Developments in Labor Theory of Value: From Smith to Ricardo
Is value different from price?

Yes! In Classical Political Economy, a dominant understanding was that the price of a commodity is not necessarily the same as its value. While the price may be fluctuating and differing from one place to another as a result of contingent factors, the value is understood as something deeper and more fundamental.

According to a version of Ricardian labor theory of value, the value of a commodity is determined by the quantity of labor expended for its production. This value may or may not be reflected by its price at any given time and place in the market.

Of course, according to the subjective utility theory of value, the value of a commodity is determined by “the varying wealth and inclinations of those who are desirous to possess them”.

In this sense, it is possible to argue that while the “objective” labor theory of value privileges the production/supply side, the “subjective” utility theory of value privileges the consumption/demand side.
Adam Smith’s theories of value

Is labor measure or cause of value?

Adam Smith’s entry point to the theory of value is that labor is “the real measure of value”. Is measure of value same as the cause of value? In CPE, and especially Ricardo, it is.

“Labour was the first price, the original purchase-money that was paid for all things. It was not by gold or by silver, but by labour, that all the wealth of the world was originally purchased.” (Smith, 1937: 30)

The necessary prerequisite for any commodity to have value is to be product of human labor.

The exchange value of a commodity “more frequently estimated by the quantity of money, than by the quantity either of labor or of any other commodity which can be had in exchange for it” (Smith, 1937: 47).
Adam Smith’s theories of value (2)

But money itself is variable, its price is determined by the fluctuations in the amount of labor that is necessary to mine gold and silver. Something variable could not be the measure of other things.

“...Labor alone, therefore, never varying in its own value, is alone the ultimate and real standard by which the value of all commodities can at all times and places be estimated and compared. It is their real price; money is their nominal price only.” (Smith, 1937: 37)

Note the distinction between real and nominal price.

The real price of a commodity is “the toil and trouble of acquiring it”.

Here we should also distinguish between the labor-commanded standard and the labor embodied. [Ricardo’s criticism.]

Measure of value → Labor-commanded

Cause of value → Labor-expended
Adam Smith’s theories of value (3)

But Smith was able to see the labor as the determinant of exchange value/real price only in early precapitalist economies, before “the accumulation of stock” and “the appropriation of land.”

Once the capitalist gained control of the means of production and landlords monopolized the land and natural resources, the exchange value became the sum of three component parts: wages, profits, and rents.

This led him to “cost of production theory of relative prices” or the Adding-Up Theory of value.

\[ TC_B = W_B + P_B + R_B \]
\[ TC_D = W_D + P_D + R_D \]

The relative price is given by \( TC_B / TC_D \).
Adam Smith’s theories of value (4)

The problem in this Adding-Up Theory of Value is that profit component of price did not have any necessary relationship (proportional?) to the labor embodied in commodity.

The reason for this is somewhat complex. Since both capital and land are not anymore free goods, the final price of a good must also include returns to capitalist as profits and to the landlord as rent.

Consider the following example. Corn is the only output. 2 inputs: Corn and Labor. Corn is both wage good and capital good.

\( k \) = capital coefficient; the quantity of seeds necessary to produce a ton of corn

\( l \) = labor coefficient; the quantity of labor-hours directly necessary to produce a ton of corn

\( \lambda \) = the labor directly and indirectly expended to produce a ton of corn.

\( \lambda k \) = the labor indirectly embodied in \( k \) tons of grain used as seeds
Adam Smith’s theories of value (5)

\[ \lambda = l + \lambda k = \frac{l}{1 - k} \]

Now, let \( r \) be the rate of profit, \( w \) the monetary wages, and \( p \) price of corn.

\( \frac{p}{w} = \text{labor commanded} \), \( \frac{w}{p} = \text{real wage} \)

\[ p = wl + pk + pkr \text{ (production costs sans rent)} \]

\[ \frac{p}{w} = l + \frac{p}{w} k(1 + r) = \frac{l}{1 - k(1 + r)} \]

Labor commanded (\( \frac{p}{w} \)) is greater than labor expended (\( \lambda \)), because there is profit. And it becomes always greater as the profit rises.

In principle, exchange value would remain proportional to the labor embodied in commodities only if the value of capital per worker was the same in different lines of production.
Adam Smith’s theories of value (6)

But Smith’s Adding-Up Theory of Value did not intend to explain the actual day-to-day fluctuations in the price in the market. This brings us to yet another distinction: market price versus natural price. The former will tend (“gravitate”) towards the latter. The natural price of a commodity is thus defined as the price at which labor, capital, and land are all receiving their natural prices. So, price explains price!

Smith’s unresolved problems:

1. Confusion btw measure of value vs. cause of (quantitative changes in) value.
2. Confusion btw labor expended vs. labor commanded.
3. Oscillation btw objective quantity of labor expended vs. subjective assessment of how much labor time is it worth it.
4. Confusion btw labor embodied in a particular commodity vs. living labor as a commodity
5. Denied that law of labor value operates under capitalism (despite continuing the use of labor as measure of value)
6. Does the values determine the revenues or the revenues determine the values? If wages go up, does the value of a commodity go up?
Capital accumulation & productive vs. unproductive labor

For economic growth, Smith argued it is necessary for “stock” to be accumulated. “Stock” includes both the means of production as well as the provisions that they need while they are working.

For accumulation of “stock” it was necessary to employ labor productively.

There are two different definitions of productive labor in Smith:

a. Laborers are productive when their labor resulted in revenues, accruing to capitalists.

b. Laborers are productive when their labor embodied in a tangible, vendible commodity. (For instance, when they are not “servants.”)

In this sense, Smith opposed to the Physiocratic view that manufacturing is sterile.
Class conflict, growth and social harmony

Wages benefit from economic growth and accumulation of stock.

Profits, on the other hand, do not. [Falling rate of profit?]

Rent is different: “High or low wages and profit are the causes of high or low prices; high or low rent is effect of it.” “The rent of land... is naturally a monopoly price.”

Both landlords and workers benefit from the accumulation of stock. “Merchants and master manufacturers,” on the other hand, will not. Why?
Ricardo’s theory of value (1)

Commodities must have utility but utility does not regulate its value. The value of reproducible commodities are determined by the quantity of labor required to obtain them.

“...very increase of the quantity of labor must augment the value of that commodity on which it is exercised, as every diminution must lower it.” (7)

Ricardo dismissed two objections to labor theory of values:

(a) the differing skills and differing rates of productivity. The study of the variation of relative price over time perspective vs. the study of the exact structure of relative goods at one particular time
(b) the increased productivity made possible by natural resources. Implements, tools and machinery TRANSFER their value, they do not CREATE any new value! “Does nature create value?”
Ricardo’s theory of value (2)

The essential two premises of the law of labor is that
(1) it applies to the reproducible goods produced in the capitalist sector and
(2) it is premised upon the existence of free competition between producers.
Ricardo’s theory of value (3)

Two important developments of the 19th Century:

1. Cheapening of manufactured commodities (due to technical progress and the increasing productivity of industrial labor).

2. Rise in the price of agricultural goods (due to the increasing cultivation of inferior land).

The second development has led to an increase in money wage and an increase in ground rent, which in turn has led to a fall in the rate of profit. Why?
Some Problems with Ricardo’s Labor Theory of Value (1)

Unlike Smith, according Ricardo, law of labor value operated even where there is profit and rent. This is an improvement over Smith and Ricardo was able to argue for this because he insisted on seeing the profit and rent as deductions from the net produce.

“There can be no rise in the value of labor without a fall in of profits.” (21)

In other words, Ricardo is the first one to articulate a concept of surplus in a significantly elaborate manner.
Some Problems with Ricardo’s Labor Theory of Value (2)

In fact, his theory of rent, simplifies the problem into one between wages and profit.

Let us assume that there is no rent. But then, if the value of the product remunerates not only wage but also profit, then it’s value must be larger than the amount of labor expended to produce it!

If capital is simply a means of production, or accumulated labor (past labor), where does the additional margin of determinate size in the form of profit come from? Where does the net produce come from?
Some Problems with Ricardo’s Labor Theory of Value (3)

Consider the following example. A hunter hunts deer, a fisherman catches salmon. Objectively, the amount of labor expended to hunt a deer is equal to the amount of labor expended to catch two salmon.

\[
1 \text{ deer} = 2 \text{ salmon}
\]

According Ricardo, this relative value is not effected by how the product is divided by the capitalists and the workers. Whether these commodities are produced by an independent hunter or a hunting company with workers and capitalists, the relative price will be the same.
Some Problems with Ricardo’s Labor Theory of Value (4)

“No alteration in the wages of labor could produce any alteration in the relative values of these commodities.” (17)

Because a rise in wages should affect each of the commodities being exchanged in the same degree. As a result, it should not effect the relative values. But this will only hold under the case when the branches of capital has the same organic composition of capital (i.e., past to present labor ratio) (19).
Some Problems with Ricardo’s Labor Theory of Value (5)

But consider the following counter-example:

<table>
<thead>
<tr>
<th>Initial state</th>
<th>After a 20% wage increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Past labor</td>
<td>Present labor</td>
</tr>
<tr>
<td>Past labor</td>
<td>Present labor</td>
</tr>
<tr>
<td>Change in value</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td>1000</td>
</tr>
<tr>
<td>1000</td>
<td>1200</td>
</tr>
<tr>
<td>+200</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>2400</td>
</tr>
<tr>
<td>+400</td>
<td></td>
</tr>
</tbody>
</table>

In exchanges between branches of capital with different organic compositions of capital, an increase in wages ("value of labor") will be accompanied by a rise in the relative value of the product with lower organic composition of capital (i.e., the one with higher present (living) labor) and vice versa.
Some Problems with Ricardo’s Labor Theory of Value (6)

Consider the following scenario:

2 commodities $x$ and $y$: in both cases, 400 units of labor embodied needed to produce 100 units of commodity.

But commodity $x$ requires 100 units of present labor and 300 units of past labor, applied uniformly at the rate of 75 units per year over the previous 4 years.

Commodity $y$, on the other hand, requires 300 units of present labor and 100 units of past labor, applied uniformly at the rate of 50 units per year over the previous 2 years.

Note that commodity $x$ has more past labor and a longer period of production.
Some Problems with Ricardo’s Labor Theory of Value (7)

In the case of commodity $x$, in order to calculate the present value of past labor accumulated over 4 years with %50 rate of profit per annum:

$$\sum_{k=1}^{4} 75(1+.5)^k = 914.08$$

Similarly, for commodity $y$, to calculate the present value of past labor accumulated over 2 years with %50 rate of profit per annum:

$$\sum_{k=1}^{2} 50(1+.5)^k = 187.5$$
Table 5.1

Costs and prices when wage rate is $1.00 and profit rate is 50% and quantity is 100.

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Past Labor</th>
<th>Present labor</th>
<th>Profit cost = (Past + Present) * r</th>
<th>Total cost = (Past + Present + π)</th>
<th>Price per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commodity x</td>
<td>914.08</td>
<td>100</td>
<td>507.04</td>
<td>1521.12</td>
<td>15.21</td>
</tr>
<tr>
<td>Commodity y</td>
<td>187.50</td>
<td>300</td>
<td>243.75</td>
<td>731.25</td>
<td>7.31</td>
</tr>
</tbody>
</table>

Table 5.2

Costs and prices when wage rate is $2.00 and profit rate is 10% and quantity is 100.

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Past Labor</th>
<th>Present labor</th>
<th>Profit cost</th>
<th>Total cost</th>
<th>Price per unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commodity x</td>
<td>765.78</td>
<td>200</td>
<td>96.58</td>
<td>1062.36</td>
<td>10.62</td>
</tr>
<tr>
<td>Commodity y</td>
<td>231.00</td>
<td>600</td>
<td>83.10</td>
<td>914.10</td>
<td>9.14</td>
</tr>
</tbody>
</table>

Three results should be identified in relation to these two sets of calculation:

1. Changing the wage rate substantially alters the relative prices of the commodities when the commodities are produced with different composition of past and present labor. Differences in profits causes prices not to be proportional to labor embodied. From 5.1 to 5.2, the scissor between the value of \( x \) relative to \( y \), closes substantially. In the latter case, the deviation of the price ratio to the labor ratio is substantially smaller. If there were no profits, the price of \( x \) and \( y \) would be equal.
2. Unlike Smith, Ricardo insisted that wage increase does NOT always lead to price increase. From 5.1 to 5.2, the price of commodity x (15.21 to 10.62) declined even when the wage doubled. If the wage rate increases, since the profit has to go down (because remember for Ricardo, when the technique of production remains same and the quantity of output is same, an increase in wage can only be achieved by a decrease in the profit rate), the prices of those commodities in which the profit component is high will go down.
3. As long as profit rate is positive, the commodity $x$ will have a higher price than $y$, because it has a higher organic composition of capital. As long as the profit rate is positive, price ratios will diverge from labor ratios in the same direction that the ratios of capital per worker (organic composition of capital) diverges.
Alternatively, consider the following model for good 1 and good 2 where $t_i$ is the time it takes for the produce the commodity, i.e., the ratio of past and present labor that goes into the production of the good:

\[ \frac{p_1}{w} = l_1 (1 + r)^{t_1} \]
\[ \frac{p_2}{w} = l_2 (1 + r)^{t_2} \]

Accordingly the relative value of the two goods is:

\[ \frac{p_1}{p_2} = \frac{l_1}{l_2} (1 + r)^{t_1 - t_2} \]

It follows that we can no longer predict relative prices from the labour coefficients unless $t_1 = t_2$. 
<table>
<thead>
<tr>
<th>ADAM SMITH</th>
<th>DAVID RICARDO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure of value vs. cause of (quantitative changes in) value</td>
<td>Rejected the project of finding an invariable measure of value. Established a coherent causal theory of labor value.</td>
</tr>
<tr>
<td>Labor expended vs. labor commanded</td>
<td>They are not equal. LTV should be based on labor expended.</td>
</tr>
<tr>
<td>Objective quantity of labor expended vs. subjective assessment of how much labor time is it worth it?</td>
<td>LTV should be based on the objective quantity of labor expended.</td>
</tr>
<tr>
<td>Labor embodied in a particular commodity vs. living labor as a commodity</td>
<td>Wage=“Variable value of labor” (We have to wait until Marx for the concept of value of labor power.)</td>
</tr>
<tr>
<td>Denied that law of labor value operates under capitalism</td>
<td>Law of labor value has universal validity.</td>
</tr>
<tr>
<td>Does the values determine the revenues or the revenues determine the values?</td>
<td>Quantitative changes in the value of products are causally dependent on quantity of labour expended (productivity of labor.) Wages go up/down, value of a commodity shouldn’t change, except in cases where OCC and/or durability of capital is divergent.</td>
</tr>
<tr>
<td>If wages go up, does the value of a commodity go up?</td>
<td></td>
</tr>
</tbody>
</table>
Late Classical Political Economy: Adam Smith Divided, A Discipline divided

This period perhaps best be understood as the development two distinct strains arising out of the work of Adam Smith, in particular *The Wealth of Nations*. In contrast to the production perspective that subscribed to a labor theory of value and took classes and class conflict into consideration, there was the exchange perspective that subscribed to a “adding-up” theory of value and viewed the society composed of individuals (and not collectivities such as social classes). In the late classical political economy, this division began to be more and more clear and embodied in two distinct approaches.

a. **Ricardian economics** (William Thompson, Thomas Hodgskin): Subscribed to Ricardian LTV, and brought out the ethico-political implications of the theory. The so-called political economy of the poor.

b. **Anti-ricardian economics** (Starting with Jeremy Bentham, Jean-Baptiste Say, Nassau Senior, Samuel Bailey): Based on Bentham’s formulation of the subjectivist pleasure calculus, formulated an early prototype of the utility theory of value, which will be found later in neoclassical economics.
Social origins of the premises of utility theory of value

At the intellectual foundations of the utility theory, we find a reification, thingification of a particular set of developments that characterize the socio-cultural and politico-economic consequences of capitalism:

- Increasing predominance of the profit motive
- Increasing division of labour (specialization)
- Increasing social interdependence

This was interpreted as the necessity of markets as opposed to dependence of individuals to other individuals.

In any case, this period can be characterized by an increasing awareness of these developments combined with a “universal projections or generalization of these conditions as pervasive, unalterable, natural characteristics of all human beings in all societies” (Hunt, 2002: 126-7).
Five features of the subjectivist economics

1. Atomistic individualism;
2. Egoistic utilitarianism;
3. Dependence on markets (and reification of production);
4. The financing of industrialization out of profits;
5. Calculating rationalism ("merchant subjectivity").