Public Economics
Level 2

2020-2021

Conférence de méthode
Session 1

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Introduction

What is Public economics?

A branch of microeconomics about State intervention

1. Shall the State intervene? How can it be justified?

2. How should the State intervene? Which tools does the State have?

3. What are the effects of such State intervention on the economy?

Political economy adds another layer (not in this lecture)

How are the decisions of public intervention taken?

Studying what?

❖ **A diversity of topics**
  ❖ Environmental issues
  ❖ Inequalities
  ❖ Individual incentives in collective matters
  ❖ Efficiency

❖ **applied to contemporaneous issues:**
  ❖ Covid-19 pandemic
  ❖ Housing subsidies
  ❖ Minimum wage
  ❖ Top income taxation
  ❖ Market concentration & antitrust (GAFAM debate)
  ❖ The financing of research
  ❖ & the topics of your choice...

Not the full set of public actions

Musgrave (1959)'s typology (*The Theory of Public Finance)*
Three functions of the government:

1. **Resources allocation** (most of the <u>focus of the lecture</u>)
   Efficient use of resources, public good provision

2. **Income redistribution**
   Equity, inequality reduction

3. **Macroeconomic stabilization** (not in a public economics course)
   full employment, price stability, monetary theory

Why shall the State intervene?

The world is just not pure and perfect

❖ The hypothesis of classical economics are often criticized (representative agent, atomicity of agents, perfect information through prices, etc.)

❖ The Invisible Hand does not systematically allocate resources efficiently (market failures)

❖ Societies may have preferences for equality

1. Why shall the State intervene?

1. **To restore efficiency**

   in the sense of **Pareto**

   A **relative** concept (that compares allocations of resources)
   In short, an allocation is **Pareto-optimal** when it is not possible to increase
   the welfare of anyone, without decreasing the welfare of someone else

2. **To favor equality**

1. Why shall the State intervene?

1. **To restore efficiency**
   1. Imperfect competition; avoid only one pharmaceutical firm working on a vaccine
   2. Asymmetry of information; compulsory norms on masks' quality
   3. Externalities; individuals partying nowadays do not internalize contagions' costs
   4. Public good provision; sub-financing of research while vaccine must be widely available
   5. Behavioral biases; moral hazard for individuals with low probability of hospitalization

2. **To favor equality**
   In an **efficiency/equity arbitrage**
   This choice is political (not the prime role of economists)
   Among decision criteria: utilitarian vs Rawlsian
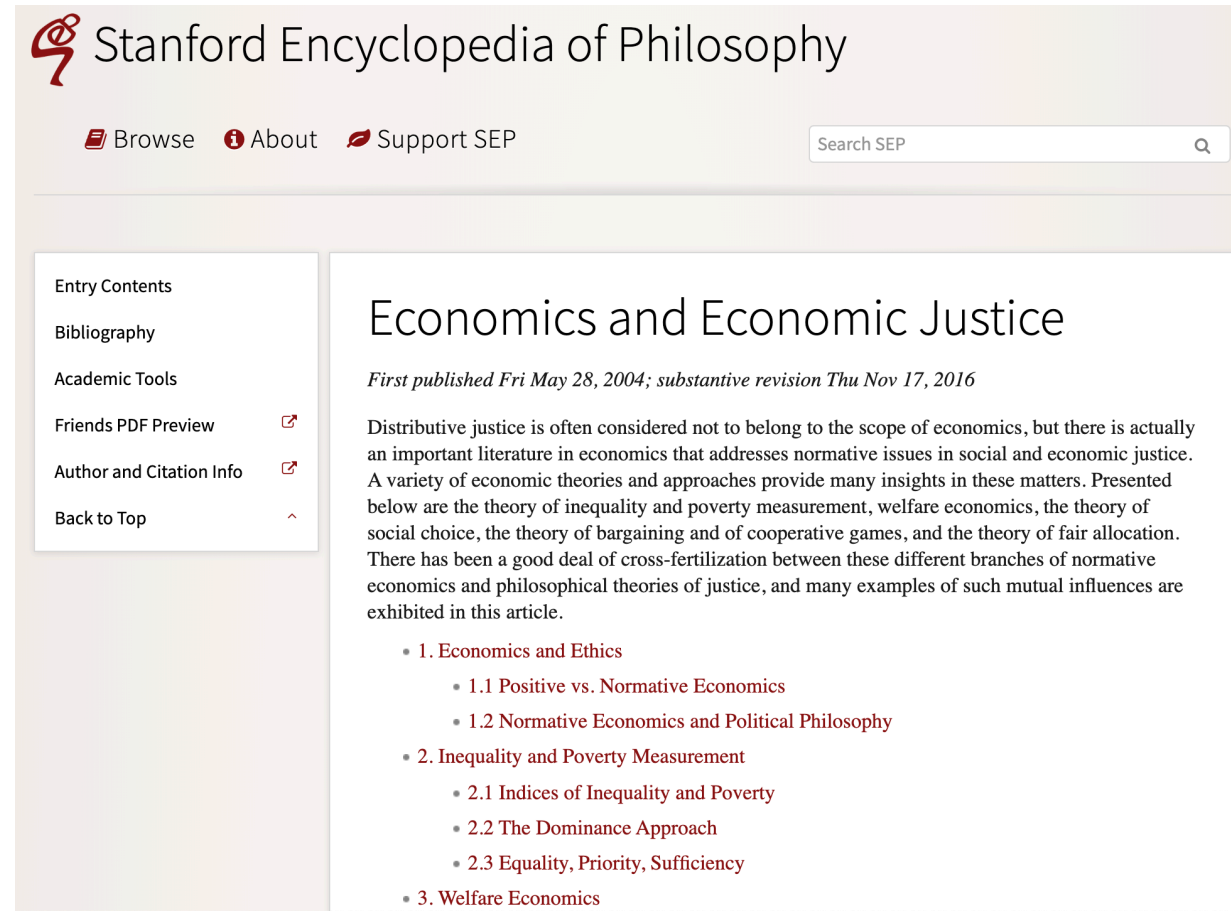
Welfare economics: reading suggestion

You may read **Fleurbaey Marc, "*Economics and Economic Justice*"**, The Stanford Encyclopedia of Philosophy Sections 1 to 3

=> available online:
https://plato.stanford.edu/entries/economic-justice/

Note: Not at all a requirement.

Just if you want to know more about this field at the crossroad of philosophy and economics. Some aspects are very formalized but here it is without any equation.

Stanford Encyclopedia of Philosophy

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Economics and Economic Justice

First published Fri May 28, 2004; substantive revision Thu Nov 17, 2016

Distributive justice is often considered not to belong to the scope of economics, but there is actually an important literature in economics that addresses normative issues in social and economic justice. A variety of economic theories and approaches provide many insights in these matters. Presented below are the theory of inequality and poverty measurement, welfare economics, the theory of social choice, the theory of bargaining and of cooperative games, and the theory of fair allocation. There has been a good deal of cross-fertilization between these different branches of normative economics and philosophical theories of justice, and many examples of such mutual influences are exhibited in this article.

- 1. Economics and Ethics
  - 1.1 Positive vs. Normative Economics
  - 1.2 Normative Economics and Political Philosophy
- 2. Inequality and Poverty Measurement
  - 2.1 Indices of Inequality and Poverty
  - 2.2 The Dominance Approach
  - 2.3 Equality, Priority, Sufficiency
- 3. Welfare Economics

2. How can the State intervene?

1. **Resources allocation**
   ❖ Direct provision of goods & services; transportation infrastructures
   ❖ Subsidies to facilitate access or incentivize consumption; local sport associations
   ❖ Taxes to disincentivize consumption; gasoline (2/3 of the price in France)
   ❖ Legal norms or obligations; regular compulsory vehicle inspections

2. **Redistribution**
   ❖ Explicit redistribution: direct transfers, tax progressivity, etc.; income tax (most countries)
   ❖ Hidden redistribution: indirect effects of taxes & subisidies; financing higher education

3. What are the effects State interventions?

=> **Focus of the course Public Policy Analysis**

❖ **Direct effects** of a policy if agents were not to adjust their behavior

❖ **Indirect effects** or secondary effects from the behavioral responses of agents (firms, individuals)

❖ Combination of **theoretical** and **empirical** responses

❖ **Ex-ante** vs **ex-post** analysis

Small introduction to those matters in the next session

Objectives of the *conférence de méthode*

❖ Clarify potential unclear **concepts** from the lecture

> go ahead with questions

❖ **Apply** them through:

   ❖ Relatively simple **quantitative exercises**
   ❖ **Research papers** on contemporary matters
   ❖ **Group projects** on a specific market failure (of interest to you!)

Introduction

Practical information

Semester's plan

Session 1 : **introduction**
& maths recaps

Session 2 : **A Look at Taxation**

Session 3: **concentrated markets**
& Informational Problems

MARKET
FAILURES

Session 4: **Externalities**

Session 5: **Public goods**

Session 6: **Group Projects Presentations**

Semester's plan

Session 1 : **introduction
& maths recaps**

Session 2 : **A Look at Taxation**

Session 3: **concentrated markets
& Informational Problems**

**MARKET
FAILURES**

Session 4: **Externalities**

Handing of written report (November 23)

Session 5: **Public goods**

Session 6: **Group Projects Presentations**
(December 2 / 9)

Evaluation / grading

❖ **<u>Continuous assessment</u>** in the *conférence de méthode* : 50 %

    ❖ including **group projects reports: 25 %**

    ❖ including **group projects oral presentations: 25 %**

❖ **<u>Final exam</u>** managed by Emeric Henry : 50 %

    ❖ "Take home exam;
Choice between 4 questions divided in two parts. The first part will be a question on the course material (either a formal quantitative exercise or a description of the course material with the student's own words). The second part will be a small case study of a public policy, taken from your personal experiences." (syllabus)

The group project – in short

❖ Form groups of **4 students** <u>within</u> this *conférence*

❖ Find a **topic** to cover related to the course

❖ Submit a **written report** by <u>November the 23rd</u>

❖ **Oral presentation** of the same topic on the last session (2nd / 9th of December)

The group project – guidelines

❖ **Objective**

Study a **market failure** in a particular context (market power, informational asymmetries, public goods, externalities, behavioral biases).

You may choose a very specific case (e.g. a given antitrust case) or be more general (e.g. regulation of congestion in large cities).

The objective is to **muster the knowledge you acquired in the course on an application that is of interest to you**.

The group project – guidelines

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❖ **Examples of previous years' topics**

❖ <u>Market power</u>: the exclusive contracts for US prisons phone calls

❖ <u>Informational asymmetries</u>: overuse of medical services

❖ <u>Public goods</u>: public subsidies to private research

❖ <u>Externalities</u>: the socio-economic burden of the US's opioid crisis

❖ <u>Behavioral biases</u>: present bias and fast-food consumption in low-income neighborhoods

Examples of written reports are shared on the main lecture's Moodle

The group project – written report

❖ Length of **around 1,500 words** (it is short)

  ❖ not counting possible appendix (but it has to be appendices)

❖ **Content**: introduce and develop the topic/case, articulate it with the theory, and try to find relevant policy recommendations

❖ **Grading criteria**

  ❖ How **original** was the choice of topic?

  ❖ How well does the report **relate to the concepts** studied in the course?

  ❖ How well are the **elements and the context** of the case/topic presented?

  ❖ How sensible are the **policy recommendations**?

  ❖ How **carefully written and structured** is the report?

The group project – oral presentation

❖ During the **last session** (2nd / 9th of December)

❖ 5 groups will present (order randomly drawn at the beginning)

❖ **15 to 20 minutes** presentations (including discussion)

❖ **Grading criteria**
   ❖ Similar criteria than for the written report but with a much smaller weight
   ❖ Motivation of the topic, teasing, introduction of what is at stake
   ❖ Synthetical and clear presentation of the topic/case critical pieces of information
   ❖ Slides readability; clarity of speech; proper time management
   ❖ Ability to arouse discussion or debate with the audience
   (even if it doesn't actually work)

Content of the first session

1. Introduction (done)

2. Card & Krueger (1994): minimum wage policy

3. Recap of basic mathematics (for the ones who need it)

   Additional slides on basics of microeconomics shared to read home (for those who might want to discover/review)

   1. Consumer and producer theories
   2. Supply and demand

Card D. & Krueger A. (1994),

"Minimum wages and employment: a case study of the fast-food industry in New Jersey and Pennsylvania",

Recall those questions

❖ **Theoretical** and **empirical** grounds for **State intervention**

    1. Why shall the State intervene?

    2. How can the State intervene?

    3. What are the effects of such State intervention?

❖ As well as the concept of counterfactual

Outline

Towards what objective?

❖ Poverty reduction

❖ Favor equality

❖ Improve social cohesion
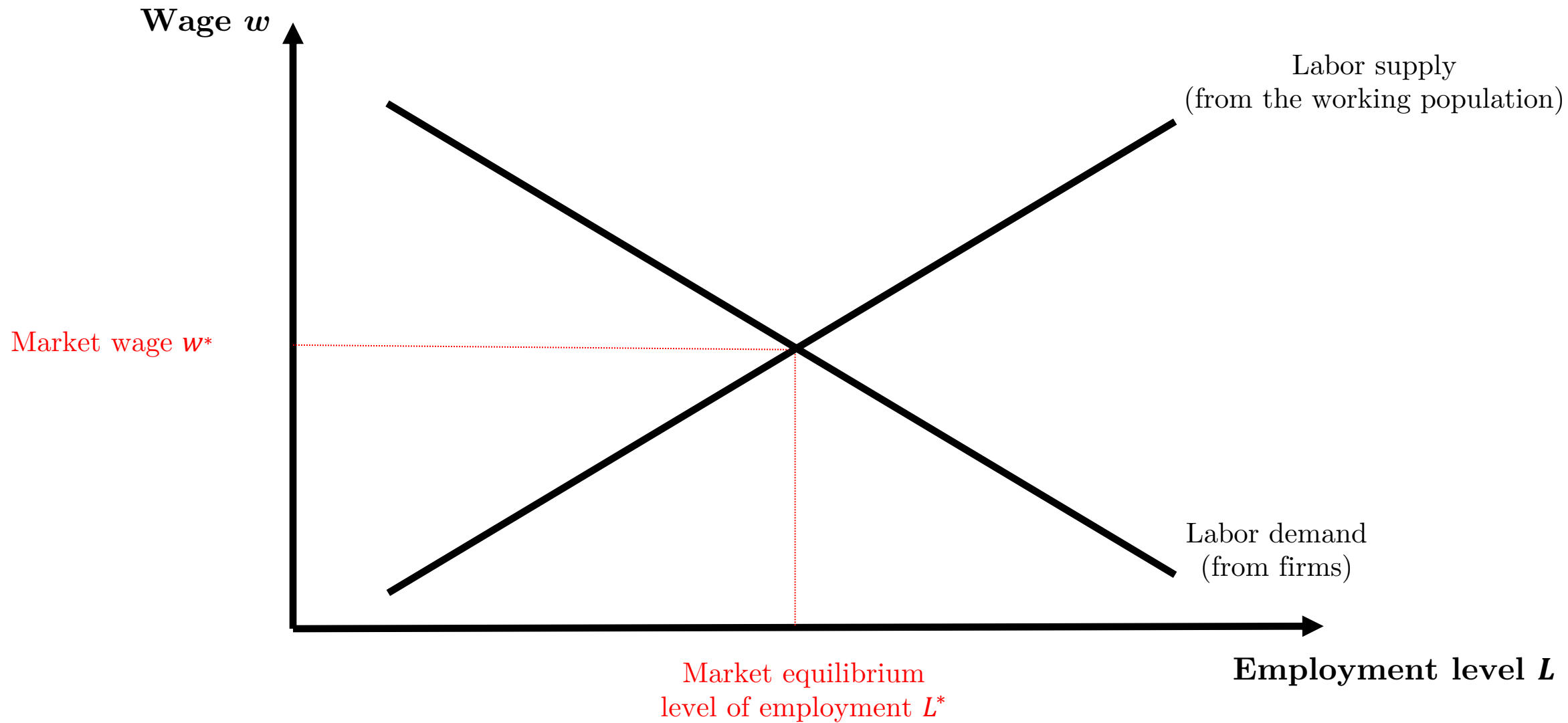
Outline

1. **The minimum wage policy**
   a. Towards what objectives?
   b. Predictions from economic theory
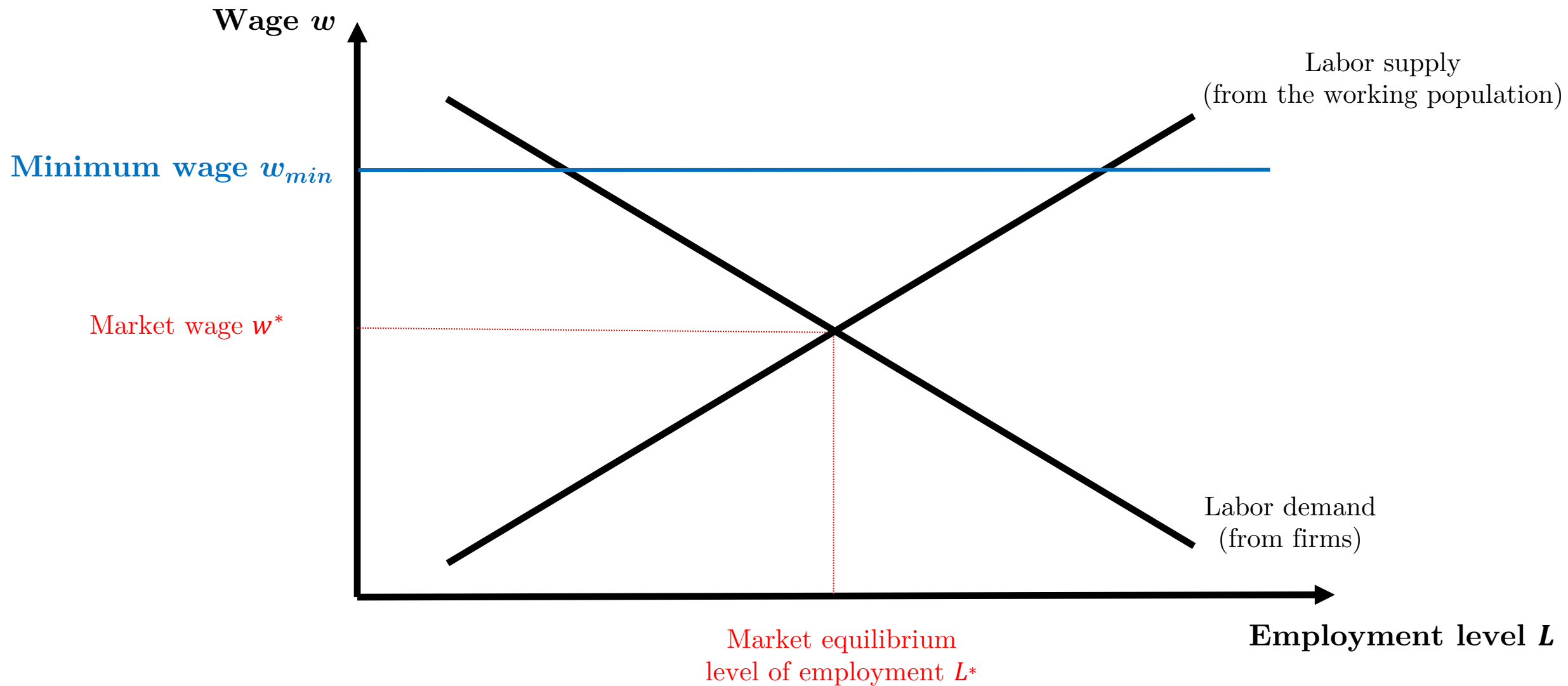
2. **Card & Krueger's responses (1994)**
   a. Context
   b. Method
   c. Main results

3. **Public policy implications**
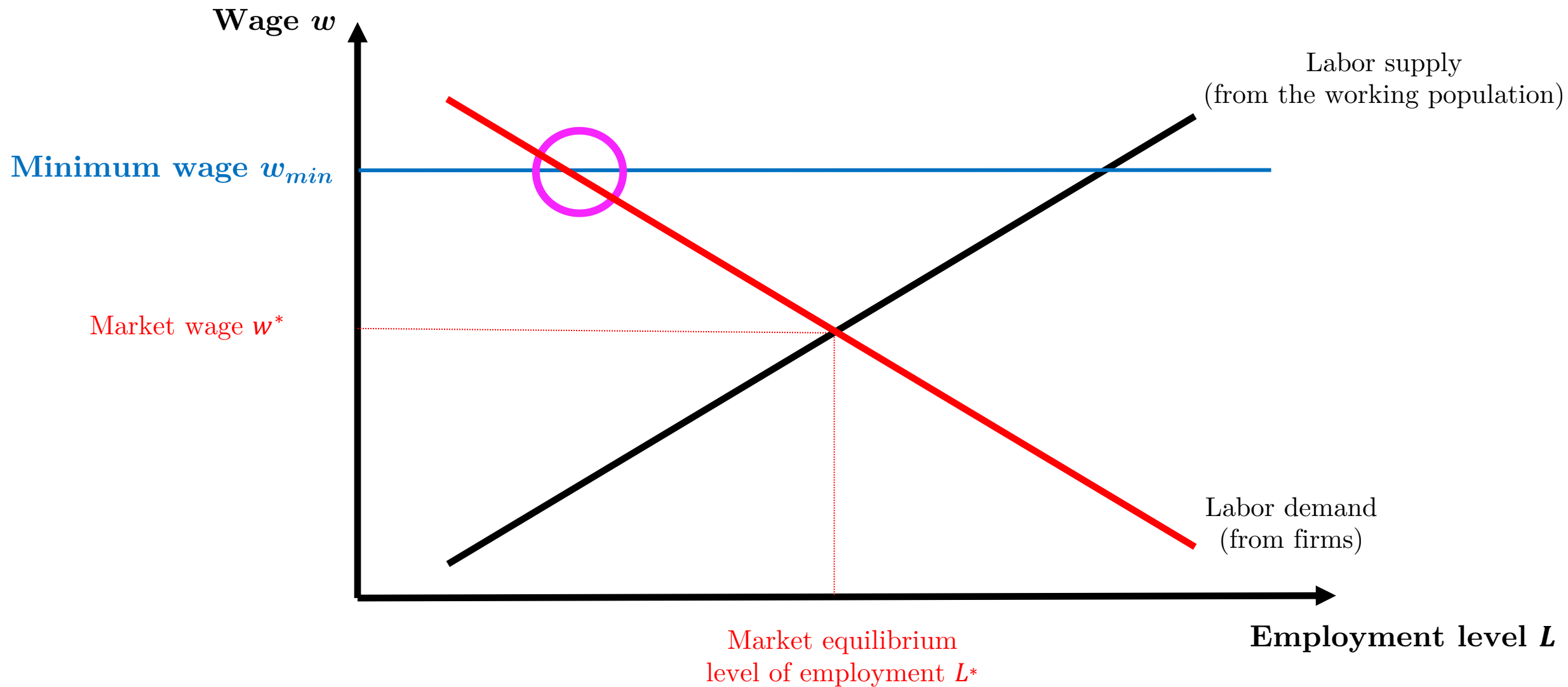
Classical wage analysis
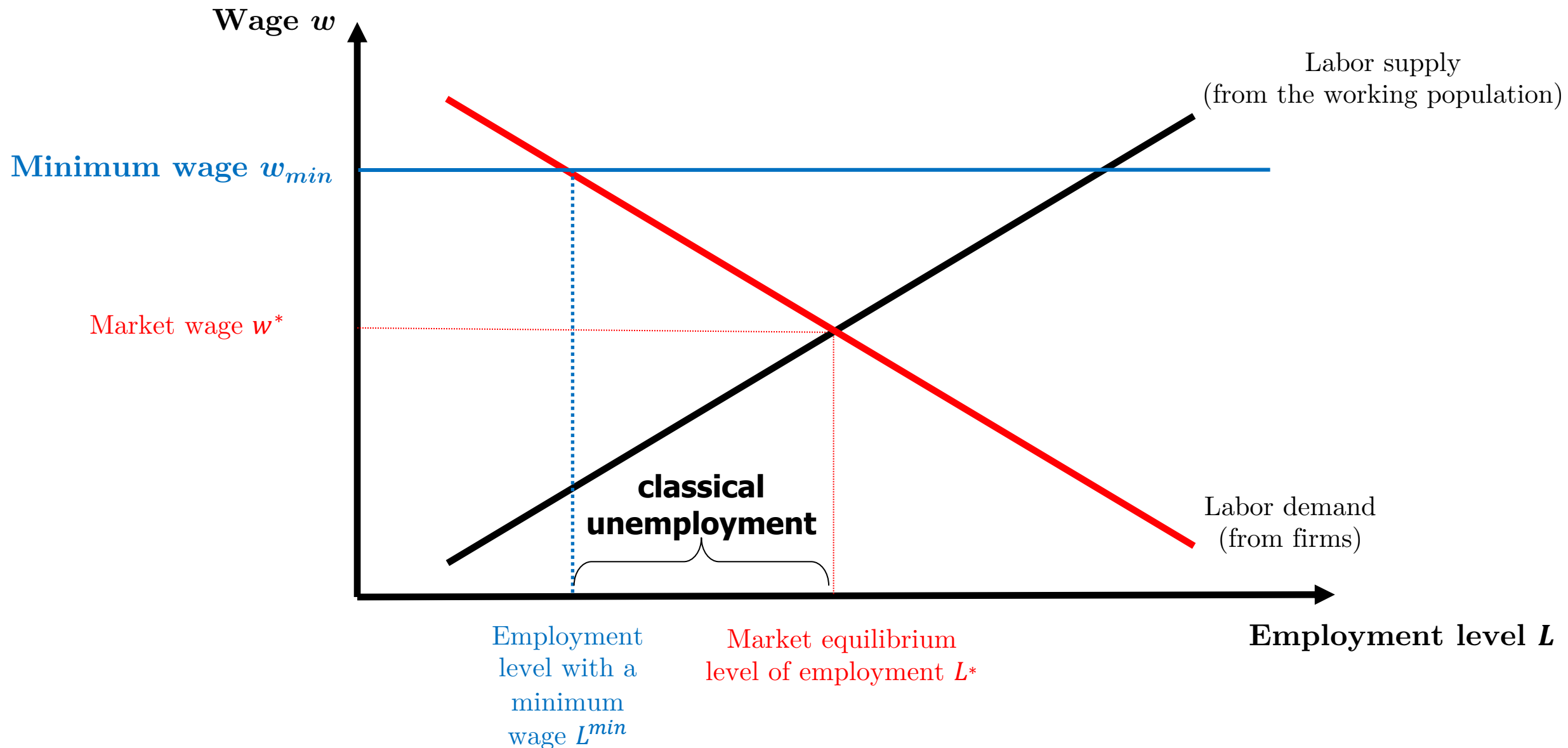
Classical wage analysis

Classical wage analysis

Wage w

Minimum wage w_{min}

Labor supply
(from the working population)

Market wage w^*

Labor demand
(from firms)

Market equilibrium
level of employment L^*

Employment level L

Classical wage analysis

Wage w

Labor supply
(from the working population)

Minimum wage w_{min}

Market wage w^*

classical unemployment

Labor demand
(from firms)

Employment
level with a
minimum
wage L^{min}

Market equilibrium
level of employment L^*

Employment level L

…or monopsony theory

❖ Employers benefit from a **market power** because they hire locally peculiar categories of employees

    ❖ Wages may therefore be lower than the level of productivity

❖ « **Monopsony effect** » : when wages increase exogenously, employers may be incentivized to increase production and employment to maximize their own profits

Great and detailed explanation in this [video](#)

Additional theoretical insights

❖ **Demand shock** in favor of growth (although crowding out effects from imports)

❖ Shapiro–Stiglitz theory of **efficiency wages**:
positive relationship between wage and motivation

❖ **Inflationary** effect => contraction

❖ Lower international trade **competitivity**

❖ **Automatization**: replacement of workers below a certain productivity level
by machines operated by fewer qualified workers (**substitution effect**)

❖ **Intersectoral reallocations** from labor-intensive sectors towards more
capital-intensive sectors (general equilibrium consequences)

Outline

Context

Increase of the minimum wage in NJ **$4.25 to $5.05**

April 1992

New Jersey (NJ)

Pennsylvania (PA)

Phone interviews
Feb – March 1992

Phone interviews
Nov – Dec 1992

❖ Fast food industry

   ❖ Many low wages jobs

   ❖ Respect of minimum law rules

   ❖ Not the *tips* remuneration system

   ❖ Homogeneous products

Outline

Empirical strategy

❖ Quasi-experiment

    ❖ One side of the border, minimum wage increase, not on the other side

❖ Variable of interest

    ❖ Level of employment in Full Time Equivalent (FTE) & employment variation in proportion

❖ Exposition to the law in absolute terms (dummy NJ) and in proportion (GAP)

❖ Many robustness checks

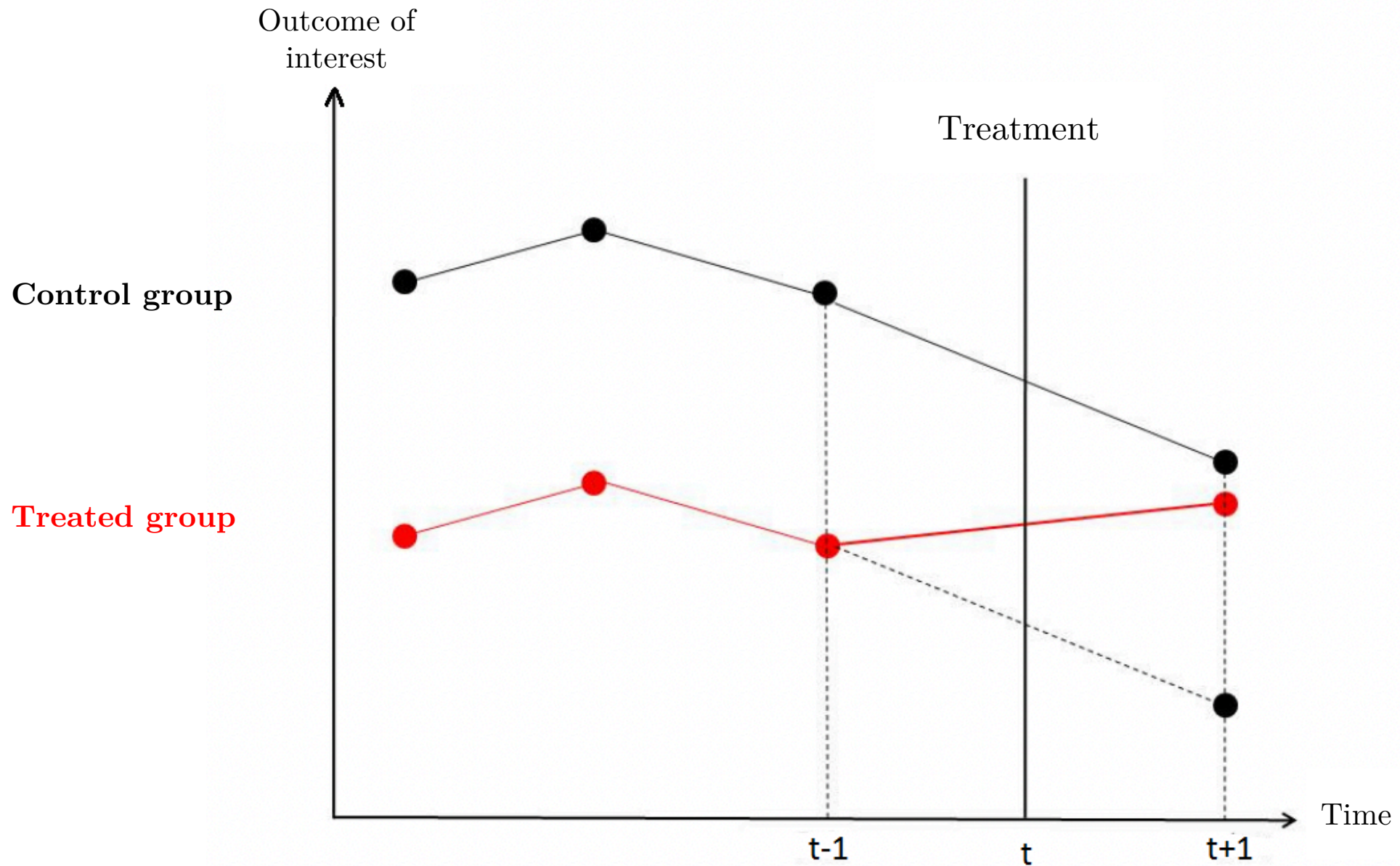   ❖ Restaurants temporarily close out, different measures of FTE, exclusion of NJ's coast, etc.

Difference-in-differences

❖ Also called double difference
  ❖ Control groups: Pennsylvania & NJ's restaurants in which already high wages did not require adjustment
  ❖ NJ/PA comparable: slightly more jobs/rest. in PA, meal prices slightly higher in NJ, the rest is similar

❖ States are not perfectly similar (NJ vs PA)
  So we **cannot compare directly** their levels of employment, but we can **compare their evolution** after the introduction of the minimum wage

❖ Two main hypothesis
  1. Without treatment (MW), both groups evolution would be alike
     We often check that pretrends are similar
  2. No other shock must impact one or the other group
     Otherwise, this is not all other things being equal (*ceteris paribus*)

Difference-in-differences

Outline

TABLE 3—AVERAGE EMPLOYMENT PER STORE BEFORE AND AFTER THE RISE
IN NEW JERSEY MINIMUM WAGE

Variable	Stores by state			Stores in New Jersey[a]			Differences within NJ[b]	
	PA (i)	NJ (ii)	Difference, NJ − PA (iii)	Wage = $4.25 (iv)	Wage = $4.26–$4.99 (v)	Wage ≥ $5.00 (vi)	Low– high (vii)	Midrange– high (viii)
1. FTE employment before, all available observations	23.33 (1.35)	20.44 (0.51)	−2.89 (1.44)	19.56 (0.77)	20.08 (0.84)	22.25 (1.14)	−2.69 (1.37)	−2.17 (1.41)
2. FTE employment after, all available observations	21.17 (0.94)	21.03 (0.52)	−0.14 (1.07)	20.88 (1.01)	20.96 (0.76)	20.21 (1.03)	0.67 (1.44)	0.75 (1.27)
3. Change in mean FTE employment	−2.16 (1.25)	0.59 (0.54)	2.76 (1.36)	1.32 (0.95)	0.87 (0.84)	−2.04 (1.14)	3.36 (1.48)	2.91 (1.41)
4. Change in mean FTE employment, balanced sample of stores[c]	−2.28 (1.25)	0.47 (0.48)	2.75 (1.34)	1.21 (0.82)	0.71 (0.69)	−2.16 (1.01)	3.36 (1.30)	2.87 (1.22)
5. Change in mean FTE employment, setting FTE at temporarily closed stores to 0[d]	−2.28 (1.25)	0.23 (0.49)	2.51 (1.35)	0.90 (0.87)	0.49 (0.69)	−2.39 (1.02)	3.29 (1.34)	2.88 (1.23)

Notes: Standard errors are shown in parentheses. The sample consists of all stores with available data on employment. FTE (full-time-equivalent) employment counts each part-time worker as half a full-time worker. Employment at six closed stores is set to zero. Employment at four temporarily closed stores is treated as missing.
[a]Stores in New Jersey were classified by whether starting wage in wave 1 equals $4.25 per hour ($N = 101$), is between $4.26 and $4.99 per hour ($N = 140$), or is $5.00 per hour or higher ($N = 73$).
[b]Difference in employment between low-wage ($4.25 per hour) and high-wage ($\geq$ $5.00 per hour) stores; and difference in employment between midrange ($4.26–$4.99 per hour) and high-wage stores.
[c]Subset of stores with available employment data in wave 1 and wave 2.
[d]In this row only, wave-2 employment at four temporarily closed stores is set to 0. Employment changes are based on the subset of stores with available employment data in wave 1 and wave 2.

Results (i)

❖ Employment **in FTE has increased in NJ** <u>with respect to</u> PA
At least no significant decrease

❖ **No *spillover*** in the NJ's restaurants which used to pay higher wages.
Similar decrease of employment as in PA

❖ **Prices have increased** 4% higher in NJ with respect to PA

❖ Employment is not statistically significantly decreasing:
  ❖ with regional dummy variables;
  ❖ when employment measure with GAP, not in FTE (heterogeneous restaurants' size effect);
  ❖ no shift from part time to full time;
  ❖ weak external validity (when youth employment in NJ is used).

Results (ii)

❖ The increased employment comes from the biggest restaurants
with GAP, weighted estimates (restaurants' size) yields results similar to the diff-in-diff

❖ No effect of mimimum wage on openings of new restaurants
Other methodology linking the openings of McDonald's with the laws on minimum wage

Outline

Public policy implications?
Are there limits to the study

1. **Period of study**
   - ❖ The adjustment might take more than 7/8 months, as Meer and West (2013) suggest
     But a *follow-up paper* (Card & Krueger, 1998) confirms their initial results (if not mistaken, should recheck); likewise for Dube et al. (2010)

2. **NJ vs PA**
   - ❖ Few elements on the inter-State comparability. Control variables could be added
   - ❖ No discussion of the potential divergence between States over the period (e.g. consumer tax has changed in NJ)

3. **Using restaurants as a proxy for low-paid jobs**
   - ❖ Jardim et al. (2017) argue that minimum wage introduction in Seattle has decreased number of hours worked, except in restaurants

4. **Non-significance of many results**
   - ❖ <u>This is a result</u> (no effect of minimum wage on employment) but many robustness checks insignificant

5. **Potential readjustment between capital- or labor-intensive sectors**
   - ❖ Fast-food chains (KFC, BK, etc.) may prosper in NJ at the expense of independent ones

6. **Take care to the external validity**
   - ❖ For example, the **proportion of minimum wage workers** in France (3 millions individuals) is much higher than in the US. Not necessarily similar effects. There was also a **recession** at that time.

Back to "How can the State intervene?"
Is minimum wage properly addressing the objectives

❖ Poverty reduction
  - ❖ In practice, many companies have market power (massive unemployment), minimum wage is addressing a market failure
  - ❖ The overlap between poverty and poor workers is much higher in countries without a minimum wage policy
  - ❖ Obviously doesn't tackle poverty of the elderly, the youth, or the unemployed

❖ Favor equality
  - ❖ Bunching around the minimum wage, although the whole scale of wages adjusts
  - ❖ If unemployment ↑, the lower the safety net the more problematic

❖ Improve social cohesion
  - ❖ Reduce poverty without social benefits stigma, unless unemp. ↑

❖ The main issue is setting an efficient **amount** for the minimum wage
  - ❖ Very challenging to have a decisive academic answer, at least w/o a given context (15$?)

Card D. & Krueger A. (1994),

"Minimum wages and employment: a case study of the fast-food industry in New Jersey and Pennsylvania",

The American Economic Review, 84 (4): 772-93.

Basic mathematics recap for economics

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