Chapter 11
Economy and Environment: How to Get What We Want

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11.1 Introduction

Our entire lives are influenced by evaluations, by receiving attention and by being ignored. Children learn to act so as to get attention, and to cease behaviors which get no attention. The same is true of our economies; we learn to emphasize things that gain the attention of government and media, and disvalue things that do not. From this perspective, the problems of economy, environment, education, and media, are problems of getting and keeping attention. We can influence progress in the direction we desire, only when we learn properly to measure that progress.

Now our leading economic indicators, invented generations ago, are the Gross National Product (GNP) and Gross Domestic Product (GDP). Like the market system they represent, these indicators are fatally flawed. They value destruction and disasters, and fail to value nature and the most valuable activities of our daily lives. This chapter introduces the importance of measuring what we value, and of finding ways of encouraging and discouraging activities through attention, taxation, and market choice.

11.2 Problems Inherent in the GDP

Imagine that your local policeman gave a report that said, "Activity on our city streets has increased by 50%." What would you think? Surely you would want to ask: *what kind* of activity has increased? Traffic jams and traffic accidents? Stolen cars? Robberies, murders, rapes? Homeless people sleeping on sidewalks? People throwing rocks? Or people picking up garbage? Volunteers planting trees and flowers?

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Children walking and talking with old people? Or people selling balloons and ice cream? The fact that *activity* alone rises by 50% is *meaningless* until we know *what* that activity entails.

Now imagine that government decided to rank cities by the amount of activity in their streets. Every time someone did something in a street, it would be counted. Every time an accident occurred, every time a stone was thrown, every time someone littered – if there were any activity in the streets, it would be counted, the more the better. Surely you would respond, "this is a bizarre if not insane way to evaluate streets. It only adds numbers but fails to evaluate contents." Of course you would be right; amount of activity alone proves nothing.

But this is exactly what happens with that bizarre if not insane measure called the GDP. The GDP is simply one way of adding up all economic activity. It adds up the total monetary value of all goods, services, and economic activity. It does not distinguish between gains and losses, costs and benefits, production and destruction, sustainable and unsustainable activities. It adds everything and subtracts nothing. The more activity a country has, the higher its GDP. Even Simon Kuznets, the American economist who invented the GNP and GDP, repeatedly warned that the GDP was *not* a good measure of quality of life. Yet today, many people imagine that a higher GDP is better, without asking *what* it measures. There are at least five fatal flaws in the GDP; let us examine them briefly below.

11.2.1 The GDP Confuses Production with Consumption

If people plant a forest, that is production. If people cut down a forest, that is consumption. If it costs more money to cut down the forest than to plant the forest, then according to the measure of the GDP, cutting forests is "better" than planting forests. If people plant the forest as a volunteer effort, then the GDP gives it a value of zero – no value at all – even though there are countless ecological reasons that planting a forest is better than destroying one. So confusing consumption with production is one problem.

11.2.2 The GDP Mistakes Capital Depletion for Income

Imagine two families each own some land and small stocks of jewelry. The first family uses its land to grow its own food and its own biomass for fuel. It lives self-sufficiently for many generations, growing its own food and fuel. The second family sells its land, little by little, to buy food and fuel at others' stores. When it has no land left, it continues to sell its jewelry little by little. In a few years, the second family has no jewelry left, and no land where it can grow its own food or fuel. Ultimately, it goes into debt, and must be cared for in a poorhouse or prison at public expense. Surely the former family should be considered the wiser, not to mention the more ecologically and socially moral, family. Yet the GDP says that the self-sufficient family is of no value, because it buys and sells nothing, while the family that sells all its resources is "good," because it creates lots of "economic activity."

11.2.3 The GDP Forgets Quality in Pursuit of Quantity Alone

Imagine that a craftsman makes a table. He chooses local wood, deadfall from his local forest, and using only hand tools and the skill of his hands, he constructs a beautiful table, so well made that it will last for centuries. Now compare this to a second table. It is made in East Asia by huge machines that consume iron ore and coke from Canada, uranium and other toxic minerals from Australia. It is so poorly made that its sharp edges damage people's clothing and cut their skin. It soon rusts, so people soon discard it to replace it with a similar one. Which table would you say is the better, the beautiful local wooden one or the dangerous rusty steel one? The GDP says that the dangerous rusty steel one is better, because it requires more money to transport its raw materials, consumes more energy in its manufacture, and by damaging people's clothing and skin it causes them to buy more clothing and medicine. This is the confusion of quality and quantity!

11.2.4 The GDP Treats the Gains of the Few as if They Benefited the Masses

Recall the work of Albert Schweitzer and Mother Teresa, who devoted their whole lives to improving the health of people in Africa and India. The GDP does not value the health that they brought to Africa and India – it only values the millions of dollars that they received in donations or in Nobel Prize money. Now consider a CEO of a financial institution who makes half a billion dollars a year. He neither creates nor produces anything; he just sits at desks and meetings on weekdays, and on the weekends, he plays golf. He puts his money in hedge funds that gamble on the value of the Thai bhat and the Indonesian rupee. When the hedge funds pull out of Southeast Asia, the rich banker gains another half billion dollars. The economies of Thailand and Indonesia crumble, millions of people are out of work, out of food, and in great suffering. Sadly, this was a real scenario only ten years ago. Now whom should society value more, Mother Teresa or the hedge fund gambler? The GDP says that the gambling of one billionaire is more important than the health of thousands or even millions of common people. It acts as if the gains of rich people help everyone – when in fact they do not.

11.2.5 The GDP Praises the Costs Incurred by Wars, Disasters, and Human Tragedies

According to the measure of the GDP, the best things that can happen are wars, because it costs great sums to make war and far more to pay for the hospitals, diseases, rebuilding, and after effects. If we were to measure GDP on a personal level, the best things for a family's GDP also resemble wars: expensive divorces, where the family is broken, everything is sold, two new houses are bought, the parents are hospitalized with expensive diseases, and the children are sent to prison after expensive police investigations. Like an anthill that has been kicked over, a society in shambles, scrambling to recover from countless disasters, is valued more than a peaceful, smoothly functioning society, by the logic of measuring the GDP. In short, the GDP values past problems which cost society money to repair, remedy, or fix up; present activities which move people from home and family to working part-time or second jobs; and depletion of resources which our children will not be able to use in the future.

11.3 How the Switch from GNP to GDP Veils the Gap Between Exploiter and Exploited

The GNP was the standard measure until 1991, when America shifted to using the GDP, and most countries of the world followed suit. How do they differ? In the old days, the GNP measured profits where a company is owned and where its profits are deposited. Imagine that an American company owns a coffee plantation in Latin America, a gold mine in Africa, and a sweatshop factory making sporting goods in Asia. Imagine that the sales of its coffee, gold, and sporting goods come to billions of dollars a year, but that it pays its workers in each country only ten cents an hour. Of course the primary profits and benefits from this exploitation accrue not to the countries where resources and workers are exploited, but rather to the exploitative country, in this case, America. The old GNP showed this as a profit for America, and it showed that third world countries were receiving pathetically little reimbursement for all their labor and resources. In short, the GNP starkly revealed the growing gap between the rich and the poor.

Now the GDP says, "let's measure the value of coffee, gold, and sporting goods *as if* all the profit from them were being returned and reinvested in the countries that produce the coffee, gold, and sporting goods." Since so much coffee comes from Latin America, precious metals from Africa, and sporting goods from Asia, the GDP *creates the illusion* that their economies are doing very well. It disguises the growing gap between the rich and the poor, by disguising the fact that labor and resources are being taken from the third world with minimal benefit to their people or societies. For rich countries that do not want to acknowledge this ugly and uncomfortable fact, the GDP is a less disturbing number than the GNP. But both numbers conceal the real quality of life.

11.4 Services Unappreciated by the GDP

Most of us would agree that real quality of life depends in large part on Mother Nature. Clean fresh air, delicious pure water, and fertile loamy soil are so basic to our happiness that we often forget to count them. In fact, the services of Mother Nature are what make air clean, water delicious, and soil rich. Sun and rain, forests and greenery take carbon and pollutants out of the air, and return fresh oxygen for us to breathe. If we had to pay for machines to purify our air, it would cost unthinkable trillions of dollars. Yet we often destroy nature and forests without thinking of the costs. Evaporation, streams, rivers, underground water systems, and bacterial action purify polluted water. If we had to pay for machines to purify our water, it would cost unthinkable trillions of dollars. Yet we often destroy rivers and water systems without thinking of the costs. Animals, insects, and innumerable bacteria and microorganisms slowly change poor soil into rich fertile soil. If we had to pay for machines to enrich our soil, it would cost unthinkable trillions of dollars. Yet we often destroy insects and soil systems without thinking of the costs. The GDP counts destruction of nature as a *good*. Yet in the long run, the uncounted services of Nature are far more valuable than short-term gains.

Most of the continents on the earth were once covered with forests – the reason many places are arid today is that men cut down those forests. When a forest is cut down, the cycle of water and CO_2 is affected, and climates become more severe. Even a small grove of trees on the north side of a house can raise temperatures by 5–10° in winter by reducing wind chill, while a few trees on the south side can lower temperatures by 5–10° in summer by providing shade from the sun. On a larger scale, we are coming to see how burning of forests in Indonesia and Brazil has affected the weather patterns of the whole globe in recent years. If we had to place a money value on these services of nature, surely it would cost trillions of dollars to cool, warm, or modify weather patterns – even *if* we really had the ability to do so.

Let us consider some more examples. Pollination and pest control could be done by humans – indeed, in some sad situations, humans have to move the pollen from flower to flower by hand, and pick off the insects by hand as well. If we had to pay for all that labor, we would painfully realize how valuable are the bees and butterflies that pollinate the flowers, and the frogs and ladybugs that eat insect pests.

Only recently, we are beginning to realize and appreciate the difference between resources that are usable only once, like coal and oil, and renewable resources, like sunshine, wind power, water power, wave power, and biomass. As problems of pollution force us to move from burning fossil fuels towards using renewable energy, we shall appreciate even more the value of natural resources like wind, sunshine, and water power.

The more we know of nature, the more we find new medicinal herbs, roots, barks, leaves, and chemicals that have the potential to save us from a wide range of diseases. Numerous studies have found that the best way for us to escape the stresses of modern society and restore our bodies and souls is to go hiking for a day in the forest. After all, our ancestors lived in forests for millions of years.

The value to our health of walking in nature is difficult to measure in numbers, and has absolutely *zero* value to the GDP.

Yet another range of services that the GDP ignores is those that have been a part of traditional family and community life. For example, we would all agree that providing a good home environment and education, that good parenting is one of the most important jobs in the world. The home and parenting that parents provide may determine whether their child becomes a saint or a criminal, a friend to many or a friend to no one. Yet such home environment and education is not considered by the GDP. How about the other services that many wives, mothers, and homemakers perform? All the cleaning, cooking, washing, painting, decorating, maintaining, and improving of homes would be tremendously expensive if everyone were paid to do it, yet we do it by ourselves everyday. Cooking, cleaning, and home maintenance are essential – some of the most valuable parts of our lives – and yet the GDP completely ignores them.

Recently, some countries in Europe have socialized medicine and elder care, so that the taxpayers pay social workers and caretakers to care for old people, while their children work in so-called "money-making" jobs counted by the GDP. Every country that has tried this has found that elder care is far more expensive, and its quality is poorer, when children work and pay helpers to care for their parents, than when children care for their elder parents without pay. The GDP values people caring for others *only* when they are paid to do so. In fact, the work that most people do in caring for others, helping them, listening to their problems, is unpaid but of very great value. And then there is the great value of communicating information itself. If we had to learn everything on our own that we can learn from talking to other people, it would take tremendous time and money to get all the information and knowledge that we need. This list could go on and on, but the point is clear. Many of the most important things in life are not – and probably should never be – bought and sold. That means that the GDP counts them as *zero*, of no importance. This too is a damning criticism of using the GDP as a measure of value or progress.

11.5 Morally and Psychologically Preferable Alternatives to the GDP

By now it should be clear that the GDP is a bad measure, not to say a measure of badness. Yet there are many alternatives. Let us compare just four that have become well known in the last decade: the *Index of Sustainable Economic Welfare* (ISEW), the *New OECD Index* (OECDI), the *Sustainable Net Benefit Index* (SNBI), and the *Genuine Progress Indicator* (GPI). Each of these scales considers the values of uncounted home and volunteer labor. More importantly, they consider the effects of income inequality, crime, accidents, pollution, and environmental damage as minuses – real losses that lower the quality of our lives, even if our GDP is rising. Let's take a minute to simply look over some of these alternatives. For the sake of clarity, let us present each in abbreviated chart form, rather than text, where pluses indicate things positively valued, and minuses, things subtracted from the total value.

(1) The *Index of Sustainable Economic Welfare*
(ISEW: Daly and Cobb 1989; Jackson 1994) values/devalues:
+ Expenditures
+ Home labor
– Income inequality
– Accidents and crime
– Air and water pollutions
– Loss of farms/wetland
– Environmental (and O_3) damage
– Resource depletion

(2) The *Sustainable Net Benefit Index*
(SNBI: Lawn and Sanders 1999) values/devalues:
+ Expenditures and services
+ Home labor
+ Leisure time
– Income inequality, crimes and accidents
– Long commutes, unemployment
– Family breakdown
– Environmental damage and pollution
– Resource Depletions

(3) The *New OECD Index*
(OECDI: Ekins 1997) values/devalues:
+ Percentage of national area protected
+ Percentage of waste treated and recycled
– Solid waste and water pollution per capita
– COX, SOX, NOX air pollution per capita
– Primary energy use and private car transport
– Imports of tropical wood
– Percentage of species threatened
– Nitrates/km^2 cropland

(4) The *Genuine Progress Indicator*
(GPI: Daly and Cobb 1989; Lawn 2003) values/devalues:
+ Expenditures/services
+ Home, volunteer labor
– Lost leisure time
– Income inequality
– Crime and consequences
– Accidents and illnesses
– Pollution purification
– Resource depletions
– Environmental damage

The scales, ratings, and measurements used to evaluate something determine its future. These scales presented above are only extremely rough outlines of the detailed proposals and practices that are already being emulated in much of the EU. Subsequent revisions of these proposals may show further improvements or fine tuning not apparent in the above rough outlines. The above rough outlines do demonstrate a wide agreement that *non*-GDP factors are more numerous and more important than the GDP. Yet when we continue to evaluate economies by their GDPs, we value consumption and waste and *de*value nature, parenting, and tree planting. So it is important that we understand how our evaluations encourage or discourage the activities or conditions that we want to encourage or discourage.

11.6 The Roles of Taxation and Consumer Choice

Consider an example connected both to the economy and to discouraging and encouraging activities: the collection of taxes. Like the GNP/GDP, tax collection systems are some 50 to 100 years out of date with our times today. All countries need taxes, to support their national health and medical systems, schools, communication, and transportation. Taxes all collect funds for those purposes; but taxes also have the effect of encouraging and discouraging specific activities. Although there is some difference from country to country and state to state, by and large we can see the following trends in the way taxes influence people.

Most countries tax employers, to provide health insurance and social security benefits for their workers. This is not to criticise health insurance and social security benefits – but this same tax encourages employers to hire fewer people, or to hire illegal aliens, for each person legally hired means more tax taken from the employer. Similarly, most countries now tax income. The longer we work, the more we earn, and the more we earn, the more income tax we have to pay. There are cases where many family members work part time, because they fear that if they were to work full time, they would lose more in taxes than they would gain in income. In such ways, taxes can end up discouraging full-time employment.

Many countries also tax earnings from bank deposits, savings accounts, and investment profits. Others tax building and home improvement projects. If the goal of the tax program is to reduce investment and redistribute wealth, or to discourage building improvements in certain areas, then this would make good sense. In fact, most countries *want* to encourage saving money and improving property, so it is counterintuitive that they should discourage it through taxation.

On the other hand, most countries continue to give tax breaks (discounts) for companies that remove natural resources, like chopping forests, mining coal, iron, minerals, and uranium, or drilling for oil. Other tax breaks are given to families with many children; yet others to people who buy trucks, 4WD SUVs, and second homes – encouraging rich people to explore and exploit the virgin countryside. These taxes might have made sense a century ago, when some countries could still claim to be underpopulated. Today, they encourage behaviors that directly harm both the social environment and the natural environment. What could be done instead?

Simply speaking, we could discourage undesirable activities by taxing them – as some countries are already beginning to do so. For example, high taxes on tobacco, alcohol, gasoline, and even meat, have had beneficial effects on the health of many European populations. The EU and UK have already introduced versions of carbon emissions taxes; henceforth taxes on sulfur and nitrate emissions may also become desirable. Taxes on many of the activities viewed as "minuses" in the environmentally-friendly evaluative scales displayed above would also motivate citizens to healthier and more sustainable directions. For example, taxes on unrecycled waste dumping and landfills, or on Dioxin and PCBs that they produce; taxes on pesticides and other poisons, possibly including batteries and heavy metals; taxes on virgin resources; even taxes on food mileage may be desirable in order to stimulate more sustainable thinking and lifestyles.

First we must *identify* what we value and disvalue, and then find ways of discouraging or encouraging those behaviors. The critical issues become *what* we choose to encourage or discourage, and *how* we value or devalue it. So far, we have already seen two ways of encouraging and discouraging. The first is by paying attention (positive ratings) to what we want to encourage, and no attention (negative ratings) to what we want to discourage. The second is by taxation and tax benefits. The third item which must not be forgotten is the power of shopping choices.

Every time we buy something, we send powerful messages to the manufacturer and society: "please make more of this, the way you made this one." When we buy paper and pens, for example, if we buy virgin bleached paper and virgin plastic pens, we invest our labor into paying the people who make them. We encourage them, "Please cut more forests, please pollute the water with more bleach, please consume more petroleum." On the other hand, if we choose to buy unbleached recycled paper and recycled pens, we send a different message: "Please recycle paper and plastic, please do not cut forests or consume oil." The choice is ours.

Manufacturers are acutely sensitive to the messages that consumers send. If consumers send the message that they want more of the things that are now damaging the environment, manufacturers will continue to try to meet those demands. But if consumers demand more environmentally responsible goods and services, manufacturers will quickly change to meet those new consumer demands. Some people say that environmentally friendly products are more expensive, but this is true of any goods in the beginning. When production of organic vegetables and recycled products becomes widespread, prices will fall to low and sustainable levels. The bottom line is that we can choose our future by the products that we purchase. Manufacturers and governments will produce what we demand. But first we must know *what* we value, and why.

11.7 Conclusions

There is growing concern about environmental issues among the citizenry of the EU and Japan. However, the scales that their governments and media continue to publicize perpetuate misperceptions detrimental to environmental sustainability, and downright reprehensible for their concealment of human suffering and injustice. Far more reasonable and moral scales already exist in abundance, and they are being steadily improved. Concerned citizens must insist on our governments and media using scales that *reflect* what we value. The revision of our economic scales is in fact a prerequisite to a much-needed revision of our perception of desirable reality. Coupled with tax systems to modify behavior patterns, and shopping patterns based on educated choice, the choice of measures of *prosperity without growth* (Jackson 2009) is the only way to effectively influence economic activity on the road to environmental sustainability.

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