

Defensive Industrial Policy: Protecting The Defense Industrial Base And Beyond

Chad Dacus, Professor of Cyberwarfare Studies, Air Force Cyber College

Cj Horn, Professor of Cyberwarfare Studies, Air Force Cyber College



Disclaimer: The views expressed in this presentation (and the underlying paper) are our own and do not reflect the views or positions of the US government, the US Department of Defense, or the US Air Force.

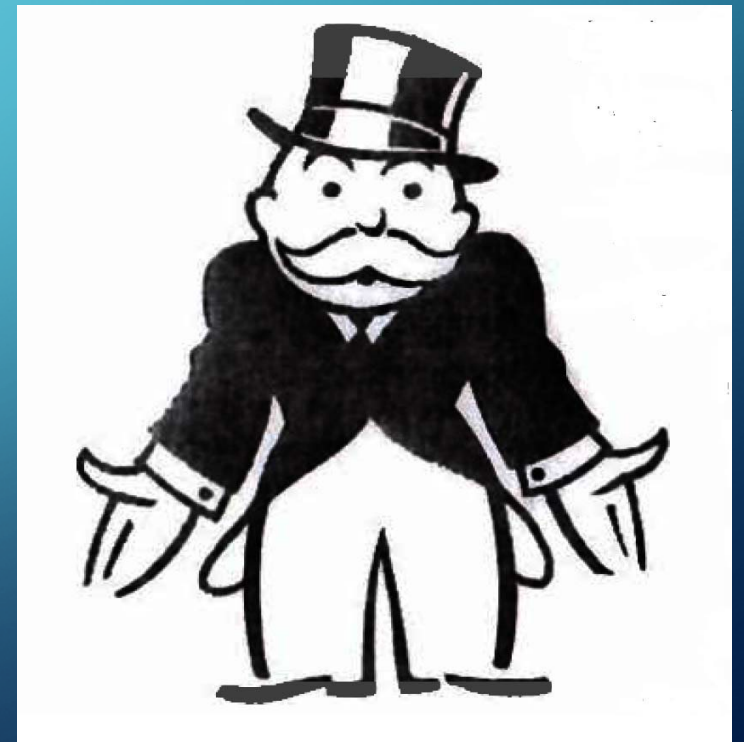
What's The Damage?

- Cost estimates are guesses
 - Inflation-adjusted cost bounds \$259B to \$621B (IP Commission Report)
 - US software market in 2022 - \$314B
- In 2019, 1 in 5 U.S. companies said China stole their IP in the past year (CNBC CFO study)
- About 44 percent of US jobs directly or indirectly supported by IP-intensive industries (Brookings)
 - Paid an average of 60 percent higher than non-IP intensive industries
- In the solar panel industry alone, Chinese IP theft has been linked to 30 bankruptcies



Underinvestment in Cybersecurity

- Due to cybersecurity externalities, underinvestment is likely and compounded by pressure to get to market first
- For information goods:
 - Network effects
 - Technological lock-in
 - Low marginal costs
 - Application bundling to foster other effects
- Undercapitalized small firms

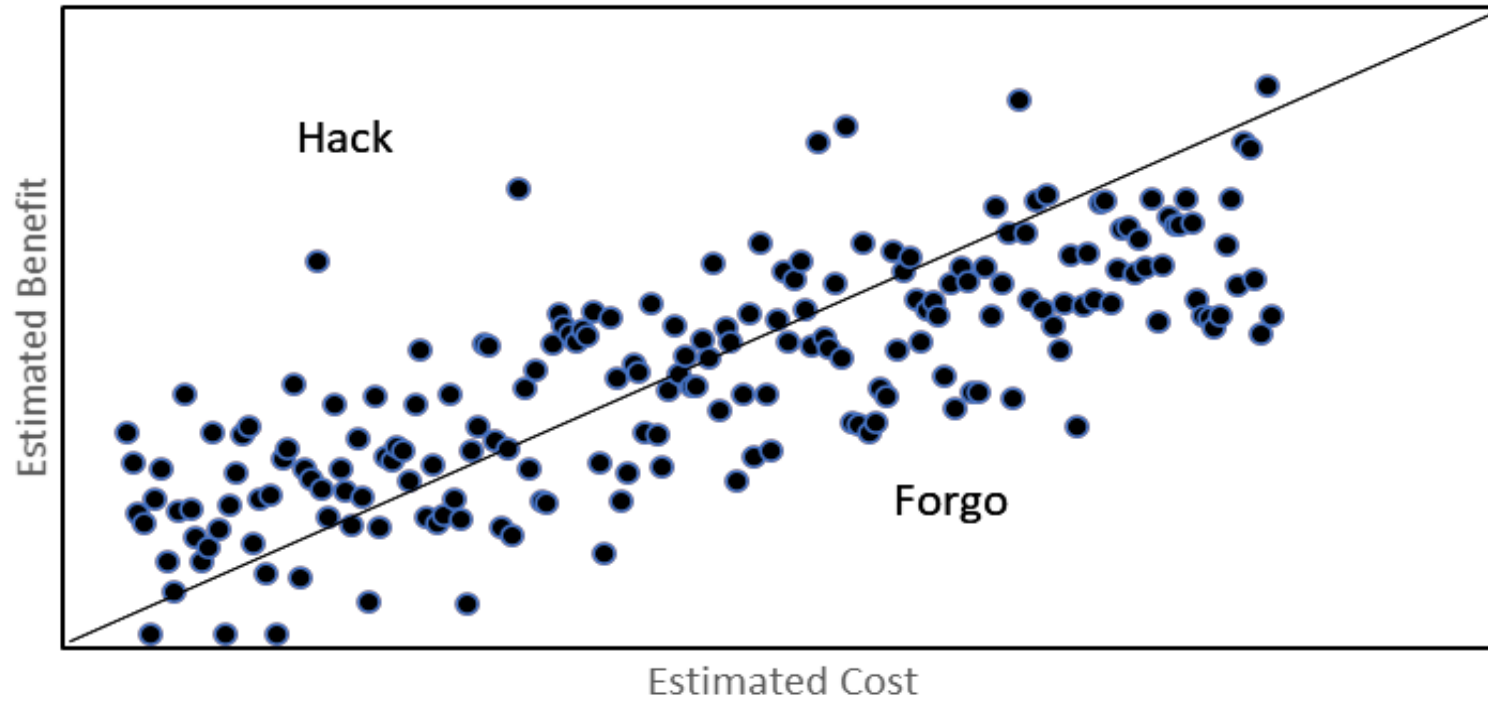


China is Good at Hacking and Using the Proceeds

- Highly-educated workforce with particular strength in product development
- Research & development expenditure among the world leaders
- Socialist economy can facilitate transfer of secrets wherever leadership wants
- Soft monetary policy to encourage exports and garnering of market share
- Extensive experience in technology transfer and IP theft

China's Decision Calculus for IP Theft

Notional Cost-Benefit Relationship for IP



Interventions Almost Entirely Aimed Externally

- Section 301 of U.S. Trade Act of 1974 (as amended) allows for the imposition of tariffs and setting of trade barriers
 - In 2018, Trump administration imposed tariffs and Biden administration has kept the
- Indictments have, unsurprisingly, been toothless
- Despite these steps, China does not appear to be abiding by its commitments in the 2020 Phase One agreement
- DOD has taken action to improve IP protection

So maybe we should do more to protect our IP from prying eyes

How to Identify What is Valuable?

- Patent applications and new patents evaluated for national security implications and passed to appropriate agency
- China's Five-Year Plans
- National Institute of Standards and Technology's industries of the future
- Recent DOD initiative

What Can Be Done?

- Expand cybersecurity grants and specifically target companies developing promising technologies
 - Existing program is small (\$3M)
- Information sharing organization
- Extend critical infrastructure services to critical IP and possibly develop customized services
- Specialized advisors/team(s)?
- Other ideas

Questions?

chad.dacus@au.af.edu / chad.dacus@us.af.mil

carl.horn.4@au.af.edu / carl.horn.4@us.af.mil