



MULTI DIMENSION IMPACT ACCOUNTING (MDIA)

FOR DISCUSSION

COMMUNITY ACCOUNTANCY

COST, PRICE AND VALUE

Peter Burgess (2008)

Background Note

The following was prepared in 2008. This paper was written while a book length analysis of development assistance was being prepared, and the focus is largely on the systemic failure of this segment of the global socio-economic system.

Subsequently it has become clear that there are also major systemic issues in other segments of the global society and economy.



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Community Accountancy

**PUTTING ACCOUNTANCY TO
WORK FOR ALL OF SOCIETY**

COST, PRICE AND VALUE

FOR DISCUSSION ONLY

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WHY THIS IS IMPORTANT

Understanding cost and value behavior

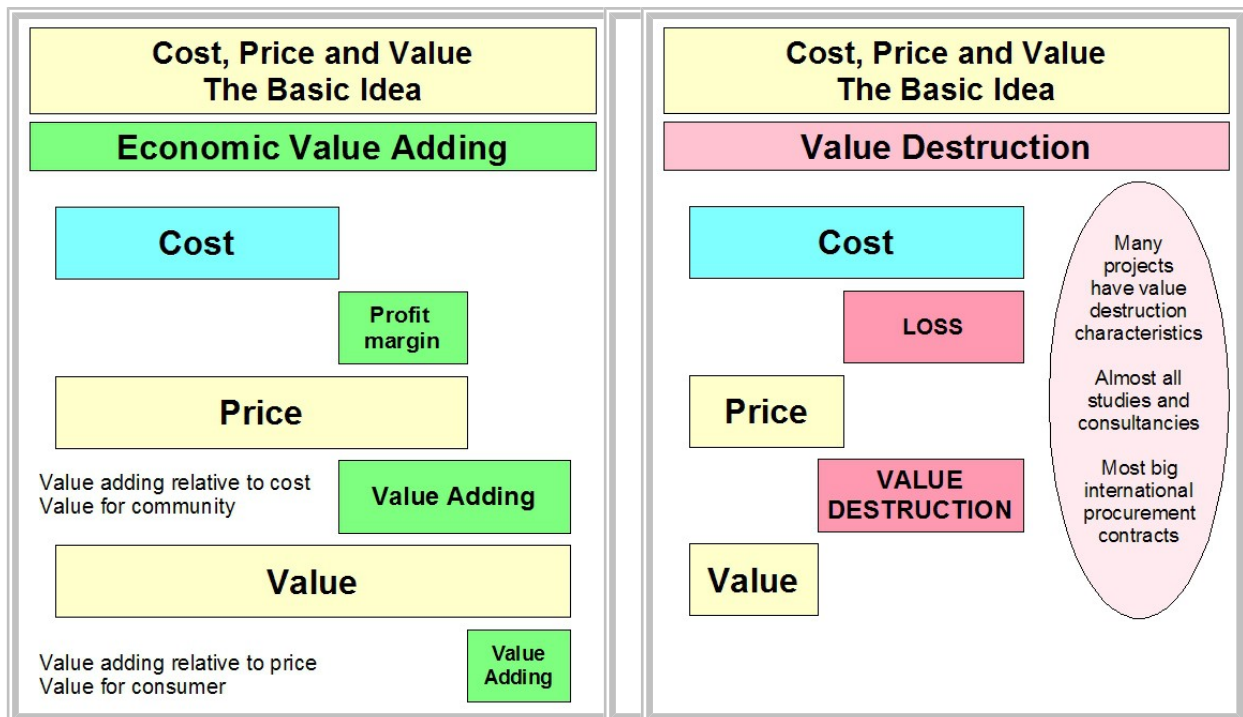
Cost price and value are the core drivers of the global socio-economic system ... and central also to how the markets work.

It has been apparent for some time that there has been something missing in modern economics ... as well as in modern financial analysis, but it is has not been particularly clear how critical these missing elements are to the reasonable functioning of the global system.

Over the past several decades there has been a boom in computational capacity ... but not matched by public understanding of this phenomenon. Worse, the analysis done has increasingly been brilliant but wrong. Bigger and bigger decisions have been made with less and less understanding and the result of this should have been easy to predict. Enron and the demise of the Anderson accounting firm were an early warning of a serious crisis of analytical understanding, and the need to have better understanding of the underlying behavior and causalities.

Cost, price and value

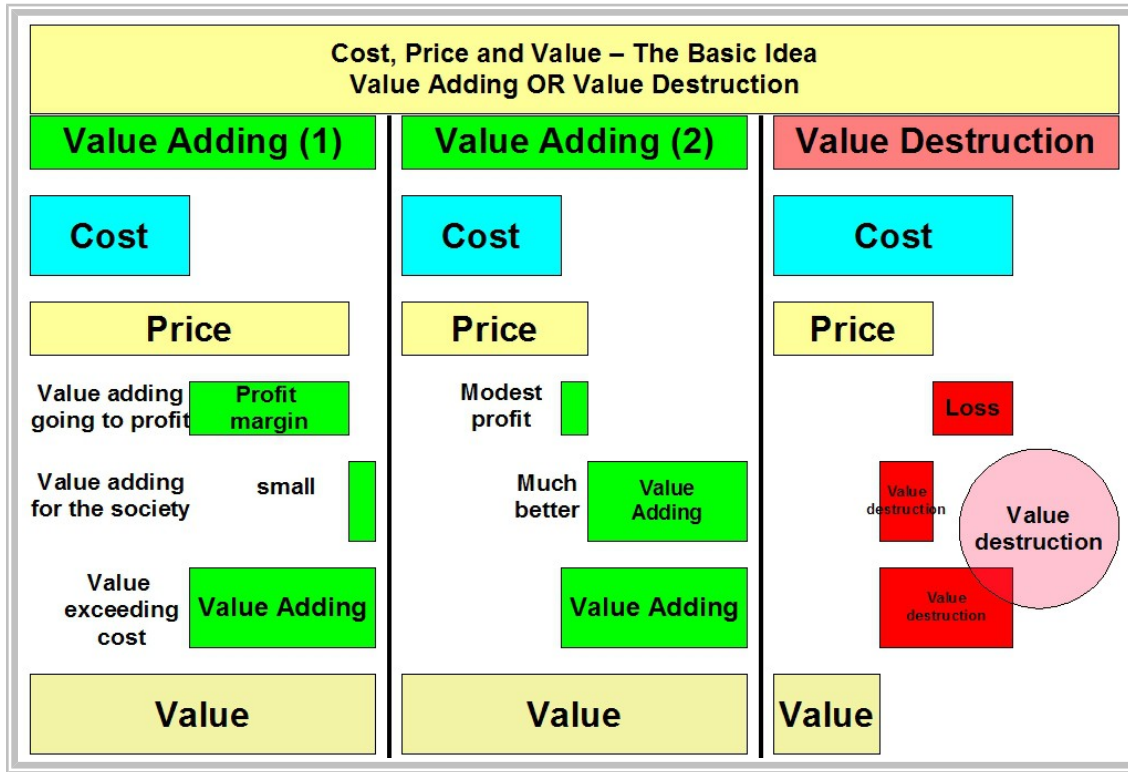
Cost, price and value produce either a value adding situation or value destruction. The concept is very basic, and very powerful. Value adding is good and value destruction is bad.



Working the system

Cost, price and value are the critical metrics of socio-economic activity. In corporate market based economic thinking cost and price are the dominant metrics because they determine profit which in turns determines market valuation ... but in society there needs to be attention paid to the relationship also between cost and value. The following graphic shows how pricing changes the attribution of value adding from the society at large to the corporate operator. In (1) there is a high profit and little of the added value accrues to the individual. In (2) there is a low profit and almost all the added value accrues to the society.

Both are value adding and better than value destruction ... but whether the value adding has more value as profit for the organization or value to society is a question for which there is no quick and simple answer.



Understand the behavior of all the key metrics

The MBA trained analyst has a very good grasp of the behaviors associated with cost, price and profit and the way these may be managed for the benefit of corporate stakeholders ... but the value element that has impact on society is less well understood and is largely ignored.

Corporate profit ... social pain

In 2008, as demand for crude oil increased worldwide, crude oil prices hit record levels ... and so also did the reported corporate profit of the major (Western) oil companies. This is perfectly understandable ... most of the production is based on investments made long ago at lower costs and gas pump prices have increased in sympathy with the crude oil prices.

But, prior to Community Accountancy, there have been no systems of metrics to address the cost to society of higher gas prices ... and even though it is recognized that there is social pain, in the traditional working of the economy, there is no incentive or mechanism for corporate gain to be matched against social pain.

Understanding has both a technical dimension and a human dimension ... they are both important. If there is understanding of the behavior of all the key metrics ... then it is possible to move towards an optimization of performance. At the moment there is optimization, but it is all about profit optimization and not about achieving an optimized balance of profit reward and social progress. There is technical expertise, but nothing in the analysis that explicitly looks at social value, nor the various aspects of the human dimension.

The technical metrics are cost, prices and values ... and the derivatives of these which are productivity, profits and value adding. The human dimension is an integral part of some of the behavior of these items, but there are other factors where human behavior is particularly important. What are the incentives that help to drive decisions ... and what can be done to bring an ethical dimension to the decisions being made that affect society.

Costs

Corporate profit performance has been optimized by a deep understanding of the behavior of costs. Cost accounting and the analysis of cost behavior has a very long history in corporate management ... but its equivalent is practically non-existent in the public sector and in the international relief and development arena. Understanding costs is essential ... and simply this will materially improve profit performance in the international relief and development industry.

The Community Accountancy system provides a framework for understanding the behavior of cost. It can show what costs are in a specific set of circumstances, and compare this with what might have been expected and what has been achieved in other places, or at other times.

Productivity

Productivity is a derivative of cost ...

For many years low unemployment was seen as a way to improve economic performance and reduce poverty ... but it rarely achieved much of either. The jobs that were created were unproductive jobs that did nothing to create incremental value, rather the work diverted people from more useful activities to absolutely useless activity.

Cost is a determinant of productivity ... or is it productivity that determines cost. This is more than semantics and goes to the heart of the management of society and the effective use of science and technology for the benefit of society rather than only being used for proprietary wealth gain. A strategy that optimizes the former may well be different from one that maximizes the latter.

Cutting Grass

When I was in Ethiopia (in the 1980s) I observed women being employed by the government to cut grass in the public areas of Addis Ababa using hand scissors. Very many women were paid tiny wages to do this work and did it laboriously and with great inefficiency. One person and a lawn mower could have done the work of 1,000 of the women. The value of the work would have been the same.

In one case one person was the labor cost. In the other case, 1000 people was the labor cost. In a case like this there is the potential to improve the grass cutting productivity by 1000 times ... but the productivity gain does not become a priority.

What are the reasons?

Perhaps it is because the leadership is using employment as a measure of success ... and by doing this ensuring that the economy remains unproductive.

Prices

The behavior of prices is complex, impacted by both market forces and issues of cost behavior, productivity and profitability.

Within the CIA analysis framework, prices are of less importance than in corporate financial analysis ... though prices do impact the behavior of the value chain, being the element that moves value from one entity to another.

Prices are a critical metric for corporate profit, for the functioning of a market and the value chain. Prices can be influenced by corporate decisions ... but market is important.

Prices that are driven entirely by the market conditions of supply and demand rarely reflect what is fair or best for society, rather what is best for those with the most power over market factors. This is dangerous and usually abused.

Profit

Profit has been the subject of all sorts of analysis and study. However, the basic calculation of profit is really quite simple. There is profit when cost of sales plus overhead is lower than the revenue from sales. This is quite a simple idea ... and worth understanding.

In accountancy, it has been said that the profit for a period is the change in the balance sheet from the beginning of the period to the end of the period. This is another quite simple idea, and also worth understanding.

Usually ... when everything is on the “up and up” ... the profit calculated by reference to cost and revenue and the profit calculated by reference to balance sheet changes are the same. This is the whole principle of double entry accountancy ... and when these two calculation methods produce different answers, it is time to ask tough questions.

Values

Value is a simple idea, but less simple to include in a universal system of accountancy.

Value behavior depends on many factors ... many of which vary quite rapidly. Food has a huge value when a person is starving ... and water when there is a drought ... and medical supplies when one is sick ... and a job when one is unemployed.

But the value is different when they are not needed. What is right? ... the answer is both!

Value is a critical metric for community performance. Value is very subjective and varies depending on many factors: the location, the socio-economic situation, the state or need, etc.

Because value is so central to socio-economic performance and value is so variable, Community Accountancy makes the understanding and analysis of value central to the work. Just as different perspectives of value have facilitated capital market derivatives ... it should also facilitate development progress.

Modern corporate accountancy does not help much in following the process of value creation ... and destruction ... from one part of society or the economy to another. If there is profit in the corporate entity that is reporting, that is all that is required ... not requirement for that profit to be offset by the value destruction in the community caused by this profit making.

But in addition to value creation, there has also been much transfer of value adding from one location. While this has facilitated substantial profit augmentation and benefit to corporate stockholders, it has often come at the expense of value destruction in some societies, and not taken into account in general GAAP accounting.

For organization accounting, value chain analysis helps in the understanding of how profit contribution is being spread between the various organizations in the supply chain.

For Community Accountancy value chain analysis helps in the understanding of flow of value between various entities in the community and with the world beyond the community.

Profit is the relationship between cost and price, and has an impact on the stakeholders of the organization.

Impact on society is a function of value and cost, but also price which determines the share of value that accrues to society.

Three critical indicators:

- Productivity ... productivity improves when less cost produces more goods or services
- Profit ... profitability improves when price is increased and cost is decreased
- Impact on Society ... impact improves when the value increases and the cost decreases.

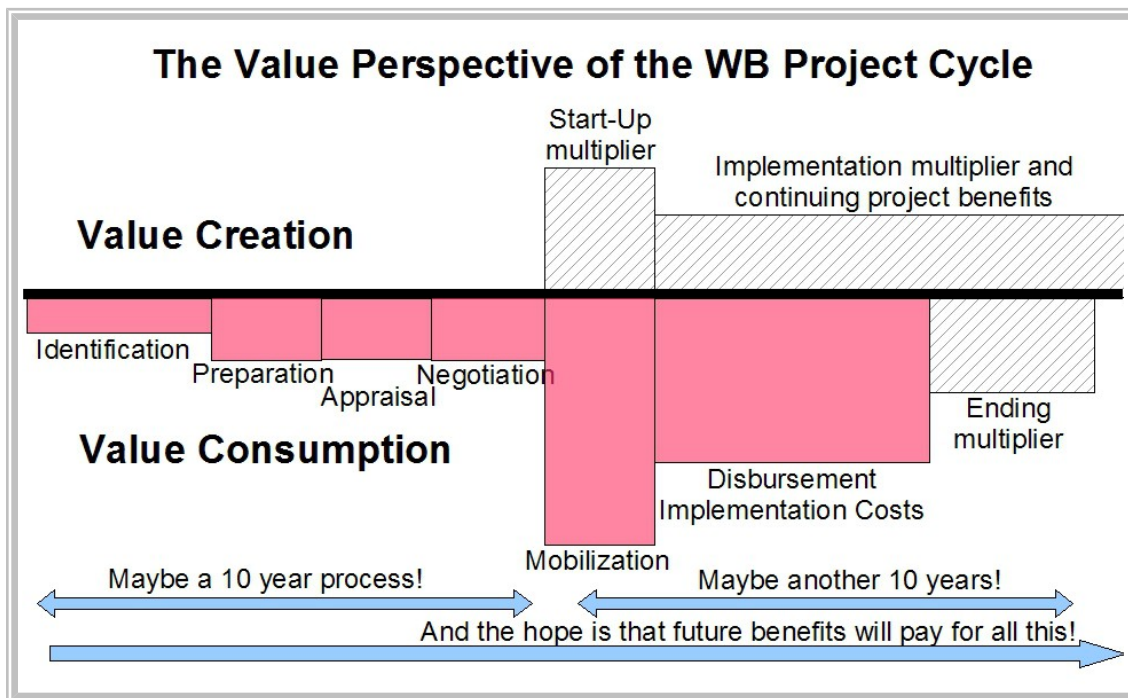
Value chain cost, price and profit

Price has an important role in the matter of economic incentive ... and the question of sustainability. The value chain works and is efficient when the transfer pricing through the value chain provides a reasonable rate of return on capital employed within each piece of the value chain. If any of the links in the chain become unprofitable, the value chain becomes dysfunctional.

Value change during the project cycle

The timeline of a typical “development” project shows changes in value starting with value consumption as the project is prepared and starts implementation, followed by value benefits as the project continues. For big World Bank type projects the length of time is significant and the scale substantial ... with the costs of value consumption certain and the benefits much less certain. When the benefits do not materialize, the project creates massive value destruction ... and for many if not most World Bank projects this is the sad reality.

Community Accountancy looks at any and all economic activities from the perspective of value creation and value consumption. The problem with the WB project cycle is that there is substantial value consumption that is sure, and long term benefit that is uncertain. The following graphic is a simple depiction of the costs incurred over a long time before a project is funded and implemented. When a World Bank project does not generate benefits there is a long term loan repayment cash flow that keeps the project in a value consuming mode for many years.



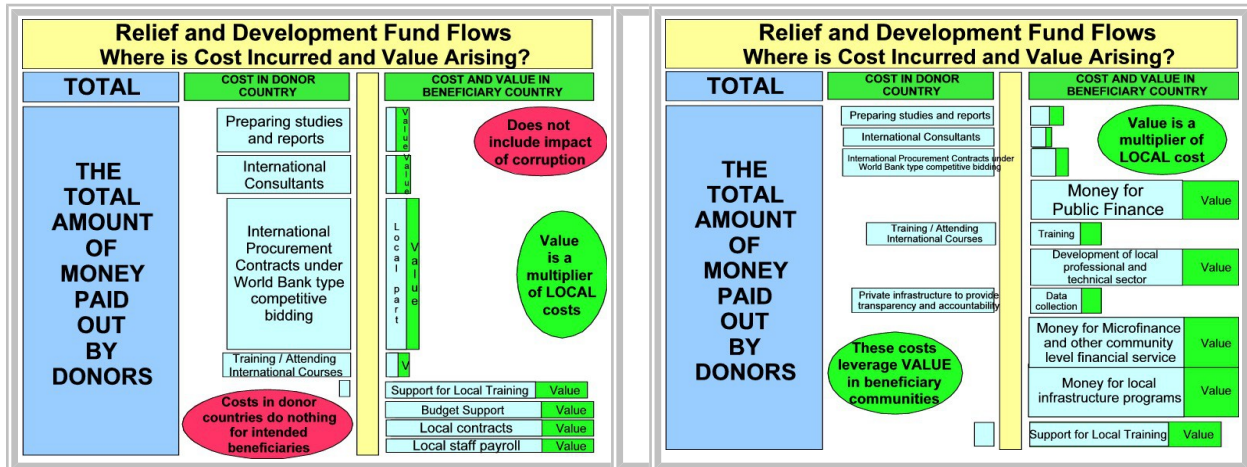
While this is obviously terribly bad for the community and the economy that serves the citizenry, this is less bad for those that have enriched themselves at various stages of the project ... no matter that the project is an economic disaster over the long term.

WHERE IS THE VALUE ADDING?

Where is the funding coming from? Where are the beneficiaries?

Over the past decades a very large proportion of the international official development assistance has been disbursed in the north, with the idea that it was going to beneficiaries in the south. But mostly this did not happen. Most funds have been disbursed in the north where there is benefit for the contracting organizations and rather little left that is of benefit for the south.

A much better way is to disburse more directly in the south where there are direct benefits and associated multiplier effects. When funds are disbursed in the south, the impact of international official development assistance is very good. Local disbursement in beneficiary communities not only has a direct benefit, but delivers other economic improvement through the multiplier effect.



The success of relief and development depends more than anything else on whether it is economic value adding or economic value destruction that is dominant. In economic value adding the value increment exceeds the cost. In economic value destruction the value increment is lower than the cost.

In the corporate environment the price of goods and services and the market serves to control cost and ensure that the clients get value for their money. No similar mechanism exists in the relief and development sector. Decisions are made based on a process that has no independent (market) checks and balances and it is easy to commit to make expenditures without the activities and outputs have much meaningful tangible value.

IMPACT ON SOCIETY

Cost is the most important parameter of economic performance. Cost is a derivative of productivity. If cost is low ... it is a proxy indicator that productivity may be high.

Productivity is the single most important reason that modern society has potential ... modern society can do things today that were impossible only a few years ago.

In numerical terms, I suppose this means that productivity went from one over infinity (infinitesimal) to something measurable.

Cost is only a proxy for cost because there are several elements to cost, most important of which are the following:

- What was consumed
- How much was consumed
- The unit costs for items consumed

Some of the consumption may be labor, some materials, some equipment and capital. Productivity is a function of the amounts of these things consumed for a unit of output.

Cost is the derivative when the amounts consumed are multiplied by their respective unit costs.

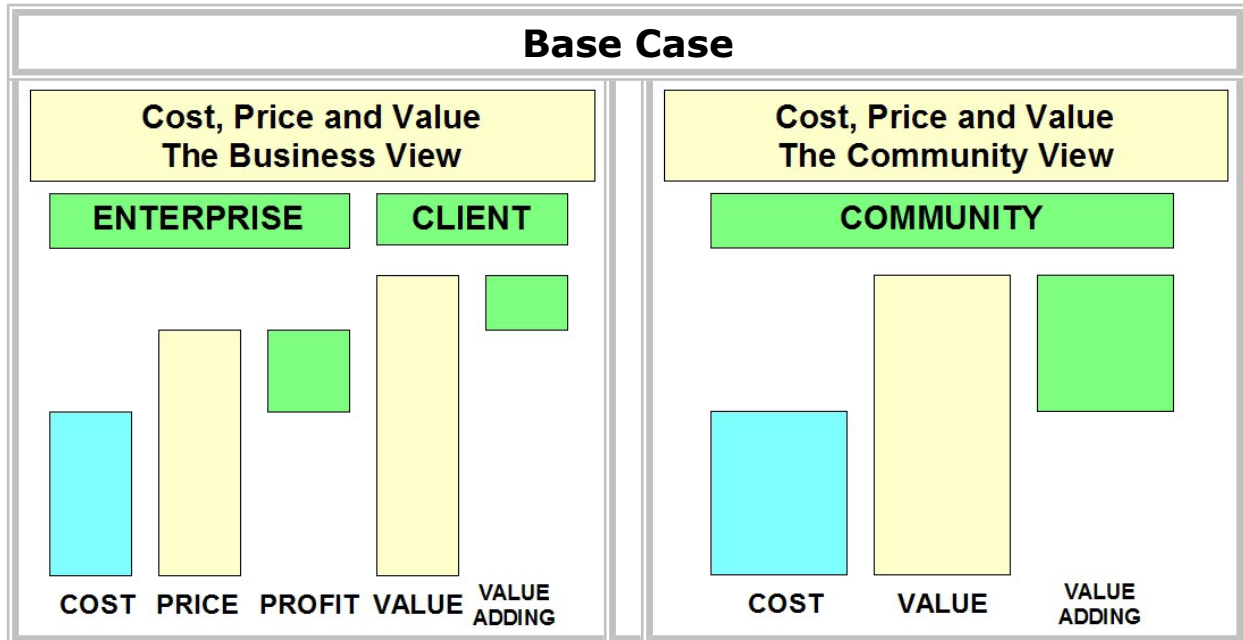
Low productivity low wage areas may have lower costs than high productivity high wage areas. Corporate profits ... which are determined in large part by costs ... are maximized by focus on production in the lowest cost areas. Social value may or may not be optimized by corporate profit maximization.

Agriculture is one of the few industries where the United States has retained a position of global competitiveness. The productivity of American agriculture is impressive, though there may be important questions about its environmental sustainability. That aside, American agriculture produces enough food for all of America, and enough for massive exports and does it using only 3% of the population. In contrast most of the countries that are poor have a large proportion of their population working in agriculture and not very much is produced. This is a crisis of productivity ... which should have an answer.

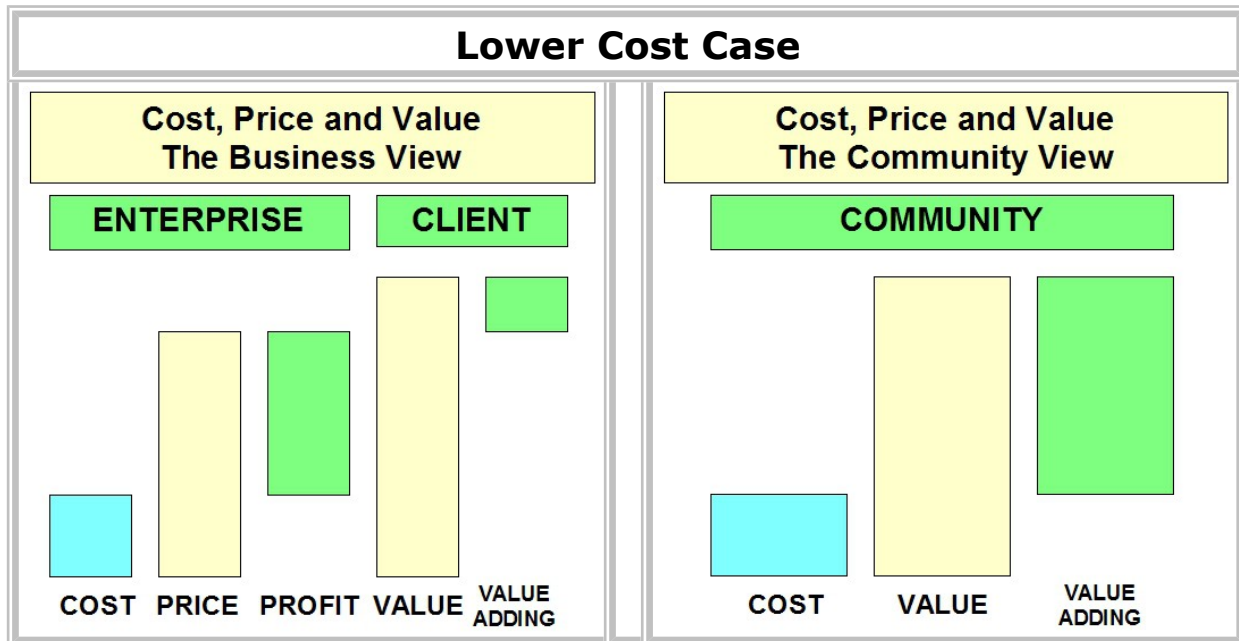
How price impacts community

Price is a key variable in the performance of society. It is not as important as cost, but the way price is used in society determines the way value is shared between the various economic actors. The following graphic shows how an economic transactions that has costs and value is shared between the enterprise and the client depending on the price being applied to the transaction.

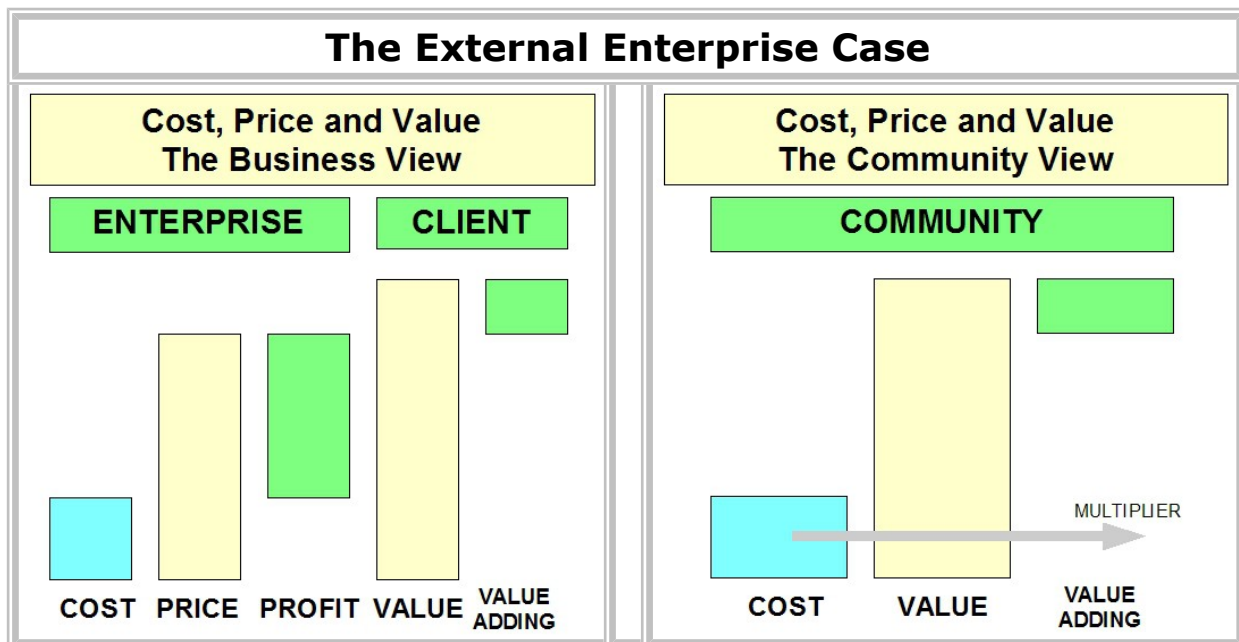
For society as a whole the value adding is the difference between the value and the cost. For the client the value adding is what is left of value adding after the enterprise has taken out its profit. In the profit maximizing enterprise the goal is to have profit as much as possible, and the amount left in the hands of the client is of little consequence.



In a lower cost case the enterprise profit increases at the same price point ... and the amount of value derived by the client stays the same.



If the client and the enterprise are in the same community it does not matter so much whether the client or the enterprise has what share of the value added ... but where the enterprise is from outside the community it matters a lot. In the case where the enterprise is external ... the case of Foreign Direct Investment (FDI) for example ... the value adding for the community is small because the profit leaves the community. If the costs are incurred in the community there is some multiplier effect ... but typically local disbursements are small and most of the costs, as for example in mining are equipment, fuel, expatriate payroll with rather little value for the community.



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 Cost is the derivative when the amounts consumed are multiplied by their respective unit costs.

Tea – The Case of Malawi

The Tea Auction in Malawi was a good example of market theory (from the World Bank) creating a disaster for local agriculture in Malawi. For most of recent history there has been global production surplus of most agricultural products, and tea is no exception. Other things being equal, an auction will produce an equilibrium price that is low when there is a surplus situation. Not surprisingly the tea auction resulted in very low export prices ... insufficient to pay for the costs of production.

Some of the tea estates were owned by Malawi interests ... including President Banda ... and some were owned by a major international tea marketer. For the local interests the low prices were catastrophic ... for the international company they were both a seller and a buyer and it made no difference to them. Rather it was a big benefit because it removed all the problems of explaining profit and being assessed profit tax and handling repatriation of local profits. For the local interests low auction prices had to be translated into low costs ... and this was done by paying extremely low wages to agricultural workers. While this was good for the plantation owners, it was terrible for the workers and the community.

The auction was the vehicle that allowed profit to be moved from the producer end of the value chain for tea to the marketing end ... for value to be moved from the south to the north. Bottom line ... this is one of the root causes of present day poverty in Malawi.

Oil in Nigeria

The oil in Nigeria is mainly in the Niger delta, and offshore from this area. For hundreds of years, local people were able to prosper from fishing. But over the past fifty years that has changed. Fishing grounds have been polluted, and local people have become very poor.

But there are huge fund flows associated with the oil that comes from this area. Multi-billion dollar investments have been made in exploration and oil drilling ... huge royalty payments are made to the Nigerian government ... and local people are obscenely poor. There is blatant inequity in the value chain ... and no way for the inequity to be resolved.

MARKETS

There are several reasons that markets exist ... some of them with good consequences, but not all:

- Markets help balance supply and demand
- Markets help adjust prices to an equilibrium between supply and demand
- Markets help monetize value
- Markets facilitate transfer of wealth between social segments

Markets help balance supply and demand

Markets probably do this better than politicians ... but this is very inefficient in the modern global economy for a multitude of reasons.

Markets help adjust prices to an equilibrium between supply and demand

Markets help monetize value

Markets

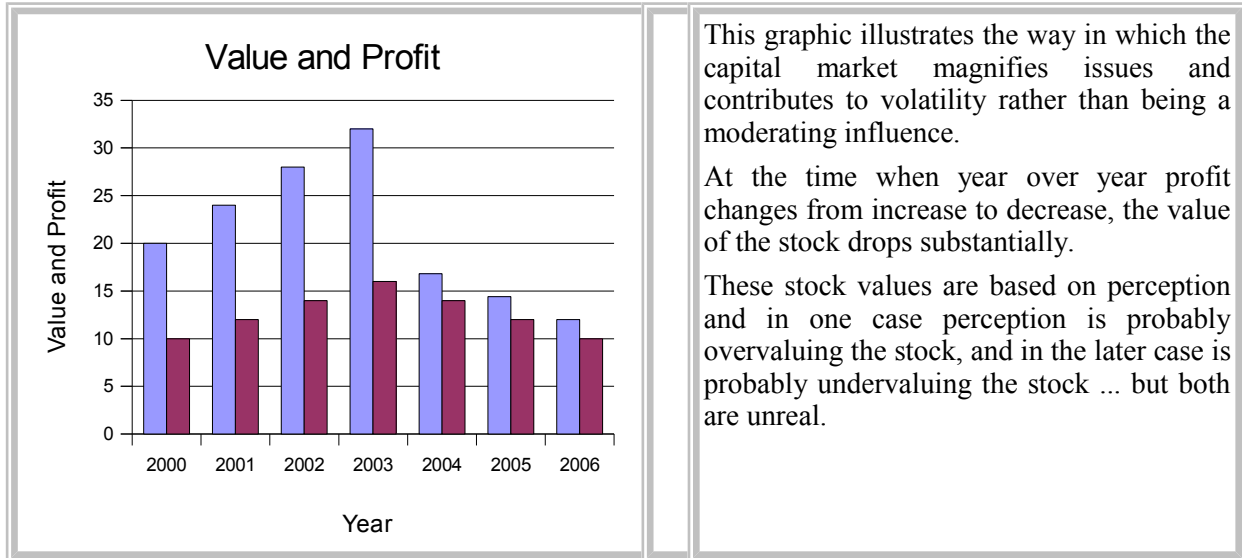
Markets facilitate transfer of wealth between social segments

The large scale transfer of wealth

The

Economic Value Adding ...

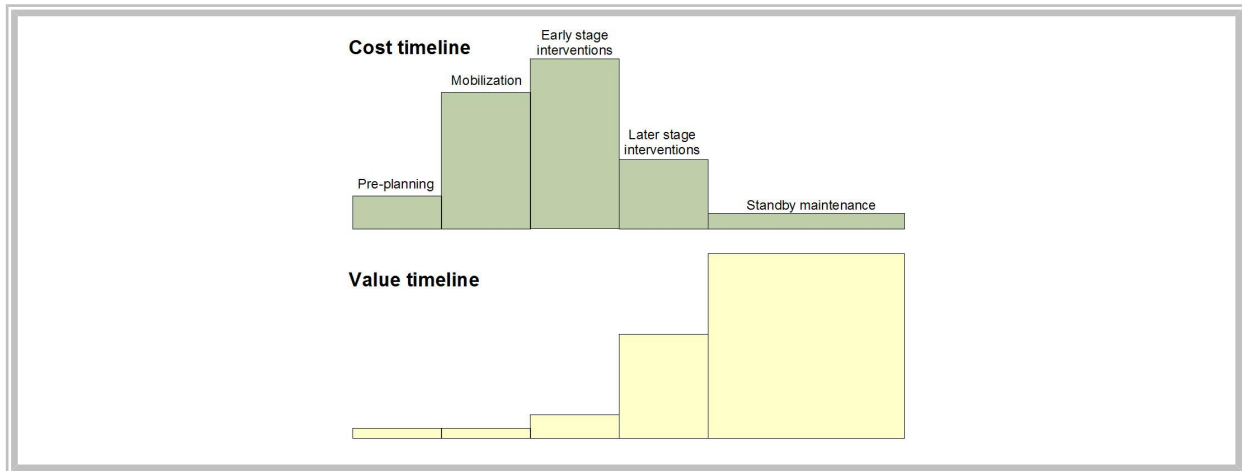
Economic Value Adding (EVA) became a powerful tool to manage wealth perception. but it is only used in the process of personal wealth creation and ignores the impact that personal wealth creation activities are having on society as a whole. Community Accountancy uses a similar accounting methodology to EVA but including all the impacts that economic activities of all sorts are having on the society. Economic Value Adding is used in the standard GAAP accounting world to optimize stockholder value. Impact on society is not taken into consideration. Economic Value Adding in the Community Accountancy framework is concerned with the impact on society and answers the question whether or not economic activities are contributing to the quality of life of the community at large.



Timeline of costs and values

The following graphic shows the very different timeline for incurring costs and realizing values. This is a critical problem in development and not central to much of the development planning process that is practiced.

As a practical matter most of the cost have been incurred before it can be shown that there are any benefits ... and this provides a dangerous opportunity for costs to be misused long before the lack of benefit raises questions about performance.



The project form of organization accentuates problem with

The F line subway station at Lexington Avenue and 63rd Street in Manhattan is a interesting example. It is a new subway station opened around 1990 serving a deep subway with multiple sets of escalators. Almost every week some of the escalators are broken down and awaiting maintenance. ... these are Otis Escalators, a reputable product, but in this situation they are always breaking down. Though almost impossible to prove, it is likely that the contractors who installed the original equipment did not do the work right ... and that the inspectors and contract oversight engineers did not do their work right either. It is pretty clear that something went wrong, and in the best of all worlds, we should know what is was and be able to hold the people responsible to account. Almost certainly something like over-billing and under-performing was involved ... payments for favorable inspections ... and so on. It is pretty obvious this is what happened ... but there is no practical way to find the facts and hold people to account.

Many cities have a problem with street congestion ... and several cities around the world have tried to address the problem with some form of “pricing” that charges users for road use. But before the discussion of congestion pricing, it would be useful to have a discussion of congestion costing. How much does it cost society to have such a dysfunctional system of city transport so that productivity is far below what it should be. This is where data about behavior of cost is useful.

Operating a truck has three major cost elements, the labor cost, the cost of fuel and the cost of the equipment (truck). These costs vary based on time (labor), the power being used (fuel) and mainly time (for the truck). A truck stuck in traffic has high costs ... and is doing nothing useful ... just waiting to get moving and go somewhere. There might be another big cost ... the cost of not delivering on time.

Buses carrying passengers have another cost to society which is the opportunity cost of the time being wasted by all the passengers on board. If 30 people on a bus are delayed one hour by congestion ... what cost does this have. If the costing is done at \$50 an hour, the hourly cost is \$1,500 ... and at a low wage rate of \$10 an hour it is still \$300 an hour.

How many people in a city like New York lose an hour a day because of getting stuck in traffic. Maybe its 500,000 people ... maybe a lot more. At a wage rate of \$10 an hour, not that much above minimum wage, the daily cost is \$5 million. For a year this amounts to \$1.25 billion.

There needs to be dialog about congestion costs ... when society knows what congestion is costing ... then perhaps leadership will give this an appropriate priority.

Profile of the population

The profile of the population tells a whole lot about the community ...

- There are the questions of how many:
- There are questions of health:
- There are questions of education
- There are questions of jobs, work
- There are questions of wealth
- There are questions of housing

How to present this so that it is clear, simple but nor simplistic.



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