


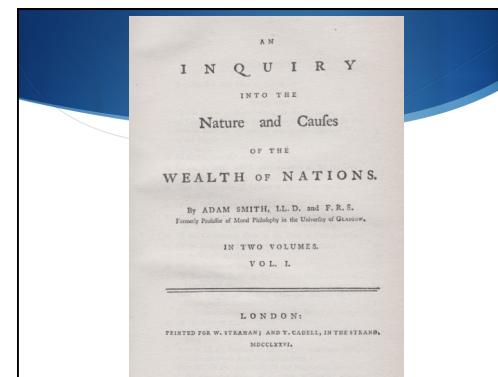
**External Inputs Vs.  
Externalities:  
Agriculture meets Economics**

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# What is economics?

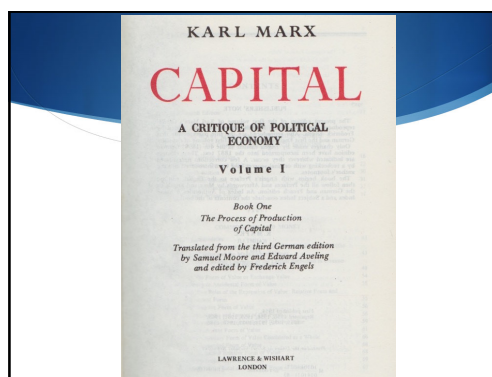


Two elements:

1. Maximise wealth/profits/capital/prosperity
2. Emphasise monetary exchange (and therefore also markets) as the medium.

The theories developed alongside industry and manufactures

- Profits made from employing labour to transform raw materials into more valuable products for sale



In 20<sup>th</sup> century macro-economics, the concepts of the market and prosperity came together in a single statistical construct:

**Gross Domestic Product (GDP)**

## What is agriculture?

It is production derived from

- ◆ Seeds (or animals)
- ◆ Soil
- ◆ Air (carbon dioxide or oxygen)
- ◆ Sunshine
- ◆ Water
- ◆ Human labour

All of these are on the farm and are things of NATURE

The farmer can also acquire things off the farm to help nature take its course:

- ◆ Seeds
- ◆ Livestock
- ◆ Other people's labour
- ◆ Machinery
- ◆ Fuel
- ◆ Fertiliser
- ◆ Pesticides

These are called **external inputs**. Many are the produce of industry.

Economics measures what is bought and sold. Two things sit uneasily with it:

- ◆ Anything acquired directly from nature – '**free goods**'
- ◆ Non-market consequences of economic activity – '**externalities**'

In agriculture, economics sits most easily with the farmer's *external inputs*. These fit the paradigm of industrial production for commerce.

For millennia, farmers have used the methods of nature to fertilise and protect their crops, feed their animals and so on

But since the 1950s, something called **conventional agriculture** has developed alongside this. It is based on the commercial paradigm, and assumes the beneficial use of many external inputs.

- ◆ Some call it **industrial agriculture**

Things akin to the traditional methods are now called **agro-ecology** – agriculture that works with the grain of ecology

The basic paradigm of agriculture, rooted in nature, is at odds with that of conventional economics, with its emphasis on commercial transactions and monetary incomes

Economics is often said to be essentially about the *allocation of scarce resources*. And yet the aim of continually maximising wealth and income is at odds with a finite planet. It requires the continually expanding exploitation of natural 'resources'

This makes the mindset of economics extraordinarily difficult to adapt to the needs of a genuinely resource-limited world and of forms of production that are based on nature.



Economics also privileges **atomistic** exchange transactions as the basis for economic activity and organisation. But there are two other, collective forms:

- ◆ **Vertical:** administrative structures, typical of the state and the company
- ◆ **Horizontal:** the commons, mutual societies, co-operatives, public services under democratic rule

All three have their merits and their drawbacks, and they often co-exist in one system or organisation

Truly scientific economic analysis would assess them on their merits, and regard nature as its basis, not an 'externality'