

Comment on Job displacement and Crime : Evidence  
from Danish Microdata *by Patrick Bennett and Amine  
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## Quantifying the causal impact of displacement on crime

- Impact of unemployed have been discussed along various economic and social dimensions (income, human capital, health, vote, crime)
- Important to quantify the economic fundamental of crime
  - To assess the social consequences of unemployment
  - Perhaps easier for policies to act on economic conditions conducive to crime than any other determinants
- To better design and target labor market policy different type of evaluation is needed :
  - Target individuals : human capital argument
  - Target areas : to deal with spillover/general equilibrium effects

*Authors come with new results, grounded on sound identification strategy  
Results raise some interesting policy questions, and open avenues for other research questions*

# Identification issues I

- Potential outcome set-up :

$$D_i = \begin{cases} 1 & \text{if } i \text{ is treated (Displaced)} \\ 0 & \text{otherwise} \end{cases} \quad (1)$$

for every individual two potential outcomes :

$$Y_i = \begin{cases} Y_{i1} & \text{crime level if treated} \\ Y_{i0} & \text{crime level if untreated} \end{cases}$$

- Authors are looking for ATT :

$$E [(Y_{i1} - Y_{i0}) | D_i = 1] \dots \text{other parameters may also be of interest} \quad (2)$$

*The exact measure : is the effect of **displacement after mass-layoff** on propensity to commit crime for tenure workers*

## Why not (simple) differences in means ?

$$E(Y_{i1}|D_i = 1) - E(Y_{i0}|D_i = 0) = \underbrace{E(Y_{i1} - Y_{i0}|D_i = 1)}_{\text{ATT}} + \underbrace{[E(Y_{i0}|D_i = 1) - E(Y_{i0}|D_i = 0)]}_{\text{Selection Bias}} \quad (3)$$

- Threats to internal validity : unobservable differences in crime proneness and reverse causality
- Going beyond ATT is important here : this is challenging if there are heterogenous reaction to mass displacement

# Assessing the validity of the design

- Internal validity : very high thanks to a very good data structure and very good use of it
- External validity is questionable due to the specificity of your treatment definition

# Assessing the internal validity of the design

- Unemployment is not randomly distributed in the population/and across space :
  - Low productivity workers more likely to lose their job, and conditionally on being unemployed are less likely to leave unemployment, following standard incentive argument opportunity cost of committing crime is lower for them : overestimation of the effect of unemployment on crime.
  - Reverse causality : crime causes unemployment

**Authors' solution** : use a control strategy relying on natural experiments provided by workers displaced after mass-layoff  
DiD with very rich data structure to control for selection along various dimensions, and pre-treatment trend

## Threat to internal validity :

- For design validity there should be no interference between units : treatment applied to one unit does not affect the outcome for another unit (SUTVA assumption)
- Is the assumption sustainable in a context of collective dismissal ?
  - Layoff workers may search for similar jobs leading to crowding out-effect : which will overestimate the effect of crime
  - Peer-effects may create spatial autocorrelation (see Barrios et al. 2010) (nice to have a map of crime)
  - Equilibrium effects (second market for robberies) : more unemployed locally lead to more demand for illegal (cheaper) goods and services
- Add area time specific effect on top of municipality specific effects : catch local labor demand shocks
- **Check with different (lower) threshold values (5, 10, 20, 30%) of mass-layoff**
- Dynamic effects may violate strict exogeneity : when a market for criminal activity is underway it could be sustained for a long time



## Threat to external validity : heterogenous reaction to treatment across the population

- Many Danish workers experience a period of unemployment/displacement which in most cases last only for a short period
- Impact is identified only for the population of high tenure workers
  - these are workers losing the most from displacement
  - within firm employers select which workers to lay-off (least productive, easily recalled workers)
- High tenure displaced workers account for a very small share of total displacement
- Most of displacement does not occur after mass-layoff : an issue if reaction to treatment is heterogenous

## Threat to external validity

- Causal impact is estimated for a specific group of workers whose crime behavior may be particularly reactive to displacement owing to their low employability prospect.

**Any policy implication should be drawn only for these specific group of workers**

## A possible suggestion to improve/assess external validity

### *Combining DiD with an IV strategy*

- Estimated impacts are average over the distribution of impact for those that have been treated because of mass layoff (small part of the stock/flow of displaced workers)
- Use mass-layoff at firm level (or any firm specific labor demand shock) as an instrument for displacement computed on all workers and not only high tenure workers : as an IV in a randomized experiment with non full compliance.
- The parameter estimated will be a LATE : impact on those that have been displaced because of mass-layoff but would have kept their job otherwise (compliers)
- Then compare the characteristics of compliers with those of other displaced workers (or any other group of the population)
- If characteristics are similar you can claim for greater external validity
- Varying treatment effects along the business cycle

## Making sense of the results

*Large effect size of displacement on crime : from 1.33% to 1.85%  
Results are scary! At least given the Danish workfare system*

# Making sense of the results : channels of transmissions

- What sort and how much human capital is losted ?
  - occupationnal specific
  - firm specific
  - displaced workers may come from shrinking occupations/task (structural displacement)
- Other channel of transmissions
  - health/depression effect (Ex. see Black, Salvanes, Devereux, 2012)
  - income : surprising in the Danish context, treated workers are high rent workers ; that will probably not recover the rent losted

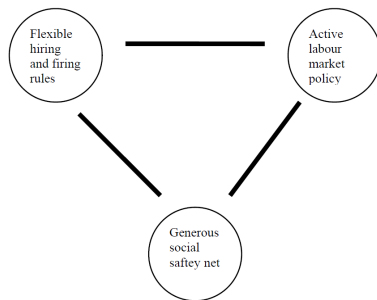
## Making sense of the results : role of activation program

- What is the size the spillover : complement the individual approach with the area wide approach
- Those with vocational education are more likely to be displaced but less likely to comit crime (Table 4) : the issue is not so much about displacement than employability.
- Most of crime are committed soon after displacement : this questioned the effectiveness of the activation part of the Danish system
- My guess : results are perhabs specific to the group of workers you are considering. High tenure workers have high rents and high reservation wages. Are they unemployable ?

## Making sense of the results : other determinant of crime

- Are crime specific skills more rewarding after mass-layoff (or changes in the trade-off between risk consumption) ?
- Measurement issue : reported crime is only the visible part of the iceberg ; bad economic conditions may throw in the crime market people with low skill for crimes (Roy type argument), composition effect, this will overestimate the effect of crime
- Demand side determinant
  - Does local unemployment impact the market for illicit good/services produced through criminal activity
  - Authors' finding that in areas with more poverty there is more crime suggests yes

# Policy implications for the three pillar Danish workfare system



- Consequence : many workers experience unemployment, which in most cases last for a short period. Average unemployment duration is much lower than in Netherlands or Germany.
- **Workers driving the results are somehow outliers : reaching external validity is challenging in this context.**



## Questioning the effectiveness of the system for displaced tenured workers

- If one wants to limit the effect on crime activation should be made more intense very soon after unemployment loss for this specific group of workers and perhaps take the form of vocational training
- Though this can have perverse effect : are displaced workers in shrinking (routine) occupation,
- Reasons workers are displaced may explain the large estimated effect for them : displaced due to import competition
- Mass lay-off may represent structural displacement due to restructuring, though most of displacement is along the business cycle.
- In Denmark there is a lot of recall (true layoff) : not for structural displacement
- The mass layoff is structural employment prospect of those in activation may deteriorate
  - More carrots than stick for these specific workers ?
  - Occupational or sectoral level analysis could shed new light on this issue

- Could your result provide a rationale for granting additional protection for collective dismissals (involve greater social costs), or for having severance pay increasing with tenure?

*Answering these questions call for enhancing the external validity : impact on workers with different level of tenure and following different level of employment adjustment (structural vs cyclical).*

## Policy questions raised by the paper

- Can displacement through crime be a vehicle for structural unemployment among low skill workers (deterred investment, create hysteresis and lock-in effect)?
- Should we tax large downsizing to give incentives for firms to smooth their adjustment.
  - Turning firms adjustment costs from concave to convex
  - Stimulate intensive adjustment (hours) rather than extensive margin (employment)
- Money may not be enough : loss of social capital
- ALMP should be adapted to the type of human capital loss (protecting workers human capital to make it portable).

## Policy questions raised by the paper

- What happens before and after the 1993s, when the third leg of the model has been introduced.
- Could the activation pillar be less effective for the type of workers considered?
  - Crime mostly occurs while individuals are still under UB which may last up to 4-5 years
  - Can this be due to some perverse effect of too tough activation program for this type of workers, such that UB is too costly for them.

## Conclusion

- Results suggest that structural displacement increases crime because of human capital loss
- Though most of displacement is along the business cycle
- Carefulness about external validity and a need for a careful definition of the treatment and the population for which the effect is identified ;

*Beyond their contribution, authors' results open avenue for new, interesting and challenging research questions relating the nature of displacement/unemployment, workfare policies and crime*