Who Reaps Gains From Trade? Trade and Inequality in Diverse Societies: Evidence from Africa*

Maxim Ananyev† Michael Poyker‡

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Abstract

This paper investigates the determinants of income inequality between different ethnic groups in Sub-Saharan Africa. We make two contributions: first, we offer a Bayesian latent variable approach of estimating income inequality from survey data where the direct data on personal incomes are either lacking or unreliable. Secondly, we demonstrate statistically, that countries that export more manufacturing goods and natural resources have larger disparities in incomes between ethnic groups, but not no systematic differences in incomes within ethnic groups. In an attempt to investigate the mechanism of this statistical association, we use enterprise survey data to test if exporting firms face fewer regulatory restrictions (both formal and informal) and preferential tax treatment. Our study offers new evidence on the effect of international trade on income inequality in developing world.

JEL Codes: F14, D63

1 Research Question and Motivation

This paper studies how international trade and foreign direct investment impact traditional ethnic and religious cleavages in Sub-Saharan Africa. Ethnic tensions are one of the most pronounced sources of political and economic instability. Economic inequality between different ethnic and religious groups is often reported as one of the main causes of grievances: when one particular group in a society enjoys benefits of economic growth, while little of an economic pie is left to the other groups, it can lead to protests, disruptions, and most importantly, violence.

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†UCLA Political Science Department; e-mail address: maksim.ananjev@gmail.com

‡UCLA Anderson School of Management; e-mail address: mikhail.poyker.1@anderson.ucla.edu

International trade is associated with higher growth rates (Acemoglu et al. (2005), Frankel and Romer (1999)), but also with higher inequality (Helpman et al. (2012)). However international trade is often blamed for exacerbating within-country inequalities both in developing and developed world: it rewards most productive firms, while least productive firms see their profits decline. Nevertheless, while international trade can lead to higher levels of inequality between household and individuals, its impact on inequality between ethnic and religious groups can be just the opposite. If economically disadvantaged groups are involved in a production that uses abundant factor (for example, labor), then the incomes of members of such groups should go up (Leamer (1995), Bowen et al. (1987)).

Impact of international trade on inequality between countries can provide a useful analogy: while trade leads to rising inequality between countries, it allows poor countries to catch up with middle income and rich countries. We find it plausible that similar mechanism can operate within ethnically divided countries: trade might allow poor ethnic groups to catch up with middle income and rich ethnic groups. Trade can still cause increase in overall inequality, but it will be driven by income disparities between individuals, and not between groups.

If international trade is indeed helping to alleviate ethnic-based inequality, then it can improve political stability and ethnic reconciliation in divided countries. Another opportunity is also possible: instead of alleviating inequalities, international trade can exacerbate it by reinforcing ethnic cleavages. If this is the case, then trade agreements should be design with the appreciation of ethnic context in particular countries.

Our study aims to inform businesses and policymakers on relevant ethnic context of economic development in Sub-Saharan Africa. The results of our study its conclusions and the data we produce can be used to inform decisions about appropriate allocation of resources and investments in African countries and political and social risks involved.

This project seeks to contribute to two main strands of literature: the first one is a literature about trade and inequality. Recent papers show that international trade is more likely exacerbate economic inequality within countries (Helpman et al. (2012)). Our study makes an important and logical next step: we ask whether trade alleviates or exacerbates between-group inequality within countries. Another strand of literature is a literature on the determinants about inequality in Africa (Alesina et al. (2012)).

2 Methodology

Out analysis will proceed in the following steps:

1. Calculating ethnic inequality measures in different African countries in different points in time. Most likely, to construct decomposable inequality index (Bourguignon (1979)), we can use exiting public microdata for this purpose (Afrobarometer surveys, Living Standards survey, and Demographic and Health Survey). Most likely, we do not need to conduct any new surveys ourselves. The goal is to construct a district-level panel for ethnic inequalities and relevant economic and demographic variables.

2. Constructing index of trade and openness to trade for all African countries involved.

3. Constructing an instrumental variable for trade based on gravity equation and a methodology of Feyrer (2009).

4. Analysis of the resulting data using two-steps-least-squares estimator, when dependent variable is ethnic inequality and explanatory variable is international trade (properly instrumented).

3 Preliminary results

We have found that, controlling for the level of economic development, in democratic countries of Sub-Sahara Africa, the rise in manufacturing export correspond to the rise in between-group income inequality. The effect is the same for the export of natural resources. Higher barriers to trade are associated with the reduction in between-group inequality.

In an attempt to investigate the mechanism of this relationship, we calculate incomes of an ethnic group of a leader of a country and a incomes of all other groups. We find the different effects of export in natural resources and manufacturing. In autocracies, manufacturing exports tend to increase incomes of under-represented groups, but natural resources tend to make their income relatively lower. In democracies, manufacturing export is associated with lower relative incomes of under-represented groups, but natural resources tend to increase their income.

References

Daron Acemoglu, Simon Johnson, and James Robinson. The rise of europe: Atlantic trade, institutional change, and economic growth. *The American Economic Review*, 95(3):546–579, 2005.

Alberto F. Alesina, Stelios Michalopoulos, and Elias Papaioannou. Ethnic inequality. Technical report, NBER WORKING PAPER SERIES, 2012.

Francois Bourguignon. Decomposable income inequality measures. *Econometrica: Journal of the Econometric Society*, pages 901–920, 1979.

Harry P Bowen, Edward E Leamer, and Leo Sveikauskas. Multicountry, multifactor tests of the factor abundance theory. *American Economic Review*, 77(5):791–809, 1987.

James Feyrer. Trade and income–exploiting time series in geography. Technical report, National Bureau of Economic Research, 2009.

Jeffrey A Frankel and David Romer. Does trade cause growth? *American economic review*, pages 379–399, 1999.

Elhanan Helpman, Oleg Itskhoki, Marc-Andreas Muendler, and Stephen J Redding. Trade and inequality: From theory to estimation. Technical report, National Bureau of Economic Research, 2012.

Edward E Leamer. *The Heckscher-Ohlin model in theory and practice.* International Finance Section, Department of Economics, Princeton University, 1995.