding/Destruction

Money Profit Metric Inadequate

The value metric also important

What is value adding … value destruction?

The money profit metric is inadequate as a driver of decision making and the allocation of resources in the modern global economy. Return on investment … where return is all about money profit and money capital gain is not enough. Value adding … and the negative, value destruction … for society are also of critical importance especially in determining the way capital gets allocated to competing opportunities.

The TVM value metric does not replace profit but is complementary. Some of the time value adding parallels corporate profit, but not all the time. The efficiencies associated with realizing profit are also efficiencies that result in improved value adding … most of the time, but not always. The best outcome is where value adding and profit have the same profile and behavior … then very good decisions are going to get made with an outcome that is good for profit and good for society.

But not all profitable corporate activities end up with value adding … and there are places where there is value destruction. There should be as good metrics about the value dynamic as there are about corporate profit … and this is what TVM is all about!

Value metrics embrace quality of life

Community and society are important for quality of life … maybe more than the corporate organization. Family and friends … social interaction … are an important part of life, and the quality of life.

The corporate business plays a part … and other organizations, like government agencies, religious organizations, and so on … because they provide jobs, they provide goods and services, and they satisfy spiritual needs and so on. An organization can be a good employer and a good community citizen … or not. Value metrics makes this an objective matter.

Community is the analytical entity

In the prevailing global capitalist market economy, the business organization is most central to economic performance metrics, and especially the money profit performance of the corporate organization. In turn this drives valuations in capital markets with all that that implies.

TVM has the community as the primary analytical entity. People live in a community and this is where the level of quality of life if determined. This is where decisions get made that directly improve quality of life. Value metrics are related to all the issues that have impact on quality of life. State of the community reflects quality of life. Progress of community reflects value adding that is taking place.

Money Profit or Loss

What is profit?

Costs and prices determine profit … cost and price make it possible to calculate margins and profits ... and this is what is done in normal corporate accountancy and financial reporting. In modern financial reporting both cost and price are capable of being distorted so that the most favorable margins and profits are being reported ... something that professional accountancy was originally chartered to control.

Simply stated, money profit is the difference between cost and price. There are accounting rules about how cost and price are calculated, but in essence the difference between these two measures is profit.

The modern market based capitalist economy is based on the simple fundamental idea that profit is good, and market forces should result in allocation of resources to those activities that are capable of earning profits.

Compared to systems for allocating resources that are simply rule based and bureaucratic, the market system is good … but not good enough.

Communist system resource allocation

In the end, the communist system of an administered economy was a complete failure with resource allocation so bad that a potentially rich and productive economy completely failed to provide essential goods and services. The capitalist market economy is a way better system … but nowhere as good as it should be. Add value metrics and it will be much better.

Money profit is at the center of modern capital market oriented economics ... while value is at the center of TVM for socio-economic metrics. Profit is a meaningful metric for performance measurement within a for-profit corporate organization, but it does not take into account the impact on society of corporate activity and any social responsibility.

In corporate accounting, the basic computation of profit is that it results from sales revenues exceeding the cost of sales. Generally Accepted Accounting Principles (GAAP) have been developed to that there are rigid rules about how sales revenues and how cost of sales are calculated.

In a simple business situation, profit is realized when revenues exceed costs, and a loss is incurred when costs exceed revenues. The idea of profit or loss does not easily translate into all economic activity … for example in the activities of government and in the activities of the not-for-profit sector of the economy.

Phony profits … ignoring liabilities!

But even in the business world much of the profit reporting is phony! GAAP rules should ensure that profits that are reported have economic substance ... but the system of rule making in recent years has preempted reality and reported profit can be meaningless. The fundamental principles of good accountancy used to require that financial reports reflect a true and fair view of the financial situation of the organization ... but this idea has been totally disregarded in modern financial reporting in case after case ... modern bank accounting ... the accounts of General Motors ... the accounts of Enron ... and a whole host of large complex organizations.

Value adding / value destruction

Value metrics needed for value purpose

Almost always a money surplus or deficit is used as a measure of performance in not-for-profit organizations with a value purpose. Money surplus is a very poor proxy for performance as it relates to a value purpose of the organization. The purpose of most not-for-profits is to be doing things of value to society, not merely to have a surplus of money. At the present time money accounting is the primary reporting system that is used in the not-for-profit sector. This has to change. The concept of profit has no meaning as a performance measure for not-for-profit activities ... but value has a very real meaning. The TVM value construct applies everywhere in both private and public sector organizations that are working for the public good, but without effective performance metrics.

Profit and loss ignores social impact

GAAP profit ignores social impact! Money profit, which is the key measure of performance for the corporate profit maximizing businesses, ignores social impact. This is important, because many profit maximizing initiatives have negative impact on society. Reducing costs usually increase profits, especially in the short run … and costs may be reduced by many initiatives like, for example, cutting back on environmental pollution control, relocating production to lower wage locations, etc.. GAAP rules allow the computation of costs to ignore completely the depletion of natural resources. GAAP accounting takes into account the disbursements made to have the right to exploit a resource, but there is no explicit costing for the depletion of the resource, and the fact that the resource is consumed.

Value adding/destruction a better metric

Phony profits are created by ignoring the basic differences between cost accounting in GAAP money accounting and the full value consumption that is really going on in the real world. This problem is addressed in value accounting because it is value consumption and value creation that are the key determinants for value adding or destruction. A situation where profit gets bigger while society deteriorates is not a desirable outcome ... but this is common because no social impact measures are in the GAAP accounting framework.

Value adding or destruction is a derivative of value creation and value consumption. Value adding happens when the resulting value … value creation … is greater than the value consumed. Value destruction is when the resulting value is less than the value consumed. TVM takes into consideration ALL the issues that impact value to society and the community. Value consumption is not only the money cost but the value change associated with the use of the resources in economic activities. Similarly value creation is the value change associated with economic activities … hopefully positive value change.

TVM uses much of the money accounting framework to organize data about the dynamics of value creation. This includes the idea that the fundamental metric for progress is the change in the “state” of the reporting entity. In TVM the community is the primary reporting entity, and its change in state over a period of time is the value adding or destruction in the community for this period.

Value adding

Value creation less value consumption

TVM thinks in terms of value adding being the difference between value consumed and value created. Value adding is a broader concept than profit. Value adding is the difference between the ending value and the initial value. It may also be thought of as the value created less the value consumed.

Value adding is a better measure of socio-economic performance because it embraces not only the money component but also the social value component. Some profit is earned by destroying social value, and simply ignored in standard money accounting and reporting. On the other had, social value adding aggregates the money profit and the social value add in a more rigorous way

Unit costs, prices and values are very informative ... they make comparison easy both over time and from place to place. There are some challenges because units of measure and currency exchange rates may confuse ... but when these issues are taken into account, unit costs, prices and values are very powerful. It should also be noted that in some industries, especially the extractive industries, costs do not include anything like the full value consumption associated with the materials.

Measurement of value has a large subjective component ... but it is still possible to have useful measures. By using the concept of standard value ... a concept rather similar to standard costs ... it is possible to compare different programs and see how one program performs relative to another.

Application of standard value

In the case of malaria control programs, the goal is to reduce mortality and morbidity. By having a table of standard values it is possible to report that one approach had more value relative to the costs than another.

The perception of value differs from place to place, and also changes over time. The changes are ongoing. Values change over time because of the evolution of society. The TVM set of standard values makes it possible to start a process of understanding value perception better, and also to make value adding the goal of economic interventions.

What value fiction arises from profit anyway?

Profit has a value in its own right ... the revenues are bigger than the costs ... so on the face of it there is a positive outcome. But there are derivatives of profit that are even more important. The "market" values corporate performance using the possible future flow of profit, and a history of past profit to assign value ... that is price ... to the securities of the organization. Often this is a lot higher than the real money accounting value increase reported in the business accounts. The Initial Public Offering (IPO) is a vehicle for monetizing the market value associated with a flow of business profits.

Value reporting!

Value reporting needs to be as pervasive as profit reporting. Every organization should be reporting not only its money accounting, but also its value accounting. Capital markets should value stock based on both money profit and value.

Value is rarely the same as price. Many things in life with the most "value" are truly priceless ... good health, friends and family, the birth of a child, happiness, and so on. It is a challenge to associate a number with value ... but TVM does this by using a perpetual dialog around sets of standard values.

Value ... financial and social

Capital markets are all about value ... but it is financial value only. A stock has a value based on its financial profit history and profit potential. What the company does for society is not a part of the capital market computation. It is just about profit history and profit potential ... about money flows ... about risk and the safety of money capital.

Social value is much more. It is no accident that the phrase "Pursuit of Happiness" is in the founding documents of the USA and not "Chase for Money". Happiness derives from social values that end up making life worth living. TVM embraces both the financial and the social value and puts both in the metrics of the community.

Price and value

In some cases price and value are the same. In this situation the value chain through delivery to the final consumer is extracting from the consumer a price that is equivalent to the value. The consumer does not get anything of the added value. In fact the typical business model is one that aims to extract as much revenue from the market as possible.

Value adding in education

Value adding may be derived from corporate activities that generate profit … but value adding goes on throughout society in a not-for-profit setting as well.

Educational establishments are value adding organizations, and mostly these establishments are not-for-profits rather than being profit making organizations. The value adding associated with education is substantial … but maybe not as robust as this example might suggest, in part because for many students (in the old industrialized countries) the opportunity to have a high paying job is substantially reduced from a decade ago and universities have yet to adjust to this reality!

Value of a good education

If the example American 25 year old with a top class education and in good health with good opportunities has a $5 million value, and the African example child with little education and little opportunity has a socio-economic value of near zero two factors are in play to explain the difference:

1. Education has contributed to value; and
2. Opportunities contribute to value.

It is difficult to assess which is the most important … they both work together to result in socio-economic value adding.

Business adds employees and makes new jobs when there is an expectation that the jobs will create corporate profit. At the same time the creation of a job does something of value in society. For a family, the value of a job for some member of the value is not only the immediate money but also the financial security that a job provides into the future. For a community the job adds to the buying power of the population and this multiplies into other businesses in the area. In its most simple form, the change in "value" between a no-job situation and a job situation is some multiple of the income of the job.

When a society has high unemployment the value of the society is reduced … the value of society is compromised. Unemployment in a community is a little bit like empty seats in an airline. The earning potential of the seat is lost when the seat is not used for a revenue earning passenger. Similarly the value of a job is gone when a person does not work on any day. Doing a job is value adding relative to a situation where the job does not exist and a person is unemployed.

Value adding is bigger when important needs are being satisfied … less when the need is merely a want. To illustrate this idea take the case of the person with a lot of shoes, and the person with no shoes.

When an affluent person who has many pairs of shoes buys another pair of shoes, for the business there is an exchange of money and an increment to revenues, but rather little or nothing changes in terms of the quality of life of the shoe owner. In money terms the business accounting shows revenue and

> profit increase together with asset cash up and asset stock down.
>
> When a poor person who has no shoes gets a pair of shoes, the economic value proposition is very different. Quality of life for the poor person is substantially enhanced and the value adding is positive.
>
> What happens in the shoe supplier business, however, may not be money profit positive … in fact there may well be a money loss.

In TVM the money loss to the business and the value adding to the beneficiary … to society … are taken together. In TVM, a business that has an activity that runs at a money loss while producing a social value gets judged on both the money dimension and the value dimension together.

When society is driven only by profit metrics the outcome is a prosperous luxury sector that is profitable doing very little in terms of social value adding … and little or no allocation of resources into the poor sector of the global economy where needs are enormous and potential for progress ignored.

Value destruction

What is value destruction

Value destruction is when there is more value consumption than there is value creation … a similar idea to profit and loss which are derived from business money costs and business money revenues.

The corporate business community understands corporate value destruction. When a business does things that enhance immediate profit but at the expense of the future profit of the company, there is corporate value destruction.

Society has value destruction in the same way … arguably in a more important way and with more complexity.

Value destruction in a money economic boom

Value destruction is possible in a society even when an economy using money based metrics shows it is booming and growing strongly. The calculation of corporate profit ignores all sorts of value elements which impact on society in one way and impact corporate profit in another way

> The case of outsourcing manufacturing from the USA to (say) China has a favorable impact on corporate profit, but has an unfavorable outcome on the social value metric for the USA community with some favorable offset for the Chinese community. When corporate profit is the only metrics that is being monitored by decision makers and investors, then community impact gets ignored.

Jobs and value destruction

Value destruction is pernicious … and difficult to address unless decision makers are using value metrics to understand performance.

> **Multiple elements impact value flows**
>
> An American 25 year old with a top class education and in good health can look forward to a 40 year career that pays very well. The cost of the education may have been something around $1 million, but the earning potential for the person is many multiples of this. A net present value

> calculation will probably put the NPV of this person at around $5 million.
>
> The example of an African child … in Niger, say … at 25 years old with little education, a lot of health problems and almost no job opportunities ends up with a NPV of perhaps $5,000.
>
> If American job opportunities decline … not so much in quantity but in the level of remuneration, then the NPV changes from (say) the $5 million referred to above, to something much lower … say $2 million. There is very real value destruction when this happens … in this case one person represents a value destruction of $3 million.

The corporate profits that are being generated simply by moving production to low cost areas of the world from high cost areas are also changing the value proposition for both the low cost area and the high cost area. Meaningful metrics about this take all the value issues into consideration … in both places … and also around the decision makers in the corporate organizations and investors in the capital markets.

The ideas of Adam Smith and the invisible hand of the economic market should not be discarded … but the role of metrics in driving the market and influencing outcomes should be respected.

Markets driven primarily by corporate profit and individual gain will produce outcomes that have massive value destruction in high wage locations around the world … which is bad.

In the outsourcing of manufacturing, TVM value metrics will show value adding in low wage areas … and this value adding will help substantially in raising people out of abject poverty … which is good.

Corporate decision makers … investors … labor leaders … policy makers, etc. have to address the challenge of value destruction caused by the relocation of corporate activity from one place to another. Maybe some value destruction has to take place … but maybe not.

If the brain-power that has a singular focus on making the most corporate profit and the most money gain in the capital markets were to be deployed to address the dynamics of socio-economic value adding and destruction there would be a better outcome.

Chapter 5-7

Concept of Return

The Concept of Return

Money metrics

Return on investment

Every investor has some understanding of the idea of return on investment … simply put, it is the income expected from an investment, with the expectation also that the investment itself will be returned in due course. Return on investment is all about money flows … the amount of money put in … and the amounts of money that get returned.

The mathematics are also well known … as well as the impact that externalities like tax regimes, exchange control and other matters may have on the return!

Return on sales

People who do the analysis of a business may also be interested in the return on sales, that is the profit that is earned relative to the sales volume. This serves as a useful measure of how efficient a company is and how healthy is the business. If the sales margin is low and the return on sales is low, the business will have difficulty if it gets faced with low cost competition.

Return on capital employed

Return on capital employed is very similar to return on investment. The main difference is the perspective with return on capital employed an internal metric while return on investment may be thought of as an external metric.

In corporate financial analysis the return on capital employed is increased when there is financial leverage. The mathematics of financial leverage are very attractive as long as risk is ignored and not brought into the analysis. With risk fully accounted for, highly leveraged investments are less attractive.

Return on assets employed

In money accounting it is common to assess performance using return on investment and return on capital employed. It is less common to measure performance using return on assets employed.

Return on assets employed is a very good measure of business performance … being the amount of income generation relative to the assets used to earn this income. This measure is very useful in determining what part of a business is making the best use of the available resources. The advantage for return on assets employed is that this enables comparison of performance based on the resources needed to be deployed … separately from the financing associated with the resources.

More meaningful value metrics

Performance taking profit and value into account

TVM is a combination of profit and value metrics. Money profit and cash flow are needed in order “to pay the bills” and to enable the functioning of the global money based economic system … but this is not enough. TVM also has a value dimension so that value flows are also captured in the system of metrics just as the money flows are captured in corporate accounting.

Value return on money expended

When money is consumed there is the expectation of a return. In TVM this return is a value return that combines the profit realized with the non-money value added to produce a measure that is the value return on money expended. Note that the non-money value added in calculated using value consumed not money cost, and value created not just money revenues earned.

The results of the value return on money expended are vastly different from the money profit return on investment. Some highly profitable practices have value destruction that are presently ignored, and some low profit activities have value adding that are huge.

Value return on resources consumed

This is a core measure of performance in TVM. It is a basic measure of quality of life improvement relative to the resources that are consumed. This measure changes the paradigm from "more and more and more" is progress to one where the metrics reflect the efficiency of society in delivering quality of life.

What equivalent in the social sector?

TVM with value balance sheet is a start

Before the development and deployment of TVM the equivalent set of analytical metrics did not exist in the social sector. Cost benefit analysis is done to help justify projects and programs, but these metrics are rarely integrated with the operational metrics of the organization.

Decision making for society is not easy … but it is likely that it is being done far more badly than it needs to be, simply because there is not much useful data that would improve decision making, and increase the fact base about costs and impacts.

Law allows inadequate accounting

In most countries the law allows government and public sector organizations as well as not-for-profit organizations to use cash based accounting and fund accounting rather than the full accrual GAAP accounting used almost universally by the business sector. These organizations do not therefore have full balance sheet accounting, and their ability to do analysis is severely compromised. Most problematic is the manner in which critical assets are inadequately maintained … and critical investments do not get made.

The TVM initiative uses balance sheet as the central core of the analytical framework … something that has served the corporate community well for a very long time … with some notably recent exceptions when the basic tenets of balance sheet accounting were ignored by laws and rules that allowed unprincipled financial reporting.

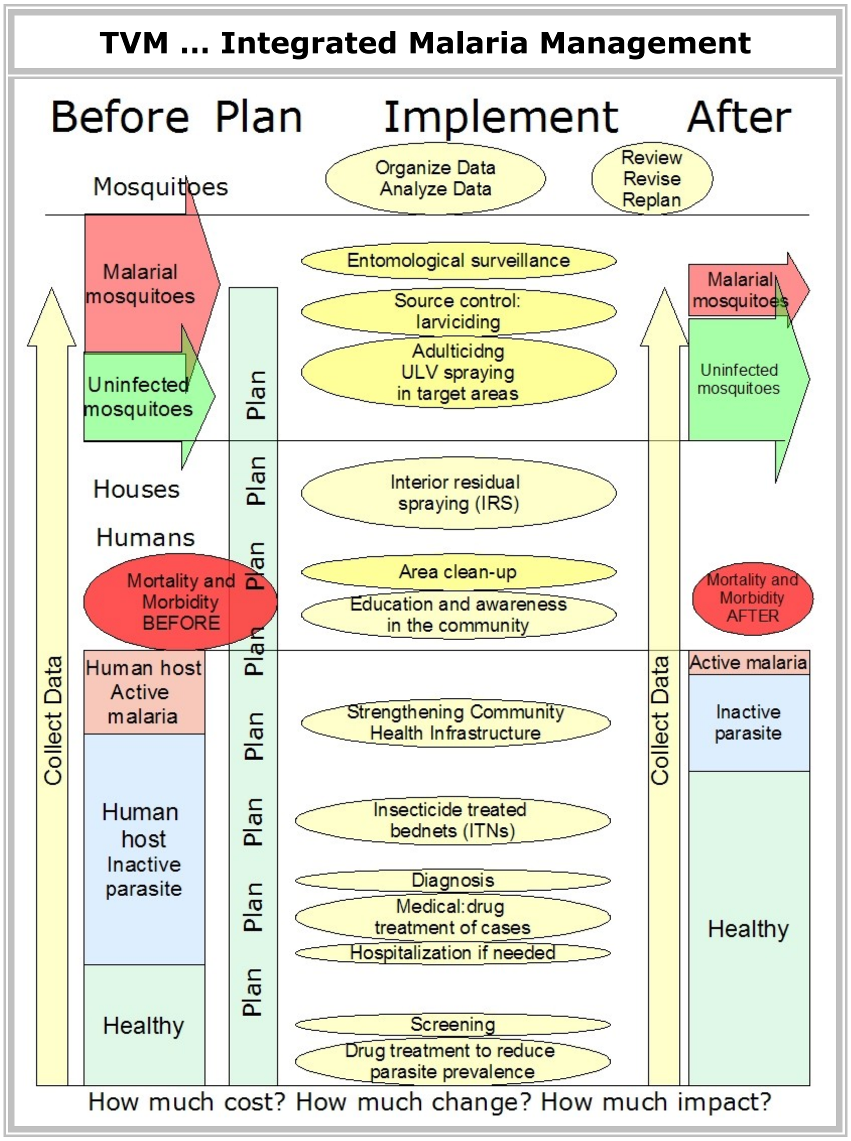
Activities assessed on a true value construct

Every activity that has substantial costs … value consumption … should be assessed based on the value for society that the activity enables. The police force should be associated with the value of low crime … while also being cost efficient. The community zoning should be associated with the value of quality of life that results from the zoning. The cost of medical services should be related to the value of good health. Every entity in the community should be paying the "right" amount of taxes and fees so that the community entity can pay the bills … and so on.

Example … TVM applied to malaria

The basic framework of TVM is (1) “state” which is like the business balance sheet but reflecting the perspective of society; (2) “progress” which is the change in state over a period of time; and, (3) “performance” which relates to the economic activities, the use of resources, how efficiently they were used and how effective they were in achieving tangible results.

A complex program like Integrated Malaria Management (IMM) needs good data for day to day operations, and these same data inform TVM for performance metrics at the same time. The data framework works along the following lines: (1) There is a before situation (2) there are activities, and (3) there is an after situation.



In this malaria example, there are four steps: (1) Before ... there is a certain situation with malaria and mosquitoes ... and with the human host; (2) Interventions are planned reflecting the data about the problem; (3) Interventions are carried out … costs are incurred; and, (4) After ... data shows a new state about malaria, mosquitoes and the human host. The interventions have costs … the community sees results … there are metrics about cost efficiency and cost effectiveness.

What are the key questions?

There are two sets of questions: Set 1 about effectiveness: (1) How much did the activities cost (2) how much change from before to after … therefore how much impact. This answers the question about effectiveness of the work done.

And then there is Set 2 about efficiency: (1) How much did the activities cost, and (2) how much should the activities have cost. This answers the question about the efficiency of the work done.

These key questions will help a decision maker to have the most cost effective operation … that is, the least cost or value consumed for the greatest value increment. If the value is properly assessed the value will reflect important issues like risk, sustainability and long term implications … which are not always easy to do, but they should not be ignored.

How much change? How much impact?

There are four things that need to be measured before and after: (1) the prevalence of malaria parasite in humans; (2) the prevalence of malaria parasite in mosquitoes; (3) the morbidity of humans caused by malaria (4) the mortality of humans caused by malaria.

The change in these parameters have value … and these values may be computed based on the population and the standard values for these items.

How much efficiency? How much effectiveness?

How much of each intervention was done and how much did it cost. How much would each of these interventions have cost based on the standard costs and the amount done?

How much should it have cost?

Many experts in development shy away from the cost question like the plague. In most activities the costs are very high relative to what might be considered a commercial norm. Experts in development may not earn millions of dollars but they do live an expensive life style that gets costed into the work. They are also constrained in all sorts of ways from doing what might be the most efficient … they are usually part of a government driven operational set up … another endemic cause of high cost low performance.

How much was the cost of the interventions relative to the value of the malaria control impact. This should be a rather easy computation based on the standard values of malaria control quality of life improvements.

Experience shows that it is relatively easy to reduce the impact of malaria in a society with intensive high cost interventions … like for example insecticide treated bednets. But experience also shows that malaria rapidly returns when the interventions are discontinued and there is no continuing program. TVM nets the impact from discontinued program in the future with impact from the implemented program today. TVM also takes into account items like resistance that emerges over time when there is continuing intensive interventions using mono-therapy without careful attention to all the issues.

Unreliable methodology

It has become a common practice to do a small study to show that something works and produces value adding ... and then scale up and assume that the value adding will scale up as the “how much has been done” scales up. Cost accounting (and industrial engineering) in the corporate

> experience shows that this rarely happens.
>
> What is vital is to understand the behavior of both costs and values. The goal is to get costs reduced without losing the value of the work. There is a point where more cost reduction results in lowering of the value of the work.

The measurement of value has a large subjective component ... but it is still possible to have some useful measurement. By using the concept of standard value ... a concept rather similar to standard costs ... it is possible to compare different programs and see how one program performs relative to another.

> In the case of malaria control programs, the goal is to reduce mortality and morbidity. By having a table of standard values it is possible to report that one approach had more value relative to the costs than another.