

Economics Reinvented

Here's the radical new theory - Give & Take Economics – that turns conventional thinking and economic policy upside down.

© 2012 EconomicsReinvented.com

The Serious Need for a New Theory of Economics

The disconnect between today's economic theories and what we see in the real world is stark and widely acknowledged. A series of major economic approaches - Keynesian, monetarist, new classical, and most recently the great moderation - have failed us with drastic consequences. We've hit a crisis point, with fiscal cliffs, bank bailouts, sovereign debt crises, massive deficits, widespread public demonstrations and deadlocked lobby-driven politics. More troubling is that we continue down the same road – because even our experts are relying on flawed theory.



Source: Freedigitalphotos.net

It's time to replace our way of thinking right from the basics. Models like expected utility, cumulative prospect theory and even the venerable supply and demand framework need major updating. The Austrian school of economics has provided us with significant insight, framing economics as a human rather than mechanical endeavour, but we still need to go further to explain our world. Here we introduce a new theory - give & take decision theory (give & take economics). It's a single pragmatic model which takes account of economic, political, sociological and psychological influences to a decision - and it's boiled down to a simple construct, like supply and demand, that we can apply in business.

A New Theory That Works: Give & Take Economics

An Entirely New Approach

Give & Take Economics redefines the model of how individuals make decisions – it replaces the idea that they solely balance external prices and quantities in a scarcity-driven trade-off with the notion that they make an internal psychological trade-off of how much cost they'll bear to obtain benefit. On this intuitive foundation, decisions are modeled with a pragmatic *Leaning X* diagram. The theory goes much further however - to also redefine the way individuals interact with each other. It expands the classic *supply and demand curves* into *give and take curves*, which places all social agreements (including economic transactions), within this context of individuals mutually balancing personal total cost (PTC) and personal total benefit (PTB).



This new framework has major implications. It makes equilibrium impossible and explains how booms/busts and fads/counter-fads occur – something that current theories can't address. It also produces a powerful tool that we can use to immediately determine the effectiveness of policies and institutions – *coupling analysis* – based on the notion that most social problems result from *social coordination failure*, where PTB and PTC are *decoupled* across individuals and populations.

Decoupling results primarily when populations disengage enough to allow the formation of powerful intermediaries (including government and business); a situation that has resulted in our current strained models of capitalism, socialism and representative democracy. The only sustainable solution is to ensure that policies and institutions effectively couple PTB and PTC, which is achieved by evolving our current systems into a new framework – a *FreeAccountable Society*. A FreeAccountable society is progressive and sustainable because it is built on voluntary and proportionate coupling of PTB and PTC, meeting four specific *axioms of freedom* that result in *freedom with accountability*.

Big Implications

A number of conclusions, controversial in existing mainstream theory, result from this new way of thinking. These examples will be analyzed in subsequent articles:

- Inflation is nothing more than a rip-off of the poor & middle classes.
- US inflation of the 70's never really died. Consumer goods inflation has declined due to Chinese imports, but has been replaced by asset boom/busts – ‘bublation’.
- The US tax system is ‘way-off’ for all classes, resulting in massive free riding by lobbyists. We need a benefit-driven system, not a revenue-driven system.
- Today's monetary and fiscal policy is guaranteeing the next major crisis.
- We need to abolish professional politicians & direct lobbyists through bigger government - direct participation government. Citizens should outsource bureaucracy but not decision-making by the majority.
- Tough punishment, protection of rights, liberty and fairness are all achieved when PTB and PTC are coupled across society. Left and right can be brought together and spurious litigation reduced.
- Privatization can be more inefficient than government since efficiency solely reflects relative power, not organizational form.
- Capitalism & democracy are at risk and current solutions aren't going to help. Recent financial crises are just initial symptoms of a deeper long-term disconnect.
- Social assistance doesn't have to be a drain - many civil service jobs should actually be workfare opportunities.

How People Really Make Decisions

What Drives People

People attempt to maximize their own satisfaction by attaching value to one or more of the following ends:

Direct Ends

Consumption: The traditional desire to acquire/access for identified short-term use.

Altruism: An individual derives personal total benefit through helping others.

InDirect Ends

Savings: This is the traditional desire to hold savings for future use, providing a cushion to meet future consumption and/or altruistic objectives over time in the face of risks. It is the mirror image of speculative demand.

Speculation: Based on perceived reward from risk (the uncertain component of PTB) obtained from taking on additional levels of risk (the uncertain element of PTC).

Making Trade-offs to Get There

Mainstream economic theory has been built entirely on the concept of scarcity, an approach well suited to agrarian and industrial times. But in today's digital, knowledge-based economy where choice and free information and tools abound, a different approach is required – so that we can explain things like boom/busts, social fads and political trends. Give & Take Economics takes such a different approach. Although scarcity still matters - it is an input - decisions are primarily driven by an internal psychological trade-off. People decide how much PTC they're willing to bear in order to gain PTB – their *psychological trade-off constraint*. This changes everything we were taught about economics.



To illustrate the difference with an everyday scenario, consider a person deciding whether or not to embark on an exercise program. Contemporary theory would model this person's decision as one where they faced outcomes of either weight gain or weight loss with various probabilities. In contrast, Give & Take Economics models this as a decision where the person faces a choice of how much 'pain' (certain & uncertain PTC) they are willing to take on in pursuit of 'gain' (certain & uncertain PTB). A person doesn't face alternatives of either being thin or overweight; they face the alternative of being thin while having to avoid excess calories or that of being overweight and enjoying lots of great food. The decision isn't across a 'lottery' of outcomes either good or bad. The decision-maker bears both the PTC (the effort required) and the PTB (improved weight on the scale) in each scenario – a concept we call *matched outcomes*.

In the approach of Give & Take Economics, external constraints always have their impact indirectly, as interpreted by the individual based on their perceptions, captured in their personal psychological trade-off constraint. There are no 'natural' or exogenous economic values – no two people see anything exactly the same way – not even a budget constraint – the hallmark of scarcity thinking. To illustrate, consider a current budget that is very low relative to purchase desires. Some individuals will choose to lower consumption expectations to compensate, some may borrow, and some may forego a portion current consumption - investing in an attempt to raise the budget constraint over time. The decision is not one of taking the budget as given and selecting a desired combination of price and quantity within it.

An individual's PTB and PTC associations are built up over time as they interact with many other people with some degree of competing motives – the latter are referred to as *Cumulative Counter Agent effects*. Many psychological principles - cognitive dissonance, status quo bias, compartmentalizing, distinction bias and selective perception to name a few - underpin the existence and resilience of the psychological trade-off constraint.

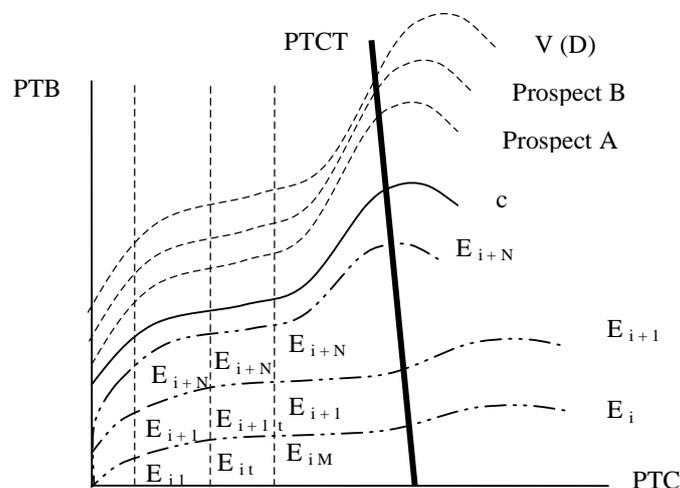
You can intuitively think of the decision-making process as an individual attaching cost/benefit profiles to each alternative *prospect* they face (a prospect is a weighted sum of weighted benefit outcomes less weighted cost outcomes over time) and then comparing those alternative prospects to their own internal acceptable level of cost/benefit tolerance, both in terms of marginal trade-off and maximum level of PTC.

The 'Leaning X' Framework

The *Psychological Trade-off Curve*, c , captures the amount of PTB required in order for a decision-maker to take on an additional unit of PTC, or similarly the PTC they will bear in order to obtain an additional unit of PTB. It is reflected in a ratio of acceptable PTB_C to PTC_C. The *Personal Total Cost Threshold* (PTCT) conveys the maximum PTC a person is willing to take on – their 'break point' (which can differ in various situations). In the Leaning X diagram in Figure 1 the vertical axis measures PTB (probability weighted certain & uncertain elements) and the horizontal axis measures PTC (probability weighted certain & uncertain elements).

The cost/benefit profiles of individual events (E_i) are shown, as are those for prospects, which are weighted combinations of events. Each outcome is denoted by i (ranging from 1 to N), and each time period is denoted by t (ranging from 1 to M). Only prospects where all (PTB, PTC) pairs are on or above the psychological trade-off constraint curve will be considered, where the maximum personal total cost threshold, PTCT, is also not exceeded. For example, prospects A, B and D would be considered. D is preferred, since it is highest as valued by the value function, v , and above c at all points. The overall upward slope of the curves conveys that events and prospects each generally require higher PTC in order to obtain higher PTB. Slope varies over the ranges of the curves reflecting the six phases of significant decisions - *Survival*, *Low-Hanging Fruit*, *Plateau*, *Rapid Pay-off*, *Diminishing Results* and *Rapidly Diminishing Results*.

Figure 1: The 'Leaning X' framework of individual decision-making



For a full technical development of the model visit www.economicreinvented.com.

Risk Aversion, PTC Aversion & the Nature of Speculation

Mainstream economic theory equates risk with variability for the sake of mathematical convenience. Give & Take Economics Theory makes the distinction that *risk* is only that part of uncertainty (variability) that is believed to potentially result in PTC to the individual – the uncertain component of PTC. The other element of uncertainty is the perceived potential *reward from risk* – the uncertain component of PTB. Risk aversion is well entrenched in economic theory, but the broader concept of *personal total cost aversion* is a new element introduced in Give & Take Economics Theory – it is equal to the inverse of the slope of the Psychological Trade-off Constraint Curve;

$$\text{Personal Total Cost Tolerance Ratio} = 1 / c'$$

This ratio captures how much additional PTC one will take on in order to obtain an expected additional unit of PTB. As discussed, risk is the uncertain component of PTC, and so risk aversion is an element of PTC aversion. Variability seeking/risk aversion can thus be measured by the Risk Tolerance Ratio, where r is the ratio of the uncertain component of PTB to the uncertain component of PTC.

$$\text{Risk Tolerance Ratio} = 1 / r'$$

Decision-makers only take on PTC in pursuit of PTB and similarly only take on risk in pursuit of reward from risk.

Expected Payoff From Risk = The uncertain component of PTB

Speculation occurs when an individual deliberately takes on risk in pursuit of reward from that risk.

How People Really Interact

Supply & Demand Evolve to Give & Take

The classic supply and demand curves of economic theory are here generalized into give and take curves that show the full trade off between PTB and PTC when individuals interact. The following fundamental definitions result:

The *give curve* is a generalization of supply. In the context of a transaction, it represents the PTC an individual is willing to bear when supplying the market in exchange for obtaining PTB from a transaction/agreement with the buyer. This may include a financial terms of trade ‘price’ and/or broader non-price ‘terms’ of exchange. PTC to the supplier includes the direct costs of producing and providing supply to the market and any ancillary costs, which may be financial and/or psychological – such as lost leisure time – and either explicit or implied opportunity costs. Give is not an end in and of itself;



Source: Freedigitalphotos.net

Give = Acceptable PTC at each given PTB, including ***Supply*** (acceptable quantity provided at each price) as a component

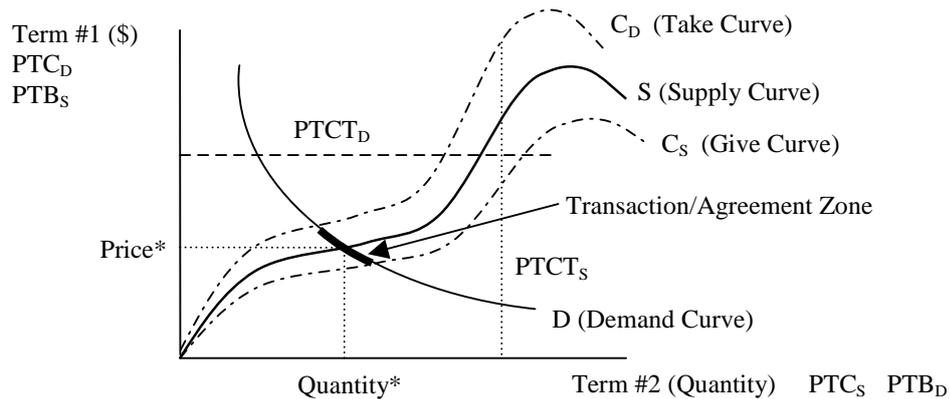
Take = Desired PTB at each given PTC, including ***Demand*** (desired quantity at each given price) as a component

individuals do not give absent of the desire to use the fruits of that give to meet an ultimate take objective.

The *take curve* is a generalization of demand. It represents the PTB an individual is seeking to obtain through a purchase in exchange for bearing the PTC of parting with funds and taking on other related costs, whether financial and/or psychological. It may be motivated by either direct or indirect ends.

The individual's Leaning X schematic can be generalized into a *give and take diagram* to illustrate interaction between individuals. An individual will engage in an interaction whenever they perceive their take to exceed their give. The give and take diagram is essentially a generalization of the traditional notion of a 'market' into a 'negotiation' – one that accommodates economic, psychological, social and political elements.

Figure 2: Decision-making 'clearing' (transaction/agreement)



In Figure 2, the area below C_D represents the potential agreement zone for the potential demander and the area above C_S represents the potential agreement zone for the potential supplier. The section of D between the C_D and C_S curves represents the zone of potential transaction/agreement. The intersection of S and D pinpoints where an agreement/transaction can occur. Unlike contemporary economic theory, there is no equilibrium point; anything in the potential agreement zone can occur.

What It Means in The Real World

Equilibrium is Impossible - Interaction Outcomes Apply

In our world of uncertainty people can only obtain further insight by exposing themselves to small amounts of heightened risk in a measured fashion, attempting to uncover larger relative benefits – a concept called *testing behaviour*. Individuals always bear uncertainty, so no matter how risk averse, they will have some level of acceptable uncertain PTC less than PTCT that they are willing to take on in order to test. The existence of testing behaviour makes economic equilibrium impossible. In Give & Take Economics Theory the contemporary notion of market 'clearing' is replaced with two modified 'clearing' concepts; *joint and disjoint interaction outcomes*.

Figure 3: Outcome Dynamics

| Joint Interaction | Disjoint Interaction |
|---|--|
| <ul style="list-style-type: none"> • Individuals motivated by direct ends • Individuals directly dependent • Produces Transaction/Agreement • Random Walk dynamic | <ul style="list-style-type: none"> • Individuals motivated by indirect ends – saving (risk-reduction/maintenance) or speculation • Individuals indirectly-dependent • When speculation exists, outcome dynamic is trend and reversal (i.e. Boom & Bust) |

Joint interactions encompass those where the individuals interacting are all directly involved in meeting identified short-term needs, whether to consume or to altruistically give to others. They produce the dynamic of a random walk.

Disjoint interactions encompass those where some individuals interacting are indirectly involved and where interaction is time removed, whether the objective is to save or speculate. An example of a disjoint interaction is a series of stock transactions over time between different groups of individuals. Such a market is not driven by the satisfaction of immediate direct needs, but fundamentally relies upon the outcomes of subsequent transactions as individuals speculate on a series of future indirect transactions. When based on speculation, disjoint interactions produce an endogenous trend in one direction that builds upon itself, creating incremental speculative demand, which is then followed by an endogenous reversal in the opposite direction. This creates a trend and reversal dynamic. When motivated by saving, to reduce risk, disjoint interactions produce a random walk dynamic.

Social Coordination & Social Coordination Failure

The recognized efficiency of the free market in meeting the needs of the broad population is a strong demonstration of the power of human coordination when PTC and PTB are effectively coupled. Free market / negotiation coordination is the purest mechanism to couple PTC and PTB across populations of individuals. When voluntarily interacting, individuals decide what PTC they are comfortable bearing in exchange for a desired PTB.

Once intermediaries are introduced - government, corporations, unions / professional groups or any other type of special interest group – decoupling of PTB and PTC will occur to the extent that a majority of citizens don't closely manage them. Intermediaries are a natural economic, political and social force, which can be benign, or a threat to social stability at its core. To the degree that citizens disengage from direct interaction, intermediaries are able to build power, blocking 'outsiders' from meaningful

participation on an issue by issue basis – they extract an *intermediary tax*, reflected in a downward right shift in the c curves of those not benefiting from the intermediary.

We often debate about whether government or the private sector is best suited to deliver particular services to society – focusing on how to balance efficiency and other societal benefits. The more fundamental question we need to ask is which approach will best couple PTB and PTC within the situation.

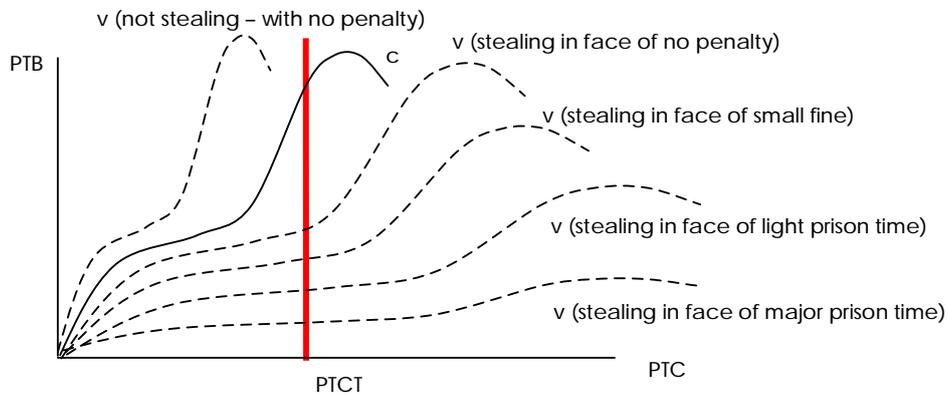
To be truly effective government needs to execute on the issue by issue desires of the majority and maintain clear frameworks for free competition and policies that couple PTB to PTC – where citizens who benefit from services bear a prorated share of the costs (not necessarily financial) and where taxes are transparently tied directly to the services provided. Private sector businesses will achieve coupling naturally as long as they aren't allowed to 'buy' political influence or market domination.



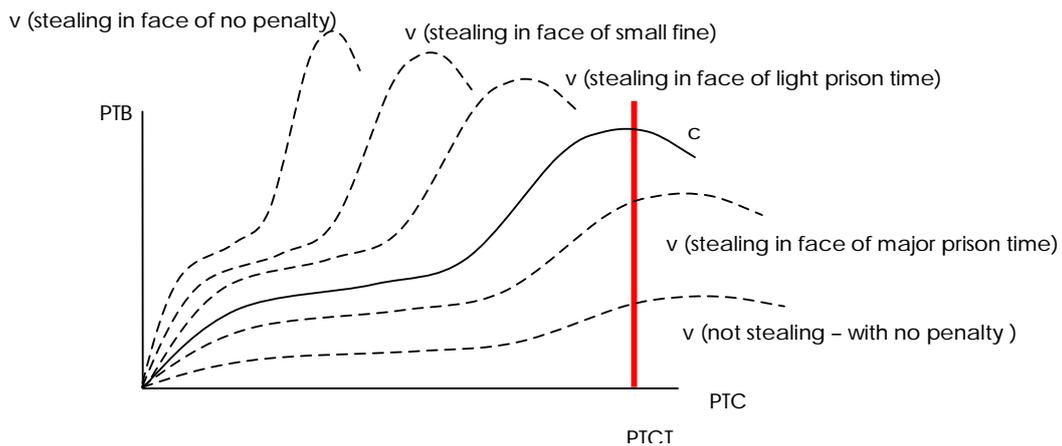
Figure 4 illustrates coupling in action through a simple example of how a law-abiding citizen and a criminal look at the same situation – the opportunity to steal something – in the face of varying penalties.

Figure 4: PTB & PTC Coupling in Action

Perspective of Law Abiding Citizen



Perspective of Criminal



This simple example demonstrates what we'd expect - that the PTC associated with crime must be large enough relative to PTB to deter the criminal, not the law-abiding citizen. The PTC attached to crime can include fines, incarceration and even social scorn. This example reinforces the view that punishment for crime is a required element of social policy – it deals with individuals already more prone to crime. However, it doesn't illustrate how to deter crime in people that are not yet criminally prone. To achieve coupling in the latter case we need to ensure that citizens – especially youth – have credible access to core education and employment opportunities – and that values of self-accountability and social-accountability are reinforced by society and in all policy.

The Road Ahead: From Capitalism, Socialism, Democracy to a FreeAccountable Society

To the extent that political, economic and social systems foster direct, active and engaged participation of the majority of the population they facilitate the direct interests of that society and resist the entrenched build up of intermediaries that create inefficiency and a reduction of freedoms. Within this ‘perfect’ scenario the pure concepts of capitalism and active democracy with coupled policies work together - there are no intermediary taxes or professional politicians, but there are systems, rules and guidelines established through an engaged majority of citizens. This system is what we call a *FreeAccountable Society*, and it maximizes the coupling of PTB and PTC across society by meeting 4 criteria – *four axioms of freedom*:

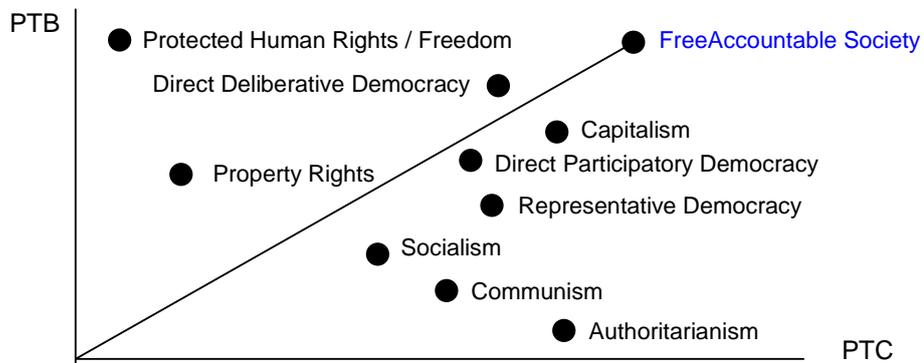
The FreeAccountable Society & The 4 Axioms of Freedom

1. Fully Free (or at least low cost and equal) access to accurate, materially significant political/economic/social information
2. Fully Free (or at least low cost and equal) access to direct, active political/economic/social participation
3. Clear property rights: private rights accessible by free market exchange with prorated public property access
4. Societal/economic (often politically legislated) accountabilities with penalties attached to breach of accountabilities (i.e. such as engaging in crime) and prorated share of costs allocated (in line with PTB) through societal policies

We’ve recently seen a large secular decoupling of PTC and PTB in Western societies – the primary source of most of our major social and economic coordination problems. Resulting from a build up of powerful intermediaries it is reflected in a range of symptoms – politics run by special interest lobbyists, bank bailouts that resulted in privatized profit and socialized losses, capitalism by litigation, inhibitive tax systems, excessive public sector unions, imbalanced trade, perks for politicians, destructive monetary policy and out of control debt racked up for future generations.

We can predict each and every one of these outcomes to the extent that we can ‘follow the money’ and the ‘ideological goals’ of those in power, mapping their impact on PTB and PTC. The free democracies the West are still young and because they don’t ensure coupling they are not sustainable. To achieve long-term sustainability through coupled PTB and PTC we need to transition to a FreeAccountable Society as represented in Figure 5.

Figure 5: Social System Evolution – Effectiveness in Coupling



Today's challenges are large but we've also never had this much opportunity before us. For the first time in history we have powerful technologies (web, social, mobile) that allow us to get past political gridlock and massive inefficiencies – through large-scale direct decision-making on a policy-by-policy basis - by governments that truly are the people. It's time everyone gets involved with an open mind, so please share your thoughts at www.economicsreinvented.com.