Does trade with multinationals induce greener production? Evidence from the Bangladesh fashion industry

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- This study examines whether trade with multinational fashion brands encourages greener production among suppliers in Bangladesh using a novel dataset that combines firm-level transactional data with river water quality indicators.
- The study finds that firms exporting to global fashion brands (for example, H&M, Zara, Uniqlo, and Banana Republic) are more likely to adopt environmentally sustainable practices.
- An increase in the share of suppliers exporting to multinational brands leads to measurable improvements in river water quality. The improvement in water quality persists for at least four years after firms begin exporting to multinational brands.
- The negative impact of higher export activity is mitigated when exporters are primarily supplying to multinational brands with stricter environmental requirements.
- Policy recommendations include strengthening environmental regulation enforcement, introducing a pollution monitoring and warning system, harmonising environmental certification requirements, encouraging multinationals to support green production, and exerting global pressure on non-brand buyers to adhere to higher environmental standards.

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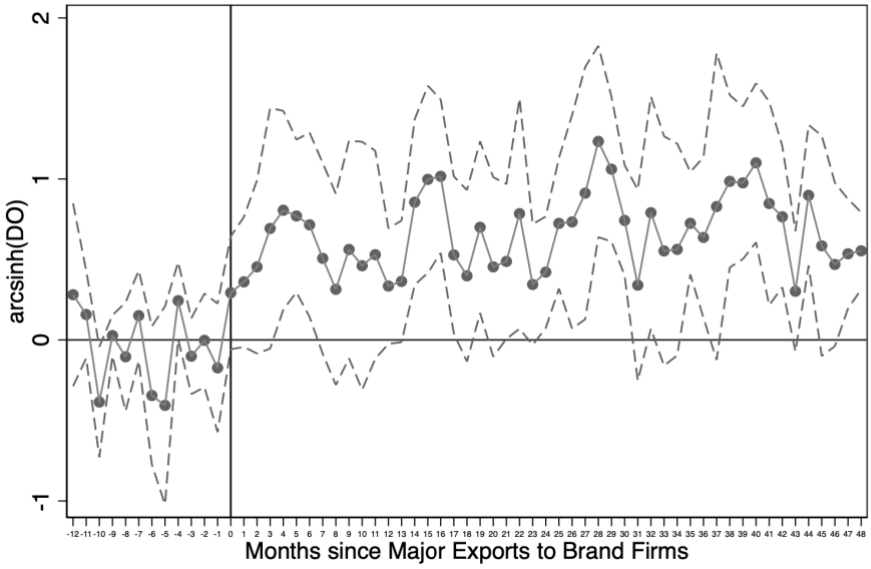
Summary

The global apparel industry faces increasing scrutiny over environmental sustainability, particularly regarding its impact on water pollution in developing countries. This study examines whether trade with multinational fashion brands encourages greener production among suppliers in Bangladesh. Using a novel dataset that combines firm-level transactional data with river water quality indicators, the findings suggest that firms exporting to multinational brands improve their environmental practices, improving water quality in surrounding areas. The results highlight the potential role of multinational buyers in enforcing private environmental standards in countries with weaker regulatory oversight (Iqbal et al., 2025).

Key findings

- **Multinational buyers and environmental compliance:** Firms exporting to global fashion brands (for example, H&M, Zara, Uniqlo, and Banana Republic) are more likely to adopt environmentally sustainable practices, such as installing effluent treatment plants (ETPs) and reducing the use of hazardous chemicals.
- **Impact on water quality**: An increase in the share of suppliers exporting to multinational brands leads to measurable improvements in river water quality. Specifically, when more than 50% of exporters in an area supply to multinational brands, dissolved oxygen (DO) levels—a key indicator of water quality—increase by 64%, suggesting reduced water pollution (See Figure 1).
- **Contrast with non-brand exporters**: While higher export activity generally causes greater industrial pollution, on average, a 50 percentage point increase in export shares leads to an approximately 17% decline in DO values. However, this negative impact is mitigated when exporters primarily supply multinational brands with stricter environmental requirements.
- **Sustained environmental gains**: The improvement in water quality persists for at least four years after firms begin exporting to multinational brands, indicating long-term changes in production practices.

FIGURE 1: The effect of exports to brand multinationals on water quality



Note: This figure shows the coefficients of the Callaway and Sant'Anna (2021) estimator. We include station-fixed effects and year-by-month-fixed effects in the regressions. The 95% confidence intervals are shown with dashed lines. Standard errors are clustered at the station level.

Key policy recommendations

- **Strengthening environmental regulation enforcement:** The Bangladesh government has established environmental standards, but enforcement remains weak. The findings suggest that leveraging private enforcement mechanisms—such as multinational buyers' requirements—could complement public regulatory efforts**.**
- **Introducing a pollution monitoring and warning system**: Since exporters are often clustered in specific areas, the government could implement a real-time pollution alert system using data from water monitoring stations. When pollution levels exceed a threshold, authorities could issue alerts and conduct inspections, ensuring firms adhere to environmental regulations.
- **Harmonising environmental certification requirements**: Bangladeshi firms currently incur significant costs in obtaining multiple environmental certifications to meet different multinational buyers' standards. A unified certification system endorsed by both the government and international buyers could reduce compliance burdens while maintaining high environmental standards.
- **Encouraging multinationals to support green production**: International buyers play a key role in incentivising cleaner production practices. Policymakers should explore partnerships between multinational firms and local manufacturers to promote technology transfer and investment in cleaner production methods.

- **Global pressure on non-brand buyers**: Non-brand buyers are less effective in addressing pollution concerns in source countries than their brand counterparts. To enhance environmental compliance among these firms, policymakers, consumer advocacy groups, and regulatory bodies in the US and European countries should exert greater pressure. Strengthening consumer awareness and implementing stricter environmental due diligence requirements for all buyers—regardless of branding—can incentivise non-brand firms to adhere to higher environmental standards in countries like Bangladesh.

Conclusion

Iqbal et al. (2025) highlight how international trade—when paired with responsible sourcing—can be effective for environmental improvement. In Bangladesh's garment sector, major brands privately enforce sustainability measures that have measurable impacts on water quality. Policymakers should harness these dynamics to complement regulatory efforts, ensure fairer environmental compliance across all exporters, and promote sustainable growth.

References

Callaway, B., & Sant'Anna, P. H. C. (2021). Difference-in-differences with multiple time periods. *Journal of Econometrics*, 225(2), 200–230.

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