Trade costs and corruption in ports

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Introduction

Recent years have brought an increased awareness of the importance of trade costs in hindering trade, particularly in the developing world where these costs are highest. The most salient type of trade costs have often been tariff duties and costs associated with the physical transportation of goods. As a result, several countries embarked on extensive programmes of tariff liberalization and a significant portion of aid effort was channelled to investments in hard transport infrastructure, such as rebuilding railways and ports (the World Bank alone devotes more than 20 percent of its budget to transport infrastructure projects worldwide).

More recently, new light has been cast on the importance of a different type of trade cost: the cost imposed by the soft infrastructure of transport, defined as the bureaucratic infrastructure handling the movement of goods across borders. While there are many possible sources of inefficiencies stemming from the soft infrastructure of transport, recent research is beginning to document the role played by corruption in transport bureaucracies in driving trade costs. This article provides an overview of this research.

Research into corruption

Corruption can take many forms and emerge in many different phases of the process of clearing goods across borders. Sequeira and Djankov (2011) documented in great detail the ways in which port corruption emerges in Durban and Maputo in Southern Africa. This research was based on a unique dataset of directly observed bribe payments to each port bureaucracy for a random sample of 1,300 shipments.

The study began by defining two broad categories of port officials that differed in their administrative authority and in their discretion to stop cargo and generate opportunities for bribe extraction: customs officials and port operators. In principle, customs officials hold greater discretionary power to extract bribes than regular port operators, given their broader bureaucratic mandate and the fact that they can access full information on each shipment, and each shipper, at all times. Customs officials possess discretionary power to single-handedly decide which cargo to stop and whether to reassess the classification of goods for tariff purposes, validate reported prices of goods, or request additional documentation from the shipper.

Regular port operators, on the other hand, have a narrower mandate to move or protect cargo on the docks, and at times even lack access to the cargo's documentation specifying the value of the cargo and the client firm. This category of officials includes those receiving bribes to adjust reefer temperatures for refrigerated cargo stationed at the port; port gate officials who determine the acceptance of late cargo arrivals; stevedores who auction off forklifts and equipment on the docks; document clerks who stamp import, export and transit documentation for submission to customs; port security who oversee high value cargo vulnerable to theft; shipping planners who auction off priority slots in shipping vessels, and scanner agents who move cargo through non-intrusive scanning technology.

The organizational structure of each port created different opportunities for each type of port official to extract bribes: the high extractive types -customs agents- or the low extractive types -port operators. These opportunities were determined by the extent of face to face interactions between customs officials and clearing agents, the type of management overseeing port operations, and the time horizons of each type of official.

Durban and Maputo

In Durban, direct interaction between clearing agents and customs' agents was kept to a minimum since all clearance documentation was processed online. In contrast, all clearance documentation was submitted in person by the clearing agent in the Port of Maputo. The close interaction between clearing agents and customs officials in Maputo created more opportunities for corrupt behaviour to emerge in customs relative to Durban.

In Maputo, port operators were privately managed but in Durban, most terminals (for containerized cargo) were under public control, with very lax monitoring and punishment strategies for those engaging in corrupt behaviour. Private management in Maputo was associated with fewer opportunities for bribe payments due to better monitoring and stricter punishment for misconduct. As a result, the organizational features of each bureaucracy determined that the high extractive types in customs had more opportunities to extract bribes in Maputo, while the low extractive types in port operations had more opportunities to extract bribes in Durban. While corruption levels were high in both ports, bribes were higher and more frequent in Maputo relative to Durban.

Finally, port officials with opportunities to extract bribes at each port differed in their time horizons. Customs in Maputo adopted a policy of frequently rotating agents across different terminals and ports, and since bribes varied significantly by the type of terminal at the port, customs agents were aware of the risk of being assigned to terminals with lower levels of extractive potential. On the other hand, port operators in Durban had extended time horizons given the stable support received from dock workers' unions. Customs officials were therefore the high extractive types with the shortest time horizons, the broadest bureaucratic mandates and more opportunities to interact face to face with clearing agents. As a result, they extracted higher and more frequent bribes, relative to port operators in Durban (the low extractive types) who had longer time horizons and narrower bureaucratic mandates.

Collusive corruption and coercive corruption

Sequeira and Djankov (2011) further differentiate between two types of observed corruption: collusive corruption, when public officials and private agents colluded to share rents generated by the illicit transaction, such as when a bribe was paid for tariff evasion, and coercive corruption, when a port official coerced a private agent into paying an additional fee just to clear the goods through the port, above and beyond the official price. Bureaucrats would engage in collusive or coercive corruption depending on the opportunities and constraints created by the bureaucratic structure under which they operated. More importantly, each type of corruption had different implications for firms: collusive corruption was cost-reducing whereas coercive corruption was cost-increasing.

The authors then show that firms exposed to collusive corruption revealed a higher proportion of internationally sourced inputs and higher usage of the port, whereas firms exposed to coercive corruption were associated with a higher proportion of domestically sourced inputs and lower usage of the port. These findings suggest that firms respond to different types of corruption by organizing production in ways that increase or decrease demand for the transport service.

Moreover, coercive corruption at the Port of Maputo was diverting import traffic from South African firms to the Port of Durban. This diversion effect appeared to increase congestion in Durban but also in the corridor connecting Maputo to South Africa, by generating imbalanced flows of cargo along the transport network (more exports, which are less vulnerable to corruption, relative to imports). Even though the actual cost of physical transport was similar across the corridors under study, transport services on the transport corridor leading to the most corrupt port carried almost a 70 percent price premium for users.

Tariff evasion

This research also revealed that tariff evasion was one of the most prevalent types of corruption at the Port of Maputo, and the one that was associated with the highest level of average bribe payments. Sequeira (2011) takes advantage of the phasing in of a long-standing tariff liberalization agreement in Mozambique in 2008 and 2011 to identify how corruption patterns changed in response to this reduction in tariffs.

This study finds a clear decline in the number of bribes paid for tariff evasion following the tariff change, but it also finds compelling evidence of how corruption appears to have simply been displaced into products that did not experience a tariff reduction or into other methods of bribe extraction. In fact, customs officials responded to the change in tariffs by extracting more bribes from products that remained in high tariff categories and by extracting bribes through means other than tariff evasion, such as identifying irregularities in the documentation or by selling speed due to alleged congestion at the port. The study also identifies a displacement of bribe payments from customs to other public officials along the clearance chain, namely towards those in charge of scanning technology. Overall, the study concludes that while the probability of paying a bribe and the total amount of bribes paid declined with the tariff reduction, the average bribe per shipment increased. Moreover, this displacement of corruption represented a shift from collusive forms of corruption (tariff evasion) to coercive bribe payments, which ultimately increase costs for firms.

Conclusion

This emerging research allowed us to peer into the blackbox of corruption at ports for the first time in order to understand the importance of bureaucratic organization in determining the opportunities that different types of agents have to extract bribes, and to begin to document the impact of different types of corruption on firms. It also highlights the importance of understanding the dynamics of the entire clearance chain when attempting to design optimal anti-corruption strategies. Targeted interventions that address just one method of bribe extraction can end up not eliminating, but simply displacing corruption into other stages of the clearance chain.

These results are also likely to extrapolate to other settings beyond Southern Africa, where the original studies took place, and to affect investments in hard transport infrastructure that are currently under way. Sequeira (2011) identifies a positive correlation between a country's trade costs and general levels of corruption using a sample of OECD countries, while Sequeira and Maachi (2010) point to the complementarity between hard and soft transport infrastructure by arguing that corruption in ports can even dampen the returns to investments in the hard infrastructure of transport, via its effect on demand for overall port services. Future research should therefore be directed at testing the impact of different anti-corruption strategies through rigorous empirical studies.

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