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The Impact of Economic Sanctions on Income Inequality of Target States

SYLVANUS KWAKU AFESORGBOR [a,c] and RENUKA MAHADEVAN [b,*]

[a] *Aarhus Universitet, Denmark*
[b] *The University of Queensland, Australia*
[c] *European University Institute, Italy*

Summary. — In this paper, we draw on established theoretical work to analyze empirically which segments of the population in the target states bear the most cost when economic sanctions are imposed. Using a cross-country analysis of 68 target states from 1960 to 2008, we find robust empirical evidence that the imposition of sanctions has a deleterious effect on income inequality. Focusing on various sanction instruments, financial and trade sanctions were found to have different impacts on income inequality. Lastly, the adverse effect of the sanctions is more severe on income inequality when sanctions span longer duration.

Key words — economic sanctions, duration of sanctions, income inequality

1. INTRODUCTION

Economic sanctions remain a ubiquitous foreign policy tool used by many countries to demand a change in the action of a target state. A current exhibition of the use of economic sanctions is the imposition of various instruments of sanctions by the United States (US) and the European Union (EU) on Russia over the annexation of Crimea region of Ukraine. According to the sanctions literature, the cost of sanctions against a target country is supposed to result in maximum economic damage in order to coerce the target state to alter its policies in favor of the sender states (Dizaji & van Bergeijk, 2013; Hufbauer, Schott, Elliott, & Oegg, 2007; Kaempfer & Lowenberg, 1988). Many empirical studies such as van Bergeijk (1989), Pape (1997), Hufbauer *et al.* (2007) and Bapat and Morgan (2009) have focused on the effectiveness of economic sanctions in terms of their successes and failures while Kirshner (1997) and Marinov (2005) conclude that the use of economic sanctions to pressure target states is of limited relevance.

Others such as Peksen and Son (2015), Neuenkirch and Neumeier (2015a), Dizaji and van Bergeijk (2013), Yang, Askari, Forrer, and Zhu (2009), Kaempfer and Lowenberg (2007a) and Caruso (2003) have analyzed how these episodes of sanctions have adverse economic outcomes on national currency, GDP, trade, government consumption, and employment instead. Our study contributes to this strand of the literature by empirically examining for the first time the impact of economic sanctions on the re-distribution of income within the segments of the target states. This is an important research question given that widening income inequality has dire consequences on long-term sustainable economic growth as it goes against the principle of inclusive growth, in relation to the lower income groups, which may well lead to civil unrest and political upheaval (Solt, 2015). Income inequality remains a global problem and evidence shows that global wealth is increasingly being concentrated in the hands of a few rich elites (OECD, 2015). In fact, Alvaredo and Gasparini (2015) explain that income inequality in developing countries is more unequal now than it was three decades ago. Relating economic sanctions to income inequality is theoretically possible as sanctions are similar to a prohibitive tariff that has major re-distributional inclinations within the framework of the Stolper–Samuelson theorem (Cooper, 1989). The theoretical underpinnings of several studies in this related literature are detailed in the next section.

Although economic sanctions may not involve the destruction of human capital and infrastructure as in the case of military wars, they may have similar consequences on the welfare of the people in the target economy (Allen & Lektzian, 2013). For instance, Kaempfer and Lowenberg (2007b) explain that sanctions are unfair as they not only burden firms that would otherwise freely engage in international commerce, but they also often impose suffering on innocent civilians. Hufbauer *et al.* (2007) on the other hand estimated the impact of economic sanctions in the form of a reduction in foreign aid on the target states to be a possible welfare loss of 100% of the value of the aid. Thus some groups of people are directly worse off than the leaders of the target countries.

There has however been a small batch of studies whose focus has been on the impact of sanctions on specific segments of the target state population. For instance, Wood (2008) provides empirical evidence that the imposition of sanctions increases state-sponsored repression and suggests that these sanctions contribute to worsening humanitarian conditions of the civilian population. Peksen and Drury (2009, 2010) find that the imposition of economic sanctions curtails the political and civil rights of the citizens, there by resulting in deteriorating democratic freedom while Drury and Peksen (2014) highlight the economic vulnerability of women as a result of economic sanctions. Ali and Shah (2000) find that the United Nations (UN) sanctions on Iraq resulted in more than a doubling effect on infant and under-five mortality rates. Garfield and Santana (1997) on the other hand, find that the US sanc-

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tions against Cuba contributed to a fall in nutritional value, rising infectious diseases, and violent deaths for the adult and aged population. As a result of these various impacts, different segments of the population may suffer varying degrees of income loss under economic sanctions.

Basically, sanctions involve several actions such as tariffs, export controls, import restrictions, travel bans, freezing assets, reduction or removal of foreign aid, and severing of diplomatic relationships. If a combination of these economic embargoes does not induce a change in the behavior of political leadership of the target state, then could it be that these political leaders are somehow immune to the negative effects of the economic embargoes? Marinov (2005) argues there are two unequaled costs that the target state must incur—the political costs incurred by the political leaders and the economic costs incurred by the population. However, the distribution of costs associated with sanctions affects the political elites and the ordinary voters or citizens differently. Thus, economic sanctions may have a heterogeneous effect on the income distribution depending on political affiliations and connections of the people. By virtue of one's political or international connections, one can minimize the income-reducing effects of the sanction damage (Kaempfer & Lowenberg, 2007a). Hence, sanctions can affect income distribution in a disproportionate manner from the perspective of the target states. In fact, Neuenkirch and Neumeier (2015b) find that US economic sanctions affect the poor people in the target countries' using the measure of poverty gap and this can be expected to affect income distribution.

In this paper, we contribute to the existing literature in three ways. First, we draw on established theoretical work to analyze empirically which segments of the population bear the most costs when sanctions are imposed and whether this leads to a more skewed income distribution. Second, we quantify the effects of two main types of sanctions (trade and financial). For trade sanctions, we distinguish between export and import sanctions and various combinations of these sanction types when imposed. Sanctioning states employ different instruments of sanctions against the target states and Hufbauer *et al.* (2007) explain that the economic and political effects of the impact of sanction types differ in several ways. Third, we take into account the duration of the economic sanctions to distinguish their impact (if any) on income inequality.

The rest of the paper proceeds as follows. Section 2 summarizes the theoretical perspective on economic sanctions and income inequality and sets out the hypotheses to be tested. Section 3 details the data and empirical methodology used. Section 4 discusses the results and finally, Section 5 concludes.

2. THEORETICAL PERSPECTIVES AND HYPOTHESES FORMULATION

The potential effect of economic sanctions on income inequality has been discussed in the literature using the Stolper–Samuelson theorem in the international trade framework by Cooper (1989), the Harris–Todaro model by Wang (1991), the public choice approach by Kaempfer and Lowenberg (1988), and the micro-foundations approach by Kirshner (1997). Thus, we draw on these studies and other related studies to provide the theoretical underpinning for the empirical analysis in this paper. Cooper (1989) was the first to directly link the impact of sanctions on income inequality within a theoretical trade model although earlier studies such as Metzler (1949) and Bhagwati (1964) have explained how international trade in general affects division of income within each country by relating it to the rents earned by various factors of production. The explanation of the earlier studies was drawn upon by Cooper (1989) on the basis that sanctions are similar to prohibitive tariffs.

Cooper (1989) argues that in contrast to popular belief, economic theory predicts that the position of capital is likely to be strengthened and not weakened by the imposition of sanctions against target states. According to the Stolper–Samuelson theorem, when sanctions are imposed on imports, it favors the factor used intensively in the import-competing sector as the domestic demand for domestic production of importables increases. Using the Edgeworth box representing capital and labor inputs versus imports and exports, together with the related production possibility curve of imports and exports, Cooper (1989) illustrates this particular case which leads to an increase in the return to capital thereby favoring capitalists; and if politicians are manipulated by capitalists, the effect of sanctions will be to slow down the pace of political change, while making the income distribution more unequal.

More specifically, while an import embargo (restricting imports to target state) allows domestic producers of import-competing goods in target countries to gain compared to producers of exports, the consumers of imports in the target state are, however, adversely affected. But Black and Cooper (1988) highlight the fact that the losses suffered by producers of exports may be partly offset by benefits derived in their role as consumers of exports. At the same time, labor may spend a larger part of its income on exports and capital owners may operate in both export- and import-competing industries in the target countries, thereby making the final effect on the income of the various groups of people unclear (Black and Cooper, 1988). Wang (1991), on the other hand, uses the Harris–Todaro model comprising a two-sector model with the production functions and factor-price frontiers of the agricultural and manufacturing sectors to show that export and import embargoes have asymmetrical effects on national income (through the impact of demand affecting wages and employment) and income distribution. All these analyses point to the fact that the impact of sanctions could differ depending on a targeted state's level of trade openness and also on the intensity of labor or capital in the economy. For instance, Black and Cooper (1988) analyze that if domestic exporters use more labor-intensive relative to capital-intensive production process, then labor is expected to suffer more from sanctions compared to the owners of capital.

The public choice approach of Kaempfer and Lowenberg (1988) examines economic sanctions from a different angle, whereby sanctions may be imposed to serve the interest of certain pressure groups within the sender state. These interest groups have different motives as they may enjoy some pecuniary benefits from the imposition of the sanctions, which are essentially specific instruments of protection that regulate goods or factor flows. For example, an embargo on exports of a target country would benefit producers of import-competing goods in the sanctioning country but harm producers of the sanctioning state that use imports from the target state as intermediate inputs. This predicates that sanctions may affect domestic constituents in the target (and sender states) differently in terms of varying degrees of income loss or gain. This may skew the income distribution favorably or unfavorably toward one segment of the target population.

Lastly, the micro-foundations approach argues that sanctions work because they weaken the government directly as well as motivate the most influential groups (such as the military, the middle class, agricultural laborers, big business etc.)