Lab 11: Income Inequality

GECO 6205 Advanced Political Economy 2

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Recapitulation

- Turbulent Dynamics of Output Growth, Productivity Growth and Inflation.
- Turbulent Dynamics of Profit Rate Equalization.
- Real and Idealized Consumer Behavior.
- Real and Idealized Firm Behavior.
- Real Competition.
- Monopoly, Oligopoly and Real Competition.
- Profit Rates and Interest Rates in Financial Capital
- International Competition at exchange rate weighted prices

Inequality

Inequality is the **driving force** in Classical dynamic models, in all processes of turbulent equalization.

Inequality is a **multi-dimensional** phenomenon: capital and labor (functional inequality), between workers (inter-personal inequality), between jobs (occupational and skill-based inequality), between industries (inter-industrial inequality).

Inequality is of growing social and political **importance**. It has also been increasing over quite some time now. Eagleton argues that inequality perceived as unjust incites social unrest: "There seems to be something in humanity which will not bow meekly to the insolence of power." (2011, p100)

Inequality Economics

In the past years, **economics of inequality** have made their mark in the **profession** and the **public perception** of economics:

- Popular books like Piketty's (2013) "Capital in the 21st Century", Milanovic' (2016) "Global Inequality", Saez' (2019) ", even Acemoglu's (2013)"Why Nations Fail".
- Increasing quantity and quality of granular data: consumption, income and finance surveys, census data
- New modeling of quantile impacts and increased computational power.
- Also: historical failure of neoclassical economics in the 2007-09 global economic crisis, corresponding political theory in the post-2010 uprisings.

Economic Approaches to Inequality

The common feature of inequality-acknowledging economics is the attempt to overcome the **restrictions of aggregate and conditional expected value effects**:

- Efficiency wage models as inequality arising from rationally maximizing agents in neo-classical models.
- Heterogeneity of initial conditions (agents) and trajectories (outcomes) in neo-classical models.
- Individual (misogynistic and racist) discrimination as reasons of inequality in neo-classical models.
- Inequality due to non-competitive factors in radical and institutional economics.
- Statistical assessment of inequality, exploiting **survey data** (Vermeulen, Milanovic, ...) or expanding **national accounts** (Piketty, ...)
- Inquries of spatial, gendered, racial, socio-segmental inequality.
- Modeling the gap between the roots and the reality of inequality.

Inequality: Fragments in pre-Marxist Classical Political Economy

- Smith: Skill is the basis of unequal wages.
- On top of this, there are differentials compensating for non-pecuniary strain.
- Furthermore new industries will temporarily overpay to attract labor from existing workplaces.

Inequality: The Challenge for Classical Political Economy

A theory of competitive determination of persistent inequalities, in line with empirical evidence on both income outcomes and firm behaviour.

Botwinick: Persistent Inequalities

Botwinick presents and delivers an ambitious project generalizing the **impacts of real competition on wage inequality**.

- Wages as outcomes of a process with labor's pressure as the driving factor, but not sole denominator.
- Competition between and within industries give long-term limits to industrial wage growth.
- Marx' theory of unemployment determines for workers' mobility.
- Workers' mobility mimicks capital mobility: "competition among workers is only another form of the competition among capitalists" (Marx *Grundrisse* 1993[1857]: 651).
- Competition within industry provide first differential limit to wages: capital-labor intensity
- Competition between industries provide second differential limit to wages: from the distance between **regulating** and **subdominant** capital derive the shae of labor cost in total unit cost.
- Conclusion: *"Abundant Possibilities for Sustained Inequality"*.
- Corollary: Interconnection of inter-industrial and inter-segmental inequality.

Botwinick: Persistent Inequalities

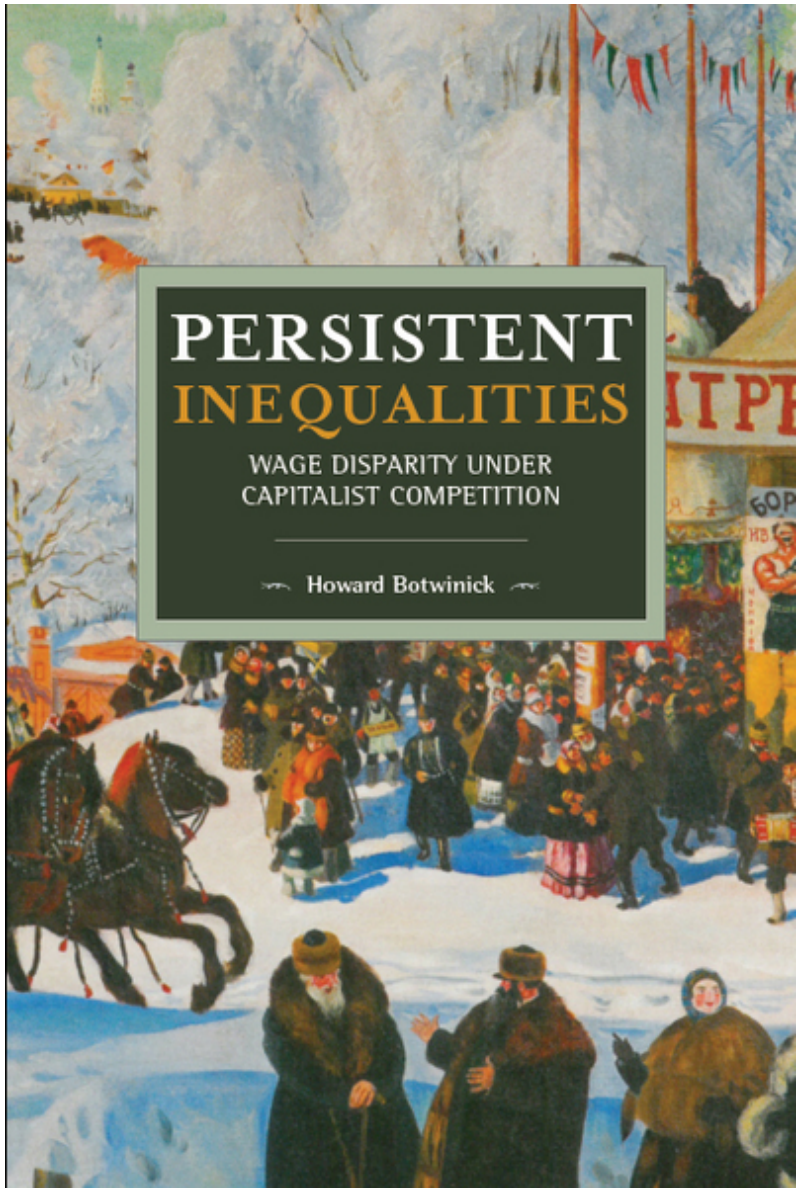

Figure 1: 2018 Haymarket Cover of the 2017 Historical Materialism Book Series Reprint of Howard Botwinick's 1993 "Persistent Inequalities"

Botwinick: The Historical Impasse 1

In neo-classical and general equilibrium models, wages are determined by marginal productivity:

- Wage differentials are determined by productivity differentials (**segmented labor market**).
- This leaves no theoretical space for **wage bargaining** and no empirical space for persistent inter-industrial inequality
- Solution 1: Unobserved differences in skill or work disadvantages (*Compensating Differentials*)
- Solution 2: Incorporation of factors outside the clearing markets into firms' maximization problem (**Efficiency Wages**)
- Solution 3: Non-Market/sociological mechanisms of gift-giving and profit sharing (**Rent Sharing**)
- Solution 4: Technologcal Change Bases Income Inequality. Change in productive structure create imbalances of demand and supply in labor market segments.

In conclusion: competition and inequality operate **simultaneous but independently**. Inequalities should **disappear over time**.

Botwinick: The Historical Impasse 2

In radical and institutional critiques, competition and inequality are **opposed but intertwined**:

- Labor Market: Concentration of capital and decline of trade unions as competition-inhibiting, inequality-increasing factors (**Monopoly Capitalism**)
- Internal Labor Markets: On-the-job training and capitalist oversight create **internal labor markets** (substantially similar to efficiency wages theory).
- Dual Economy: Open and closed labor markets, where the latter is ruled by non-competitive wage determination.

Botwinick: The Historical Impasse 3

The **historical impasse**: Both schools provide valuable insight into the reality of inequality. None can explain it consistently with the real competitive dynamics of capitalism.

The **historical tragedy**: No course of action for militant and radical trade union activism. It plays no systemic role in any of these theories, no workers' agency.

The **historical challenge**: A theory of persistent and dynamic wage inequality based in real competition.

Real competition is a theoretical framework **accomodating and explaining** differential profit rates. The same should be possible for wage rates in three key dynamics:

- **Differential profit rates** and profit margins within and between industries.
- A persistent reserve army of labor forced to seek employment at **substandard wages**.
- Unequal **organizational strength** of organized segments of the working class.

Botwinick: Basics of Capital Accumulation and Labor

Abstraction without heterogeneity of workers and capitals reveal **wage level dynamics**.

- Marx: "the labour market is ruled by other laws than the product market." (1993[1857], *Grundrisse*)
- Class struggle as one of the primary determinants of the general wage level ("historical and moral aspect" of subsistance wages).
- Capitalist accumulation rules labor supply (by monopolizing means of production in repeated rounds of primitive accumulation) and demand.
- Reserve army of labor is persistent due to (1) changes in the rate of accumulation, **reservoir effect**, (2) changes in the organic composition of capital, **mechanization effect**, (3) changes in the participation rate of workers, **participation effect**.
- Reserve army puts persistent downward pressure on wages. Marx: *"the very nature of accumulation excludes every diminution in the degree of exploitation of labour, and every rise in the price of labour, which could seriously imperil the continual reproduction . . . of the capitalist relation."*, i.e. **competition among workers**.
- Mechanization has double effect on wages: Downward pressure via reserve army of labor and disciplining, upward pressure via higher cost of strikes.

Botwinick: Segmentation of the Reserve Army and the Active Industrial Army

Segments of the reserve army of labor, all of which are involuntarily unemployed.

- floating: constantly interrupted periods of employment in established industries.
- latent: on the brink of joining the urban or industrial center proletariat, e.g. by ongoing processes of expropriating peasants, immigration, new demographics.
- stagnant: expulsed by decaying branches of industry, interrupted and very irregular periods of employment.
- pauperism: able to work but only called upon at the peak of the industrial cycle.

Differentialization of the working class is a key element of **general accumulation** (increased division of labor).

It increases competition among segments of workers for "pieces" of the wage increase cake (**atomization effects**).

Segmentation of the active industrial army by skill also means that after being thrown into the reserve army, workers have to accept **much lower wage** (Marx: "the poor devils"). Workers can unfortunately play an active role in this.

There is no general correlation between increasing skill levels and increasing wage levels, no law of marginal productivity. However, for a smaller group of "superior workmen" (and -women) it can mean increased wages.

Conclusion: The rate of wage growth is **regulated by accumulation, productivity and employment**.

A Reminder: Capitalist Competition

- The same product will sell for about the same price due to **demand and supply**: Within industries, prices equalize.
- Heterogeneity in the capital structure leads to different cost structures, differential profit rates.
- Between industries, capital mobility will accelerate towards higher profit rates on new investment.
- This increases competitive pressure in price-setting, drives down profit rates.
- Due to technological progress and decreased competitive pressure, incremental profit rates in the former below-average industries will increase.

Key factors: competitive price setting, capital mobility, regulating role of most profitable capital.

Corollary: Different capital structure within industries (and even firms) lead to **persistently different average profit rates**. Capital mobility and profit motive lead to **turbulently equalizing incremental profit rates**.

A Reminder: Capitalist Competition

- Accumulation makes it necessary for every capital to increase its market, this drives price-cutting and mechanization. Technique of production is the weapon in this war.
- Turnover time of capital leads to differential vintages of capital, a **differentialization of profit rates**. Newer techniques tend to have greater capital outlays, higher capital-labor and capital-output ratios (law of value), and higher profit rates.

General Equilibrium asserts the order of the system, turbulent regulation understands order and disorder in its dialectical relationship.

- Equalization of profit rates in face of different capital-labor ratios implies **differential profit margins**.
- Regulating capitals will in tendency seize a larger market share, determine the incremental development of an industry.

Recourse on Institutional Labor Economics

One key institutional labor economics' insight is that "*differential conditions within product markets must have a significant influence on related labour markets*". However, the link (and the differences) are assigned to non-competitive factors.

Marxist economics, in particular the theory of real competition provide a theory of differential conditions among capitals due to competition.

Marxist insights into segmentation and especially the dynamics between the reserve and active army of industry provide a theory of differentialization among workers.

What remains is to patch these factors together in a theory of the intersection of capital and labor markets embedded in competition.

Regulating Capital and Income Inequality: Absorption of Wage Increases

Non-Limit:

- Organized pressure on the regulating capital in industry A resulting in wage increases will decrease the competitive edge of the regulating capital, and thus the **regulating profit rate will decrease**.
- The immediate result is an outflow of capital to other industries, which will re-increase the profit rates in A. Thus, if workers remain the organizational strength in **all** regulating capitals, these wage increases are sustainable.
- Corollary: This might immediately increase the industrial price, but the overall effect on relative prices is non-trivial (*transformation problem*).

Regulating Capitals and Income Inequality: Limit 1

Wages cannot increase such that the regulating capital makes **no profits**, even in short-term.

$$
\begin{aligned}
m = p^* - k^* &= r^*(\frac{K}{Q}) \\
&= r^* \frac{K}{L} \frac{L}{Q} \\
\frac{m}{L/Q} &= r^* \frac{K}{L} \qquad (1) \\
\text{Limit 1} = \frac{m}{L/Q} & \\
&= r^* \frac{K}{L} \qquad (2)
\end{aligned}
$$

If we assume a general profit rate or turbulent equalization of the regulating profit rate, the limit over time is given by $\frac{K}{L}$.

Subdominant Capitals and Income Inequality: Limit 2

The regulating capitals determines the pace within an industry, and in tendency, grow the fastest.

They cannot do that when they cease regulating capital position to their closest contender: the **subdominant capital**.

The second limit to wages is the cost differential to the subdominant capital.

$$\text{Limit 2} = \frac{k^s - k^*}{(L/Q)^*} \tag{3}$$

If that limit is surpassed, the center of gravity for the industry is determined by the **subdominant capital's price of production** at its old cost structure.

$$p^s = k^s + r^* \frac{K^s}{Q} \tag{4}$$

Since usually, the regulating capital has higher capital-output ratios $p^s < p^*$.

The now larger prices of production of the regulating capital will make it impossible to retrieve normal profit rates.

Subdominant Capitals and Income Inequality: Limit 2 in Observable Terms

For two industries with the same competitive pressure (cost differential between regulating and subdominant capital) and similar cost-labor ratios, a further limit of wage growth can be derived.

$$
\begin{aligned}
(\frac{k^s - k^*}{k^*})_A &= (\frac{k^s - k^*}{k^*})_B \qquad (5)\\
\frac{(\frac{k^s - k^*}{k^*})_A}{(k^*/l^*)_A} &= \frac{(\frac{k^s - k^*}{k^*})_B}{(k^*/l^*)_B}\\
\frac{(\frac{k^s - k^*}{k^*})_A}{(\frac{k^s - k^*}{k^*})_B} &= frac(k^*/l^*)_A(k^*/l^*)_B
\end{aligned}
$$

The second limit is **directly proportional to the share of labor unit cost in total unit cost**.

Dynamic Aspects of the Model

Botwinick derives persistent and growing inter-industrial wage inequalities, determined by competitive dynamics under **turbulent equalization**. They are trajectories depending on the working of competition over time.

At the same time, regulating capitals with above-average profit rate will also be the fastets growing among all regulating capitals.

Expansion of productive facilities necessitates increased employment.

For the same organizational strength of workers and the same competitive pressure within the industry, they will be able to offer the highest wages for new workers.

Since the highest-profit rate regulating capitals turbulently alternate, the organizational and within-industry competition effects alternate too.

Dynamic Aspects of the Model 2

The hiring of new workers due to increased production is the direct tapping into the reserve army of labor.

Also, the above-average position is the point in which workers win the highest wage increases, i.e. when unions should attack.

In conclusion, the turbulent equalization of profit rates and wages will be contemporaneous and constitutes the mechanic intersection between real competition in capital and labor markets.