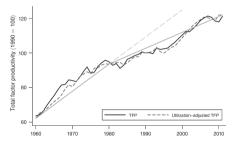
Competing for Inventors: Market Concentration and the Misallocation of Innovative Talent

Andrea Manera

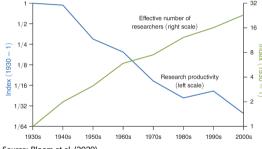
October 5, 2021

► TFP growth has slowed down
Fernald et al. (2014), Gordon (2016), Akcigit and Ates (2021)



Source: Akcigit and Ates (2021)

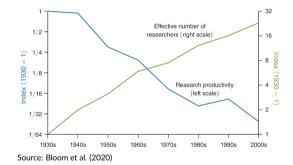
- ► TFP growth has slowed down Fernald et al. (2014), Gordon (2016), Akcigit and Ates (2021)
- R&D productivity has fallen Bloom et al. (2020), Acemoglu et al. (2018, 2021)



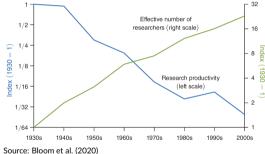
Source: Bloom et al. (2020)

- ► TFP growth has slowed down Fernald et al. (2014), Gordon (2016), Akcigit and Ates (2021)
- ► R&D productivity has fallen Bloom et al. (2020), Acemoglu et al. (2018, 2021)
- ► Inventors have skills broader than product markets, high mobility

 Akcigit et al. (2016), Azoulay et al. (2017), Moretti et al. (2017)



- ► TFP growth has slowed down Fernald et al. (2014), Gordon (2016), Akcigit and Ates (2021)
- R&D productivity has fallen Bloom et al. (2020), Acemoglu et al. (2018, 2021)
- Inventors have skills broader than product markets, high mobility Akcigit et al. (2016), Azoulay et al. (2017), Moretti et al. (2017)



Are inventors misallocated?

▶ Inventors have become increasingly misallocated in the last 20 years

- ▶ Inventors have become increasingly misallocated in the last 20 years
 - employed by incumbents in less competitive sectors

- ▶ Inventors have become increasingly misallocated in the last 20 years
 - employed by incumbents in less competitive sectors
 - deployed to non-productive, defensive, R&D projects ("patent walls")

- ▶ Inventors have become increasingly misallocated in the last 20 years
 - employed by incumbents in less competitive sectors
 - deployed to non-productive, defensive, R&D projects ("patent walls")
- Mechanism:

- Inventors have become increasingly misallocated in the last 20 years
 - employed by incumbents in less competitive sectors
 - deployed to non-productive, defensive, R&D projects ("patent walls")
- ► Mechanism:
 - ♦ Dominant firms engage in both productive and defensive R&D activities Hall and Helmers (2015), Abrams et al. (2018), Akcigit and Kerr (2018), Jo (2019), Argente et al. (2021)

- Inventors have become increasingly misallocated in the last 20 years
 - employed by incumbents in less competitive sectors
 - deployed to non-productive, defensive, R&D projects ("patent walls")
- Mechanism:
 - Dominant firms engage in both productive and defensive R&D activities

 Hall and Helmers (2015), Abrams et al. (2018), Akcigit and Kerr (2018), Jo (2019), Argente et al. (2021)
 - Defensive R&D more attractive when profits to protect are bigger Arrow's (1962) replacement effect

- Inventors have become increasingly misallocated in the last 20 years
 - employed by incumbents in less competitive sectors
 - deployed to non-productive, defensive, R&D projects ("patent walls")

Mechanism:

- Dominant firms engage in both productive and defensive R&D activities
 Hall and Helmers (2015), Abrams et al. (2018), Akcigit and Kerr (2018), Jo (2019), Argente et al. (2021)
- Defensive R&D more attractive when profits to protect are bigger Arrow's (1962) replacement effect
- Concentration and profits have increased significantly in the US Autor et al. (2020), Gutierrez and Philippon (2017, 2018), Grullon et al. (2019), Barkai (2020), De Loecker et al. (2020)

- Inventors have become increasingly misallocated in the last 20 years
 - employed by incumbents in less competitive sectors
 - deployed to non-productive, defensive, R&D projects ("patent walls")

► Mechanism:

- Dominant firms engage in both productive and defensive R&D activities Hall and Helmers (2015), Abrams et al. (2018), Akcigit and Kerr (2018), Jo (2019), Argente et al. (2021)
- Defensive R&D more attractive when profits to protect are bigger Arrow's (1962) replacement effect
- Concentration and profits have increased significantly in the US Autor et al. (2020), Gutierrez and Philippon (2017, 2018), Grullon et al. (2019), Barkai (2020), De Loecker et al. (2020)
- ♦ Concentrating sectors attracted more inventors, pushing growth below potential

- Inventors have become increasingly misallocated in the last 20 years
 - employed by incumbents in less competitive sectors
 - deployed to non-productive, defensive, R&D projects ("patent walls")
- ► Mechanism:
 - Dominant firms engage in both productive and defensive R&D activities
 Hall and Helmers (2015), Abrams et al. (2018), Akcigit and Kerr (2018), Jo (2019), Argente et al. (2021)
 - Defensive R&D more attractive when profits to protect are bigger Arrow's (1962) replacement effect
 - Concentration and profits have increased significantly in the US Autor et al. (2020), Gutierrez and Philippon (2017, 2018), Grullon et al. (2019), Barkai (2020), De Loecker et al. (2020)
 - ♦ Concentrating sectors attracted more inventors, pushing growth below potential
- Misallocation can explain 27% of fall in annual growth (-.78pp)