Demand-side factors influencing endemic drug use in America

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Demand versus Supply Drivers

Supply-side drivers
- Increasing availability of powerful drugs

Demand-side drivers
- Increasing demand for deadly substances

1. Supply-side drivers
2. Demand-side drivers
Overview
1. Supply-side drivers
2. Demand-side drivers

Demand-side Factors
- Community economic disadvantage
- Mental health problems
- Relational problems
- Health conditions (chronic pain, sedentary life styles, etc.)
Demand-side Factors

- Community economic disadvantage
- Mental health problems
- Relational problems
- Health conditions (chronic pain, sedentary life styles, etc.)

Ohio Overdose Rates by Education Level

- HS Grad
- Some college
- Associates
- Bachelors

US and Ohio Unemployment Rates 2000-16
Unemployment rates

1. Mask type of job
Ohio's Industries  

<table>
<thead>
<tr>
<th>Industry</th>
<th>2000</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>15.4</td>
<td>10.4</td>
</tr>
<tr>
<td>Government and government enterprises</td>
<td>12.1</td>
<td>11.3</td>
</tr>
<tr>
<td>Retail trade</td>
<td>11.7</td>
<td>10.1</td>
</tr>
<tr>
<td>Health care and social assistance</td>
<td>9.9</td>
<td>12.8</td>
</tr>
<tr>
<td>Accommodation and food services</td>
<td>8.4</td>
<td>7.2</td>
</tr>
</tbody>
</table>
Koffi, Hurst, and Schwartz (2018)

- Manufacturing decline lowered incomes for prime aged workers
- State manufacturing decline increased OD rates (causal)
One more robot per thousand workers reduces the Employment/Pop Ratio by about 0.18-0.24 percentage points.

Source: Acemoglu and Restrepo 2017

Carnegie Mellon Reels After Uber Lures Away Researchers

Uber staffs new tech center with researchers poached from its collaborator on self-driving technology

Amazon opens grocery store with no checkouts

Robot spending will hit $188 billion by 2020, report predicts Robotics and related services are expected to reach new heights, driven by an expanding market.

January 22, 2018
Currently 47 million workers with HS degree or less
Driving: 3.4 million
Grocery store attendants: 2.4 million
Fast food counter workers: 3.7 million

Unemployment rates
1. Mask type of job
2. Mask LF participation

Source: BLS
Men NLF express much lower levels of meaning to their daily lives than LF men

- Not so for women

Half of prime age men NLF use daily pain medication (Krueger 2017)
In 2016, ~2.1 million people with opioid use disorder

Could account for 78% of non-boomer LFP drop

*Could be 100% in KY, OH, PA, WV*

Consequences of Job Bifurcation and Decreased LFP

[Graph showing trends in Median Family Real Income and Productivity: Output per Hour]
Productivity: Output per Hour

Median Family Real Income

Source: Chetty et al. 2014

Academic Research
- Hollingsworth et al. 2017
- Kreuger 2017
- Betz and Jones 2018
- Kofi, Hurst, Schwartz 2018
- Ruhm 2018; Currie, Jin, Schnell 2018
Demand side: Relationships

Conclusions? ...nuanced
### Leading Causes of Death Under 55 in 2016

<table>
<thead>
<tr>
<th>Cause</th>
<th>KY, OH, PA, WV</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug overdoses</td>
<td>10,415</td>
<td>56,679</td>
</tr>
<tr>
<td>Cancer</td>
<td>6,422</td>
<td>58,740</td>
</tr>
<tr>
<td>Heart disease</td>
<td>5,694</td>
<td>49,498</td>
</tr>
<tr>
<td>Suicide</td>
<td>3,048</td>
<td>28,999</td>
</tr>
<tr>
<td>Homicide</td>
<td>1,638</td>
<td>16,970</td>
</tr>
<tr>
<td>Chronic liver disease</td>
<td>998</td>
<td>12,190</td>
</tr>
</tbody>
</table>

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Trends in substance use disorder in the past year age 18+

2002-2014
2.6m SUD
2.6m AUD

Trends in substance use disorder in the past year age 18+
by drug

+230k HUD

Past month Marijuana use age 12+

+10m Using Marijuana
Takeaways
1. US drug crisis is more than a supply problem
2. Local economic conditions influence ODs
3. Coming automation will likely exacerbate

Policy recommendations
Prevent new users
1. More thoughtful (slower) approach to economic policy
2. Investments in education/health
3. Better support of families EITC
4. Reduce prescription rates back to 1995 levels
5. Increase access to alternatives: Marijuana with caveats

Policy recommendations
Help existing users
1. Increase treatment for those already addicted
2. Reducing supply of illicit drugs…good luck
Thank You!
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