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Amazon Warehouses: Effects on Local Employment and Housing Markets
(Job Market Paper)

I examine the effects of Amazon warehouses (known as fulfillment centers) on local labor markets and housing prices. Since the early 2010s, the number of Amazon warehouses across the U.S. has quadrupled. I focus on the subset of U.S. counties in which the online retailer has either opened or announced its plan to open warehouses since 2011, and use the gradual roll-out of warehouse openings within this sample to identify the causal effects.

I combine data from a number of sources: warehouse information from the website of a logistics consulting firm, county level employment and earnings data from Quarterly Wage Indicators (QWI) series, and housing price data from the Zillow home value index. I estimate that opening an Amazon warehouse increases employment in the warehousing industry by 1,100-2,200 jobs. These estimates are in the same range as the number of workers hired by a typical Amazon warehouse, suggesting at most small spillover to the rest of the warehousing sector. For total county employment, I do not find any significant increase except in the fourth quarter of the year. At the industry level, I find weak evidence of positive employment effects on construction and wholesale trade. The earnings results show that average monthly earnings in the warehousing industry decline by 2 percent. My estimates control for state or county level trends and are supported by an event study analysis. The latter rules out the possibility that persistent local shocks could lead to Amazon's entry.

Overall, the results suggest that Amazon warehouses are lower-paying than previous warehouse jobs, mainly add short-term seasonal jobs to the local economy, and have limited scope for generating spillover effects on other local industries. Using the quarterly employment data, I calculate that one warehouse job creates 0.13 additional jobs in a county in the fourth quarter. This number is far below some of Amazon's own calculations; a report published in its blog claims that 18,000 warehousing jobs from Amazon in southern California created another 34,600 jobs —suggesting a job creation factor of 1.9.

In the housing market, I find that warehouse openings increase median home values by 1.5 percent. I suggest mechanisms that could propagate demand shocks to local housing markets in the absence of strong employment effects. Amazon's entry might drive up demand for industrial space for warehousing and other logistics operations reducing the land supply of residential properties at the margin. In support of this, I provide evidence that an Amazon warehouse might be increasing the number of large warehousing establishments in a county by more than one. However, additional warehouses do not boost up industry employment since this sector is increasingly automated.

JEL Classifications: J2, J3, R3

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