Policy brief
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International
Growth Centre

The Economic Costs of Piracy

In brief

- Modern piracy exerts costs on the shipping industry, with the effects of piracy experienced by the insurance industry and governments as well. Existing research does not identify the effects of piracy from differences across time and space.

- This study attempts to identify the costs of modern piracy on shipping prices. The authors develop a model for how piracy should affect shipping prices on differing routes and test the theory based on data from Somalia and Indonesia between 2002 and 2011.

- An intermediate estimate of the welfare loss caused by piracy in Somalia is $1.5 billion in 2010, with the creation of $120 million of revenue for pirates in the Somalia area. The extra spending due to piracy could finance one year of employment for more than 1.5 million laborers at the going rate in 2010.

- The above finding highlights the fact that the cost of predation is much larger than its benefit to the predators. The estimated costs to the industry give an idea of the aggregate "willingness to pay", but this amount is spread over many different actors on different trade-routes. For example, trade routes through the Indian Ocean are affected as well, even without travel through the Gulf of Aden.

- Controlling predation saves resources. The costs to the shipping industry of more than $1.5 billion is spent on things like preventive measures, insurance rates and private security teams. However, decentralized security provision is inefficient compared to centralized security provision. This raises questions over whether there are more efficient ways to arrange security provision, including the pooling of resources.

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Policy Motivation, Policy Impact and Audience

"The extra spending due to piracy could finance one year of employment for more than 1.5 million laborers at the going market rate in 2010."

This research project attempts to identify of the costs of modern piracy on shipping costs. There is a large interest in this issue in the shipping industry, insurance industry and governments affected by the threat to trade routes. But existing research do not identify the effects of piracy from differences across time and location of piracy.

We develop a model for how piracy should affect shipping prices on different shipping routes and test the theory with two new datasets: detailed information on piracy attacks in the area of Somalia and Indonesia and information on 24.000 time charter agreements of dry cargo between 2002 and 2011.

We calculate the welfare loss caused by piracy in Somalia. Our intermediate estimate suggests, that the creation of $120 million of revenue for pirates in the Somalia area led to a welfare loss of over $1.5 billion in 2010. The extra spending due to piracy could finance one year of employment for more than 1.5 million laborers at the going market rate in 2010.

Our results highlight the fact that the cost of predation is much larger than its benefit to the predators. It is likely that private, un-coordinated law enforcement is not the most efficient solution to the problem of security in the area. The estimated costs to the industry give an idea of the aggregate "willingness to pay" for a solution of the piracy problem. However, this amount is spread over many different actors on different trade-routes.

Policy Implications:

Controlling predation will save resources.

Estimates of piracy revenues suggest numbers around $120 million. This stands in stark contrast our estimates of the costs to the shipping industry of more than $1.5 billion (up to $4 billion). Right now this money is spent on things like preventive measures, insurance rates and private security teams. It is a well-established fact that the decentralized provision of security is inefficient compared to a centralized solution. This raises the question of whether more efficient ways to trade resources for security could be found if private resources were pooled and spent differently.

"All trade between the Middle East and Asia and Africa is affected by the problem as well. This spreads the cost of piracy over even more actors"

Willingness to pay is high in the aggregate but spread over many actors

The overall cost to the industry is very high both as an absolute number and compared to what the pirates earn. A problem in practice is that these costs are spread out over different actors and trade routes. We find, for example, that trade routes through the Indian Ocean are affected as well – even without travel through the Gulf of Aden. This means that all trade between the Middle East and Asia and Africa is affected by the problem as well. This spreads the cost of piracy over even more actors and will make it difficult to realize the overall "willingness to pay" for the problem.

Dissemination

UNCTAD, Commercial Crime Services (ICC), International Maritime Bureau (IMB), Oceans Beyond Piracy.

Further Readings

Tim Besley, Thiemo Fetzer, Hannes Mueller (2012) One Kind of Lawlessness: Estimating the Welfare Cost of Somali Piracy. GSE Working Paper 626. http://research.barcelonagse.eu/tmp/working_papers/626.pdf

About the authors

Tim Besley is Professor of Economics and Political Science at the LSE and a member of the Steering Group of the International Growth Centre (IGC). He has served on the Bank of England's Monetary Policy Committee since September 2006. He is also an Associate of STICERD's Economic Organisation and Public Polocy programme. He previously taught at Princeton University, and is a Research Fellow at the Institute for Fiscal Studies, and the Centre for Economic Policy Research. His work focuses mainly on issues in development economics, public economics and political economy. He has been a Co-Editor of the American Economic Review, and Editor of the Economic Journal. He currently serves on the editorial boards of numerous other professional journals. His professional honours include being a Fellow of the British Academy, a Fellow of the Econometric Society and a British Academy Research Reader. He was educated at Oxford University where he became a Prize Fellow of All Souls College.

Thiemo Fetzer is a researcher at London School of Economics and a contributor for 'Ideas for India'.

Hannes Mueller joined the IAE in September 2008, after completing the PhD in Economics at the LSE. His research interests are Political Economy and Development Economics. In his past research he has, for example, studied the impact of the Northern Irish conflict on housing prices, the interaction between bureaucratic and political institutions and the role of intrinsic motivation in not-for-profit organizations. Hannes is currently researching the adoption of primary elections in political parties, the use of factors (labor and capital) in the military and the role of group identity in terrorism.

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