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► **To cite this version:**

Jérôme Gautié. How (and how much) does theory matter? Revisiting the relationships between theories and empirics in the economic controversies over the minimum wage since the 1940s. History of Economics Society (HES), Annual Congress, Jun 2019, New York, United States. halshs-03242222

HAL Id: halshs-03242222

<https://shs.hal.science/halshs-03242222>

Submitted on 30 May 2021

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How (and how much) does theory matter?

Revisiting the relationships between theories and empirics in the economic controversies over the minimum wage since the 1940s

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Introduction

- The rise of applied economics and the correlative empirical turn that has affected the whole discipline since the late eighties ([Backhouse and Cherrier, 2017](#)) => worries about the increasing gap between theory and empirics, and, beyond, the decline of theory in contemporary economics

"[nowadays], *empirical work is science; theory is entertainment*"
([Romer 2015, 93](#))
- Labor economics good illustration, as it is one of the fields most impacted by the “*credibility revolution*” in applied econometrics ([Angrist and Pischke, 2010](#)), and the rise of the “*experimentalist paradigm*” ([Biddle and Hamermesh, 2017](#)), that has induced a shift from “*models to methods*” ([Panhars and Singleton, 2017](#)).

Introduction

- Minimum wage (MW) economic debates offer a very rich material to explore these issues

"[...] what is striking through much of the twentieth century is the extent to which the application of economics to labor markets remains almost entirely theoretical.", Leonard (2000: 126)
- The aim of the paper is to revisit MW debates over a shorter and more recent period (from 1940s to nowadays, as compared to the period from 1880s to the end of 1990s for Leonard, op.cit) => How did the relationship between theory and empirics change over the period? Has there been really a shift from “mainly theory “ to “only empirics matter”? What are the methodological and epistemological issues at stake, in line with Rodrik’s (2015) recent contribution?
- Methodology of the paper: for the period from 1990s, also based on interviews with some of the main contributors (Card, Neumark, Reich....)

Main results



➤ The application of economics to the MW debate remains almost entirely theoretical... globally true, but only until the end of the 1940s;

- **Stigler (1946)** article is the best illustration: strong statement (about the negative impact of MW on employment) but with no direct empirical evidence, and no call for it.
- During the following years, in the same line attempts, with some success, to push out of the ring theories that could give credence to the “no negative employment effect of MW” thesis: 1) “shock theory” assume firms’ non-optimizing behaviors, a contestable assumption on methodological grounds, and moreover, considered as not plausible in low wage industries, in which competition between firms is fierce 2) monopsony: “non predictive in theory” >>>> Orthodoxy building (1) : the right way of doing theory

Main results

➤ From the late 1940s (and starting with the Lester-Machlup controversy), the (first) empirical turn:

➤ Empirics before econometrics (1950s and 1960s):

- fierce controversies (Lester vs Peterson, trained in Chicago) about the interpretation of existing empirical evidence, mainly provided by the BLS => promotion of the “difference-in-difference” methodology as the best empirical design among the Chicago minded economists => orthodoxy building (2): the right way of doing empirics and combining it with theory);
- controversies over the production of “evaluation” by the BLS

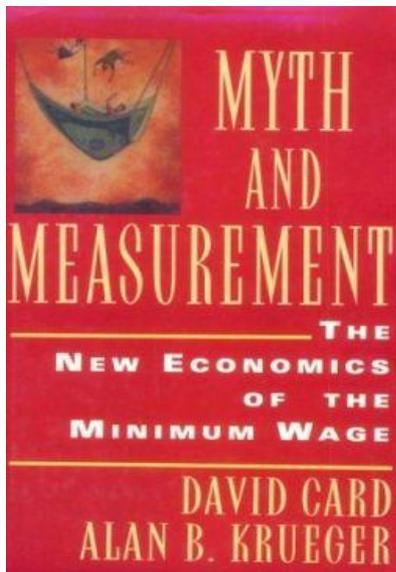
“With half a century of debate and experience with minimum wage legislation behind us [1912 first state MW legislation in the US], it is deplorable that we have so little knowledge of its economic effects [...] Academic economists bear a heavy responsibility for this condition, because they have left it so largely up to government agencies to study minimum wages.” (Peterson 1962, 1)

Main results

- The rise of econometrics and the boom of empirical studies from the beginning of the 1970s ("*What, Another Minimum Wage Study?*", [Eccles and Freeman, 1982](#));
 - Many of them commissioned by the Minimum Wage Study Commission of the Congress, and the American Enterprise Institute = the crucial role of political and social demand
 - But a *de facto* increasing gap with theory because of the estimation techniques (reduced forms with time-series data)..... Even before the “credibility revolution, did theory really matter anymore for the majority of economists?

Main results

- The “New MW Research” initiated in the beginning of the 1990s redefines profoundly the relationship between theory and empirics => the *Myth and Measurement* controversy
- Measurement *against* Theory? Card and Krueger’s theory free empirics “*Our approach is to identify a series of “natural experiments” that would provide convincing evidence even to a skeptic*” (Card and Krueger, 1995: 17) => the “credibility revolution” in applied econometrics (Angrist and Pischke, 2010)



- Fierce reactions; over the credibility of the empirical method, but also symptomatic of the prevalence of theory over empirics in the opinion of some (many?) economists

“But theory is evidence too!!!!” (a distinguished economist, to Card and Krueger in a seminar)

“Why do you lose your time trying to confirm the negative impact of the MW on employment? We know it by theory” (a distinguished economist, to David Neumark).

Potential underlying conceptions

- “Models are experiments” ([Mäki, 2005](#))
- Econometric method *“is one neither of discovery nor of criticism. It is a means of giving quantitative precision to what, in qualitative terms, we know already as the result of a complete theoretical analysis”* ([Keynes 1939, 560](#))
- Theory as a safeguard against incredible empirical results (the *“sniff test”*, [Hamermesh, 2000](#))..... But *“which theory?”* (Card and Krueger); for some “Theory” equates to standard theory = a dogma (see the reference to the law of gravity by opponents to C&K.)

Main Results

- Theory (and theories) back in?
 - [...] *it takes a theory to kill a theory; facts can only dent a theorist's hide*" (Samuelson, quoted by [C&K, 1995](#): 335)
 - The new MW empirical research not only *coincided* with a theoretical revival, but was also greatly *stimulated* by it... and vice-versa
 - Many new (or not so new) models: efficiency wage; monopsony models; matching models :
 - Did too many theories lead to "only empirics matter"?
 - Enriching our menu of theories to choose from can be considered as a symptom of scientific progress ([Rodrick 2015](#))
 - But: the "*Which theory?*" issue => "*it is empirics that are important*" ([Manning, 2011](#): 1026).

Concluding remarks

- The history of the 8 last decades: not just about the “balance” between more or less theory and more or less empirics; more about the evolving relationship between theory and empirics
- From the 1950s, some orthodoxy building about the canons of “good theory” and “good empirics”; among the canons: empirics as a test of theoretical deductions, implying a good articulation between the two (= the “old consensus” [Biddle and Hamermesh, 2017](#)); but in the MW studies field, it relied on weak methodological grounds = already a *de facto* (i.e. in the practice) gap between theory and empirics

Concluding remarks

- The nowadays gap between theory and empirics
 - The limitations of structural econometrics => leaves the room for the quasi-experimentalist empirical designs; but the price to pay is that theory (at best), plays as “*post hoc rationalization*” (Osterman, 1995)
 - “*Economics is a science of thinking in terms of models, joined to the art of choosing models which are relevant for the contemporary world*” (Keynes, quoted by Mäki, 2018: 229); choosing models should not be an “art”, but rather a scientific procedure, and that is why connecting theory and empirics is crucial. The “craft” part of the economist work leaves the room for subjectivity and prior beliefs
 - O'Neil (2015): the differences of opinions about MW impact are not randomly distributed across economists' characteristics. In particular, support for the MW grows steadily as economists are (physically) located further away from Chicago => the role of theory, or more precisely, of *theoretical priors*, should not be overlooked: they still have a strong influence not only on an economist's trust in another economist's results, but also, probably, on her/his own empirical work.