

Will California's minimum wage put "non-elite restaurants" out of business, as "Harvard-Shock-Study" suggests?

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Recently, [California's legislature decided](#) that by 2022 the state's minimum wage will rise to \$15 from currently \$10. A number of cities, including San Francisco, have already started hiking their own minimum wage. Thus, a Harvard-linked study of the effects of these regional minimum wage hikes on restaurant closures met with great [media interest](#) in California and beyond. The popular anarcho-finance website *Zero Hedge* titled "[Harvard Shock Study](#)". *Breitbart* found its own anti-elite twist with the headline "[Harvard Research: Minimum Wage Hikes Put Non-Elite Restaurants Out of Business](#)". We take a closer look at the findings of the study.

This is, how *Breitbart* read and interpreted the study:

They concluded that lower-rated restaurants are disproportionately more likely than four or five-star restaurants to go out of business as a result of minimum wage laws. (...) This is an important conclusion because it reveals that minimum wage policies often hurt those that they are intended to help. Minimum wage hikes put employees of lower-rated restaurants at risk of losing their jobs. Owners of lower-rated restaurants are put at risk of having to shut down their businesses in response to the mandated increases in the cost of labor. And patrons of lower-rated eateries can lose dining choices. Those who eat out at the top of the food chain, the elite 4-and-5-star restaurants might never even notice.

Source of the commotion is the working paper "[Survival of the Fittest: The Impact of the Minimum Wage on Firm Exit](#)", by the economist-couple Dara Lee Luca und Michael Luca, which set out to challenge the pro-minimum-wage consensus in economic research established by two [studies](#) by David Card and Alan B. Krueger published in 1994 and 2000 and a similar, more comprehensive [study by Dube, Lester and Reich](#) published in 2010.

Card and Krueger compared the development of fast-food-employment in neighboring states Pennsylvania and New Jersey after New Jersey had hiked the minimum wage. They found that employment in this low wage industry performed better in the state that had hiked its minimum wage. Dube, Lester and Reich did a similar but more comprehensive exercise. They compared employment developments in many neighboring counties across state borders with different minimum wage laws and obtained a similar result. This counterintuitive result is theoretically possible if you consider that higher paying patrons have an easier time finding enough qualified personnel. They can off course always pay more, but they would have to pay more also to those that they can get for less. Thus, they might decide to employ fewer people and sell less than they could in order to increase profits. If the minimum wage forces them to pay more to everybody anyway, they might decide to expand.

Pitfalls of reading the abstract only

So what about the "Harvard-Shock-Study" as read by *Breitbart*, then? Does it challenge these findings? Not by far! *Breitbart's* Tom Cicotta simply did not read beyond the abstract before reporting. The low-rated restaurants with one star are not necessarily the cheap ones, and the four or five-star restaurants might well be cheap fast-food eateries. The Lucas-couple used the

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one to five star user-ratings of Yelp, not something akin to Michelin-stars on food quality and fanciness of location, as Cicotta seems to think. The low-rated ones are simply the badly managed restaurants, whose exit is sped up by a higher minimum wage.

But what about the real substance of the study? Even if a higher minimum wage forced lots of badly run restaurants to shut down, which would otherwise have continued to employ people, wouldn't that be a real problem? It would, as long as it is established that this is really a result of higher minimum wages and not an artefact of the data or – worse – of data mining scientists. Further it would have to be established that the effects are economically important in size and also that the employment losses are not compensated by other, better-run restaurants expanding or new restaurants opening in place of the failed ones.

Unfortunately for the story -but luckily for Californians, who do not want to prepare all their favorite [tasteless](#) but [exceedingly healthy](#) meals at home - all three conditions are hardly met.

Survival of the fittest

For "[Survival of the Fittest: The Impact of the Minimum Wage on Firm Exit](#)" the authors analyzed reviews and exits of restaurants in the San Francisco Bay Area, where cities had different minimum wages and raised them at different times. Their main indicator for the effect of minimum wage hikes is the change in the likelihood that a restaurant closes down, i.e. the change in the share of restaurants closing down in a certain time-period.

In the abstract, they conclude:

The evidence suggests that higher minimum wages increase overall exit rates for restaurants. However, lower quality restaurants, which are already closer to the margin of exit, are disproportionately impacted by increases to the minimum wage. Our point estimates suggest that a one dollar increase in the minimum wage leads to a 14 percent increase in the likelihood of exit for a 3.5-star restaurant (which is the median rating), but has no discernible impact for a 5-star restaurant (on a 1 to 5 star scale).

This seems to suggest that the academic consensus based on earlier studies, which found no negative or even positive effects of minimum wages on employment in low-wage sectors, might have to be reconsidered. A restaurant, which shuts down, will not be able to employ workers any more. However, as regards statistical significance of the results, i.e. the level of conviction that they are not simply an artefact of chance, the authors have to admit that they can come up only with "suggestive evidence", regarding overall increases in restaurant exit rates. "The estimate is only statistically significant in certain specifications", they confess. If researchers try out lots of specification before they find at least some statistically significant results, that is usually a very bad sign. To their credit, Lucas and Lucas are at least honest about it.

The effect on overall exit is not only statistically insignificant in most specifications, it is also economically hardly significant. In the abstract they point to the estimate for medium-rated

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restaurants, which they give as a 14% higher likelihood of exit. Only in the conclusions at the end do they mention the much lower estimates for all restaurants of plus four to ten percent. The annual closure rate of restaurants in the Bay Area is five percent. Four percent increase of a five percent exit rate would be an additional minimum-wage-related closure of 0.2 percent of all restaurants, or one in 500. This is nothing to write home about, especially if the result is far from statistically significant.

More exits of bad restaurants, but no overall decline

The third question remains to be answered. Does the overall number of restaurants and restaurant jobs go down, if minimum wages are hiked, or do restaurants that expand their workforce and new restaurants make up for the employment loss in badly run, failing restaurants?

On employment, the Harvard-study has to remain silent, as the Yelp-data the authors use, does not contain any information on that. Thus, the main theoretical channel, which could account for less damaging or even positive effects of minimum wages on employment, is ignored by design.

As regards the number of restaurants, the authors mention briefly, that there is a negative effect, which is not statistically relevant. However, it is not only statistically not significant, but also economically irrelevant. In a table in the annex, one can find that from a base of 45 restaurants per 10.000 inhabitants, a minimum wage hike by one dollar leads to 0.1 to 0.2 less restaurants per 10.000 people.

In conclusion, one can read this study as confirmation that no statistically and economically significant negative effects from higher minimum wages should be expected.

[German version](#)

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