Figures 8. and 9. below, illustrate, in different ways, how the application of labour and capital will produce a different amount of added value (wealth) depending upon where it is applied i.e. the land location. In each diagram the height of each column represents the value added or wealth produced on each of ten productive sites that vary only in their location. Below each added value column is a column that represents the input of labour and capital that has been used to produce the added value. In Figure 8. the input of labour and capital is assumed to be equal on each site and the added value varies - a maximum on the prime location and a minimum on the marginal location. Figure 9. shows the different inputs of labour and capital required on the same ten sites to produce the same wealth. The 'Supply Curve', referred to earlier, has been superimposed on this diagram to show how it reflects the input needs of successive locations.

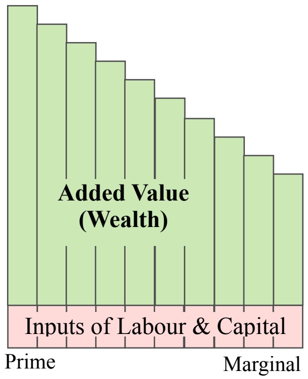

Figure 8.

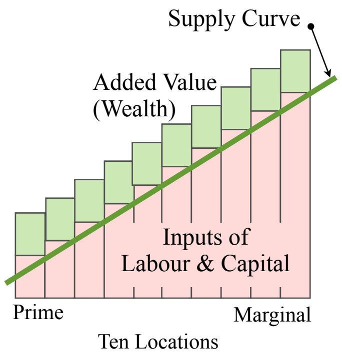

Figure 9.

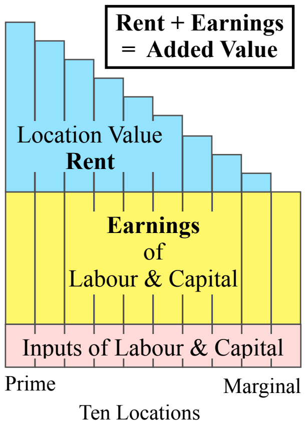

Figure 10.

Figures 10. Illustrates the primary division of the wealth produced on each site on the basis that since the inputs of labour and capital are equal the earnings of labour and capital should likewise be equal. Also, they can be no more than that which may be earned on the marginal site. The surplus that arises at all other locations is entirely due to the advantages those locations provide compared with the marginal location. This 'location value' is equivalent to the Rent which a tenant would be prepared to pay to possess such a site if a site at the margin were available without charge.

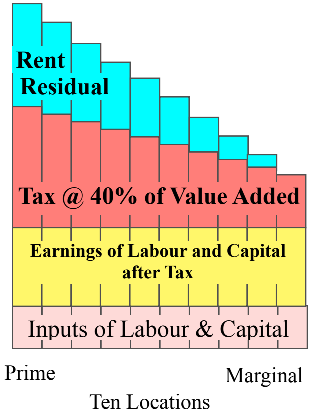

Figure11.

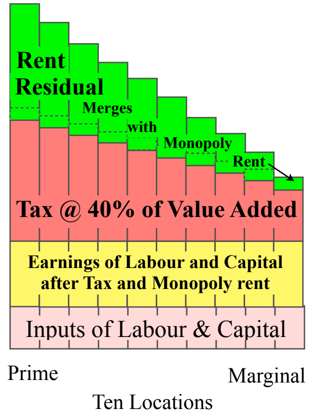

Figure 12.

Figures 11. and 12. above, illustrate how the distribution of wealth in an economic community is affected when public revenue is raised by means of taxes levied on production in proportion to the value added by productive enterprises irrespective of their location. They show tax levied at 40% of the Value Added i.e. similar to the percentage of GDP that taxes currently represent in the UK. Figure 11. shows how the after tax earnings of firms at the margin are reduced and, since the returns to labour and capital are set at the margins of production, how this reduces earnings everywhere. A Rent Residual is shown on all but the marginal site assuming (unrealistically under present arrangements) that no monopoly rent claim is levied there. Figure 12. addresses this and shows how earnings are further reduced everywhere when a monopoly rent charge is levied on marginal sites (as is usual with full land enclosure).

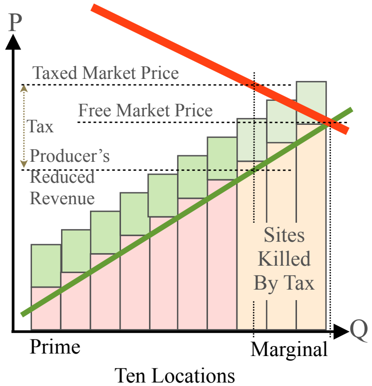

Figure 13.

Figures 13. Combines Figs. 9 and 4 to show how marginal and even supra-marginal sites may be made unproductive by taxes if they are levied on production.

Conclusion: Taxes levied on production e.g. on labour, capital, income, profits, and trade, impose a deadweight loss on the economy which could be avoided if the Location Value - Rent (as shown in Fig. 10.) were to be collected instead.

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DEADWEIGHT LOSSES (And How To Avoid Them)

By

David Triggs

This paper describes how and why taxes that are levied on the production and producers of wealth damage the economy in a manner that is rarely acknowledged. It starts with consideration of the conventional supply and demand theory and thus begins with a description of the idealised (i.e straight) supply and demand curves to show the effects of tax on price and production This is then supplemented with an alternative view of economic production using stacked bar charts.

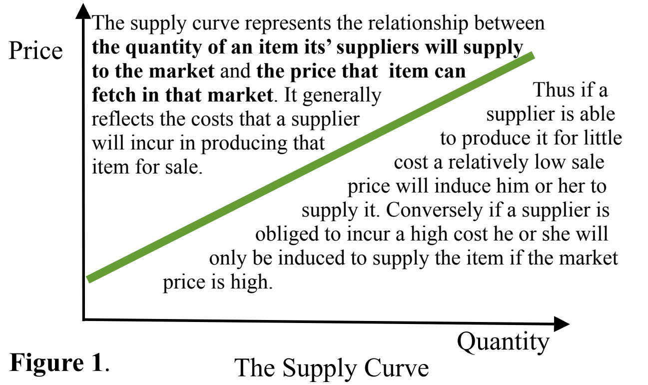

Figure 1. The Supply Curve

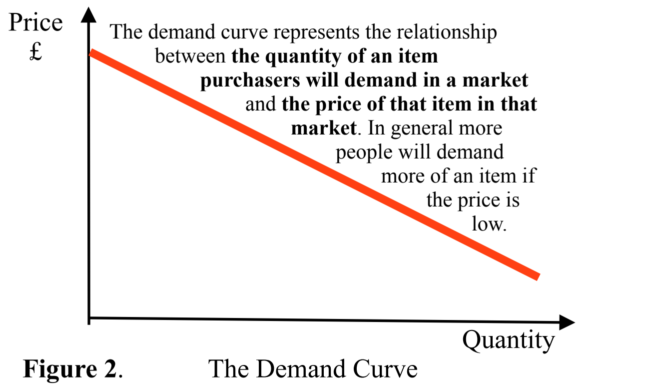

Figure 2. The Demand Curve

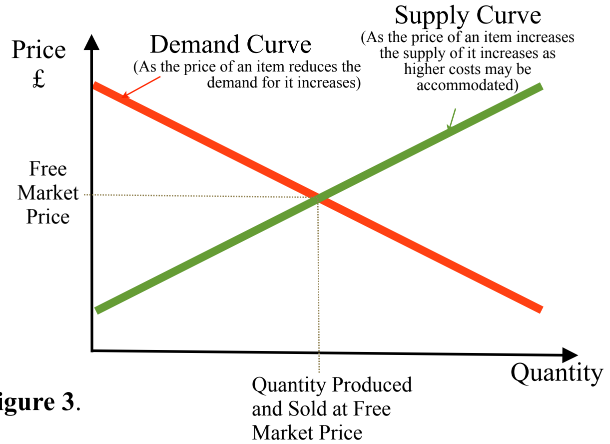

Figure 3.

How the Interaction of the Supply and Demand Curves Determines the Free Market Price and the Quantity of Goods Produced

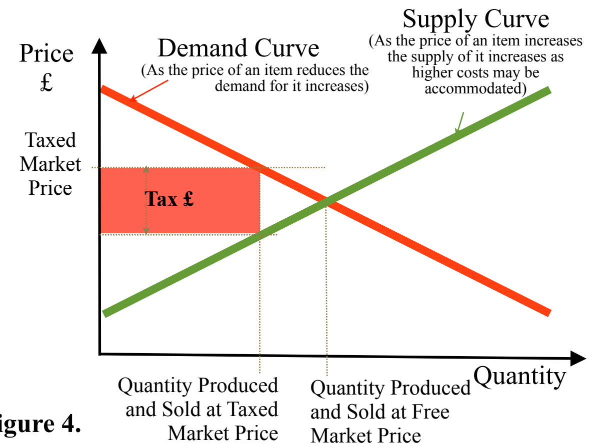

Figure 4.

The Effect of Taxation on the Market Price and the Quantity of Goods Produced by the Economy

The figure above shows how the imposition of a tax on the production of wealth has three effects:

1. The price that must be paid by purchasers is increased.
2. The incentive/reward/return to suppliers is reduced.
3. The viable quantity of goods and services in the market is reduced.

These represent a loss to the economy and are sometimes referred to as 'Deadweight Losses'. They do not arise because of taxation as such, but as is illustrated below, because of the way in which the tax is levied, i.e. on production and the active factors of production (labour and capital), rather than the passive factor - land.

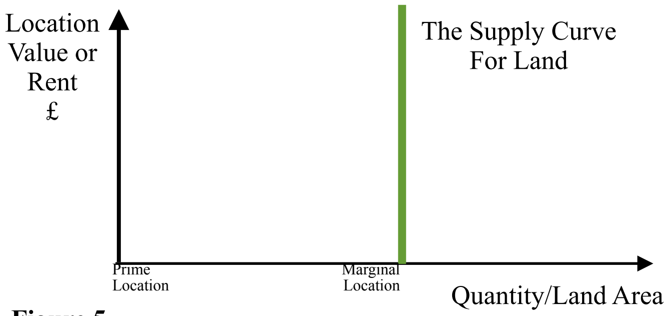

Figure 5.

The Supply Curve For Land

The supply curve for land is 'inelastic' i.e. essentially vertical because the quantity of useable land in the economy is substantially fixed. Unlike material wealth, the supply of which can be increased by employing more labour and capital to produce it if it is worthwhile, the supply of suitable land cannot be increased at the discretion of wealth producers. It is not generally practicable to increase the supply of land - 'they are not making it anymore'!

The amount of land available for particular uses however may be increased or reduced as a consequence of either private owners releasing or withholding land or by public authorities granting or prohibiting certain uses at particular locations e.g. through land use planning regulations. Both courses of action will have an affect on location values, the benefits of which will accrue to private land owners if the public authorities fail to collect it as public revenue.

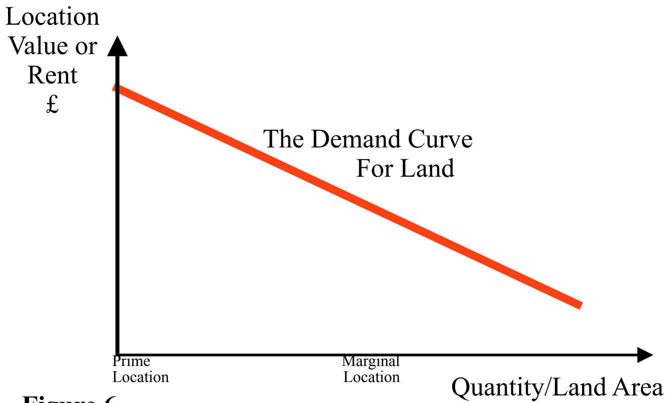

Figure 6.

Demand Curve For Land

As the price and value of land locations reduces more of the population are able to afford to use it and the demand from would be users increases. All would be users are however obliged to compete with each other for possession of the better locations. They price they then pay is thus determined by demand and does not relate to any land supply costs - since land has no supply cost..

The rental value of each location is set by competition between potential tenants. At a prime location where demand is high value will be high whilst at the margin where demand is relatively low, value will be low. If land is freely available at the margin it will be zero. If it is not an owner may charge a monopoly rent or hold the location out of use without penalty.

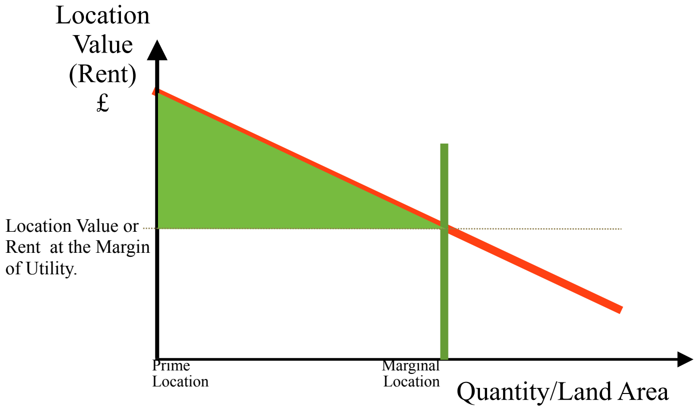

Figure 7.

Location Value - Rent

The Location Value or Rent that arises at locations that exist above the margin of utility may be collected as public revenue without:

- Reducing the amount of land available for production or for residential use or:
- Increasing the Rent which a potential tenant would need to pay. This is because the Rent is determined by competition between potential tenants not by who collects the rent. What a prospective or existing tenant can afford and is willing to pay to a private owner is not changed if that private owner is obliged to pay a like amount to a public authority.

At locations that exist at the margin of utility the Location Value or Rent is minimal. In a society where all land has been enclosed and owned by someone the value of a marginal location is entirely due to the monopoly power of the owner to withhold it from use. The speculative value of such a location represents a subspecies of this monopoly value. In a society where all land has not been claimed by someone, the Location Value or Rent at the margin of utility would be zero. Clearly the scope for entrepreneurship and enterprise is maximized where there are no barriers to entry at the margins of utility.

A major challenge to any government charged with providing the economic environment in which wealth is produced and distributed within a free and democratic society in which private property is acknowledged to arise from the enterprise and exertions of individuals is to ensure that no individual is prevented from producing wealth on their own account. Key to the meeting of this challenge is the removal of any artificial barriers to work and in particular to working at locations that represent the margin of utility i.e. the least productive sites in use.

One way of achieving this whilst still respecting the institution of land ownership is suggested on the next page.