Definition: Arbitrage, Impute, Margin, Profit

Arbitrage

According to Wikipedia, Arbitrage is "the practice of taking advantage of a price difference between two or more markets." It's what hedge funds do, simultaneously buying one security, and selling another very similar one. It's what my brother used to do when he was in school in Boston: He bought prints from art dealers in Boston and sold them back home in Washington DC, where they fetched a higher price.

The effect of arbitrage is to bring prices closer together in different markets.

This is why Henry George can claim that the wage a man can earn working for himself on marginal land sets the wage he can earn from an employer. Imagine a new immigrant back in California in the 1870's. He can work for Farmer Brown who has a large spread. Or he can settle on a remote plot and try to scratch a living. Imagine Farmer Brown offers $6 a week. The immigrant calculates he can earn an imputed wage of $6.50 a week on his own plot. (See *Impute*). So he can say to Farmer Brown, I won't work for less than $6.50. So to hire the workers he needs, Farmer Brown must raise his wage offer to $6.50, bringing together the wage for hire and the imputed wage for independent farming.

Of course, as George understands even if he doesn't put it that way, wages for hire and wages for work on one's own are determined simultaneously, as people move back and forth between the two options. With today's high unemployment rates, many people are going back to working on their own, often off the books. With companies not hiring, self-employment becomes more attractive.

Impute

Assign a value to something, when that value is not given explicitly, based on comparable information. For example, when an appraiser puts a value on a property, he imputes the value by looking at selling prices of similar property. When I work for free at a charity, the imputed value of my services is what I could earn working at a for profit business. When a donor gives a Rembrandt to a museum, he takes a tax deduction based on the imputed market value of the painting.

(There is of course an assumption in imputing that the true value is "market value"—which may be a stretch both where markets function poorly, or there are ethical considerations. What's the value of a healthy baby to would-be adoptive parents?)

Margin and Marginal

Margin means "edge". People make most economic decisions "at the margin", comparing small differences to decide which way to go. For instance, should I work for hire or to work on my own? (See *Arbitrage*). The owner of ABC Plumbing decides whether to buy another truck or hire another worker. Columbia SIPA decides whether to offer another environmental course. United Airlines decides whether to offer an additional flight between Chicago and Newark. Tish Construction decides whether to add another floor to a proposed high rise office building. Farmer Brown decides whether to add another ton of fertilizer to his corn field.

Before Ricardo, classical economists were groping for ways to explain value. Ricardo figured out that the rent of land is determined by the difference in productivity between that land and marginal land—land that was just barely worth cultivating. George extended Ricardo's insight to labor and (classical) capital. Wages and interest are determined by what they can earn at the productive margin. That goes, by arbitrage, both at the **extensive margin**—on land barely worth

cultivating—and at the **intensive margin**—additions of labor or capital on land already in cultivation. This determination of rent, wages and interest applies everywhere, not just to agricultural land.

In the "**Marginal Revolution**" of late 1800's, Stanley Jevons and others created the theory of demand, by extending marginal concepts to consumer preferences. Where the classical economists looked to explain prices by cost of production, the new marginalists said prices also depend on "marginal utility". The more eggs I have, the less the "utility" to me of additional eggs, hence the less I'm willing to pay. If the price of eggs falls by a dollar, I'll buy two dozen instead of one. Put all the consumers together, and you get a "demand curve" showing how much people will buy as a function of price.

Profit.

Naïve profit is the "bottom line"—what's left after subtracting costs from revenues in a given period. However naïve profit isn't a good basis for comparing two businesses; we have to know what went into revenues and costs. That's where imputing comes in. Suppose Farmer Brown owns his land and he and his wife and three adult children do all the work. Their annual profit is $500,000. Farmer Jones rents land and hires labor. His annual profit is $75,000. We can't compare these two farmers without imputing the rental value of Farmer Brown's land and the wages of his family.

The classical economists used the term profit loosely for interest on capital, which they separated from rent on land. George faults them for carelessly including the "wages of superintendence" with profit. Even worse, as George will emphasize later, they often carelessly included land rent with interest. That is, they failed to impute a value to land rent and supervisory labor, and subtract it from profit to get true interest on capital.

"Pure profit" is profit after subtracting imputed rent, interest and wages. What's left is luck, and compensation for risk in more risky businesses.