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MAXIMIZING ILLICIT PAYMENTS AND RESTRICTING TRADE IN WEST AFRICA

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Significant new opportunities have been created in the last decade for regional trade in West Africa based on road transport. As of 1993, over 88% of the trans-coastal highway linking Lagos, Nigeria with Nouakchott, Mauritania and 78% of the trans-Sahelian route linking Dakar, Senegal with N'Djamena, Chad had been completed. Dramatic economic policy and political liberalization in West Africa changed the balance of power between central government, local government, private unions, and citzen groups. However, in the early 1990s illicit payments and associated lengthy delays at a growing number of road checkpoints throughout West Africa were increasingly offsetting these improvements in physical infrastructure and policy environment.

As an earlier example of this problem, the Manu River Union, created by Guineau, Liberia, and Sierra Leone in 1973 was not successful in creating a customs union and increasing trade among its members. Key reasons for the failure of this Union are cited as including the frequent border closures for political reasons and the non-tariff barriers such as illicit payments at roadblocks by soldiers, political party authorities, and customs officials [Sesay]. This is a clear example that illicit payments along major transport routes can undermine regional integration, trade promotion, and broader economic growth which contribute to political stability.

The July 1991 summit conference of ECOWAS (Economic Community of West African States) in Abuja, Nigeria approved a "minimum program of action for the implementation of Community agreements on the free movement of goods and people." The program aim is to remove non-tariff barriers, simplify customs and transit procedures, and reduce the number of control posts on international roads. Over the last five years customs and transit procedures have been simplified. However, progress in other areas has been more limited. For example, in both 1995 and 1997 drivers reported being stopped at 56 control points between onion growing areas in Niger and Abidjan, Cote d'Ivoire to make higher illicit payments than in the 1980s. Economic liberalization in conjunction with a relaxation of state authority due to political liberalization, created an environment of broader corruption.

From 1992 through 1995, the new democratically elected government in Niger, with support from the U.S. Government, carried out a successful multi-year campaign to reduce corruption. This significantly increased Niger's exports and led to foreign exchange savings for West Africa. In June 1997 the Niger drivers' and transporters' unions held a seminar to further institutionalize their monitoring and reporting of corrupt practices that constrain road transport [Iddal, 1997].

Legal taxes and illicit payments have a significant impact on the availability of foreign exchange and economic growth in West Africa. The total cash volume of illicit payments paid on Nigerien onion exports to Cote d'Ivoire grew in constant 1992 FCFA from an estimated 11 million FCFA in the late 1980s to nearly 200 million FCFA by 1993. In 1992 illicit payments, road transport losses, and legal taxes resulted in an additional one billion FCFA (about $US 4 million) in onion imports from Europe that could have been supplied to the region by Niger. Since there is limited awareness of the economic costs of these illicit payments to the regional economy, governments and foreign donors underinvest in the reduction of these corrupt practices. The analysis in this paper is a step toward identifying economically feasible approaches to reduce illicit payments and related deadweight losses to West Africa in a way that can increase both public and private sector legal revenues.

This paper is a review and analysis of the regional market for illicit payments in West Africa using the onion trade as a case study. The primary focus is the factors that determine the levels of illicit payments over time and how to characterize competition in this market. First is a description of the market for illicit payments on onions along roads in West Africa. Second, a model of illicit payments is presented to identify the critical parameters to be tracked over time as an indicator of regional market integration and efficiency. Third, historical data on these parameters is used to tell the story of the evolving illicit payment "industry" along the route from the primary onion producing region in central Niger to Abidjan, Cote d'Ivoire a principle consumer market. Conclusions are summarized in the final section.

The Market For Illicit Payments On Nigerien Onion Exports To Abidjan

Onions are chosen as a commodity for this case study for several reasons. First, onions represent a significant trade in a standardized commodity that is both produced in West Africa and imported. Second, public agents in Niger, Burkina Faso, and Cote d'Ivoire compete for illicit payments on the shipments of onions as they move from producers to consumers. This market for illicit payments is regional in the sense that it includes three countries. Third, the production and transport of onions is a highly competitive business which makes analysis of market behavior possible. Fourth, onions are a semi-perishable commodity that is relatively sensitive to delays and costs associated with illicit payments. Data for the last ten years is available due to a policy reform program supported by the U.S. Agency for International Development in Niger to promote exports of agro-pastoral products, including onions.

Between 1988 and 1995 European countries, primarily Holland, exported 34 to 72 thousand tons of onions per year to West Africa with an FOB value ranging between $10 and $14 million ($200 and $283 per ton) [Eurostat]. Of this total between 6 and 25 thousand tons were imported to Abidjan for consumption in Cote d'Ivoire. The variation in imports to Abidjan from Europe is largely offset by supply from Niger, but because of better storage facilities in Europe, the ceiling price in Abidjan is set by European imports year round. The trucking route from growing areas in Niger crosses through Burkina Faso and Cote d'Ivoire to reach Abidjan in a minimum of 42 hours driving time.

Along this 2100 Km road there are up to 70 locations where public agents (generally police, military, and customs agents) stop trucks and demand payment of legal taxes and illicit payments. Cash payments to public agents by onion traders and transporters along this route for which no receipt is received are defined as informal illicit payments. Payments with a receipt which are primarily paid to avoid informal illicit payments are called formal illicit payments. In addition to the cost of cash payments these stops increase the time needed for the trip, sometimes by several days, thus adding to transport costs and spoilage of produce. The non-cash costs of these delays for traders and transporters can be over twice the cost of cash payments. The primary interest of traders and transporters is to reduce the total of cash and non-cash costs due to delays, which requires a trade off between these two costs. Total losses due to delays along the road have varied from $10 to $100 per ton delivered to Abidjan during the 1990s. Illicit payments per ton vary by product. More perishable products pay a higher price per ton than less perishable products. The vast majority of payments go to customs agents who have control posts along the road inside countries as well as at international borders.

One purpose of establishing road blocks is to collect illicit payments. A sufficient number of public officials are collecting illicit payments for themselves and superiors that they compete with each other for the total available volume of illicit payments. The delays and bargaining between truckers and agents at road barriers are a source of vital "market information" to public agents on the willingness to pay for each product being transported. Knowledge of illicit payments being taken at other locations indicates the "market" price for passage, while current prices in origin and destination markets indicate the current profitability of the commodity trade. Based on the last ten years it appears the market requires two annual market cycles to respond efficiently to new prices. This is a relatively quick response to market conditions, which indicates that market information is easily available to a sufficient number of competitors in the market.

The total volume of illicit road payments is the illicit payment per ton multiplied by the tonnage of Nigerien onions supplied to Abidjan. The total market for imported onions is roughly 25,000 tons and illicit payments per ton have varied from $18 to $50 per ton. Over the last eight years the total volume of illicit payments collected regionally has grown significantly in spite of successful anti-corruption campaigns in Niger and significant variation from year to year in market conditions. Collective responses of market participants have enabled total revenue collected to grow significantly in spite of market volatility, which suggests this is an integrated market across the three countries: Niger, Burkina Faso, and Cote d'Ivoire.

The Supply Of Illicit Payments

The potential supply of illicit payments is determined by the difference in Abidjan between the wholesale purchase price for European versus Nigerien onions, Nigerien production capacity for onions, and the institutional structure of the market.

The wholesale purchase price for European onions in Abidjan is determined by the CIF price from Europe plus legal and illicit import taxes. This price for European onions determines a ceiling price for Nigerien onions because above this price European producers will supply the Abidjan market. The price for Nigerien onions in Abidjan is determined by producer and transport costs, plus legal taxes, illicit payments, transport losses, marketing costs, and profits. The CIF price for Niger onions is defined as Nigerien producers' and transporters' minimum price, below which they will not produce and ship onions to Abidjan. The volume of Nigerien onions which traders supply to the Abidjan market is a function of their marketing and profit margins per ton. Exactly how the difference between the European and Nigerien CIF prices is divided up among producers, transporters, traders, consumers, spoilage, legal taxes, and illicit payments is determined by the functioning of the regional market for onions as well as the regional market for illicit payments.

Between 1988 and 1997 the difference between European CIF prices in Abidjan and Nigerien cost of production and transport (excluding taxes, losses, and other trading costs) varied between 12,000 and 84,000 FCFA per ton in constant 1992 terms. In 1988 the bulk of this price difference was collected as legal taxes, while in 1992 most went to illicit payments and related transport losses from spoilage. In some years, (1990,1991,1994, and 1995) a major share went to producers and traders allowing significant expansion in productive capacity in Niger. By 1997 legal taxes captured a much smaller share than ten years earlier, while illicit payments captured a much larger share.

Nigerien production capacity appears able to respond within one to two years. Artisanal labor intensive producers can provide the lowest cost onions, while larger producers with motorpumps for water and primarily hired labor can increase total production quickly. Investments in new production capacity can be paid off in one good season, which limits production risk.

The Demand for Illicit Payments

The demand for illicit payments is determined by the "cost" of collecting illicit payments, the supply of close substitutes, and the institutional framework governing the market.

The "cost" of illicit payments for public agents includes the potential sanctions, positive or negative, the time spent collecting taxes, and the efficiency of collecting revenue. If public officials are sanctioned for collecting (or not collecting) illicit payments then this changes the "cost" of collecting the payments. The efficiency of collection refers to the total financial costs imposed per unit of illicit payments. For example, in 1992 significant transport delays associated with negotiation about illicit payments along the roads increased estimated spoilage rates from ten to over twenty percent of cargo. This caused a loss to traders of greater value than the cash cost of illicit payments. However, this had costs to public agents also in that it reduced the total volume of illicit payments available. In Cote d'Ivoire these costs of collecting illicit payments declined significantly when private companies were introduced to collect escort taxes, reportedly beginning about 1992.

The closest substitutes for illicit payments are alternative income sources for public agents, including their salaries or illicit payments on other commodities. When other income sources, legal or illicit, are adequately available then the demand for illicit payments on onions will be lower. In 1992 there were significant salary arrears for public officials in Niger and in 1993 there were significant arrears in Cote d'Ivoire as well as Niger. In Niger salary arrears increased from 3.3 billion FCFA in February 1993 to over 5 billion in 1995. This is likely to have increased the demand for illicit payments in Niger in these years. Salary arrears in 1993 in Cote d'Ivoire amounted to several months of arrears which were paid by early 1994.

Over the last ten years the demand for IPs (illicit payments) has become increasingly concentrated in Cote d'Ivoire. The demand for illicit payments has also evolved into two distinct categories: "informal IPs" for which no receipt is provided and "formal IPs" for which a receipt is provided. Informal IPs are generally paid in increments of 5000 to 10000 FCFA to each customs agent and 1000 to 5000 FCFA to police or gendarme agents. Formal Ips are primarily paid to the private escort companies upon entry to Cote d'Ivoire in one lump sum of 260,000 to 400,000 FCFA. In 1997 informal IPs were about the same in real terms as they were in 1988. However, by 1997 formal IPs represented nearly two thirds of all IPs.

Institutional Structure of the Market for Illicit Payments

Supply and demand result in different outcomes over time as the institutional structure of the market for illicit payments evolves. Important institutional factors are the relative bargaining power of public versus private agents, regulatory enforcement, and competition for illicit payments among public agents.

The relative bargaining power of public agents versus private market agents is partly determined by the legal and regulatory framework in place and information available. The upper limit on the payment per road barrier is some fraction of the value of the sanction that the public agent can impose on the private agents. The more authority a public agent has to make truckers unload their cargo, waste time in delays, travel extra distance, or pay fines, the greater is the potential demand for illicit payments. The lack of clear definition and publication of trade or vehicle regulations increases the bargaining power of public agents who can enforce rules that don't exist, sometimes because they themselves have not been informed of regulations. When truckers are informed of the regulations and their rights, their bargaining power with public officials increases.

The weakening of government authority in the late 1980s followed by the anti-corruption campaign between 1992 and 1995 of the democratically elected government in Niger, were important shifts in regulatory enforcement. This anti-corruption campaign did have a significant effect on reducing illicit payments inside Niger. An important part of the campaign was merely using radio and printed materials to inform truckers and public officials of what rules and regulations actually existed. Increased transparency and provision of information in combination with enhanced enforcement of regulations can reduce illicit payments.

There are three general ways to characterize the competition for IPs on onions in West Africa: independent monopolists, a joint monopoly, and competitive agents. [Based on Johnston's [1997] summary of other studies]

If public agents act as independent monopolists along the road, then each agent would increase their individual demand for illicit payment until their private cost of collecting payments sufficiently offset their marginal revenue. On an individual basis each agent hopes to capture a larger share of the total IPs from other public agents along the road. In aggregate this results in an excessive level of illicit payments that chokes off the export volume of onions from Niger and reduces the total volume of illicit payments available.

If public agents act as a joint monopoly with good information, they would maximize the total volume of IPs regionally. Even in this situtation there would be some volatility, as it may take one or two market cycles to respond to exogenous shocks, such as changes in the world price of onions or major changes in legal taxes. However, under a joint monopoly it is expected that the marginal revenue to be gained by increasing IPs per ton would equal the marginal revenue from increasing the tonnage of onion exports.

If agents compete with each other to attract truckers to travel the route they control, then they would bid down the price of passage resulting in a total volume of IPs less than the maximum available. To the extent there are alternative routes to the same destination, agents on different roads have the incentive to reduce illicit payments per truck in order to increase the number of trucks travelling their route. Alternatively, if there are multiple agents that can "sell" the right of passage along a particular route, they could compete with each other to sell the lowest price "escort service" that enables truckers and transporters to avoid illicit payments.

A Revenue Ratio to Measure The Efficiency Of Illicit Payments

There are two categories of strategies that public agents can use to increase their total volume of illicit payments over time: 1) Increase the payment per ton or 2) increase the total tonnage. The model below summarizes the strategies and provides a framework for understanding the empirical evidence in the third part of the paper.

Q = Total tons of onions imported into Cote d'Ivoire from Niger and Europe

This is estimated to be approximately 25,000 tons annually [David]. The price of onions in Abidjan is set by the price of imports from Europe so the change in illicit payments on Nigerien onions is assumed to not effect the total volume of onions consumed in Abidjan.

Q - E = Estimated tons of onion imports to Abidjan from Europe
= 112845 - 9376*LN(M)

Coefficients were estimated using [EUROSTAT] data on European exports and available regional margins data for seven years. Data from 1993 was excluded due to probable high but unmeasured illicit payments on European onion imports in that year. No data on illicit payments in Abidjan for imports from Europe are available, but these are assumed to now be minimal due to improved port management.

E = Total volume of Nigerien onions imported into Cote d'Ivoire
= 25000 tons minus imports from Europe = 9376*LN(M) - 87,845

M = C + I - T - P = Potential margin per ton on Nigerien onions shipped to Abidjan in constant 1992 FCFA.

C = CIF price of European onions in Abidjan plus legal import taxes

I = Illicit payments on European onions imported to Abidjan

T = L + B + W = taxes and losses on Nigerien onions shipped to Abidjan
L = Legal taxes on Nigerien onions shipped to Abidjan
B = Illicit payments on Nigerien onions shipped to Abidjan
W = Time and produce losses in transport of Nigerien onions

P = Minimum price determined by technology and opportunity costs for Nigerien producers and transporters to deliver onions to Abidjan

These variables enable us to define the following:

(1) R = B*E + I*(Q-E) = total illicit payments on onion imports to Abidjan

(2) dR/dB = (E + B*dE/dB) + (I*dQ/dB + Q*dI/dB) - (I*dE/dB + E*dI/dB)
= E + (I-B)(9376/M)

dI/dB = 0 if Abidjan port and road agents act independently

dQ/dB = 0 because consumer price and thus demand is determined by C + I

(3) dE/dB = - 9376/M

When M is small then slight increases in B can cause large decreases in E and a corresponding large economic cost to the region through promotion of onion imports to Abidjan from Europe rather than Niger.

When M is large changes in B have less of an effect on economic costs. The economic costs of a given change in B depends on the level of M at that point in time. As long as margins are sufficiently large in absolute terms, Nigerien onions will be shipped even if there is a high level of illicit payments.

(4) $dR/dE = B - I$

The problem for public agents along the road is to maximize B*E. For Abidjan port agents the problem is to maximize I*(Q-E)based on the observed value of the CIF price of Nigerien onions imported into Abidjan which is generally very close to C.

(5) $dR/dB = dR/dE$ is the point at which road agents have maximized B*E through changing B and they must shift focus to decreasing W or L if they want to continue to increase their illicit revenue. However, due to exogenous changes in the price of imports from Europe, agents along the road must continually adjust B in order to maximize their revenue. In the following empirical analysis due to a lack of data on "I", this variable is assumed to be equal to zero.

In summary, when the "revenue ratio" [(dR/dB)/dR/dE)] which equals (E - B*9376/M)/B] is greater than one, agents along the road should increase B and when this "revenue ratio" is less than one they should decrease B. When this RR (revenue ratio) equals one the agents have maximized their revenue through manipulating B and must seek alternative methods to increase total revenue. Agents can seek to further increase M and thus increase E through decreasing W or L, which means they can reduce the delays they impose on transporters or they can reduce the legal taxes actually paid by transporters.

Equilibrium values of the revenue ratio are one indication of the types of competition for illicit payments on a regional basis in West Africa. If public agents act as independent monopolists the RR would tend to be less than one. A joint monopoly of agents would keep RR roughly equal to one. Competition among public agents for illicit payments would result in the RR being greater than one.

Historical Review Of Available Evidence

There are several historical periods of development in the West Africa market for illicit payments on the onion trade. The following review begins in October 1988 when Niger eliminated its export tax on onions and sectoral profit margins increased enough to enable a rapid growth in expansion of exports during 1990 and 1991. Over this same period illicit payments increased to the point where total legal taxes and illicit payments represented over 60% of the marketing margin and exports to Abidjan collapsed. Beginning in 1992 there were campaigns in Niger to reduce illicit payments and over the next two years illicit payments were reduced enough to allow a second period of rapid growth in exports to Abidjan. The 1993 limitations on FCFA convertibility and 1994 CFA currency devaluation, combined with increased dollar costs of European onions and declining illicit payments increased the competitiveness and exports of Niger onions. In 1996 and 1997 there was a sharp fall in European onion prices and increased illicit payments and trucking delays in Niger which restricted export of Nigerien onions to Abidjan. In spite of officially declared reductions in legal taxes and favorable shifts in foreign currency exchange rates, the export of Niger onion dropped significantly between 1995 and 1997. Estimates of the revenue ratio and other key variables for the last ten years are shown in the table below.

<u>1988-1991: Increases in Volume Exported and the Revenue Ratio</u>

In 1988 following sharp increases in legal export taxes in Niger since 1984 and possibly IPs, the "revenue ratio" was estimated to be 0.6, which means that total illicit revenues could be enhanced through increasing export volume. Over the next three years a nominal reduction of Niger's effective export taxes by approximately 14,000 FCFA/ton and a similar rise in the CIF price of European onions led to a rapid rise in exports of onions from Niger. This also increased the "revenue ratio" to an estimated 1.3 by 1990, reflecting strong incentives at this time to increase total illicit revenues by increasing B at the expense of export volume. Between 1990 and 1992 IPs are reported to have increased from 5,263 to 16,660 per ton in 1992 FCFA.

<u>1992: Decline in Volume Exported and the Revenue Ratio</u>

Between 1991 and 1992 the revenue ratio approached a value of one which means it was necessary to decrease W or increase I in order to enable continued growth in total volume of illicit payments. At this time a road "escort service" was instituted in Cote d'Ivoire that consolidated revenue collection at one location with a payment of approximately 220,000 FCFA per 30 - 35 ton truck or 7,000 FCFA/ton. This also reduced loss of time and produce which may have been over 7,000 FCFA/ton in 1991. At the same time in Niger, government employees increased illicit payments to 2,500 FCFA/ton by 1992.

Unfortunately for Nigerien exporters this increase in illicit payments was sufficient to choke off export of onions because of a simultaneus drop in the price of European onions on the world market. As total illicit revenues dropped sharply the time delays in Niger and related loss of produce increased sharply as well. This further reduced the volume exported from Niger. Total volume of exports from Niger to Abidjan dropped back to below the 1988 level and the total illicit revenue collected on onion shipments declined accordingly because of this sharp drop in total volume shipped. In 1992 the revenue ratio dropped very sharply indicating that total illicit revenue could now be increased by lowering illicit payments per ton and again allowing total volume to increase.

YEAR	REVENUE RATIO (dR/dB) (dR/dE)	ILLICIT PAYMENTS " B " CFA/TON (92 FCFA)	CIF SUPPLY PRICE "C" FCFA/TON (92 FCFA)	ESTIMATED EXPORT "E" OF NIGER ONIONS IN TONS	TOTAL ROAD ILLICIT PAYMENTS MILLIONS (92 FCFA)	POTENTIAL MARKETING MARGIN WITHOUT IPS&TAXES (92 FCFA)
1988	0.6	3316	88623	3730	12	16021
1989	0.7	3432	102180	3347	11	27031
1990	1.3	5263	99978	7875	41	36846
1991	1.3	8933	110786	13827	124	38541
1992	-0.8	16660	95175	903	15	6762
1993	0.8	12458	100884	15470	193	16823
1994	1.4	12396	149813	19052	236	74398
1995	1.8	9693	152822	18493	179	82321
1996	0.9	9693	81000	12400	120	11054
1997	0.6	11617	81000?	4000?	46	17526

Sources:
Based on USAID/Niger project documentation for Niger Economic Policy Reform Project;
EUROSTAT;
as well as David[1995], Rogers and Iddal [1996], Iddal [1997]
Exchange Rates: In 1993 250 FCFA = $1 and after 1993 500 FCFA = $1

1993: Increased Cost of European Onions and a Large Increase in Volume Exported from Niger

The net result of events in 1993 was a rebound in exports of onions from Niger while total illicit payments rebounded as well from 15 million to 193 million FCFA (about $800 thousand). This implies that there was a much larger increase in "M" than reported in available data. Truck drivers and traders reported that in Niger illicit payments and the number of road barriers had not yet been reduced through the anti-corruption campaign of the Government of Niger. The CIF price of European onion increased by 4,900 FCFA, but this is not enough to have accounted for more than a small part of the increase in "M" required to expand exports from Niger. It is possible that the widely publicized impending currency devaluation and August 1993 limitations on currency convertibility led importers of European onions to restrict their imports. It is also likely that due to growing salary arrears for government officials in Cote d'Ivoire there was an increase in illicit payments on imports from Europe, which could have significantly increased Niger's exports. In 1993 the observed revenue ratio remained below one, indicating there was still room to increase total illicit payments through expanding the volume of

Nigerien exports.

1994-1995: Increases in Legal Taxes and Increases in Volume Exported

In early 1994 the nominal exchange rate for the FCFA doubled which led to dramatic readjustments of prices in all sectors and a doubling of nominal FCFA prices for imported products such as European onion. In addition the FOB price for European onions increased from $211 to $283 per ton between 1993 and 1995. In Niger the government campaign to reduce illicit payments continued and by late 1994 had reduced delays and led to an important drop in the cash costs of illicit payments which were offset by rising illicit payments in other countries. Legal taxes in Cote d'Ivoire on Nigerien onions were increased from 170,000 to 476,000 FCFA per truckload or from 5,000 FCFA to 14,000 FCFA/ton and captured some of the new difference in price between European and Nigerien onions. In Burkina Faso legal taxes may have been increased as well. The net result was that following devaluation of the FCFA the overall margin "M" on Niger onion increased sharply leading to an additional sharp increase in volume of exports from Niger. As shown in the table above, the total volume of illicit payments continued to grow reaching an estimated 236 million FCFA.

1996-1997: Decline in the Volume Exported and the Revenue Ratio

In 1996 the cost of imported European onion declined sharply for several reasons. Informal illicit taxes in Niger increased but were offset by declines in other countries. Formal illicit payments collected as an "escort fee" in Cote d'Ivoire increased from 220 to 260 thousand FCFA/truck. Ivoirian customs data for 1996 indicates a sharp rise in European onion imports.

In 1997 legal taxes and illicit payments resulted in a loss of 5,000 tons of onion exports from Niger, while the decline in price of European onions since 1995 resulted in a decline of 10,000 tons. Observations in the Abidjan market during 1997 indicate high levels of European onion imports. The revenue ratio has fallen to less than one, indicating that once again total illicit payments could be increased by letting the volume of Nigerien onion exports expand. This could be achieved through reducing IPs or effective legal taxes.

Customs services consistently collect more than half of all informal Ips. Available evidence from Niger indicates that following the military coup, gendarme and police agents did not increase collection of informal illicit payments. However, Nigerien customs agents increased informal illicit payments by 15,000 FCFA per truck and formal illicit payments through beginning to collect export taxes that had been abolished a few years earlier. In Burkina Faso, following official complaints from the Goverment of Niger, customs agents reduced their collection of informal illicit payments by 50,000 FCFA per truck. In Cote d'Ivoire the police are reported to have increased informal illicit payments by 25,000 FCFA. However, formal Ips in Cote d'Ivoire were increased from 220,000 to 260,000 FCFA while other non-existent taxes are collected officially with receipts and could also be considered formal Ips. One receipt shows payment of a 20% "value added tax" and 12.5% in other taxes on the value of agricultural products (produit du cru) being imported to Cote d'Ivoire from Niger in May 1997. On a truckload of onions these taxes would amount to over 500,000 FCFA, much of which could be counted as a formal illict tax a year after import duties were officially abolished.

Summary of Historical Evidence on Trends in Illicit Payments

On average over the last decade the reduction in marketing margins for Nigerien onions due to illicit payments, legal taxes, and road losses reduced exports from Niger by about 7,000 tons per year. However, legal import taxes on European onions were sufficient to have increased exports from Niger by about 3,000 tons during the same period. The estimated net effect of these taxes and transport losses was to reduce export of onions from Niger on average by about 4,000 tons per year.

In the late 1980s legal taxes and illicit payments in combination with transport losses, are associated with a loss of 900 million FCFA per year in Niger onion exports at European onion CIF prices in Abidjan. These were reduced to under 400 million FCFA in 1991, but increased again to nearly 1,000 million FCFA in 1992. In recent years these losses are running at about 400 million FCFA evaluated in constant 1992 FCFA.

Isolated national level anti-corruption campaigns have reduced illicit payments such as in 1995 in Niger. However, over the last ten years the total volume of illicit payments on onions shipped from Niger to Cote d'Ivoire has grown in spite of anti-corruption campaigns, currency devaluations, and significant external price shocks. Available evidence suggests participants in the "market for illicit payments" behaved in a profit maximizing behavior over time on a multi-country basis [Rogers, 1997]. Changes in economic incentives on a multi-country basis will be needed to address this problem.

In the 1990s agents along secondary routes, such as through Togo, appear to act competitively to attract a higher volume of trucks. In the 1990s agents that collect informal IPs act as independent monopolists, but with a surprisingly consistent level of payments per stop. This suggests that the variation in informal IPs is more a function of the number of checkpoints than the payment per checkpoint. Agents that collect formal illicit payments tend to act more as a joint monopoly and slowly raise payments to maximize illicit payments over a multi-year period.

Conclusions

Historical analysis supports the conclusion that a regional market in illicit payments on regionally traded goods exists in West Africa. Market participants appear to have responded efficiently to economic incentives and exogenous price shocks within one to two years.

If regulatory sanctions reduce illicit payments in one country, evidence suggests that economic market forces lead agents in other countries to capture gains from the first country that reduces legal or illicit payments. When Niger reduced legal export taxes for 1989 and illicit payments in 1995, agents in other countries increased their revenues and offset gains to regional trade.

Regional illicit payments can undermine the beneficial effects of economic liberalization at a national level. If when a national government reduces legal trade taxes to promote exports, illicit payments increase and offset the benefits of liberalization, then the net result can be larger government deficits and a decline in funding for public services. [see Hibou for a broader discussion] If this leads to public sector salary arrears this can further increase the demand for illicit payments as happened in 1992. Under these circumstances there are incentives for individual countries to impose legal trade taxes. These conclusions imply that legal taxes and illicit payments as constraints to regional trade must be addressed together on a multi-country basis using market and non-market incentives.

Historical analysis of the revenue ratio over the last ten years provides preliminary evidence on the evolution of competition for illicit payments. Agents collecting informal illicit payments appear to act as independent monopolists and excessively increase demands for payments. This is shown in the rapid increase of informal Ips from 1990-1992 following the elimination of the export tax in Niger and in 1994 following the devaluation of the FCFA. The several dozen customs agents along the road that collect the bulk of these payments appear to be numerous enough to lack the coordination needed to maximize illicit revenue as a group.

Agents collecting formal illicit payments along the main road from Niger to Abidjan act more as a joint monopoly when they increase payments slowly to levels that maximize total revenue over a multi-year period. Collection of formal illicit payments along the primary route is very concentrated geographically, with the bulk of the payments being made at international frontiers between countries and primarily upon entrance to Cote d'Ivoire. The market concentration for these payments may allow more coordinated action or agents may simply be reacting in a similar way to the same market conditions. Perhaps because the collection and distribution of these payments are more formalized, adjustments are made less frequently than the informal illicit payments.

This case study provides one clear example of quantifiable negative effects of illicit payments on regional trade and income. If the regional market for illicit payments can be made more competitive, West Africa will be better able to take advantage of unrealized trade opportunities. However, there is limited awareness of the economic and social costs of illicit payments to the regional economy. In order to evaluate the overall economic costs of illicit payments on the region and ways to increase competition, other commodity subsectors need be investigated as well.

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