Policy Brief

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What Can We Do to Stop Smuggling in Tanzania?

Smuggling is a problem that has been plaguing Tanzania recently. The press has written a lot about smuggling, and the Tanzania government estimates that it has lost billions in revenues from this practice. Most countries face similar problems, or have faced them in the past. So, from a development economist's point of view, the logic of why it affects particular commodities has become clear. Let's take the cases of three commodities frequently smuggled in Tanzania: maize, fuel and gemstones.

In evaluating what should be done in each case, we assume that the common good is the long term goal of both the people and the government. So we analyze what it would take to stop smuggling and to ensure the common good. For simplicity's sake, we will say that the common good includes three main components: economic growth, an equitable chance for all to participate in the economy, and safeguarding social well-being, including law and order, health, morality and a clean and aesthetic environment.

We use incentive analysis to determine why people engage in smuggling and what structural changes could reverse those incentives, making it more rewarding to abide by the law than to smuggle. This involves testing the laws to see whether they provide the right incentives, as well as to see whether they are enforceable. Normally a law will be enforceable if most of the people believe it is a just law, and that the common good will be harmed if it is broken. The law against theft is a good example of a law that is enforceable in Tanzania. It is not only the presence of police that deters theft. Nearly everyone believes it is wrong. So if a thief is caught in the act, people will rush to grab him or even stone him. Public opinion helps the police enforce the law.

Smuggling Maize

Export bans on maize are not so easily enforced. Why? Because they hurt the interests of one group of citizens (producers/farmers), while trying to protect another (consumers, mainly urban). The group whose interests are hurt by the

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bans on food exports cannot support the law wholeheartedly. Government officials have traditionally imposed bans on food exports, thinking that they would ensure food security. In fact, such laws have the opposite effect, if one looks closely at the incentive structure that they create. Government has realized this in Tanzania, and has gradually been allowing freer food crop markets. But local officials can still decide to ban exports. This means that farmers still face the risk of losses on maize due to official intervention.

A farmer living under an export ban must decide each year how much maize to plant. Since it will be difficult to buy maize if there is a shortage (because neighboring regions that might have a surplus cannot sell to his region), he has an incentive to plant just enough to satisfy his family plus local legal sales in his district. He cannot afford to plant too much. If he plants so much that he produces a surplus, he cannot sell it. Then, unless he sells to a smuggler, his maize will rot, and his investment and labor will have been wasted. He would have done better to plant less maize and more of something that he could sell. He has no incentive to help the government suppress smuggling of maize.

The merchants living in this farmer's district have less business because of prohibitions on selling maize. Since it is one of the main crops, producing about half of the value added in some regions, the fact that there is rarely a surplus means that the markets have little business. If farmers sold a surplus and had cash to spend, many would buy other foodstuffs, consumer goods, fertilizer, improved seed and agricultural equipment. But since they cannot sell much maize, the demand for these other goods is limited. So the merchant has little incentive to offer inputs for sale that farmers cannot afford to buy. The result is weak rural markets.

The transporter living in this area also has little incentive to serve weak dispersed markets. He needs to fill his truck quickly every day in order to earn a living and pay for his truck. He cannot afford to visit each farm and pick up the cash crops they grow, because it would take him all day to fill his truck. So he insists that the farmers bring their cash crops to town, where he might get a whole truckload in one stop. This way he saves fuel, and wear on the truck, which is a major incentive for him because of the terrible state of the roads. But that means that he also does less business than he would if he were transporting more maize and agricultural inputs as well as cash crops. So transport business is also weak.

Weak transport business means that less fuel is consumed. That, in turn, means that less road tax is paid to the government. That means government has less money for road maintenance. So the roads stay in poor shape.

Now, when drought strikes, will people in this country really have a more secure food supply because of the laws restricting sales of maize? What actually happens is this. In the rural district, farmers will have planted just enough to get by in a normal year. When the rains do not come as in a normal year, they are certain to have a shortage. If some districts got good rains and others none, the farmers in a district that did get good rains will not be much help. Since they had no incentive to plant more than would be needed locally, they will have only a small surplus at best. And they have to wait until district authorities realize that sales are necessary before they can sell. So the district that got poor rains is sure to experience famine. Food relief must come from far away. It takes a long time for authorities to realize how serious the problem is. Then they have to prove it with statistics. When a drought becomes known, traders in the city will buy maize from the world market. But it will mostly stay in the city, because it sells quickly there with no transport hassles. The farmer in the drought stricken district is likely to have to go to the city to get maize to keep his family alive. Since this may go on for a whole season or year, many will find new work, give up the farm and settle in the city.

Measures prohibiting maize selling do not seem to work for the common good. The incentive structure that they create ensures that farmers will never produce a big surplus, and will suffer severely from drought. They will have weak markets, poor transport services and bad roads. These problems make them less competitive in the world market producing all crops, not just maize. In fact, they create and perpetuate a subsistence economy.

The solution in this case is not better government enforcement of bans, but a change in the practice of government control of maize markets. If allowed free sale and transport of food crops, farmers will gradually learn what crops bring them the best return for their land, labor and inputs. Government must stop intervening for several years, however, and guarantee farmers that the change is permanent. Otherwise farmers will continue to consider the risk of losses due to government intervention when deciding what to plant and whether to fertilize. Risk makes them discount the value of maize as a production option.

If farmers have good information about commodity prices and are free to maximize their own value-added, history has shown that they can increase their value-added in agriculture quite rapidly. Soon merchants and transporters have more business, so more people go into trade and transport. Then even small villages will have transport available. More transport means more road tax, which means government has the means to maintain more roads. With democratization government also has an incentive to maintain roads. Few issues are more important to the voters than good roads and other local infrastructure.

If drought strikes a district after a few years of free markets, what happens? The government may barely notice that drought struck. Districts in another part of the country that got good rains and produced a surplus simply sell it to the drought-stricken one. Now that telephone service works in many rural areas of Tanzania, transporters and merchants can respond quickly to rural price signals. Farmers in the drought stricken area may have to buy maize in a drought year. They may suffer economically that year, but they will not starve as they did when the markets were controlled and weak. For several years they will have sold surpluses of various food and export crops. Economic analyses of the East and Southern African countries show that Tanzania would be earning money exporting maize in most years if the markets were liberalized. Even if a huge drought struck the whole country, people throughout the country would get food relief faster and cheaper if they had better markets and transport.

Fuel Smuggling

Fuel smuggling is a slightly different matter. The law that smugglers evade here is the tax on imported fuel. The tax is paid by oil companies. Its purpose is primarily to raise revenue for the government. Since oil companies are known to be rich, it seems that almost everyone might consider this fair. However, this is not true. The effect of the tax is to raise the cost of fuel for transporters— and the goods that they transport. It also raises the cost of electricity generation and kerosene lighting. So consumers bear the burden of the tax, and they have little incentive to help government collect the tax. Fuel smuggling is mainly theft and diversion by transporters of re-exports intended for other countries. When fuel is smuggled, it is sold cheaper, and products transported to market are available more cheaply. So ordinary citizens may regard the smugglers as criminals, but nevertheless be unwilling to turn them over to authorities.

Is raising money for the government in the common good? Most people would say yes, if government uses it for public, not private, benefit and if the government's share is reasonable. Government consumption in Tanzania was 11 percent of GDP in 1997. This is a reasonable level if government delivers the infrastructure and services that it is meant to fund. It is up from 8 percent in the 1980s, but government spending, adjusted for inflation, has held level for more than a decade. (National Accounts of Tanzania Mainland, 1987-1997)

The problem here is that fuel is taxed at a high rate, as if it were a luxury. The wholesale price of gasoil, for example, is 367% of the cost of production, due to a plethora of taxes and parastatal margins. Perhaps fuel was a luxury in the days when only the wealthy used transport. But now nearly everyone does. So consumers deciding whether to support government in enforcing the law face a visible dent in their pocket book. And, candidly, some doubt that government will use the money wisely to provide the services they need. They judge with their eyes. The road tax adds 76% to the price of a liter of gasoil. People know that its purpose is to build and maintain roads. Government has started to try to rebuild the road infrastructure, but most roads are still in pitiful condition. So enforcement has little public support.

How can we break this vicious cycle? The solution here is not to abolish all fuel taxes. Every non-petroleum producing country taxes fuel, and most producing countries do, as well. It is an accepted means of raising government revenues and encouraging energy conservation. It gives people an incentive not to waste fuel. So better enforcement has to be part of the solution.

Better enforcement includes reasonable penalties for both smugglers and officials who collude with them, applied to all alike. Government has instructed TRA to experiment marking fuel with trace chemicals to facilitate enforcement. Fuel intended for re-export to Zambia, for example, can be marked with a readily detectable chemical. If it is diverted in Tanzania, those buying or selling it can be identified and penalized.

A second part of the solution is to reduce the tax rates on fuel. Government budgets have to be protected in the process. But enforcement will work better and will protect government budgets, if the rate is reduced at the same time as enforcement is stepped up. How does that work?

Government estimates that if all fuel paid taxes at current rates, it would collect an additional 60 bn/per year. (Sunday Times, 9/26/99) That would increase government revenues by 17.6 percent, over the 1997 budget total. Instead of jumping up government revenues that sharply, government should reduce the tax rates on fuel simultaneously as it expands enforcement. Then consumers benefit, and government holds its revenues constant or takes a small gain. It is what negotiators call a win-win situation. Kenya has done this successfully in the last few years with customs tariffs. It reduced rates by half and still doubled its revenues, by enforcing collection more consistently. The common good is served, and government can expect some support from consumers when it explains such an approach.

Gemstone and Gold Smuggling

Precious minerals smuggling is much more like maize than fuel. Both are smuggled exports, whereas fuel is an import. The main differences are that maize raises the question of food security and that it is bulky, so any significant quantity is hard to conceal. Gemstones and gold of great value are easy to conceal, hence literally "invisible" exports. That makes enforcement difficult and increases the cost/benefit ratio of tax collection. Gemstones and gold are mined, mainly in small artisan workings throughout the interior regions of Tanzania. The ending of STAMICO's monopoly in the late 1980s freed Tanzanians to mine and sell gemstones. Removing most currency controls created even more incentives, setting off a mining boom. The foreign exchange generated by precious minerals exports were mostly used to buy imported consumer goods that had long been rare. Yet the majority of gemstones and nearly all of the gold mined during ESRF's (Economic and Social Research Foundation) recent study of marketing in the minerals sector was smuggled, mainly through Kenya.

The authors of this study of artisanal mining were surprised to conclude that the mining rush that was set off by these policy changes has done more to reduce rural poverty than all of the development ideas tried since independence. At last count (in 1995) 550,000 rural residents got some of their income from mining. The reservation wage in mining communities is about 2500 Tanzania Shillings per day, five to six times more than the 400-500 shillings reservation wage in purely agricultural areas. There were only 1.1 million salaried jobs in the country at that time. That meant that mining had moved 45 percent as many people into middle-income status as salaried jobs. Moreover, young men in mining areas report that they can find work every day in mining, whereas in agriculture, work is available only once in a while. Some miners invest their earnings in more stable businesses: shops and kiosks, bars, restaurants and guest houses. They also build better housing and shops, both in the mining communities and for their families at home. Others move up the marketing chain, using their earnings as operating capital to become brokers or dealers. Lest readers think that the authors were blind to the negative aspects of artisanal mining, they report that some miners blow their money immediately on beer and women, or have it stolen. Moreover, the gambling psychology and easy money that goes with mining can disrupt and corrupt families, communities and whole countries (e.g. DRC, Angola, Sierra Leone).

The environmental, health and safety problems that go with artisanal mining are difficult to mitigate. Large mining companies have to control toxic materials used to purify gold. They equip their personnel with protective gear and other safety equipment. Small miners rarely do either. Large companies also refill and replant the areas they dig up when mining is completed. Small miners abandon pits suddenly when they hit hard rock or water, or hear of a rich new find elsewhere. They almost never cover them to prevent people and animals from falling in. Abandoned artisan mine fields are useless for agriculture or livestock.

So how can the common good be served in the minerals sector? The first step is to preserve the benefits gained so far. The jobs and incomes generated by mining in rural areas have reduced rural poverty on a vast scale. So, from this point of view, liberalizing the mining sector has contributed to both economic growth and social equity.

The question remains, what incentive structure leads to smuggling? Smuggling occurs at every link in the marketing chain:

- directly from the mine by mine workers (often stolen goods),
- through brokers (mostly unregistered),
- by miners and dealers (legal or unregistered), and
- through direct sales to non-resident foreign buyers.

The 1996 ESRF study found that most of the smuggled goods went out through Nairobi. Kenya has long operated minerals trading on a duty-free basis. Duty-free policies, if combined with strict law enforcement, can create quite attractive minerals markets. Minerals from Tanzania, as well as DRC, Rwanda, Burundi and Uganda enter and leave Kenya without owing any taxes. Dealers can have their packages evaluated and sealed by Customs officials, on the dealer's own secure premises, and can insure and ship their packages directly to customers. This minimizes the risk of theft in international trade. The risk of theft within Kenya was also minimal for a period in the mid-1990s. The result was that Kenyan dealers were well capitalized. Thailand operated on a similar duty-free basis for gemstones and Switzerland and Dubai for gold.

Brokers interviewed in 1996-97 reported that they smuggled because they were paid better prices in Nairobi, or the same price cash-on-the-spot. Arusha dealers, who were less well capitalized, delayed paying brokers until they sold the gems. This slowed down the whole trade cycle. Some dealers admitted to undervaluing goods or going through Kenya because they were convinced that they could not pay full taxes and still build their operating capital to compete with Nairobi. Also, the currency controls in effect at that time prevented them using their FOREX earnings to finance imports, which is another advantage Nairobi dealers had over them.

The effort to suppress smuggling has focused on the incentive structure for traders, both local and foreign. Tanzania began licensing dealers in 1994, and by 1996 had 85 licensed dealers. In 1999 it had one hundred thirty. Can they compete with Nairobi and Thai dealers and keep the sector thriving?

To succeed anywhere in the world, mineral dealers need three main things: trading capital, knowledge of minerals and current market information. Tanzanian dealers were failing to build trading capital partly because of the tax structure. The tax laws in effect when dealerships were first registered in large numbers in 1995 imposed transaction taxes totaling 8-13% on each export by Tanzanian dealers. Both Kenyan and Tanzanian dealers paid corporate tax on profits of 35 percent. The ESRF team did an economic model to test the effect of these two tax structures on the ability of dealers to compete, and on the tax yield to government. The Kenyan system, relying exclusively on corporate tax, won on both counts. A gem dealer starting with the same capital and buying and selling the same stones at the same prices would end up with more than twice as much operating capital in Kenya after three years as the same dealer operating under Tanzanian laws. Because he was doing more business and making more profit, he would pay more taxes to the government than the dealer in Tanzania as well. Current market information was also a problem for the competitive position of Tanzanian dealers. Minerals trading relies on speed. Dealers need daily international and local telephone calls to keep up on markets. These cost roughly half as much in Kenya as in Tanzania.

Government has, since 1996, eliminated most of the transaction taxes on gold and gemstones and reduced the royalties to 3 percent. This brought more gemstones into legal channels, reducing smuggling. Tanzanian dealers are also capitalizing on crime problems plaguing Kenya, causing traders to fear going there. Tanzanian regulations have, however, made it difficult for foreign traders to establish themselves here. Miners throughout the country report that the capital that they used to bring in was the main motor of development of artisan mining. Many foreign dealers left for Madagascar, the latest mining rush area. This has deprived the sector of capital in Tanzania, resulting in a depressed mining sector in what was once a booming southern zone. It also increased smuggling, as foreign dealers who come for a short buying trip rarely pay royalties, whereas those who set up an office in Tanzania did pay.

The main cause of gold smuggling between 1992 and 1998 was that there was no functioning gold buying system. The Bank of Tanzania had closed down its gold buying operations in 1992, after being badly hurt by fraud and collusion of its employees. Private dealers who obtained licenses and tried to trade gold legally found that the taxes and extra-legal payments demanded by local officials exceeded their operating margins. To trade legally they would have had to lose money. In 1998 a South African/Tanzanian parastatal company called Meremeta was set up to buy artisan gold. It is now the main legal buyer. It reportedly has had some problems of employee turnover and combating fraud, but its operations are growing. Miners have an incentive to sell to Meremeta because it provides mining equipment and supplies on lease or credit.

In summary, suppressing smuggling is not simply a matter of enforcing the law. Government has seen that the laws themselves first needed to be changed in some cases, particularly those involving exports. Potential export growth was being hampered by outdated laws and regulatory practices for maize and minerals.

The scale of smuggling is a sign for economists. When smuggling or tax evasion takes place on a massive scale, it has historically been a signal that it was creating untenable economic distortions and that the people hurt by the distortions did not support the law. Usually the only means of ending the situation has been to change the laws. On the other hand, where smuggling is committed only by a few, and most people respect the law, imposing reliable negative incentives on offenders is the best cure. When there is massive tax evasion, tax rates need to be set at a lower rate and then enforced on a much larger base (i.e. proportion of taxable goods and services, incomes and assets). Rates for businesses are bearable economically if businesses can pay them and still compete in their sector in the world market. Domestic policy has to consider competitiveness as the first priority. Otherwise the whole economy suffers, and no one benefits in the long term. The pie everyone was trying to get a piece of can dwindle to a crust.

This policy brief is based on EAGER Research done by Lucie C. Phillips [lcphillips@ibi-usa.com], International Business Initiatives, Rogers Sezinga [tandisc@intafrica.com], TanDiscovery, and Haji Semboja [esrf@twiga.com], Economic and Social Research Foundation.

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