

## SUFFICIENT AFFLUENCE/SUSTAINABLE ECONOMY: ECONOMICS FOR EVERYONE (PART FIVE)

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*“Education can help us only if it produces ‘whole men.’ The truly educated man is not a man who knows a bit of everything, not even the man who knows all the details of all subjects (if such a thing were possible): the ‘whole man’ in fact, may have little detailed knowledge of facts and theories; he may treasure the Encyclopædia Britannica because ‘she knows and he needn’t,’ but he will be truly in touch with the centre. He will not be in doubt about his basic convictions, about his view on the meaning and purpose of his life. He may not be able to explain these matters in words, but the conduct of his life will show a certain sureness of touch which stems from this inner clarity.”*

--Ernst Friedrich Schumacher, *Small Is Beautiful: A Study of Economics as If People Mattered* (Frederick Muller Ltd., 1973)

In the past four months, we have laid out some basics of economic scarcity, resources, needs, wants, and production that Detroiters must “grok” in order to rebuild the economy of the City. In order to work successfully, this approach must include everyone in the metropolitan area. We have named this extended sub-series “Economics for Everyone,” using the basics of Economics as its theme.

This month, we continue our foray as strangers in this strange land. Our parallel intention with this in-depth approach is to provide background for attorneys to develop their own primers to share with their staffs and with jurors in cases involving economic issues. Ultimately, we hope that this primer will help to redirect the negative energy that is being focused on Detroit by educating our readership on how the Principles of Economics work in reality. In doing so, we hope to foster a spirit of positivity regarding the City of Detroit. With this in mind, we have changed the subtitle of our series from “Understanding Detroit’s Bankruptcy” to “Preparing for Detroit’s Recovery.”

In this column, we will discuss marketplaces and the process of how we buy and sell in order to exchange goods and services with one another. At the center of Economics, we find the market mechanism of Supply and Demand. College sophomores often view this as an intimidating subject because usually it is presented in a very technical manner; some instructors even teach it with nothing but graphs. However, by using common sense, simple illustrations, and clear, plain language, anyone should be able to comprehend this important topic for economic growth and redevelopment.

The first myth about Economics that we need to dispel is that a market is necessarily a physical space. Though we tend to think of concepts of General Economics in terms of markets that resemble a flea market or a grocery store, a market also may exist in cyberspace; examples include a stock market, Web sites like Ebay.com, or television programs such as those on the QVC Shopping Network. Therefore, we should recognize markets as existing whenever or wherever a transaction occurs in which we exchange goods and services.

Let us step back for a moment and consider what a market is not. If a person comes up to us and hands us a flower without a request or expectation of receiving something of comparable value in return, we do not experience a market-defining exchange. Instead, we have a transfer—a one-directional gift-giving. However, if two of us meet and are holding items of value to one another, we may wish to exchange them for what the other has. For example, if I am holding a catch of trout that appeals to you and you have a chicken that looks good to me, we may come to an exchange that we mutually consider a fair trade. In such a case, we have a two-way action in which we give to one another—in other words, a transaction. This transaction involving goods of equitable value constitutes and defines our market activity.

A direct exchange of goods or services occurs most often within the family circle or a close community. For example, in a household in which two children each have regular chores, one child may volunteer to do the dishes if the other agrees to take out the garbage. This form of exchange involving barter works best when individuals have a double coincidence of wants. In other words, you need—or at least want—what I have to offer and *vis à vis*. However, in the larger society in which traders lack that double coincidence of wants, direct exchange does not work as smoothly. The recourse takes the form of a series of side trades. For instance, you accept my fish and I take your chicken, which I may not need or want, with the expectation that I can trade it with a third person who has something that meets my desires.

Across the millennia, the solution to this trade conundrum has been the development of tokens, markers, or IOUs that remain accepted commonly in place of real value and that can serve as a satisfactory tool for exchange. Symbols such as pieces of paper printed with ink may not possess any inherent value. However, this is irrelevant if the purpose of the symbol is to provide merely a transitory medium that is acceptable to anyone involved in complex rounds of exchanges. Commonly, we have come to call these symbols “money.”

Another quality that a system of money provides is that we can use it as a commonly understood measure of value for a myriad of products. For instance, if I were to ask of you how many fish one chicken is worth, you might not have a clue. However, if we agree that one chicken equates to the value of three fish, then we may use our paper markers in accordance and agree that each fish can be represented by two pieces of paper and each chicken by six. In closing this discussion about the value of commodities themselves, let us address one additional issue. By the fourth day after the trade, any unpreserved fish that we carry around town may lack freshness. Therefore, the only parties interested in it may be the village cats that have begun to follow us with great interest. In other words, fishes do not maintain their intrinsic value as a trade good because they are not suitable stores of wealth.

Once we establish the relative value of fish, chickens, goats, shirts, shovels, and anything else that we might exchange in terms of our special pieces of paper, we have developed a system of prices. We can observe what happens when the price of each good rises above or falls below its known average trade-value. In effect, we expect to find that those who have some of this particular good to offer will be more interested in parting with what they have when the price rises above the average. On the other hand, when the price falls to the low side, those traders who are interested in obtaining the good are more willing and able to obtain what is offered than those who are doing the offering. The latter group has the ability and inclination to part with the good. However, normally there will be an exchange price somewhere in the middle at which those who provide the good will supply just enough to meet the demands of those interested in

obtaining it. Therefore, when some mutually agreeable price is achieved, the quantities both offered and requested will equal one another as this market goes to a steady state of equilibrium. This is our basic law of supply and demand.

Nevertheless, this state of equality may change for reasons having little or nothing to do with the agreed-upon price. A change in non-price variables leads to an increase or a decrease in the equilibrium price and/or quantity. Furthermore, though the quantity exchanged between buyers and sellers increases or decreases, the price may remain unchanged. In this short tutorial, we will explore the seven major influential variables, two that affect the behavior of sellers supplying the product and five that lead buyers to demand collectively and to be willing and able to purchase a different quantity of this product.

### **Supply and Cost**

First, let us consider the two major variables that affect supply—the number of producer/sellers and cost-changes. In a normal market, we expect a number of producer/sellers to remain situated at any given time. At the margin, some of these suppliers have lower costs and therefore can break even at low price-points. This ability may result from greater experience or business skills. Alternately, some suppliers only can manage to break even when price rises to a higher point. In contrast to the first group, these producer/sellers may possess less skill and experience, resulting in reduced efficiency. In short, a greater number of suppliers are willing and able to offer their goods at higher prices than at lower ones. Given this status quo, when a similar mix of new sellers arrives on the scene, greater quantities enter the market at any price-level. Contrastingly, when producer/sellers exit the market permanently, the available quantity in this market decreases.

Beyond the number of producer/sellers, the remaining reasons for which the supply of a good increases or decreases point to some change in cost. Effectively, we can recognize that measurement of supply is the measurement of the costs involved to produce a product and to sell it. Therefore, the question that we must ask ourselves is whether a change in a specific variable causes the cost to increase or to decrease. Once we can identify the direction of the cost-change, the resulting movement of supply is obvious. Under normal conditions, cost and quantity move opposite of one another. When costs increase, supply decreases. Alternately, supply increases when costs decrease. There are two ways we can regard this cause/effect process. For example, we can bake, wrap, and sell loaves of bread at a set price. When our cost per loaf increases, we may not be able to sell as many loaves. However, we are able to sell more loaves when costs decrease. The second viewpoint of this economic phenomenon requires that we look at what happens if we wish to sell the same number of loaves, though we are ready to increase or decrease the price as necessary to at least break even. Let us say that we sell our loaves at \$2.00 each. This price covers our costs and leaves our employees with a fair wage and us with a modest profit. However, if the cost of producing a loaf increases by fifty cents, we must raise our price to \$2.50 lest we lose money and go out of business. On the other hand, if we find a way to lower our cost of producing a loaf by fifty cents, we can afford to lower our price to \$1.50 and be as well off as before.

What are some of these variables that can affect cost? Though there are many, the ones that we cite commonly are wages paid to employees, taxes paid to a government, the price for a quantity of raw materials, and improvements in technology and know-how. For the first three, an increase

in their dollar amounts will cause costs to increase and supply to decrease. If the wages or benefits paid to a worker rise, the cost will rise unless the increase in pay is offset by an increase in productivity. For example, if it costs ten cents to wrap one loaf of bread and we pay our employee Sally \$10.00 per hour, then we expect her to wrap 100 loaves per hour to cover her wages. If we increase her wage to \$12.00 per hour and Sally continues to wrap 100 loaves per hour, our cost of wrapping increases to twelve cents per loaf. For everything else to remain the same, we would have to increase the price per loaf by two cents. However, if Sally can wrap 120 loaves per hour, she has met her raise through increased productivity and our cost of wrapping a loaf remains at ten cents. As a result, both parties benefit. Sally earns 20% more per hour and we do not need to increase our price to cover the additional wage-cost.

We can construct a similar scenario for taxes, raw materials, or many other costs of doing business. An increase in any of these variables will raise costs unless they produce an offsetting benefit. For instance, if higher taxes paid to our local or state government results in an equitable benefit in the form of improved road-maintenance, which saves us delivery time and reduces repair costs to our vehicles, such a benefit offsets the tax increase. Likewise, if an increase in the quality of raw materials accompanies the increase in the price of these materials, this event may result in savings due to lower scrap-rates or downtime. Let us use a different example. If a sewing establishment switches to more expensive thread of a higher quality, the business should expect to reduce the non-productive time of rethreading the sewing machines because cheap thread breaks more often.

In understanding the root cause of supply-change and its corresponding effect on cost, the odd variable out is technology. We generally consider an increase in technology as an improvement. Naturally, we do not expect an improvement to lead to an overall rise in cost. Instead, better technology should lead to a decrease in cost and to a resulting increase in our supply of final product. The easiest way to understand the behavior of technology is to ask whether or not an improvement reduces cost. The rational process of deciding whether or not to acquire a new technology is to estimate the expected increase in production per hour and the reduction in maintenance and repair costs. To illustrate this point, let us consider the example of a light bulb. Modern halogen, fluorescent, and LED bulbs are more expensive than their incandescent counterparts. However, these newer technologies result in lower energy costs and a longer bulb-life. In business, a bulb with twice the life expectancy only needs to be changed half as often. The savings in terms of paying to replace a bulb might justify the higher initial cost of the bulb.

### **Demand and Revenue**

Let us turn our discussion to the matter of customer demand for a product and to the thought processes and decisions that buyers make. We will discuss the five major variables that affect demand for a product. The first one is the number of buyers in the market. As with our supply-side analysis, let us return to our bakery example and hold our loaf-price constant at \$2.00. On a typical visit, each customer tends to buy one loaf of bread. Between ten and eleven A.M., twelve customers come into our shop; each of them buys one loaf. However, many of our customers do their shopping during their lunch hour between noon and one o'clock. If twenty-four customers enter the shop during that hour and each purchase one loaf, we sell twenty-four loaves of bread. Ergo, more customers, more loaves sold.

Of the other four demand-variables to consider, three of them work in the same direction as the number of customers. These variables include the income of the buyer, the personal tastes of that person, and the price of a competing brand. If any of these three variables increase, then demand for the product that we are selling will increase.

Normally, customers are willing and able to buy more in general and to be able to buy more of our product specifically at the going price if their incomes increase. Let us put ourselves into the movie-theatre business. In this kind of entertainment concern, the product that we sell is a service. We sell tickets to our customers that allow them to enter our enclosed space, to sit in a seat, and to watch a film. When they have finished, we still have the film, seats, and enclosed space. In this sense, we have provided a service rather than giving them a tangible physical good, like a DVD of the film. As the incomes of entertainment-seekers increase, they tend to purchase more of this and similar kinds of entertainment, such as live concerts, sporting events, and premium home-cable service. Within some constraint of practicality, as income increases, one purchases more entertainment.

As income increases, we tend to buy less of goods that we deem inferior and more of higher-quality brands. For example, the diet of college students may consist of chicken-pot pies, pizza, Ramen Noodles, and some kind of canned protein combined with a box of inexpensive pasta such Road-Kill Helper. Their choice of products results not from preference but from low incomes. As their incomes increase, the normal course of events follows a path to higher-quality meals that are more nutritious and more expensive.

At other times, our decision to buy a product depends upon our personal tastes or preferences as well as social trends. For example, I (Dr. Sase) noticed that virtually all of the female students in my Economics classes wore “banana clips” in their hair some years ago. These devices were a spring-clip hair-clamp with two banana-curved plastic pieces of plastic with teeth. When these clips reigned as the height of student fashion, the demand for this relatively inexpensive accessory soared to its apex. After its popularity subsided, this twentieth-century artifact was consigned to the bargain bins near the front door of neighborhood drugstores—a result of the rise and fall of consumer taste and preference.

Our third and fourth variables require a more involved explanation. When the price increases for a similar good produced by a competitor, the demand for the brand that we sell tends to increase. However, to comprehend the dynamics of this market event more fully, we need to fill in the intermediate steps. Let us imagine that we are one of two major producers of generic Fizzy-Flavored Sugar-Water. Apart from the packaging and minor differences in the taste of the effervescent liquid, our two brands are virtually the same. Each of us sells a comparable quantity of our drink at \$1.00 for a half-gallon bottle. One day, our competitor raises the price of its beverage to \$1.50. As a result, our sales at \$1.00 per bottle rise sharply. What has occurred? Due to a sudden increase in price, indifferent customers viewed the product of our competitor as excessively priced in comparison to our product. These customers decided not to buy the competing brand at \$1.50 and to buy our brand at \$1.00 instead. In summary, our competitor raised its price, we kept our price the same, and many customers substituted our product for that of the competitor. Customers will make a substitution of brands if it seems economically rational to do so.

Our fourth and final variable is the odd one out. Again, our scenario involves two producers. This time, the demand and the quantity sold of our product increases when the price of a different but related good decreases. Our little company makes jelly and jams. Another company specializes in the manufacture of peanut butter. Everyone who makes peanut butter and jelly sandwiches (PB&J) are potential customers. Peanut butter and jelly go together and complement one another in sandwiches. For reasons unknown to us, the peanut-butter manufacturer lowers its price from \$3.00 to \$2.00 per one-pound jar. As a result, sales for our one-pound jars of jelly increase even though our price remains the same as before. What has happened? Apparently, customers have purchased more jars of peanut butter because of the price reduction and plan to make more peanut-butter-and-jelly sandwiches. Therefore, they purchase more jars of our jelly to complement the number of additional jars of peanut butter that they buy. In summary, customers will purchase more of both complementary goods if it seems economically rational to do so.

### **Wrapping up the Groceries**

The preceding sections have focused on the interworking of all of the major elements of markets. Now, let us put theory into practice. In order to facilitate the recovery of Detroit, everyone, from the very poor to the very affluent, in the metropolitan region needs to have a basic understanding of markets, revenues, costs, supply, and demand. A workable social contract must develop in order for this understanding to take place. Much of this contract focuses on wages. Due to how things work, those offering their labor for hire need to have a clear understanding of the relationship between the wages that they expect and the value of the productivity that they offer. On the other side, those who have other vested interests in the success of businesses and institutions that need productive employees must understand that there needs to be a fair and balanced division of the revenue generated by all concerned as well as the human responsibility that owners, managers, and employees have to one another.

For the City and region to recover, all parties concerned must work with a basic understanding of the market dynamics of supply and demand. These dynamics include the seven variables outlined earlier: the number of sellers, the number of buyers, costs, incomes, tastes and preferences, the price of a substitutable good, and the price of a complementary product. In order to clarify these seven variables, we need to understand the cause and effect of the number of sellers who are willing and able to produce products, the number of buyers who are willing and able to purchase these needed products, the interconnection in the social contract of production, the wages demanded by workers and paid by employers, taxes raised in return for needed public goods and services by different levels of government, and the importance of education, research, and development in respect to technological progress.

In summary, the recovery of our hub city depends upon elements such as a dialogue among all groups involved, the understanding of the need for relevant education and training, and the affordable delivery of this education and training to those who need and desire it. In addition, we need to develop other industries to complement the existing ones, which include automotive and related manufacturing, health-care delivery, and institutions of higher education. We are seeing progress in this area with such developments as Tech Town, bio-medical research, and a global multi-modal freight-hub. Smaller businesses in areas such as arts production, retail, and hospitality could be developed in order to use available real estate optimally. In future columns, we will delve into the economics of the macro-economy of the planet, the nation, Southeast Michigan, and Detroit, specifically.

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