Political Economy of Economic Sanctions
By William H. Kaempfer and Anton D. Lowenberg
Presented by Celene Chan and Azadeh Khoshaein
In their article, The Political Economy of Economic Sanctions, William H. Kaempfer and Anton D. Lowenberg discuss the economic impact of sanctions, focusing primarily on trade sanctions and mandatory disinvestments, and offer two mechanisms through which the nature and extent of sanctions can be explained, the interest group model and game theoretic approaches.

**Economic Sanctions**

Since the end of the Cold War, economic sanctions have played an important role in international relations and foreign policy. As an alternative to military conflict, sanctions can influence another government’s behaviour. The imposition of a sanction is not necessarily instrumental; often times, a government will impose sanctions in order to satisfy domestic special interest groups, whereby the sanction is merely symbolic. Economic sanctions include trade restrictions, capital flow/investment restrictions and “smart” sanctions, which are often directed at the ruling elite or government officials of the target nation. Modern political economic theory suggest several models through which economic sanctions can be understood.

**Trade Embargo**

Often times, the purpose of a sanction is to gain a competitive edge against producers in other countries. The economic impacts of trade sanctions on the target country are reflected in their terms-of-trade effects. When a sanction is imposed, the specific price ratio between exports and imports (from the perspective of country T)
Economic effect of sanctioning depends on the extent of pre-sanctions trade between the sanctioner and the target and the ease with which the target can find alternative markets for supply and demand of the goods they consume and produce. Kaempfer and Lowenberg use offer curves to measure the effects of trade sanctions on relative prices of imports and exports. Offer curves, or reciprocal demand curves, show the level of trade of imports for exports that some country would desire at various prices. In the graph below, T indicates the offer curve for country T and W, the offer curve for the rest of the world. Point E on the graph below indicates the free trade equilibrium between T and the World. It is where the offer curves and terms-of-trade line meet.

The terms-of-trade faced by country T worsen as \( t_0 \) moves to \( t_i \), as in the case of total embargo. The result is that there is no price at which country T and the rest of the world, W will engage in trade. One important finding is that as more countries participate in the embargo, the more effective the sanction becomes, as the target has fewer trade
Mandatory Disinvestment

Disinvestment means that foreigners are selling off assets that they own in the target country and repatriating the proceeds, either to the investor’s own country or to another country. A mandatory disinvestment sanction usually implies the sale of any current investments in a country, and injunctions against new investments. The net effect is net capital outflow from the target country. We can observe how the net capital outflow will impact the target country’s balance of payments equation.

\[ P_X N_X = F \{ q, P_X MP_K(L,K) \} \]

where \( F^1 > 0, F^2 < 0 \)

On the left hand side of the equation, we have an expression for the nominal value of net exports, where \( P_X \) is the price of the product \( X \) and \( N_X \) is net exports of \( X \). On the right hand side of the equation, we have an expression for net capital outflows which is the outflow of investment funds, net of foreign investment inflows. Net capital outflows is a function of \( q \), the degree of disinvestment, and \( MP_K \), the marginal product of capital (for given labour, \( L \) and capital, \( K \) employed in the target economy). In this model, labour and capital are exogenous and taken as given. The Net Capital Outflows is positive in the degree of disinvestment and negative in the value of the marginal product of capital stock.

The foreign currency obtained as a result of selling more goods and services to foreigners than buying from them (Net Exports) is used to finance the purchase of foreign financial and physical assets (Net Capital Investment). Likewise, a trade deficit would need to be financed by net capital inflows. In other words, the target country requires more capital
inflow from foreign investors than investment outflow generated by domestic capital owners.

A mass exodus of capital from a country will have several effects on its economy. Interestingly enough, the short term effect of such an outflow is actually beneficial to the target country’s domestic investors. By acquiring large amounts of capital at depressed prices, the firm owners experience a windfall gain. This is essentially the fire sale phenomenon. The rate of return on capital can explain the economic impact of disinvestments:

\[ r = \frac{P_X MP_K(L,K)}{P_K(q, K)} \quad \text{where} \quad P_{K1} < 0, \quad P_{K2} < 0 \]

Suppose a universal mandatory disinvestment sanction is enacted. The sharp increase in disinvestments, q will have a negative impact on the price of capital, \( P_K \). As such, the rate of return on capital will increase, to the benefit of the domestic capital owners in the target country. The increase in the domestic rate of return will motivate capital owners in the target country to sell their foreign holdings and repatriate the proceeds domestically. In the short run, these capital owners will enjoy higher profits, enlarging the tax base over which the target country’s government can tax. The tax proceeds can fund the policy which provoked the sanction in the first place.

Kaempfer and Lowerberg also consider the long term effects of mandatory disinvestment sanctions, which can be quite harmful to the target country’s economy and the reason that this international relations tool exists. As foreign investors move their investments away from the target country, the inflow of new capital will diminish. The deterioration of capital
stock in the target country will diminish, which will increase the marginal product of capital and increase the price of capital. These two effects act oppositely on the rate of return. The marginal product of capital will increase as capital stock decreases, which will increase the rate of return, while the price of capital will increase due to the scarcity of capital, which will decrease the rate of return. It is presumed inevitable that the effect of price of capital on the rate of return will be greater than the effect of marginal product of capital. Firms in the target country will face higher production costs and experience lower profits. The target country’s tax base diminishes and the sanction has effectively removed funding towards the objectionable policy.

Aside from a sanctioning government explicitly banning any further transactions with the target country, foreign investors are also motivated to withdraw their current capital investments, as the outlook on the target country’s economy has become both bearish and volatile. Foreign investors expect that firm profits will decrease in the target country if mandatory disinvestment sanctions are in place. Like with trade embargos, the effectiveness of mandatory disinvestments depends on the number and size of countries participating in the sanction. The amount of damage inflicted upon the target country’s economy depends on the target’s ability to replace or cope without foreign sources of capital.

**Interest Group Model**

According to this approach, the decision to implement sanctions against a target country are determined by pressures brought to bear in the domestic political system by interest groups acting on behalf of whom the sanctions would affect. The groups are defined by a
common interest; however, political participation is offset by the desire to free ride on the lobbying efforts of other members within the group.

Kaempfer and Lowenberg model the economy in terms of individual profit-maximizers, each of whom is willing to pay for protection of their industry through the presence or absence of sanctions. The implementation of a sanction will either increase or decrease an individual's income.

\[
\begin{align*}
\text{Max} & \quad U^i = U^i(Y^i), \quad U^i_1 > 0, \quad U^i_{11} < 0 \\
\text{subject to} & \quad Y^i = Y^i(S), \quad Y^i(0) = Z^i, \quad Y^i_1 \geq 0, \quad Y^i_{11} = 0,
\end{align*}
\]

One group is willing to pay for more sanctions (indicated by J in the graph below), while another group is willing to pay fewer sanctions (K). Depending on the level of influence and support for each policy (more sanction or less sanction), the level of sanctions can be determined. The combination of these desires produce a market for sanctions. The support-maximizing governing body will impose sanctions to a level such that the absolute value of the marginal utility to beneficiaries is equal to the marginal disutility to the losers. The dollar amount that one group is willing to pay is offset by the free riders within that group. A similar analysis is done from the perspective of the target; the individuals in the target country are willing to pay for compliance and non-compliance with the sanctions imposed.
Single Rational Actor Approach

The earlier observed policies in international relations and their consequences are viewed as outcomes of the configurations of domestic interest group politics within sender and target nations. However, in this game-theoretic model, the relevant unit of analysis is no longer individual interest group members, voters or politicians, but entire nation states. So according to single-rational actor this approach, states are the main players on the international stage and decisions about whether and how to apply sanctions and whether to comply with or resist sanctions are made by states. As rational actors, the states engage in a repeated game, whereby the success of sanctions is determined by the commitment of a sanctioner to actually impose sanctions. A surprising outcome is that, in a world of perfect information, the mere threat of a sanction would be sufficiently effective in eliciting a compliant behaviour from the target nation. However, the fact that sanctions are imposed suggests that either the sender underestimates the target’s cost of compliance, whereby the sanction fails, or that the target underestimates the sender’s resolve, whereby the sanction succeeds.
Conclusions

This paper discusses several models to determine the decision to implement and the effect of trade sanctions. The interest group models show how national policy choices reflect the interests of constituency groups within the domestic polity. In single-rational actor models, however, one country’s international policy decisions both affect and are affected by other national governments’ decisions.

Often, trade sanctions are made for purposes other than protection for domestic industries, who are willing to pay for the political suasion needed to implement the sanction. Therefore, in determining the terms-of-trade effects of the sanctions, the paper suggests that economists and policy makers should take into the account that the actual level of politically-driven sanctions imposed is a function of the relative political influences of the pro-sanctions groups and the anti-sanctions groups within that country. Similarly, in target nations, the compliance with a sanction is determined by the equilibrium of political power between the groups that gain and lose from conforming to the sending states’ demands.

Although there exist reasons other than political motivation for sanctions, such as symbolic sanctions, smart sanctions, and selective sanctions, all sanctions have implications for the level of export and imports and prices of goods in both the sanctioning and target countries. It should be mentioned that in some situations, such as total embargo, sanctions are not harmful just for target country but for the sanctioning country as well.