

# Cutting the Gordian Knot of GE Theory

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## Abstract

In the context of GE Theory, the conditions required for capitalism to be efficient are implausible in practice, though conceivable in theory. The former implies that the free market is always inefficient. The latter implies that a central planner can mimic how capitalism would work if it were efficient while the profits and interest generated by the operations of publicly-owned business enterprises would be distributed to the general public as a social dividend.

In the context of GE Theory, there is no way for libertarians to get around this dilemma without being impaled on one or the other horn. Either we live with a system that can never be efficient in practice or we have an efficient system but renounce private property rights and put distribution of the "social dividend" in the hands of a central planner.

Is there another way?

Steve Reglar (2005) writes:

As a tool of capitalist hegemony the doctrine of general equilibrium is very useful. It assumes that the normal condition of society is for the state to play as little a role in economic life as possible, because the market is part of human nature and the most efficient form of economic organization. The theory, therefore, has a role in legitimizing capitalist hegemony.

A tool of capitalist hegemony? My, what harsh language! One can almost visualize GE theorists visiting smoke-filled rooms to accept bribes from their cigar-puffing benefactors. Indeed, Post-Autistic economists, after observing the word “axiomatic” in the title of my book (Aguilar, 1999), dismissed it out-of-hand, denouncing me as a bought-and-paid-for stooge of Big Business. Apparently, just that one word was enough to convince them of this about me.

But before we dismiss this talk of an epistemological approach being a “tool” of Big Business to “legitimize” their obviously anti-social behavior, let us at least see if the socialists are consistent. James Yunker (2007) writes:

This article evaluates the performance of contemporary capitalism relative to that of a hypothetical alternative designated “profit-oriented market socialism.” In most respects, profit-oriented market socialism would closely mimic contemporary market capitalism. The major difference would be that most profits and interest generated by the operations of publicly-owned business enterprises would be distributed to the general public as a social dividend proportional to household wage and salary income rather than in proportion to household financial assets. The basis of the comparison is a small-scale but comprehensive computable general equilibrium model.

Here we read that GE Theory is not a tool of capitalist hegemony, but a tool of profit-oriented market socialism, that is, publicly-owned business enterprises (e.g. Fannie, Freddie, AIG, etc.) that mimic contemporary market capitalism. And it is not a “tool” in the sense of legitimizing the socialists (presumably, their legitimacy is derived from emotional appeals of the “Gosh, there sure are a lot of poor people – darn capitalists!” variety), but a tool in the literal sense of defining a software model.

Well, which is it? Reglar thinks that GE Theory “assumes that the normal condition of society is for the state to play as little a role in economic life as possible.” Yunker sees GE Theory as the basis for a central planner to “mimic contemporary market capitalism” while retaining for himself the authority to distribute the social dividend – hardly a “little role in economic life.”

The primary (actually, the only) criticism that socialists have of my writing is that it lacks “substantial references.” Apparently, he whose writing is filled with the most quotations from the most august of academic journals wins. Thus, having observed that Reglar and Yunker have opposite views of GE Theory, we clearly need a tie-breaker. Cristobal Young (2005) writes:

General equilibrium theory – the mathematical analysis of a market economy as a whole – has its roots in the late 19<sup>th</sup> century works of Leon Walras and Vilfredo Pareto... However, the project failed to attract much following and soon faded into dormancy.

It was the end of the Great Depression, ironically, that saw a tremendous revival of the General Equilibrium (GE)/Welfare economics project. In the US, a loose grouping of devout socialists were busy detailing the elegance of the market equilibrium. The leaders of the GE revival – Oskar Lange, Abba Lerner and Abram Bergson – were cutting-edge mathematical economists and true believers in Soviet-style central planning...

The GE framework, given sufficient mathematical complexity, is actually a grand narrative on the fragility and implausibility of perfect market equilibrium. Successive mathematical torturing has outlined an extensive list of unlikely conditions required to demonstrate general market efficiency. Mark Blaug has nicely summarized a partial inventory: “perfectly rational, omniscient, identical consumers; zero transaction costs; complete markets for all time-stated claims for all conceivable contingent events, no trading at disequilibrium prices; no radical, incalculable uncertainty...; only linearly homogenous production functions; no technical progress requiring capital investment, etc” (1997, p. 5)...

For an economic system that failed to satisfy such assumptions, there seemed a need for government intervention. General equilibrium theory provided a sort of checklist for market critics.

Young supports Yunker’s position though, while they agree that central planning is the inevitable result of economists’ acceptance of GE Theory, Young see this as a bad thing and Yunker sees it as a good thing. Nevertheless, the *Review of Political Economy* and the SSRN trumps an obscure conference of socialists idling on the taxpayer’s dime, drinking tea and refining their plans for world conquest. Two out of three quotes wins!

Steve Keen (2007, p. 173) has also observed that satisfying the ever-growing list of assumptions made by Debreu and his followers is “unrealistic”:

It is almost superfluous to describe the core assumptions of Debreu’s model as

unrealistic: a single point in time at which all production and exchange for all time is determined; a set of commodities – including those which will be produced in the distant future – which is known to all consumers; producers who know all the inputs that will ever be needed to produce their commodities; even a vision of “uncertainty” in which the possible states of the future are already known, so that certainty and uncertainty are formally identical. Yet even with these breathtaking dismissals of essential elements of the real world, Debreu’s model was rapidly shown to need additional restrictive assumptions.

In the context of GE Theory, the conditions required for capitalism to be efficient are implausible in practice, though conceivable in theory. The former implies that the free market is always inefficient. The latter implies that a central planner can mimic how capitalism would work if it were efficient while the "profits and interest generated by the operations of publicly-owned business enterprises would be distributed to the general public as a social dividend."

In the context of GE Theory, there is no way for libertarians to get around this dilemma without being impaled on one or the other horn. Either we live with a system that can never be efficient in practice or we have an efficient system but renounce private property rights and put distribution of the "social dividend" in the hands of a central planner.

Far from being a “tool of capitalist hegemony," acceptance of GE Theory is the death of capitalism. Our only compensation is that, like a condemned prisoner who gets to choose the firing squad or the hangman, we get to choose inefficiency or tyranny. How did free-market economists respond to this dreadful choice? Milton Friedman invoked his famous “assumptions don’t matter” dictum (1953) to avoid having to admit that he could not untie the Gordian knot of GE Theory – but that is cowardice. Surely there must be a better way!

Instead of attempting to untie it, I cut the Gordian knot of GE Theory by throwing all of Walras’ and Pareto’s assumptions overboard and starting from scratch with my own set of axioms. When faced with a dilemma "in the context of GE Theory," I invented Axiomatic Economics. As Hannibal Barca said, "we will either find a way, or make one." The same goes for libertarians; we will *never* accept socialism.

My assumptions are three:

1) One's value scale is totally (linearly) ordered:

- i) Transitive;  $p \leq q$  and  $q \leq r$  imply  $p \leq r$
- ii) Reflexive;  $p \leq p$
- iii) Anti-Symmetric;  $p \leq q$  and  $q \leq p$  imply  $p = q$
- iv) Total;  $p \leq q$  or  $q \leq p$

2) Marginal (diminishing) utility,  $u(s)$ , is such that:

- i) It is independent of first-unit demand.
- ii) It is negative monotonic; that is,  $u'(s) < 0$ .
- iii) The integral of  $u(s)$  from zero to infinity is finite.

3) First-unit demand conforms to proportionate effect:

- i) Value changes each day by a proportion (called  $1+\epsilon_j$ , with  $j$  denoting the day), of the previous day's value.
- ii) In the long run, the  $\epsilon_j$ 's may be considered random as they are not directly related to each other nor are they uniquely a function of value.
- iii) The  $\epsilon_j$ 's are taken from an unspecified distribution with a finite mean and a non-zero, finite variance.

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