

# Research Statement

Franklin Maduko

November 10, 2019

My research interests lie in the fields on international trade, intellectual property rights, international macroeconomics and political economics. My work uses both theoretical models, empirical tools and observational data to better understand several economic issues bordering on trade, macroeconomy, terrorism and corruption. Firms rely on trade policies, domestic policies and the prevailing economic environment in making their business decisions; policy makers are interested in how international shocks and investment policies affect their economy; individuals are interested in understanding the extent of corruption, and how it impacts on their welfare. Finally, with the rise in terrorism, identifying the broad economic and social effects of terrorist attacks will facilitate the development of multi-faceted policies to nib these consequences. My broad research agenda is geared at providing deeper understanding on these issues. Often times, when need be, I offer new empirical framework that helps in circumventing some data restrictive issues I encounter in my work. I now outline some of my research projects.

## **Intellectual Property Rights, Trade and Welfare**

The first part of my research agenda concerns the relationship between intellectual property rights (IPR) and trade. Adopting the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement is a key component of membership into the World Trade Organization (WTO) partly because of the trade frictions associated with lax IPR. Specifically, firms are concerned that the intellectual property embodied in the products might be stolen by competitors. A large and growing research work has focused on examining the pros and cons of adopting IPR. Chaudhuri et al. (2006) finds that patent protection in India led to the withdrawal of domestic pharmaceutical products, and rise in market power of innovators which is associated with large welfare losses. Duggan et al. (2016) finds that pharmaceutical firms increased the prices of their patented products by about 3-6 percent after India passed the TRIPs agreement to law. While these papers highlight the welfare losses from IPR, Ivus (2010) shows that IPR reforms increase the export of

high technology products from North to South, a source of welfare gains. However, its underlying mechanism remains unclear.

In my job market paper titled *Exports and Intellectual Property Rights Policies: Does Product Time-to-Imitation Matter?* I provide an explanations on why IPR reforms is associated with higher exports from the North to the South. I build on the work by Qian (2008) that finds (amongst other things) that weakening IPR in China led innovators to innovate in aspects of their products that are difficult to imitate. Specifically, I provide evidence that product time-to-imitation determines the sensitivity of US exports to IPR reforms. This implies that firms in the US increase their exports to destinations with IPR reforms because the likelihood of imitation of their products is lowered with the reforms. This paper offers a methodology of constructing product time-to-imitation index, by looking at the import and export dynamics of products in countries that are renowned for product imitation. In sum, this paper underlines that the threat of imitation hinders innovators from exporting to countries with imitation risk.

## Trade Policy, Productivity and Welfare

In this research agenda, I am interested in uncovering the relationship between trade policies, productivity and aggregate welfare. Very recently, there has been a lot of debates on free trade and its implications for welfare. Critics of free trade in the US argues that higher tariffs provide a level playing field for competition between domestic and foreign producers, and its absence will lead to closure of important industries in an economy. My paper titled *Import Competition and Quality-Adjusted Productivity: Evidence from Hungary's Pre-accession Import Tariffs* studies the effects of a reduction in tariffs on EU imports on the efficiency of manufacturing firms in Hungary during the period (1996-2003) leading to Hungary's accession to the European Union. To examine this issue, I propose an empirical framework and apply it on my data. I provide evidence that firms which faced higher competition from the EU became more productive than firms that faced lower competition from the EU. Moreover, my framework can be adapted in other settings in estimating firm-level productivity if firms sells in both the export and domestic markets.

My other research paper titled *Increasing Marginal Cost and Welfare Implications* aims to uncover certain preconditions necessary for developing countries to fully benefit from international trade. Specifically, the paper studies the relationship between a firm's domestic and foreign sales using detailed manufacturing firm-level datasets for Hungary between 1995-2003. The paper shows that the relationship between exports and domestic sales is negative, suggesting the presence of capacity constrained producers. I built this finding into a traditional trade model and show that welfare gains from trade are reduced

by capacity constraints. The main takeaway from this work is that policies which propagates trade be implemented concurrently with policies that alleviates capacity constraints at the firm level.

## **Foreign Debts, Interest Premiums and Global Crisis**

In this research agenda, my interest lies in uncovering factors that drives the interest rates premium on long term government bonds. Developing countries spends a large fraction of their annual budget in loans servicing. This dynamics takes resources away from other potentially productive sectors. In a working paper which I co-authored with Istvan Konya of the Centre for Economic and Regional Studies of the Hungarian Academy of Sciences, we reexamine the empirical relationship between external indebtedness and the interest premium on government bonds using a broad sample of countries between 1980-2017 that includes advanced, emerging and less-developed economies. Our main result is that the relationship is strongly state dependent, and varies both with international financial climate and level of economic development. The paper opens up a lot of questions on the underlying mechanisms for this state dependency results and policies to address them.

## **Plans for Current and Future Research**

On my current research, I plan to submit my job market paper at the Journal of International Economics and the other two singled authored research papers at top field journals in development and international economics. My co-authored paper with Istvan Konya has been revised and resubmitted at the Journal of International Financial Markets, Institutions, and Money.

My immediate future research will be in the fields of political economics, and international trade. I intend to explore issues bordering on the economic consequences of terrorist attacks, policies for national integration, estimating the effects of corruption among politically connected firms on welfare, intellectual property rights and innovations, border closure and local economic effects, discriminatory policies on foreign firms, and the empirical study of the rule of law. I have already began some of these projects, while others are in the planning and data collection/cleaning stages.

Trade, macroeconomics and political economics are very important and crucial fields in shaping the welfare of individuals and firms, and also instrumental for economic development. We, researchers in this field have the responsibility to provide clear-cut research which will form the basis for future economic policies. I do hope my current and future research will contribute in this regards.

## References

- Chaudhuri ,S., Goldberg ,P. K., and Jia ,P. Estimating the effects of global patent protection in pharmaceuticals: a case study of quinolones in india. *The American Economic Review*, 96(5):1477–1514, 2006.
- Duggan ,M., Garthwaite ,C., and Goyal ,A. The market impacts of pharmaceutical product patents in developing countries: Evidence from india. *American Economic Review*, 106(1):99–135, 2016.
- Ivus ,O. Do stronger patent rights raise high-tech exports to the developing world? *Journal of International Economics*, 81(1):38–47, 2010.
- Qian ,Y. Impacts of entry by counterfeiters. *The Quarterly Journal of Economics*, 123(4):1577–1609, 2008.