Lecture Note 6
Other economic thinkers of the classical period

1. Some subsequent contributors to the classical economic theory

In the period from Malthus and Ricardo and to the introduction of the marginalist approach several authors contributed to the development of economic theory without acquiring the status of fundamental importance, in some cases definitely undeserved. In this lecture we give a brief treatment of some of the more interesting of these. While V&G concentrate upon English authors, we add some of the contributors from the continent.

In France, the proposals for reform were much more radical and far-reaching than in England. It can be traced back to **Francois-Noël ("Gracchus") Babeuf** (1760 – 1797) who not only wrote but also went into political action for a radically egalitarian society, for which he was executed by the reactionary government taking power in 1797.

The French left-wing thinkers were more directly inspired by **Henri de Saint-Simon** (1760 – 1825) who had a background in impoverished nobility and looked with deep mustrust to the new class of rich industrial capitalists. He pointed to the unbalances in a society with few rich and many poor people, but he did not propose any radical means of changing society.

Charles Fourier (1772 – 1837) stated that in a capitalist society on 2/3 of the population has useful employment while the rest are useless parasites, and he was sceptical towards property and in favour also of sexual liberalization. His proposals for a more just society was centered on collectivist production ins the so-called phanlanstères, where the inhabitants both worked and lived and had other activities such as education. Only few of these were ever tried out, among these one in what is now Romania (1835 – 36), but it was closed down after one year by the authorities who were suspicious against the activities and considered the establishment as a camouflaged brothel.

Pierre Joseph Proudhon (1809 – 1865) is famous for the statement "property is theft" in his writings about property rights, which he considers as being the mother of tyranny – in the sense that property owners can prevent other citizens from using the result of previous labour and are protected by the law, which means that violence can be used if necessary. Proudhon can be considered the founder of the anarchist movement (the word 'anarchist' was introduced by Proudhon).

Having mentioned the French socialist thinkers of the period, we need also to comment on another (apart from J.-B.Say) economist of the conservative school:

Frederic Bastiat (1801 – 1850), whose main work "Economic Harmonies" indicates the political observation, was a strong believer in laissez-faire capitalism and justified the existing society as the best possible. He considered the authority of science, as represented by Say and Senior, as decisive against left-wing writers such as Proudhon.

Bastiat's point of departure is a version of *utilitarianism:* In an exchange, both parties are better off since otherwise they would not engage in the exchange. Given that all human interactions are exchanges, it may then be concluded that what emerges is better for all. So, according to Bastiat, political economy, which deals with exchanges, shows that society achieves social harmony.

In the value theory, Bastiat considers also nature to contribute to value, but apart from this, it comes from production, where also capital, which he considers as the result of foresight, intelligence and thrift, plays a role. Not surprisingly, he was opposed to any interference with or taxation of inheritance.

2. First steps towards a modern price theory

Johann Heinrich von Thünen (1783 – 1850) is one of the outstanding economists of the nineteenth century, standing somewhat apart from the main contributors and therefore often neglected.

The isolated state: Localization and land use. Here is a modernized version, due to Beckman (1972) of the most important of von Thünen's contributions. We begin with the case of only one agricultural commodity. At distance r, employment x yields a profit (all per unit of land)

$$g(p, r, x) = (p - tr)a\phi(x) - wx,$$

where p is price, t transportation cost, ϕ the production function, a a proportionality factor for the particular commodity, and w the wage rate. Profit maximization gives

first order conditions

$$\frac{\partial g}{\partial x} = a(p - tr)\phi'(x) - w = 0$$

so that

$$x = (\phi')^{-1}\left(\frac{w}{a(p - tr)}\right).$$

If we simplify to have $\phi(x) = x^\alpha$ for $0 < \alpha < 1$ (per capital version of a Cobb-Douglas), then

$$x = \left(\alpha a\frac{p - tr}{w}\right)^{1/(1-\alpha)}.$$

This means that employment per unit of area unit falls with increasing distance and becomes 0 when distance is $r_0 = \frac{p}{t}$. Output and profit per unit of area also decreases and become zero beyond r_0.

Now we assume that there are two commodities with proportionality factors a_k, prices p_k and transportation cost t_k. Profit per unit of area is

$$g(p_1, p_2, r, x_1, x_2) = \sum_{k=1}^{2}(p_k - t_kr)a_k\phi(x_k) - w\sum_{k=1}^{2}x_k,$$

and first order conditions for maximization are

$$(p_k - t_k)a_k\phi'(x_k) - w = 0 \text{ if } x_k > 0, k = 1, 2.$$

In the simple case this gives us

$$x_k = \left(\alpha a_k\frac{p_k - t_kr}{w}\right)^{1/(1-\alpha)}$$

with a profit

$$g_k(r) = (1 - \alpha)\left(\frac{\alpha}{w}\right)^{\alpha/(1-\alpha)}(a_k(p_k - t_kr))^{1/(1-\alpha)}$$

for $k = 1, 2$ (insert x_k and replace w using the first order ondition). Since at any location $g_1(r)$ will typically differ from $g_2(r)$, only one of the crops will be grown at this place. Also, the profit functions intersect only at one particular value $\bar{r}$ of r, where

$$a_1(p_1 - t_1\bar{r}) = a_2(p_2 - t_2\bar{r}).$$

Assume that commodity 1 is grown closest to the center. To find what determines the boundary, we notice that the (numerical) slope of the profit function g_1 must be higher than that of g_2 at the intersection point where g_1 is equal to g_2, and this

amounts to the condition

$$a_2 t_2 < a_1 t_1,$$

saying that output per area unit using one worker is larger for commodity 1 than for commodity 2.

The reasoning holds also with general functional forms for ϕ.

The natural wage. The square-root formula for the natural wage has been debated in the literature, usually in a highly critical way. Von Thünen has a very modern approach, deriving the formula from maximization of zy, where z is the rate of interest and y the annual surplus of a working family, which is considered as converted into capital. Let a be subsistence consumption (price of the consumption good seet to 1), then average wage is $a + y$. If one unit of labour is necessary to produce one unit of capital, then

$$z = \frac{p - (a + y)}{q(a + y)},$$

where p is annual production of consumer goods for a worker using q units of capital. If p, q and a are taken as constants, then maximization of zy gives first order conditions

$$(a + y)^2 = ap, \text{ or } a + y = \sqrt{ap},$$

so that the natural wage is the geometric mean of necessary subsistence a and average product of the worker. It has been argued by Samuelson (1983) that q and p cannot be taken as constants. If the wage rate is higher, then q abd consequently p must be larger. If production of consumer goods is described by a (per capita) production function f with standard properties, so that $p = f(q)$, then

$$a + y = f(q) - qf'(q)$$

(the remuneration to labour equals the product minus remuneration to capital), and inserting in the expression for z we get

$$z = \frac{f'(q)}{a + y}$$

and

$$zy = \frac{f'(q) - af'(q)}{f(q) - qf'(q)}.$$

This expression should then be maximized in q, and again the first order condition is $(y + a)^2 = ap$, giving the same square root formula as that derived by von Thünen.

What was wrong according to the critics was the choice of maximand zy. But the idea of considering zy as a social welfare function and the expression $\sqrt{ap}$ as an optimal wage is a much later construction, it might not have been what von Thünen was looking for. According to Negishi (1990), what von Thünen had in mind was rather a kind of equilibrium wage determined by equality of demand and supply when workers have adjusted their supply fully, and it should perhaps be considered in the context of a steady state growth model.

Nicolas-François Canard (1750 – 1833) can be considered as a forerunner of Cournot, who however was extremely critical in his judgement of Canard's work. Although Canard supported a labor theory of value, he considered the labor employed as insufficient for determining the price. For this, one has to fall back on the market, gathering buyers and sellers. Buyers determine a maximal price, beyond which they will not buy, and sellers similarly have a minimum price. The lower limit is the price of the necessary labour which has been used in producing the commodity. For the maximum price, the are several cases to consider:

(a) If the good is a not necessity, the seller cannot force the price beyond the point where what he gains from an increase in price is lost by the reduction of sales. This point is the limit of what the seller can obtain, and we have here an anticipation of the demand function used by Cournot.

(b) If the good is a necessity, the price will be limited by the natural wages of the buyer. If higher, the wages would have to increase wages or the workers would revolt or die from hunger.

(c) If the buyer intends to transform the good and resell it, the price cannot be higher than what will leave to the seller his natural wage.

From this, Canard goes on the consider what is the outcome in the market given that the two parties have opposite interests. If L denotes the latitude of the price (distance between maximum and minimum) and x is the part added by sellers to the minimum price, then the proportion

$$\frac{x}{L - x}$$

can be seen as the relation between force of sellers and force of buyers. The force of the buyers is expressed as $\frac{1}{BN}$, where B is the need and the competition among buyers, possibly measured as the number of other buyers, and similarly, the force of

sellers is $\dfrac{1}{bn}$ with b the need of sellers and n their competition. From

$$\frac{x}{L-x} = \frac{\dfrac{1}{bn}}{\dfrac{1}{BN}}$$

we get that

$$x = \frac{BN}{BN + bn}L,$$

and letting S be the natural price for producing the good, which is the minimum price, we finally get the expression

$$p = S + \frac{BN}{BN + bn}L.$$

As it can be seen, Canard had a price theory which included all forms of imperfect competition, and in some ways looks very modern. He was among the first to use a mathematical expression of the argumentation, for which he was severely criticized by contemporary and later economists, with only few exceptions as e.g. Sismondi.

References:

Beckmann, M.J. (1972), Von Thünen revisited: A neoclassical land use model, The Swedish Journal of Economics 74, 1 – 7.

Negishi, T. (1990), Studies of von Thünen in Japan, Japan and the World Economy 2, 199 – 209.

Samuelson, P.A. (1983), Thünen at two hundred, Journal of Economic Literature 21, 1468 – 1488.