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HOW TO AVOID KILLING THE CHICKEN THAT LAYS THE GOLDEN EGGS: AN ANALYSIS OF THE POTENTIAL IMPACTS OF AN EXPORT TAX ON RAW TOBACCO IN MOZAMBIQUE*

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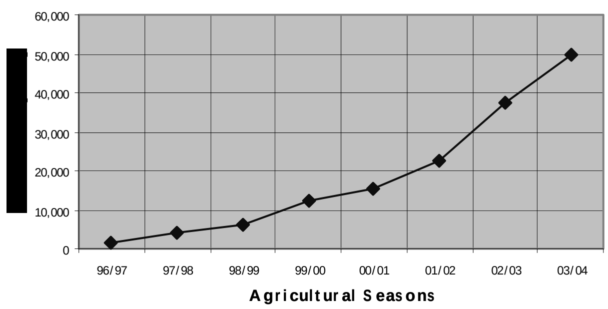
INTRODUCTION: Tobacco production in Mozambique has grown very rapidly over the past seven years. From 1,500 tons in the 1996/7 agricultural season, national production of raw tobacco has increased every year to reach approximately 50,000 tons in 2003/4 (Figure 1). Over the same period the estimated number of tobacco growing households has increased from 6,000 to more than 120,000. There are currently five major firms (or partnerships) operating in the country promoting both smallholder contract farming schemes and larger scale commercial operations.[1] The impact of this rapid expansion of the tobacco sector on rural smallholder household incomes and economic growth has been dramatic.

Figure 1. Raw Tobacco Production in Mozambique
1996/97 - 2003/04



Source: DINA-MADER

This policy brief is a contribution to the debate on the development of the tobacco sub-sector in Mozambique. It is motivated by a recent proposal to impose an export tax on raw tobacco produced in Mozambique. The stated intention of the tax is to increase investment in value added processing activities by those tobacco companies that are currently only engaged in raw tobacco production and export. A concern is that the tax could instead compromise future growth of the sector. Therefore, the objective of this brief is to help policy decision makers evaluate whether the proposal makes sense in light of the government's overall goal of poverty reduction.

The road map for the flash is as follows. First, it examines briefly the dramatic positive impacts of the growth of tobacco production by smallholder farmers. Then, it evaluates the likely impacts of the proposed export tax on raw tobacco, identifying winners and losers among the actors, and the likely short and long run consequences on the tobacco sector as a whole. Finally it offers a path that will help achieve the objectives of the proposed export tax without unintended negative consequences.

THE POSITIVE IMPACT OF TOBACCO PRODUCTION ON RURAL SMALLHOLDER HOUSEHOLD WELFARE AND FARMING SYSTEMS: Data collected by the national agricultural sample survey (TIA) in 2002 reveal that the incomes of tobacco growing smallholder households are significantly higher than those of rural households that do not grow tobacco (Walker et al., 2004). Controlling for a set of household characteristics such as gender, age and education, household size, amount of land owned, and other variables, total household income of tobacco smallholder growers is about 29% higher than that of non-growers, while the incomes of cotton smallholder growers - another important cash crop in the country – are barely 5% higher than that of non-cotton growers. Controlling for the same factors, tobacco smallholder growers were less likely to be poor and more likely to have perceived an improvement in their well-being

[1] The Firms/Partnerships operating in the country and the provinces where they operate are as follows: MLT – Mozambique Leaf Tobacco (Tete and Manica); JFS – João Ferreira dos Santos (Manica, Nampula, Cabo Delgado, Niassa, and Gaza); DIMON (Tete, Manica, and Sofala); Stancom/Mosagrius (Niassa); and Stancom/Sonil (Nampula).

over the past three years compared to households that do not grow tobacco.

Tobacco production has a positive impact on rural smallholder household incomes and overall welfare in other ways than the direct income generated by tobacco sales. Tobacco production is labor intensive and has generated a large number of employment opportunities since many tobacco producers are not able to meet the labor requirements solely through the use of family labor. Survey results from major tobacco growing areas (Benfica et al., forthcoming) reveal that virtually all tobacco producers employ family labor**,** about 35% employ some temporary labor and over 60% rely on permanent labor. On average, each producer that relies on permanent workers employs 6 people (figures range from 1 to 50 workers). The number of workers employed varies as a function of the area cropped, household size and time of the year. In response to increased seasonal demands for labor, migration has occurred within Mozambique and in some instances across international borders, particularly with Malawi. In addition, the common practice of paying hired labor in kind (with food) has provided an incentive for increased food crop production by both tobacco growing and non-tobacco growing households. Furthermore, good agricultural practices, such as the respect of crop rotation recommendations, have increased the productivity of maize grown after tobacco (benefiting from fertilizer residuals kept in the soil). Tobacco growers have also been able to obtain fertilizer on credit from tobacco companies and use some of it on cereal and vegetable crops. Seasonal employment is also very significant further down the chain, in marketing and warehousing activities such as sorting and bailing. Over 8.000 seasonal jobs were created by these activities in the 2003-2004 season.

Furthermore, preliminary empirical data suggest that the additional income from tobacco sales is used to improve food security, make home improvements and construct additional housing, and investment in education. It is also reported that demand for durable goods, such as radios, bicycles, motorcycles and even automobiles, is growing very fast in many areas. Demand for non-farm services and manufacturing goods has also increased substantially, particularly during the marketing season. As a response to that increase in effective demand, a boom in household owned rural micro- and small-enterprises is being observed across the board, along with the emergence of input suppliers and a wide range of service providers. In tobacco growing areas 47% of tobacco growing households and over 50% non-growers run a non-farm business. The combined direct and indirect effects of tobacco production are one of the reasons why Tete province has achieved the fastest rate of increase in rural household incomes in Mozambique during the period since 1996.[2]

Profits from tobacco production also enable much-needed infrastructure development and improvements in public sector services such as education, health and financial services. Tobacco companies are, in many cases, playing public sector-type roles, particularly in infrastructure development/improvement, as part of "social responsibility programs" they put in place in the communities.[3] A study is currently underway to better estimate direct effects, linkages, and economy wide impacts of tobacco production in those rural economies, particularly in the Zambezi Valley Region (Benfica, 2003; Benfica et al., forthcoming).

Currently, all tobacco produced in Mozambique is exported raw to processing facilities in Malawi and Zimbabwe. In 2003, Mozambique Leaf Tobacco (MLT) initiated the construction of a processing facility in Tete City. Anticipated to start operating in time to absorb 2004/2005 production volumes, the $50 million facility has an installed capacity of 50,000 tons per year (6-8 months of operation). Project plans anticipate a scaling up investment in coming years to accommodate production increases.

From the standpoint of the Government's overall goal of poverty reduction through economic growth and improved public services, the performance of the tobacco sector in recent years has been an outstanding success. However, it is necessary to recognize that many challenges lay ahead, particularly related to the environmental risks that are brought in with tobacco production. Recent data collected in Tete Province, indicate that in 2003-04, 32% of the producers interviewed expanded their tobacco areas by cutting trees. About 26% cut trees for curing the tobacco, and 61% for barn construction. About 44% of those producers (that cut trees for tobacco related reasons) planted new trees in the same season. Cutting of trees for reasons not related to tobacco production (firewood, construction, etc.) continues to be an

[2] Boughton et al. (2004) and Donovan (2004) estimate that rural household income *per capita* in Tete has grown 235% over a six-year period (1996-2002). The national mean rate of growth for that same period was only 68%. The dis-aggregation of that rate of growth by income source in Tete, indicates that 37% comes from agriculture, 3% from livestock, 41% from rural micro-enterprises, and 19% from wage employment.

[3] Such interventions include, rehabilitation of roads, reconstruction of bridges, constructions of health facilities and schools, opening of community shops to promote the use of the Mozambican Currency in border areas, etc.

important cause of de-forestation, with virtually all producers doing so. Overall, among all rural residents that cut trees for various reasons, in tobacco growing areas, only 30% planted some trees in 2003/2004. Experiences from other countries, e.g. Malawi, indicate that environmental management plays a key role in determining the long-term sustainability of the sector. Other important challenges are the need for development of a rural financial system to meet the demands of the tobacco economies, and a more transparent classification system.

ASSESSING THE IMPACT OF A PROPOSED EXPORT TAX ON RAW TOBACCO: Despite the positive economic benefits resulting from the rapid growth in raw tobacco production, and despite the current investment in processing capacity initiated by a tobacco company, a recent study has expressed concern that tobacco companies are not investing in value added processing activities (DINA-MADER, 2004). The report identifies a series of consequences that flow from the insufficient investment in processing of raw tobacco: (a) lack of employment opportunities in processing; (b) lack of tax revenue from taxation on formal labor income; and (c) minimum use of local resources and loss of the opportunity to generate employment in linkage activities, such as transportation and a wide range of other services. It then argues that for those reasons the Government of Mozambique (GOM) is less capable of intervening properly in infrastructure development and in the development of social services in rural areas. To remedy the situation, the report proposes a 20% *ad valorem* export tax on raw tobacco to encourage tobacco companies to invest in local processing facilities.

The study proposing an export tax assumes that everyone will be a winner as a result of the policy. But in practice we know that any policy imposed on an economic system is likely to generate both winners and losers. The tax proposal document ignores three possible adverse effects of a tax on raw tobacco: (a) potential reduction in volumes produced, purchased and exported, (b) potential reductions in price and related downward pressure on income for growers and other participants, and (c) the potential negative long-run effects on investments that flow from changes in those variables. Furthermore, the proposal makes no attempt to consider alternative options for achieving the policy objective of increased investment in domestic value-added processing. In this section we first identify the players, then analyze who would be the potential winners and losers from an export tax, and finally discuss some of the long-term consequences of the policy.

The four major groups of players in the tobacco sub-sector include:

1. Over 120,000 producers, predominantly small-scale farmers;
2. Five tobacco companies managing contract farming schemes, and buying and exporting tobacco;
3. Over 8.000 laborers from the local population engaged in post-harvest transportation and warehouse operations, such as marketing, grading, weighing and bailing of tobacco; and
4. Local, Provincial and Central Governmental institutions.

Other players include local and foreign transporters engaged in input distribution and transportation of raw tobacco to warehouses and foreign destinations, and local traders engaged in input supply. Investments in tobacco processing will result in additional functions for the tobacco companies (processing of raw tobacco and export of processed tobacco), and additional employment in industry and services. This labor will be predominantly urban if the facilities are located in urban areas and partially rural otherwise.

In identifying and analyzing the winners and losers of the proposed export tax on raw tobacco, it is important to keep in mind some key aspects regarding the current structure of the sub-sector and dynamic factors. First, the organization of production and marketing is imperfectly competitive, which implies that anti-competitive behaviors are likely to emerge in the adjustment process. Second, only one company, once its processing plant opens, will be exempt from the tax. Finally, specific attention needs to be given to the length of run in analyzing the impacts, as on a short run perspective some actors may appear favored, but as a result of volume adjustments and price effects, the system as a whole may lose over the longer run.

The Losers from the Proposed Export Tax

All Tobacco Companies without Domestic Processing Facilities. The primary losers are all firms except the one that has installed domestic processing capacity. The tax cost imposed on those firms will reduce their ability to invest on and off the farm, in both the short and medium run. Investments related to their social responsibility programs, as well as reforestation and other needed investments, will likely be the first to suffer cutbacks. In the longer run, the tax burden may even turn the operation of some firms so unfeasible that they may have to reduce operations or even shut down with disastrous consequences for the rural communities where they operate.

If an export tax on raw tobacco is imposed, tobacco companies will have three options:

1. Invest in domestic processing facilities to avoid paying the tax (the intention of the proposal);
2. Send raw tobacco to the sole provider of services in Tete City for processing; or
3. Continue to export raw tobacco and pay the export tax.

We now look at the benefits and costs of each option for the companies and anticipate how they might react.

The expectation that the proposed policy will create sufficient incentives for other firms to put processing units in place (option 1) is highly problematical. If those firms are not choosing to invest in processing facilities now, it may have to do with many other factors. One factor is the need to benefit from relatively lower unit processing costs at existing plants in neighboring countries where they can achieve a reasonable level of capacity utilization. Restricting exports to those plants imposes a cost to these firms. Given the current levels of production of the sector, and the capacity of the factory in Tete, it is highly unlikely that other companies would reach a level of production that is high enough to justify such an investment in the near term. With an export tax that will very likely reduce production, the expectation of additional investments becomes even less likely.

In regard to option 2 (send all tobacco to Tete City for processing), attention needs to be given to the fact that tobacco production is geographically dispersed and real transportation costs to the facility in Tete City from the tobacco growing areas may be higher than anticipated by policy makers due to bad road conditions. Note that many production areas in Mozambique are closer to Malawi than to Tete City or to other electrified areas of Mozambique where factory location is feasible. Finally, if firms choose to process the tobacco at the plant in Tete, there will be two effects. First, they will be facing a sole provider that is in a monopoly position providing those services. Bargaining power for negotiating processing charges will be weak. Second, they will be sacrificing processing capacity utilization elsewhere, in processing destinations where their interests are currently based.

A third alternative is to continue to export raw tobacco and pay the export tax (option 3). In this case, the exporting firms would have a heavy tax burden. Given the current organization of production and marketing, those firms could pass it down to the farmers resulting in lower farm prices for tobacco. Furthermore, as a result of the resulting lower prices or lower levels of support, farmers will have less incentive to invest in ensuring a better quality product, Tobacco quality is an important determinant for ensuring the long term competitiveness and sustainability of the sector.

For all companies, except the one with domestic processing facilities, each of the three options will lead to higher costs of operation, whether through taxes, or higher unit transport and processing costs. The question then would be who will actually pay the higher costs? Will the companies accept lower profits or will they pay lower prices to farmers to compensate for the higher costs? In any case, there will be costs to the system as a whole, which can compromise its long-term sustainability.

All Smallholder Households Producing Tobacco and Rural Businesses Providing Goods or Services to Them. Given the current structure in production and marketing of raw tobacco, where firms promoting contract farming (the ones to be taxed) have monopsony power over large numbers of farmers, they can easily pass the tax burden down to the farmer level, i.e., by paying them lower real prices[4] with negative consequences on rural poverty. In the long run, as indicated above, those firms could even reduce their support to farm production and reduce production by engaging with a smaller number of farmers. Lower prices to farmers may reduce their interest in the crop. The direct negative effect on rural producers is unquestionable.

Looking at impacts on the rural economy as a whole, the reduction in direct tobacco production would weaken the dynamic domestic and trans-border labor market, as well as the food crop/cash crop linkages that are emerging through the labor market. That would have negative consequences for rural communities as a whole. Furthermore, as a result of lower prices and eventually lower levels of production and employment in rural areas, the ability of the rural people to re-spend locally would be significantly reduced, thus minimizing the prospects for large investment in non-farm sectors that are normally fueled by that demand.

In sum, an export tax on raw tobacco exports could at best slow down, and even provoke a downward spiral in tobacco prices, production, rural incomes and

[4] Note that due to a wide range of grades in Tobacco indirect price reductions through grading manipulations is also a possibility. This would be difficult to document and would also increase mistrust between farmers and companies – hardly the environment one would want to create to ensure the sector's success.

investment similar to that observed in the cotton sector during recent years as a result of low international prices.

The Winners from the Proposed Export Tax

The Company with Domestic Processing Facilities. The only firm that has so far made investments in processing is the sole winner with this policy in both the crop production and processing spheres. This situation will create an unequal playing field among the various actors in the sub-sector. Two possible scenarios could result. First, this environment will strengthen the position of that firm, as other areas will likely see lower and fewer services to (fewer) farmers, leading to a possible reduction in areas of influence or a complete shut down of production operations by other concessionaries. In that event, the benefited firm can, eventually, request to take over those areas to work with already experienced farmers, taking advantage of the human capital built in rural areas by the departing firms. Second, in case some or all other firms decide to send their raw tobacco to Tete, the company that owns that factory will benefit from increased processing volumes that will serve to ensure full capacity utilization, and further monopoly profits from processing services provided to others.

Government. In the short run, the government may gain additional revenue from taxing raw exports. Whether the revenue gain is permanent or falls over time will depend on the behavior that tobacco firms adopt with respect to raw exports. Since new processing investment – and the resulting employment of labor – from other companies is not likely to emerge even in the medium-run, if at all, the government cannot realistically expect increased tax revenues from labor income in processing facilities beyond the one already in place.

Urban Industrial/Service Employees. A group that will inevitably benefit from the current investment in processing is that composed by the urban employees in Tete City. It is expected that the investment will generate approximately 2,000 jobs in Tete City. This policy will serve to ensure the benefits to that group, by protecting the emerging processing facility. Further benefits to this group will depend on the magnitude of the effects that will result from the expansion of that initiative. Urban services linked to that operation are likely expand in the short run. Long run effects from further investments in processing are not expected under the current policy environment.

Alternative Options for Encouraging Investment in Value Added Processing of Tobacco

The concern about insufficient investment in tobacco processing that motivates the proposal for the introduction of the tax is a legitimate one. It is important for policy makers to guide government and the private sector on ways to make those investments happen. The fundamental question is *how should that be done?* Although the use of export taxes on unprocessed commodities is one available instrument to create incentives for domestic processing, given the current stage of tobacco production and the fact that investment in processing is already happening, alternative approaches to encouraging more investment are needed.

The first step to a more constructive solution is to recognize that potential investors may have specific needs to be able to invest and that policy makers should know what those needs are *before* designing and implementing any policy that will affect negatively producer welfare and eventually reduce the growth rates in production levels which may affect the needed scale for any emerging processing facility. Recognizing the fact that additional processing facilities in the region will induce overcapacity in processing, and hence increased unit processing costs in multiple locations, an important issue to address in the consultation process relates to the assessment of the level of production that companies need to reach in their areas of influence in order to make investments in a new plant competitive enough to be sustainable. Evidence from the cotton sector in Mozambique indicates that domestic overcapacity in processing is the prime cause for massive side buying and territorial disputes between concessionary firms, each trying to get a volume that makes viable the installed processing capacity. If the current growth rates in tobacco production are halted as a consequence of an erroneous policy, it is unlikely that investments will take place. The bottom line is that there have to be other ways of promoting investments in processing without compromising the long-term sustainability of the sector.

From a perspective of investment promotion it is important to note, at least for the Tete and Northern Manica/Sofala areas of operation, that the proposed export tax is incompatible with the incentive regime established by law for the Zambezi Valley region under the Spatial Development Initiatives (SDIs). Under that regime, firms operating in agricultural and agro-processing (and some other areas) are expected to benefit from exemptions rather than be increasingly taxed. In order to increase the propensity to invest in value adding activities, investment incentives need to be put in place instead of the penalization of existing sectors at the cost of massive numbers of people. Facilitating that investment as the current investment legislation predicts would be a better way to go. Eventually, if enough and more constructive incentives are given for investors, production volumes will grow and investors will find it sufficiently attractive to invest domestically as production volumes reach acceptable levels, thereby to feeding processing facilities on both sides of the border in the long run.

CONCLUDING REMARKS AND DISCUSSION POINTS: An analysis of the proposed export tax on raw tobacco indicates that there may easily be only one long-term winner from the policy – the one tobacco company that has almost completed construction of a processing plant, and for which it has already received a highly favorable incentive package from the government. There are many potential losers, and consequently the credibility of government would itself be at stake despite a potential short run increase in tax revenue. The following are some key discussion issues that follow the line of argument set forth in this policy brief:

1. The proposed export tax on raw tobacco should not be imposed on tobacco companies at this point as it would very likely generate adverse effects on the system as described in previous sections;

2. A consultation process should take place between the proponents of the policy and all the stakeholders in the sector, including policy analysts within MADER, the companies, and others. This consultation should assess the kind of facilities/incentives needed to encourage further investment in processing capacity, and whether it is in government's interest to provide such incentives. The costs and benefits of such an incentive approach could be compared with the costs and benefits of the current proposal; and

3. Priority should be given to actions that do not create additional distortions beyond the already imperfectly competitive system in the production/marketing process. Instead, government actions need to find ways to facilitate the emergence of a competitive input and output marketing system over time. Other issues that need to be closely looked at include the incentives for the emergence of a rural banking system, environmental management, and training efforts to improve quality and fairness in classification.

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