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Minu, Startu and All That: Pitfalls in Estimating the Sensitivity of a Worker's Wage to Aggregate Unemployment
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Abstract:
In this paper we show that panel estimates of tenure specific sensitivity to the business cycle of wages is subject to serious pitfalls. Three canonical variates used in the literature – the minimum unemployment rate during a worker's time at the firm (min u), the unemployment rate at the start of her tenure (Su) and the current unemployment rate interacted with a new hire dummy (δu) – can all be significant and "correctly" signed even when each worker in the firm receives the same wage, regardless of tenure (equal treatment). In matched data the problem can be resolved by the inclusion in the panel of firm-year interaction dummies. In unmatched data where this is not possible, we propose a solution for min u and Su based on Solon, Barsky and Parker's (1994) two step method. Our proposed solution method is however suboptimal because it removes a lot of potentially informative variation in average wages. Unfortunately δu cannot be identified in unmatched data because a differential wage response to unemployment of new hires and incumbents will appear under both equal treatment and unequal treatment.

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