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Say's Law Explained

David (dmg) got this discussion started with a post by Horwitz. This is my second participation in the thread.

Say's Law of Markets: "Supply Creates Its Own Demand."

The problem with Say's Law is that it is very difficult to visualize when supply and demand are in dynamic equilibrium.

Let's take gasoline. You are driving along and you notice that the tank is half empty. You stop at a gas station and fill up. It would seem that the car's demand for gasoline precipitated this action. At the gas station they monitor the tank levels and as soon as they are half empty they call the distributor to send the tank truck around. It would seem that the motorists' demand for gasoline precipitated this action. And this goes all the way up the fuel chain to the storage farms, refineries, shipping and eventually the well heads. When you look at this system in dynamic equilibrium you easily come to the conclusion that demand drives supply.

But let's brake the system and see what happens. I picked on gasoline on purpose because that system was broken by the Arab oil embargo and you have a real life situation to study. When the Arab oil embargo hit the USA, supply of gasoline was restricted and the equilibrium of the system broken. All of a sudden you had queues at the filling station. All of a sudden people were "topping off" their tanks to make sure they did not run out. I believe there was quite a bit of violence, some fatal, at some of those queues. No amount of gasoline demand created any gasoline supply! And that is the important part of the lesson!

In countries less fortunate than the USA, the business of queues is a constant, and not just to buy tickets at the local Radio City Music Hall. In these summer months water is rationed in Caracas and people have to alter their daily schedules to conform to the supply times. New Yorkers might remember their own water shortage some years ago and the trauma it caused. In London queues at the tube

and other transport systems were a fact of daily life. And food queues in the Soviet Union -- no amount of hunger produced a single loaf of bread! No amount of hunger in Ethiopia produced any food -- only a large pile of corpses!

A few pages back, Fay argued that if you produce something that no one wants, that supply clearly will not create demand. Since this observation is accurate, I will have to deal with it. The answer is that supply and demand are not equal and opposing forces. They are different and they collaborate to make markets work. Here is how:

Markets are a human invention. Lower animals consume, some actually produce (bees) but they don't exchange except in a few cases of symbiosis. People commonly agree that supply and demand are the drivers of the market. Let's compare the general market with a simpler version of it. For example, the electric grid.

At the core you have the power plants that produce electricity. They convert some form of energy into electrical energy. At the edge you have the consumers, mostly light bulbs and electric motors (and Internet hotels ;-)). There is also a control mechanism. When voltage drops because consumption is up, the control mechanism tells the power plants to increase output. When voltage rises because consumption drops, the reverse happens (if this is not technically exact, it does not matter for our purposes, we just want a model that is simple enough to visualize). In this model you can see clearly that to create supply you have to use up or convert large amounts of energy. Before you apply "labour, rent and profit" to paraphrase Adam Smith there is nothing for the consumer to consume. Once the virtuous cycle of production and consumption is started, monitoring demand controls the volume of the supply. It should be clear from this model that supply needs a large amount of energy in the form of "labour, rent and profit" while the control exerted by demand is accomplished with a very low expenditure of energy in the feedback loop.

This electric grid model shows that supply and demand are not equal and opposite but both are required for the virtuous market loop to work.

We have seen many example of existing demand not creating supply. Gas lines, starvation, too low unemployment figures. On the other hand, we have many

example of supply creating demand. Every successful human invention is a case in point! Someone has a bright idea, tinkers in his garage, gets family funding, tinkers some more, gets venture capital funding, tinkers in style, does the IPO, we buy the shares. Well, you know the story. Probably 9 out of 10 garage projects, or maybe 99 out of 100, never produce a virtuous market loop. But the one that does, the survivor, proves Say's Law. Say's Law does not contradict Darwin's Survival of the Fittest. What it does say is that the surviving supplier survives by having created demand.

It is interesting to note where Adam Smith begins his epic, "The Wealth of Nations." He starts with the division of "labour," a better way to create supply. He notes that no other species besides the human species has the concepts of "mine," "thine," and "let's trade" and thus no other species has material progress. The division of labor is trade at the micro level. Once a whole product is made, its sale to the final consumer is trade at the macro level. The driving force of trade, both at the micro level and at the macro level is the same, a search for improvement that starts with production.

Say's Law works in an invisible sort of way and it is very difficult to discern just how it works. But as soon as it stops working for lack of supplies, the situation becomes quite clear. This the reason for Denny's Law: "Demand creates queues. Supply gets rid of them." You can more easily visualize Say's Law when you put it this way.

Denny

"Demand creates queues. Supply gets rid of them."