

WHAT IS THE DEFINITION OF A MARKET?

The US economic system is based on what we've all agreed to call free markets. The entire system is often called the free market system instead of the capitalist system. I've been looking for a definition of the term market.

1. Textbook Definition. Samuelson and Nordhaus define markets early in their textbook *Economics* (2005 ed.):

A market is a mechanism through which buyers and sellers interact to determine prices and exchange goods and services.
P. 26.

Markets consist of buyers and sellers interacting to determine prices? I'd call that moderately descriptive. Is it interacting when you go to the grocery store and decide to buy one brand of crackers rather than another? Is Macy's is running an auction? You get into an accident and your car needs body work. The insurance company negotiates with your body shop. Is that interacting? You need to see a doctor. There's no interaction over prices. This definition implies that as far as ultimate consumers are involved, a market is an arrangement where prices are set by sellers, and buyers get to pick whether or not to buy and from whom among the reasonably available sellers. It is a reasonable description for transactions among merchants. There isn't really a mechanism, and the whole thing doesn't constitute a mechanism, and the term interacting seems inaccurate. There is, of course, exchange of goods and services.

They also define the term "market economy"

A market economy is an elaborate mechanism for coordinating people,

activities, and businesses through a system of prices and markets. It is a communication device for pooling the knowledge and actions of billions of diverse individuals. P. 26.

Again we see the word “mechanism”. It must be a metaphor, and not a definition. These descriptions lead you to think a market is a circuit on the motherboard of a computer that is running the market economy program. You’d think a market economy operates by formal laws and in accordance with mechanical rules. You’d think it was a permanent thing, to be studied in the same way you’d study galactic movements or steel balls rolling down an incline. That seems completely wrong.

And anyway, the term mechanism doesn’t tell us anything about what a market is. The other terms are vague and unconnected to anything. It’s hard to see how this definition could serve as the basis for an economic system.

2. Markets as defined by early neoclassical economists. One of the first neoclassical economists was William Stanley Jevons, a mathematician and philosopher. His principle contribution to economics is his book *The Theory of Political Economy*, published in 1871. The book includes an early effort to apply the new Riemann Integral to the field of economics. Compare the drawings in III.17 and III.21 with the graphics at this link. Here’s his definition of Market:

By a market I shall mean two or more persons dealing in two or more commodities, whose stocks of those commodities and intentions of exchanging are known to all. It is also essential that the ratio of exchange between any two persons should be known to all the others. It is only so far as this community of knowledge extends that the market extends. Any persons who are not acquainted at the moment with the

prevailing ratio of exchange, or whose stocks are not available for want of communication, must not be considered part of the market. Secret or unknown stocks of a commodity must also be considered beyond reach of a market so long as they remain secret and unknown. Every individual must be considered as exchanging from a pure regard to his own requirements or private interests, and there must be perfectly free competition, so that any one will exchange with any one else for the slightest apparent advantage. There must be no conspiracies for absorbing and holding supplies to produce unnatural ratios of exchange. Were a conspiracy of farmers to withhold all corn from market, the consumers might be driven, by starvation, to pay prices bearing no proper relation to the existing supplies, and the ordinary conditions of the market would be thus overthrown.

The theoretical conception of a perfect market is more or less completely carried out in practice. IV.16-17

This is an excellent description of what we call a competitive market, you know, the kind that doesn't exist in the real world today, if it ever did. Jevons thinks the model is close enough to reality to allow him to create equations, which he thinks this is crucial.

But if Economics is to be a real science at all, it must not deal merely with analogies; it must reason by real equations, like all the other sciences which have reached at all a systematic character. IV.38

3. Post WWII economics. Neoliberal economists of the Chicago school updated the metaphor of the early neoclassicals. Bernard Harcourt in his excellent book *The Illusion of Free Markets*

explains that neoliberal theory extolling marvels of markets rises from 18th and 19th Century theories that markets are part of the natural order of things. One branch, related to the ideas of Friedrich Hayek, springs from Adam Smith's metaphor of the invisible hand of the market, a form of spontaneous order, updated with "new models from computer science." Chapter 8.

Harcourt describes another strand of thought about markets, this one closely linked to Gary Becker and Richard Posner of the Chicago school of economics. He says it focuses on the alleged economic efficiency of the market economy, and he traces its roots to French Physiocrats who believed that markets were the embodiment of a natural order. Just as we perceive order in the physical universe (more or less, depending on how you understand quantum behaviors), so markets reproduce that efficiency. Efficiency is set up as the chief goal of the economy. With this step, we incorporate a determinative model of the economy, one that can be represented by equations.

But there is still no definition of the term market.

4. Contemporary works. Now, as in the past, economists raid the physical sciences for new ideas. Here's a fascinating example: *The Market as a Creative Process*, available starting at page 378 here [huge .pdf] by James M. Buchanan and Viktor J. Vanberg. They discuss an early book on complexity theory by Ilya Prigogine and Isabelle Stengers; Prigogine won a Nobel Prize in chemistry, and later turned to the study of complexity. His book is about the role of chaos theory in the self-organization of more complex forms.

Buchanan and Vanberg discuss a very old problem arising from Newtonian physics. That system is thought to be deterministic, in the sense that if you knew the position and motion of every particle in the universe, you could predict the future. Nobody has actually thought that was

true for decades, at least. As far as I know, economists don't think that markets are deterministic. Buchanan and Vanberg point out that lurking in a system of equations based on the idea of general equilibrium, there is a kind of determinism lurking. They explain that Prigogine's book should bring an end to ideas about determinism in economics, and presumably an end to the idea of equilibrium in the economy.

Ideas about chaos theory were cutting edge in the mid-80s. Chaos theory is a mathematical field, so I'm not sure it's the best argument Buchanan and Vanberg could have made. There has been much progress since then in both complexity theory and ideas about self-organization. This seems to me to be a very elegant solution.

Buchanan and Vanberg's paper is in a book titled *Philosophy and Economics*. Therefore, you'd expect a bit of formalism, like a definition of market. But no. We learn that standard economic teaching is based on the "self-organizing nature of markets." 383. That doesn't accord with Samuelson, which I have set up as standard economic teaching, but it seems to be at the heart of the Austrian School; you can see it in this paper by Friedrich Hayek. This school preaches that markets are self-organizing and automatically compute the proper allocation of resources without resort to any centralized apparatus. Hayek explains that the "price system", which seems to mean the market system, "evolved without design". H.24. He doesn't cite any evidence for this proposition, and surely no one really thinks the bread markets in 18th Century France evolved without design, any more than the Chicago Board of Trade did. See Harcourt's *The Illusion of Free Markets*.

I've got a lot of stuff to look at, but so far, I don't see a formal definition of "market" that will bear any scrutiny. Why it matters is the subject of a future post.