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The Political Economy of Drug Smuggling

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Illicit drugs, predominantly cocaine and heroin, now generate a substantial international trade. Production is concentrated in poor nations and the bulk of revenues, though not of consumption, is generated by users in wealthy countries. Earnings have an odd shape. Most of the money goes to a very large number of low-level retailers in wealthy countries while the fortunes are made by a small number of entrepreneurs, many of whom come from the producing countries. Actual producers and refiners receive less than 1 percent of the total.

It is not difficult to explain why production occurs primarily in poor countries and only a little harder to understand why the accounting profits are downstream.[1] Almost everything else about the trade presents a challenge, both descriptively and analytically. Why do only some poor nations export these drugs? How are the different sectors organized in terms of enterprise size and internal structure? What is the relationship of drug smuggling to other transnational and organized criminal activities? Why have international control efforts been so unsuccessful?

These questions serve to organize the chapter. It is focused primarily on the cocaine and heroin trades as transnational crime. Purely domestic aspects are introduced only as necessary. The trades in other drugs, such as cannabis and Ecstasy are not included. The chapter focuses mostly on the United States, which constitutes the largest market and the one for which more information is available. First, the existing knowledge about the scale of the international drug trade will be described. The following sections will examine where drug production and smuggling occurs and who is involved. Then, the evolution of the organization of the trade and the relationship to other criminal activities will be dealt with. We will conclude with a brief assessment of the consequences of enforcement.

The topic of transnational smuggling attracts a good deal of rhetoric but not much that could be called research. Few studies have specifically focused on the international aspects of the trade, in contrast to the now almost voluminous empirical literature on retail markets, particularly street markets. José Fuentes represents an important recent addition to the literature in the United States.[2] Francisco Thoumi describes in analytic fashion the role of cocaine production and distribution in Colombia.[3] Paul Stares synthesized the research and official literature on global production, consumption, and control programs.[4] In Western Europe the analytic literature appears slight, though a number of descriptive studies have appeared since 1990. Official reports provide some descriptive material but little use has been made of it.

The Scale and Distribution of the Drug Trade

The standard estimate of the international drug trade, thrown around with ease even by publications as skeptical and numerate as the *Economist,* is 300 billion to 500 billion U.S. dollars.[5] This number is probably ten times the actual figure for the trade flow.[6] Only for the United States have systematic revenue estimates been documented.[7] The figures for 1988 to 1995 are presented in Table 7.1. They show a decline, primarily a consequence of the continuing fall in the price of both cocaine and heroin, rather than in quantities purchased.[8]

For the rest of the world, only smatterings of data are available. Some of the few available figures on numbers of dependent users and per addict expenditures are presented in Table 7.2. Roughly these figures suggest that dependent users (who account for the vast bulk of total expenditures)[9] in rich nations each spend about 20,000 U.S. dollars per annum on drugs (mostly heroin and cocaine), fifteen to forty times per addict expenditures in poor countries.

The total for the United States and western Europe is plausibly 120 billion U.S. dollars, twice the official estimate from the United States.[10] Now assume that the drug dependents in the rest of the world manage to spend 1,000 dollars each, the Thai figure; that is generous indeed, given that Thailand is substantially wealthier than most other Asian nations with large opiate dependent populations, such as Afghanistan, Myanmar, and Iran. Then literally hundreds of millions of such addicts would be needed to reach the global figure of 400 million U.S. dollars. Yet the numbers provided by the UNDCP are about 20 million (including the United States and western Europe) for heroin and cocaine, the only very expensive drugs in mass consumption. A total for the developing world of 30 billion U.S. dollars would seem extremely generous, giving a total of about 150 billion U.S. dollars in consumer expenditures on illicit drugs. The United Nations reaches its total by imputing to world consumption the low end of U.S. prices.[11]

The error is even more egregious than this because the figure is referred to as an international trade number. For example, the UNDCP describes it as "equivalent to eight percent of total international trade and larger than the international trade in iron and steel, and motor vehicles."[12] In fact, the international trade component of drug sales is quite small; the landed price, relevant for the international trade calculation, is only about 15 percent of the retail price, as shown in Table 7.3 for cocaine in the United States.

Thus, even if retail sales totaled 400 billion U.S. dollars, the international trade figure would be about 60 billion. If, in fact, the sales figure is only about 150 billion, then the trade flow is down to a mere 20–25 billion, a very small share of total trade, currently estimated at 5,000 billion U.S. dollars.

This is not mere pedantry about measurement. A certain amount of serious policy-making is dependent on the froth of international drug trade estimates. If 400 billion U.S. dollars in illegal drug revenues is flowing across borders, then the justification for stringent money-laundering regulations is clear. At 25 billion, one needs to look a lot more carefully as to whether the resulting impediments to the easy flow of capital are worthwhile. More germane to the current paper, the smaller figure points to something less than a behemoth among transnational criminal activities.

Table 7.1. U.S. Expenditures on Illicit Drugs (Selected Years, 1996 Billions of Dollars)

	1988	1990	1992	1994	1995
Cocaine	61.2	51.5	41.7	37.4	38.0
Heroin	17.7	14.3	10.2	9.3	9.6
Marijuana	9.1	11.0	11.5	8.2	7.0
Other Drugs	3.3	2.2	2.0	2.6	2.7
Total	91.4	79.0	65.4	57.5	57.3

Source: What America's Users Spend on Illicit Drugs, 1988–1995 (Washington, D.C.: UNDCP, 1997).

Table 7.2. Estimated Drug Expenditures by Nation, 1996

Nation	Dependent Users in Thousands (per 100,000 population)		Per capita Income (ca. 1994)	Drug Expenditures in Billions $ ($ per dependent user)	
Italy	179–420	(515)	$ 18,160	7–13	(33,898)
Sweden	17	(194)	$ 17,900	0.4	(23,529)
U.S.A.	2,700	(1,037)	$ 24,680	48.7	(18,037)
Australia	100–300	(1,121)	$ 18,530	2.0–4.4	(16,000)
Thailand	1,300	(2,203)	$ 6,350	1.1–1.9	(1,154)
Pakistan	3,000	(2,340)	$ 2,160	1.5	(500)

Source: UNDCP *World Drug Report* (Oxford: Oxford University Press, 1997).

Which Nations Produce and Transship and Why

A small number of nations account for the vast bulk of production of coca and opium. According to official estimates, Myanmar and Afghanistan account for 90 percent of global production of opium (3,100 tons out of 3,462 tons); Bolivia, Colombia, and Peru account for all of coca production.[13]

There is no technical reason for not producing cocaine or heroin in the United States. Hydroponic techniques could be used for both coca and opium poppies. However, the enforcement risks faced by producers in the United States are substantial and the risk compensation costs sufficiently high that, even with transportation costs and associated interdiction risks, local production of coca and heroin have never developed. Indeed, they are not even refined in the United States. It is useful to contrast this situation with that of cannabis. In that area, U.S. production accounts for a substantial share of U.S. consumption; apparently much of it is grown indoors. Cannabis's exceptional status probably rests on three factors: (a) the bulkiness per unit value, which raises smuggling costs substantially; (b) the existence of a boutique market of user/growers interested in developing better breeds of the plant; and (c) the ease of entry, since the seeds are widely available and there are probably few economies of scale beyond quite a small number of plants.

The principal costs of the international drug industry are associated with distribution rather than production; Table 7.3 provides approximate figures on the cost of cocaine at different points in the distribution system to the United States and generates three observations, which are also true for heroin and for western Europe: (a) The cost of production, as opposed to distribution, is a trivial share of the final price. That statement holds true even if one adds the cost of refining to leaf production; (b) The vast majority of costs are accounted for by domestic distribution in the consumer country. Smuggling, which is the principal transnational activity, accounts for a modest share but much more than production and refining; and c) Most of the domestic distribution revenues go to the lowest level of the distribution system. If the retailer and lowest level wholesaler each raise their purchase price by 75 percent, which until recently was a low estimate of the margin, they account for two-thirds of the final price. This is consistent with the enormous increase in price from the ounce level to retail observed in Table 7.3.

Table 7.3. Prices of Cocaine through the Distribution System, 1992 (per Pure Kilogram Equivalent)

Leaf (Peru)	$650
Export (Colombia)	$1,050
Import (Miami)	$23,000
Wholesale-Kilo	$33,000
Wholesale-Oz	$52,000
Retail (100 mg pure)	$188,000

Source: Drug Enforcement Administration, Washington, D.C.

Production

Risks and the costs of bearing them provide a plausible, though still untested, explanation for all these observations.[14] Coca and opium are grown in countries characterized by labor and land that have low prices relative to those in Europe and North America.[15] The comparative advantage of these countries is reinforced by the reluctance or inability of governments to act aggressively against growers or early stage refiners. Low opportunity cost for factors of production plus low enforcement risks produce very modest prices for the refined product and also ensure that production does not move upstream geographically.

It is also useful to consider why neighboring countries, involved in transshipment, have not been major producers. Consider, for example, Thailand. In the early 1970s it was a major producer of opium. It also has, as listed in Table 7.2, a substantial addict population (predominantly heroin using). It continues to suffer from high levels of corruption, both in the powerful military and in the civilian government. It would seem to be a strong candidate for a large opium production sector.

Yet Thailand now produces little and serves primarily as a consuming and transshipment country for Myanmar. The explanation can probably be found in economic actors. Over the past twenty-five years Thailand has had high rates of growth, raising the opportunity cost of land and labor relative to impoverished Myanmar.[16] Thus, Thai farmers have not been able to compete in the opium growing sector, particularly since the illegality of the product has inhibited the development of more technologically advanced growing methods. The Thai government, despite the corruption of its border drug controls, has also been more willing to act aggressively against growers.

Until recently Colombia was the other anomaly. Though the principal source of refined exports to the United States, and an important source for western Europe, it was a distant third in coca production until the mid-1990s. The recent and rather sudden expansion of coca growing in Colombia, which has accompanied a decline in Peruvian and Bolivian production, may be the result of specific political factors.[17] The upturn in political violence in Colombia has led to a large internal migration from more settled agricultural regions, where the paramilitary are most active, to unsettled areas in which there are few economic opportunities other than coca growing and in which the guerrillas can provide effective protection. If political stability ever returns to Colombia, the coca trade may shift back to poorer Bolivia.

Smuggling

The modest share of costs associated with cocaine smuggling is easily explained.[18] Cocaine travels in large bundles at that stage; seizures suggest that shipments of 250–500 kilograms are quite common. Though large sums may be paid to pilots for flying small planes carrying cocaine or for Honduran colonels to ignore their landing, these costs are defrayed over a large quantity. A pilot who demands 500,000 U.S. dollars for flying a plane with 250 kilograms is generating costs of only 2,000 dollars per kilogram, about 2 percent of the retail price. Even if the plane has to be abandoned after one flight, that adds only another 2,000 dollars to the kilogram price. For shipments in container cargo, seizure constitutes little more than a random tax collection. The replacement cost of the seized drugs is substantially less than the landed price, so high seizure rates have modest effect even on wholesale prices.[19] This contrasts sharply with street level dealing, where the risks of arrest and incarceration can be spread over only the few grams that the dealer sells.

A large share of cocaine in the 1980s was smuggled in dedicated vessels, either small boats or planes. Intense interdiction has changed both routes and patterns. Small (and sometimes not so small) planes are still used to carry a substantial fraction of cocaine to Mexico, from where it enters the United States in regular cargo, either by truck or cargo vessel. Patterns of seizure also suggest that in recent years even shipments direct from Colombia have tended to travel in commercial traffic, both air and sea. The drug is found concealed in an enormous variety of cargoes; frozen fruit pulp containers, wooden furniture, and even suspended in other liquids.

Heroin smuggling appears to be less efficient, at least as measured in dollars per kilogram. Heroin that exits Myanmar at 1,000 U.S. dollars per kilogram (in bundles of 10 kilograms or more) sells on arrival in the United States for 50,000 dollars per kilogram. There have been a few multi-hundred kilogram shipments of heroin, but they are very rare compared to those for cocaine. The drug often travels in small bundles carried internally by individual couriers.[20] "Body-packing," where the couriers are low wage earners, produces per kilogram smuggling costs of less than 10,000 dollars. A body-packer can apparently carry about three-fourths of a kilogram. A payment of 5,000 dollars for incurring a one to ten risk in prison (perhaps acceptable for couriers whose legitimate wages are only about 2,000 dollars per annum), along with 3,000 dollars in travel expenses, produces a kilogram cost of just over 11,000 dollars compared to a retail price of 1 million dollars.[21] The remainder of the smugglers' margin is for assuming other kinds of risk.

Note, however, that as a share of the retail price, the ratio is actually less than for cocaine, about 5–10 percent compared to 15 percent for cocaine. This is one of many unresolved puzzles about the relationship between cocaine and heroin prices, which maintain, in both Europe and the United States, a remarkably constant ratio of one to ten. Smuggling costs depend on the ability to conceal drugs in a flow of legitimate commerce and traffic. Colombia and Mexico serve as the principal smuggling platforms to the United States because they have large immigrant populations in the United States and maintain extensive air traffic and trade with that country. Though Mexico is a high cost producer, farm-gate prices for opium in Mexico being typically 2,000 to 5,000 U.S. dollars per kilo compared to a few hundred dollars in Myanmar, the low smuggling costs equalize total landed price. Colombia, a new source for heroin, also represents high farm-gate production with relatively low smuggling costs. Though Colombia and Mexico are minor producers of opium worldwide, accounting for perhaps 3 percent of the total, they are now the source of nearly two-thirds of U.S. heroin.

Nigeria is an interesting anomaly, a nation that seems to have little potential role in the international drug trade. It is isolated from the any of the principal producer or consumer countries and lacks a significant base of traditional domestic production or consumption. Nonetheless, Nigerian traffickers have come to play a significant role in the shipping of heroin between Southeast Asia and the United States and also Europe; recently these traffickers have even entered the cocaine business, though the production centers are still more remote from their home country.

The explanation is probably to be found in a complex of factors. Nigerians are highly entrepreneurial, they have been misruled by corrupt governments over a long time, have large overseas populations, a weak civil society, very low domestic wages, and moderate to good commercial links to the rest of the world. Thus, (a) it is relatively easy to buy protection for transactions in Nigerian airports (corruption and a weak governmental tradition); (b) to establish connections in both the source and consumption nations (large overseas populations) and to use existing commercial transportation;[22] (c) smuggling labor is cheap (low domestic wages); and (d) the entrepreneurial tradition produces many competent and enthusiastic smuggling organizers. Nigeria is not unique in most of these dimensions (except for size and connections with the rest of the world), and there is perhaps an accidental quality to its initiation into the trade, but these other factors plausibly play a major role.

One might more usefully ask whether the new republics of Central Asia are likely to become major players in the international heroin business. They certainly have low-cost land and labor, as well as apparently good ecological conditions for growing opium and a traditional expertise. Some governments, such as that of Uzbekistan, are desperate for foreign currency, have few alternative sources, and little concern about their standing in international organizations; they are unlikely to enforce aggressively prohibitions against growing opium poppies or to have the capability to do so even if they desired to. They are certain to be low-cost producers.

But are they advantaged, compared to current low-cost producers, notably Afghanistan and Myanmar? Though closer to Europe and with significant populations resident in Russia and perhaps even in western Europe, the commercial connections with western Europe are likely to be weak compared to those of Myanmar, which operate through established Thai and Chinese trafficking networks and are imbedded in growing legitimate traffic. The Central Asian republics will only become major players in the European opium markets if there are disruptions (including rapid economic development) in the current major supplier countries.

Increasingly the drug trade is taking more indirect paths for smuggling. Seizures in Germany frequently turn out to have traveled through Scandinavia into Russia and then exited through Poland to their final market. Ruggiero and South describe a joint Czech-Colombia venture to ship sugar rice and soybean to Czechoslovakia. This operation was used to smuggle cocaine, destined for western Europe. In 1991, police say that 440 pounds of cocaine were seized in Bohemia and at Gdansk in Poland, which would have been smuggled onward to the Netherlands and Britain.[23] Francisco Thoumi contrasts the distribution of illicit drug production across nations with that for legitimate agricultural products.[24] Coffee can be grown in many countries; in fact, a large number of those countries do have coffee producing and exporting industries. Many countries are capable of producing opium or coca; very few of them do. For example, opium has at various times been grown in Macedonia, Turkey, Lebanon, and India. However, none of these are currently active in the illicit markets.

Immigrants have advantages in exporting, with better knowledge of potential sellers and corruption opportunities. Few potential U.S. importers speak any of the languages of the Golden Triangle (Myanmar, Laos, and Thailand); English has more currency in Pakistan but not much in Afghanistan. Corrupt officials may be much more at ease in dealing with traffickers whose families they can hold in mutual hostage. Moreover, nonnative traffickers are likely to be conspicuous in the growing regions. Nor are the exporters merely agents for wealthy nations, in sharp contrast to the international trade in refined agricultural products. Khun Sa, an exotic figure associated with irredentist ethnic groups on the periphery of Myanmar, was the dominant figure in opium exports from the Golden Triangle for many years.[25] The Colombian cocaine trade has spawned some spectacular figures, such as Pablo Escobar and Carlos Lehder, all of them of Colombian descent. If there are major United States or European exporters in the source countries, they have managed to escape detection.

Immigrants and Trafficking in Consumer Countries

Dominance in the exporting sector does not imply dominance by the same nationalities in the smuggling business or in high-level distribution in the consuming countries. However, that seems to be the case.

Immigrant communities have substantial advantages in the consuming country as well as their own. For example, their communities are likely to provide less cooperation with the police. Even language can be a major asset; for example, few police departments are able to conduct effective wiretaps or other electronic surveillances involving various Chinese languages. Hence immigrants have better opportunities to hide and weaker licit market opportunities than most of the native population. Continuing immigration can serve as a source of new entrepreneurs and reduce the effectiveness of enforcement interventions, as may have been the case with organized crime and Italian immigration in the early part of the twentieth century. Many wealthy nations see foreign groups as critical to the import of drugs. Table 7.4 lists a few consumer countries and the immigrant groups thought to play a major role in the heroin or cocaine industries there.

Most of these associations are easily explicable, since the immigrant groups come from the producing regions. There are few Afghans in Britain but many immigrants from neighboring Pakistan. Morocco, a traditional producer and consumer of hashish, has sent many emigrants to France. The Balkans has long been a transshipment area for heroin entering Europe. The only one that is difficult to explain is the involvement of West Africans in the Scandinavian heroin trade.

The European literature is particularly rich and consistent on the role of immigrants. For example, Mats Killias reports the dominance of immigrants in every level of the drug trade in Zurich. "In 1992, in Zurich Canton, Swiss nationals were only 37 percent of suspected drug traffickers and 14 percent

Table 7.4. Immigrant Groups Involved in Drug Trafficking

Consuming Country	Drug	Immigrant Groups
Australia	Heroin	Chinese, Vietnamese
Denmark	Heroin	West African
Britain	Heroin	Pakistani
France	Marijuana	Moroccan
Switzerland	Heroin	Balkan, Lebanese
United States	Cocaine	Colombian

Note: These gross statements come from scrutiny of reports in the Foreign Broadcast Information Service (FBIS), a compilation of foreign media reports concerning narcotics, and from interviews with officials and researchers in these nations.

of suspected drug importers."[26] Interpol reports that seizures of heroin involving Turkish nationals accounted for 40 percent of the total 11.2 tons seized in 1996 in Europe. "The existence of Turkish communities, roughly totaling over three million in Western European countries, had given the opportunity among Turkish criminal groups to create a ready network for transport and redistribution of heroin in Western Europe."[27]

The variety of groups involved is impressive. Hans-Jörg Albrecht reports on the shift in the nationality of drug sellers in Frankfurt.[28] In the 1980s, there were many from sub-Saharan Africa; intense enforcement eliminated these nationalities from the trade, and they were then replaced by North Africans. Albanians are prominent in the Swiss market.[29] Vincenzo Ruggiero supplements this finding through his study of the Albanian population of source countries, finding that drug dealing and importation are important activities for immigrants, many of whom go to Italy.[30]

Even in the United States, where traffickers are forced to be much more discreet than in the source country, it appears that the high levels of the cocaine trade are primarily the province of immigrant groups. That is, the principal figures in the import sector are not U.S. nationals, but come from the producer or transshipment countries: China, Colombia, and Mexico for heroin; Colombia and Mexico for cocaine.

The Organization of the Trade

Some characteristics of smuggling organizations seem quite general. For example, smuggling is rarely integrated with downstream distribution activities. Organizations that import 250-kilogram shipments of cocaine do not distribute beyond the initial transaction, selling in loads of 10 kilograms or more. The explanation for this probably lies in risk management; lower level transactions are more visible and the purchasers less reliable. Integration thus increases risk of arrest. Only very small-scale importers are likely to operate close to the retail level. Markets for smuggling services contain many forms and sizes of organization. A credible case can be made that the 1990s U.S. cocaine market has been dominated by a few large organizations. For other eras, countries, and drugs, smaller and more ephemeral organizations may account for a significant share of the total. Monopoly control is rare. Prior to 1980, it was widely believed that the mafia had dominated the major illegal markets such as those for bookmaking and loan sharking, and even for heroin importation into New York City until the late 1960s.[31] Despite finding that some dealers within the United States have enormous incomes and traffic in large quantities, no researcher has found evidence, except on the local microlevel (e.g., a few blocks), that a dealer organization has the ability to exclude others or to set prices: the hallmarks of market power.[32]

Even at the trafficker level, market power seems elusive. Notwithstanding references to the Medellín and Cali cartels, these seem to be only loose syndicates of independent entrepreneurs, who sometimes collaborate but have to compete with other, smaller, Colombian smuggling enterprises.[33] The small share of the retail price accounted for by all activities up to import is strong but not conclusive, pointing at evidence of competition at this level.[34] The continuing decline of prices over a period of almost twenty years at all levels of the market suggests that, if market power ever existed, it has now been dissipated. Thus, there is no level at which policy makers need be worried that tough enforcement will lead to price declines because a cartel is broken, a matter raised thirty years ago by Tom Schelling in his classic paper on organized crime.[35] The explanation for the lack of market power may also be contained in Schelling's paper. The mafia may have been collecting rents on behalf of corrupt police departments that had exclusive jurisdiction and little external scrutiny, but those departments are less systemically corrupt and face substantial oversight from federal investigative agencies.

The different types of organizations that have functioned in the cocaine market as it has evolved in the United States over the last twenty-five years will be dealt with in the next few sections.

The Early Cocaine Market

Patricia A. Adler reported observations on sixty-five high-level dealers and smugglers in southern California whom she and her husband met through contacts while in graduate school. Her study notes considerable range in the closeness and stability of relationships among participants. Some formed close and enduring partnerships that were quite exclusive; for example, one pilot was constantly being recruited by a smuggler neighbor but refused to work for him because of his loyalty to his regular employer. Other dealers, characterized as "less reputable," existed in a network of shifting alliances.

The organizations Adler studied were micro-enterprises. Those of cocaine dealers typically consisted of only two or three people. Marijuana, because it is bulkier, required more elaborate transportation organizations. She concluded that "this is not an arena dominated by a criminal syndicate but an illicit market populated by individuals and small groups of wheeler-dealers who operate competitively and entrepreneurially."[36]

Peter Reuter and John Haaga interviewed mid- to high-level U.S. traffickers in cocaine and marijuana in the mid-1980s; the sample was recruited from low-security federal prisons. They found importers who were small, opportunistic, and niche-oriented. "All one needs is a good connection and a set of reliable customers." Though many of those interviewed regarded themselves as part of an organization, "[m]ost of the arrangements would be better described as small partnerships, in which each partner is also involved in trading on his own account, or as long-term, but not exclusive, supplier-customer relationships." Here is their account of one small-scale importing operation:[37]

> [O]ne couple residing in Florida would travel with another couple to South America, posing as tourists, and would then hand off their packages to the owner of a sailboat in a Caribbean port for delivery to a Florida location. The husband had a contact in Bolivia, whom he had met during a short stay in federal prison for a non-drug-related offense. The sailboat owner was a friend of a friend, also tracing back to a contact made in prison. The two couples would part company after each trip, each taking a share of the proceeds. Thanks to prison and his former life as a small businessman, the husband had enough contracts in different parts of the country to get his large quantities of cocaine and Quaaludes distributed within a short time after arrival. In some five years of operation about a dozen people had taken part.

Both Adler and Reuter and Haaga were describing the cocaine market in an early stage of its development. In 1978, cocaine consumption was estimated to be approximately 100 tons. By 1988 it had grown to approximately 200 tons.[38] Prices had plunged, the consequence of the emergence of more efficient distribution systems. It seems plausible that the generally amateur, small-scale smuggling operations described in the two studies, often involving well-educated principals with at least modestly successful legitimate careers, had been replaced by more professional and large-scale smuggling operations.

Colombian Smuggling Organizations

José Fuentes has recently provided the first fine-grained description of the operation of the high levels of the international drug trade since the shift to large-scale smuggling.[39] He relied on transcripts from court proceedings (including extensive wiretaps) on two major organizations and lengthy interviews with five senior traffickers, who have cooperated with federal agencies. These are accounts of organizations, and by participants, that were detected and punished. Thus, they might be atypical. In fact, both organizations had lasted for at least five years, while the informants had also been successful over an even longer period. Each trafficking organization accounted for nontrivial shares of the total cocaine market in the United States. On a monthly basis, a dozen or so customers brought in loads of hundreds of kilograms; a purchase of 250 kilograms at 20,000 U.S. dollars per kilo involves payment of 5 million dollars. There were a number of multi-ton shipments from Colombia; during the period August 1991 through April 1992 five shipments totaling 20 tons were warehoused by one warehouse operation.[40] In the context of a market delivering about 300 tons to final users, these are substantial quantities.

Fuentes described organizations that were durable, bureaucratic, violent, and strategic. For example, recruitment of new staff for U.S. operations was highly systematized with interviews by senior traffickers in Colombia, and the provision of collateral in the form of identification of family members who could be held hostage. References for prospective workers had to come from within the organization. Non-Colombians were considered higher risk employees because it was more difficult to threaten them if they defected with money or drugs. Providing familial details did help, though threats were harder to execute in the Dominican Republic than in Colombia. Recruitment was very selective. There was a strong preference for relatives in leadership positions, and cell managers were usually well educated with college degrees. Exit was allowed, provided the circumstances did not arouse suspicion that the agent had defected to the police. Colombians who were recruited to work in the United States were issued visas that expired shortly after entry, so as to limit their mobility.

The system was designed to move shipments very rapidly, since inventory in the United States represented risk. Twenty-four hours was the goal for getting rid of a shipment once it had reached the destination city. Stockpiles were held in Colombia, where the enforcement risk was vastly smaller. The organizations had their own domestic transportation systems, drivers who would carry shipments of 100 kilos or more for prices ranging from 300 to 1,000 U.S. dollars per kilo, depending on the length of the trip.[41]

The scale of the organization was impressive. One large cell was estimated to have three hundred workers in it, occupying at least six identifiable roles. It was estimated to have employed a total of twelve hundred individuals during its lifetime. Most of them received modest salaries: 7,000 U.S. dollars per month for a cell manager, 2,000 U.S. dollars for a stash-house sitter. Those incomes are rather moderate given the volume and margins for the organization that still generated annual incomes totaling millions of dollars for the principals.

M. Nataranjan describes an equally large organization.[42] She documents one surprising phenomenon, namely that the principal U.S. operative talks to numerous individuals, with twenty-four identified from wiretaps, including fifteen customers. This phenomenon is hardly consistent with maintaining low exposure, since any one of the fifteen could obtain relief from lengthy prison sentences by providing information about his supplier. Perhaps what we observe here is the end game of successful operations that have become increasingly confident of their own invulnerability.

European Smuggling

Smaller smuggling entities can still survive in the European market. Ruggiero and Smith describe opportunistic smugglers of less than a kilo of cocaine or hashish, concealing it in bicycles.[43] Disposal of smaller quantities requires less organizational capacity; a single domestic customer may be sufficient.

However, European heroin seizures of more than 25 kilograms are regularly reported. For example, Interpol reported in 1996 eight seizures of between 65 kilograms and 373 kilograms, totaling more than 1 ton, from truck traffic alone. Other large seizures were made at ports: seizures reported in May and June of 1996 included 217 kilos (Venice), 108 kilos (Madrid), and 134 kilos (Ipsala, Turkey).[44]

It is impossible to estimate systematically what share of total European heroin imports are accounted for by large shipments, that is, by groups with the financial, organizational, and personnel capacities to assemble, purchase, ship, and distribute large quantities. Large shipments appear to account for the majority of all heroin seized but that could reflect the higher per kilo risk associated with larger bundles.

Drug Smuggling and Legitimate Institutions

If drugs travel in legitimate commerce and traffic, then transportation companies, as well as financial institutions, may be active accomplices. For example, American Airlines has paid substantial fines in the past for inadequate monitoring; its planes were importing clandestine cocaine shipments. Recent investigations at Miami International Airport showed that employees of the airline have continued to find opportunities for large-scale smuggling. This time, the participating employees were baggage handlers at the U.S. landing point. Corruption in the consuming countries seems to be less central to the business, an assertion that arouses considerable skepticism in producer countries. Corruption, like scientific hypotheses, presents a problem of epistemological asymmetry. Scientific hypotheses can only be disproved, not proved; corruption can be found but its existence never disproved. Nonetheless, U.S. prosecutors pursue corrupt agents with considerable zeal when they find them. At the same time, the overlapping authority of enforcement agencies creates a situation in which any corrupt agent, no matter how well protected in his or her own department, has to be concerned with possible investigation by another agency. In such an environment, the market for corruption will shrink.

Organized Crime and Transnational Drug Traffic

The expansion of the drug trade in the last thirty years has presented opportunities for preexisting groups to build on their core capacities in other criminal activities, particularly those involving illicit markets (gambling, prostitution, loan sharking). One might also expect that success in the transnational drug business would lead new organizations to use their core capacities to enter other illegal markets and criminal activities. Though there has been a shift in specialization by experienced offenders (for example, in Britain many drug traffickers were previously active in other criminal pursuits, including armed robbery), generally that seems not to have happened at the organizational level.[45]

Particularly surprising is the minimal role of the U.S. mafia. Though apparently possessing some of the most important assets for this business, and having had a major role in heroin smuggling during the period 1935–1970, it has been marginalized in drug trafficking since then. Drug cases involving senior Mafiosi are almost unheard of, and the organizations themselves have not participated at all. Only in Italy has the mafia—a very different organization from its U.S. counterpart—played a significant role.[46]

Western European nations other than Italy had a less well-developed organized crime structure when the heroin market expanded. Western European organizations with international smuggling and distribution capacities appear to be a creation of post–Cold War developments. They are involved in the smuggling of cars into eastern Europe and of immigrants and prostitutes into western Europe.

The absence of the U.S. mafia from this trade, as well as the failure of the Colombian drug-smuggling organizations to develop a presence in other markets, may enable a better understanding of what is distinctive about the transnational drug market. In particular, it leads to consideration of the final topic, enforcement and its consequences.

The U.S. mafia, as a national alliance of predominantly Italian gangs based in various cities, emerged primarily through bootlegging, though the exigencies of the gambling business also played a role in its development.[47] It was characterized by highly developed networks of systemic corruption in local law enforcement, and until about 1950 or 1960, in city politics as well. Both bootlegging and numbers banking required large numbers of agents, geographically dispersed. Using its connections with the Italian mafia, the U.S. mafia imported heroin through the New York City docks, utilizing its control of the waterfront unions. The leaders were highly visible, as much reported on in the newspapers as prominent socialites. The names of the principal "families" were also well known throughout the nation. Membership in one of these families provided an important asset for an ambitious young criminal seeking to intimidate others without investing in extensive violence himself. The individual organizations endured in recognizable form for more than half a century at least. Leaders were occasionally incarcerated, but rarely for extended periods prior to the 1980s. The assets of the mafia families then were: a) reputation for control of contingent violence, both collective and individual; b) access to a network of agents; c) durability; d) access to capital; and e) control of corrupt police departments. Cocaine importing turned out not to require these assets. Most basic was that the drug originated in Latin America where other gangs had already established corruption relations with authorities. Moreover, the large Hispanic immigrant community in the United States was capable of providing the necessary networks and recruitment for operations in the United States. The Colombian organizations developed a reputation for violence that was comparable to, if not greater than, that of the mafia. In this area, they were building on the tradition of extreme violence that has characterized Colombia since the political troubles of the late 1940s. These organizations were willing to be less discriminating in their use of that violence, killing wives and children as well as principals. Perhaps most importantly, high-level participants in the United States were at great risk from enforcement agencies. Many agencies developed sophisticated and broad investigative capabilities, creating substantial risk of arrest. If arrested, leaders were likely to serve very long sentences. The mafia itself has shown signs of breaking down in the face of long sentences for other crimes that have generated high-level informants. The return here was not to broad reputation but to discretion. Ostentatious display of wealth and power might be an asset in Colombia where the corruption was systemic. It was a source of weakness in the United States where police corruption was only opportunistic and where enforcement agencies had strong incentives and tools for apprehending leaders.

The mafia, then, simply lacked useful assets for competing with Colombian and Mexican traffickers. But that may also explain why these drug-trafficking groups have not expanded their activities to other criminal markets in the United States. Their assets are not usable in many sectors. Discretion requires that they restrict the dissemination of information about their capacities. Similarly, their workforce is predominantly from their own community, limiting their capacity to operate in the general market place. The contacts with corrupt authorities are limited to source countries that play a minimal role in other smuggling, apart from illegal immigrants; in that market, only protection in the importing country has value.

Enforcement

Official estimates suggest that drug smuggling is a risky business, at least in terms of the drugs themselves. World cocaine production is estimated to total about 900 tons,[48] while total seizures may be as high as 400 tons. In western Europe, heroin seizures total 11 tons; a back-of-the-envelope calculation generates an estimate of heroin consumption of less than 30 tons.

Many seizures occur at the border and involve no offender other than the carrier, notwithstanding efforts in some countries to make "controlled deliveries," in which police follow the drugs to their final destination. Offenders carrying small amounts from one point to another across the border are called "mules," not merely for their physical roles; they also have minimal knowledge about who else is in the organization. When drugs are seized in container vessels, it can be very difficult to identify the responsible participants. Thus, though a high fraction of the quantity shipped is seized, risks to senior traffickers may be modest.

Fuentes's research does give some information on this subject.[49] The two trafficking organizations that he studied had operated successfully within the United States for a number of years: one from 1983 to 1992, the other at least from 1988 to 1992. The head of the first organization had been convicted in 1975, and then again in 1979, but after release in 1983, survived in the business for nine additional years without arrest. One other participant, a senior manager, also involved in money laundering, was said to have operated in the United States for almost ten years. The description of the cells and the organizations generally suggested an operation in more or less the same form for at least a few years.

As in other illegal markets, there is a constant interaction between enforcement agencies and drug smugglers, most conspicuously around routes and modes of trafficking. A concentration of interdiction resources around southern Florida in the early 1980s led to a shift in trafficking routes to the Caribbean. Pressure on those routes led to increased transshipment through Mexico. Increased focus on smuggling in TIR trucks (Trans International Router) in Europe may have led to a greater use of sea cargo.

Broader technological and social changes impinge on enforcement efforts. Ruggiero and Smith have noted that the growth of international personal mail has reduced the risk of sending small packages containing drugs through the regular international post. It is no longer a remarkable event for a household to receive a package from overseas.[50] The universal availability of cell phones makes electronic surveillance more complicated, though not necessarily less successful, once established. The same can be said for computers. They allow the organizations better control of their own activities, but once controlled and deciphered by enforcement agencies, provide more varied and detailed information for investigation and prosecution.

Money laundering is another component of drug enforcement specifically targeted at transnational trafficking. While no systematic measures are available as to the amount of money that is being laundered by drug traffickers, there are two reasons to believe that control may have had a substantial effect on drug trafficking. First, the absolute sums seized in a number of high-profile operations combating money laundering, occasionally amounting to more than 250 million U.S. dollars, constitute a non-trivial fraction of the total earnings generated by this level of trafficking. Second, there are reports that money launderers charge 5 to 10 percent for their services, a healthy tax on the revenues of high-level traffickers. Given the presence of many potential launderers, this may well represent a response to the risk of law enforcement.

Conclusion

Transnational drug trafficking has evolved in response to a variety of economic and social factors, next to the shifts in demand. Patterns of legitimate traffic, commerce, and migration have influenced the participation and organization of the trafficking. Modern communication technology has been an important factor, directly and indirectly influencing trade. In addition, the intensity and form of law enforcement have played a large role, driving up returns for successful traffickers to truly astonishing levels. This way, the principal figures in the Colombian cocaine trade have been able to accumulate fortunes in the hundreds of millions of dollars.

For cocaine as well as for heroin, growing efficiency appears to produce an industry in which a small number of enterprises account for a large share of total traffic, though without acquiring any market power. With their scale of operations, they have created great harm in producer and transshipment nations, exacerbating corruption and, in Colombia, Mexico, and Myanmar, undermining the power of the national state. Much research on the structural functioning of the drug industry and its effects on source and consumer countries remains to be done. A research agenda will require a specification of goals, sources, and methods. A basic research objective will be to assess the way in which alternative control methods do affect the harms from trafficking in both the producer/transshipment and consumer countries. Data sources are not likely to be found in official statistics. The information on seizures, arrests, or incarcerations will not provide much useful insight either. Price data, information on the mark-up between export and import prices and, if possible, on the prices charged by corrupt officials and various employee groups, would provide knowledge on the economic consequences of trafficking. Given the reluctance of enforcement agencies to enter this area, these data may have to be collected through interviews with participants, itself an expensive and difficult process.

Research may progress to the extent that it follows the national security research models that have been developed at organizations such as RAND and the Institute for Defense Analysis. Agency cooperation will be required if research is to be systematic and not driven by the erratic offering of opportunities. Agency cooperation, in turn, will be dependent on showing that what

researchers produce can help the agencies perform better. The challenge is by no means impossible, as shown by how much official measurement of crime in recent years has been driven by researchers. A clear strategy, however, is required.

Notes

1. The distinction here is between true economic profits, which take account of shadow prices, and profits that appear as revenues in excess of actual payments for labor, transportation, rent, and so on. In very risky business, accounting profits may be high while true economic profits are low or even negative, once risk compensation is included in costs. See D. A. Boyum, "Reflections on Economic Theory and Drug Enforcement" (Ph.D. diss., Harvard University, 1992).

2. José R. Fuentes, "Life of a Cell: Managerial Practice and Strategy in Colombian Cocaine Distribution in the United States" (Ph.D. diss., City University of New York, 1998).

3. Francisco E. Thoumi, *Political Economy and Illegal Drugs in Colombia* (Boulder, Colo.: Lynne Rienner, 1995).

4. Paul Stares, *Global Habit* (Washington, D.C.: Brookings Institution, 1995).

5. United Nations International Drug Control Program (UNDCP), *Economic and Social Consequences of Drug Abuse and Illicit Trafficking,* Technical Series, no. 6 (Vienna: UNDCP, 1999).

6. Peter Reuter, "Book Review," *Journal of Policy Analysis and Management,* no. 17 (1998), 22–24.

7. Office of National Drug Control Policy, *What America's Users Spend on Illicit Drugs, 1988–1995* (Washington, D.C.: UNDCP, 1997).

8. John Caulkins and Peter Reuter, "What Can We Learn from Drug Prices?," *Journal of Drug Issues* 28, no. 3 (1998), 593–612.

9. Evringham and Rydell estimate that 22 percent of users accounted for 65 percent of total cocaine consumption in 1992; the figure can be higher, depending on the point in the epidemic. See Stuart Evringham and Charles P. Rydell, *The Demand for Cocaine* (Santa Monica, Calif.: RAND, 1994), 28.

10. This is a personal judgment developed from a host of speculative figures on the prevalence of heroin and cocaine addiction in the European Union; quantities consumed per addict; and the price of drugs (e.g., Pompidou Group, 1998). See European Monitoring Center on Drugs and Drug Abuse (EMCDDA), *Annual Report on the State of the Drugs Problem in the European Union* (Lisbon: EMCDDA, 1977); also Pompidou Group, *Heroin Seizures as an Indicator of Variation in Market Situations: Drugs Availability and Heroin Use in Europe* (Strassbourg: Council of Europe, 1998).

11. United Nations International Drug Control Program (UNDCP), *World Drug Report* (Oxford: Oxford University Press, 1999), passim.

12. Ibid., 124.

13. United States Department of State, *International Narcotics Control Strategy* (Washington, D.C.: Department of State Annual Report, 1999), passim.

14. Peter Reuter and Mark Kleiman, "Risks and Prices: An Economic Analysis of Drug Enforcement," in Michael H. Tonry and Norval Morris, eds., *Crime and Justice: An Annual Review of Research No. 7* (Chicago: University of Chicago Press, 1986), 62–98.

15. Michael Kennedy, Peter Reuter, and Kenneth J. Riley, *A Single Model of Cocaine Production* (Santa Monica, Calif.: RAND, 1992), passim.

16. The per capita GDP for Thailand is more than ten times that of Myanmar.

17. The decline in Peruvian production may also be the consequence of an extended blight, the first to hit the coca crop in recent decades, and a period of intense enforcement against air traffic of coca base between Peru and Colombia.

18. This analysis draws heavily on Peter Reuter, "Can the Borders Be Sealed?," in *Public Interest,* no. 92 (1988), 51–65.

19. This is not an argument for abandoning interdiction but for recognizing the limits of its effectiveness in making cocaine more expensive and less available in mature markets.

20. Nigerian traffickers seem to specialize in such smuggling. Mark Kleiman has estimated that Nigerian couriers body-packing heroin into New York in the early 1990s accounted for more than 500 kilograms per annum, 3 to 5 percent of estimated U.S. consumption. That requires only three body packers every two days. Kleiman, "Drugs and the Law," in *New York Review of Books* 40, no. 4 (February 11, 1993).

21. The risk and payment figures here are moderately informed guesses; the purpose is simply to provide a sense of the magnitudes involved.

22. Note that, as expected, the drugs travel with passengers rather than cargo, since Nigerian exports, apart from oil, are modest.

23. Vincenzo Ruggiero and Nigel Smith, *Eurodrugs: Drug Use, Markets, and Trafficking in Europe* (London: London University College Press, 1995), 75.

24. Francisco E. Thoumi, *The Political Economy of the Andean Drug Industry* (Washington, D.C.: Woodrow Wilson Center, 2001).

25. Michael Booth, *Opium: A History* (New York: St. Martin's Press, 1996), passim.

26. Mats Killias, "Immigrants, Crime, and Criminal Justice in Sweden," in Michael S. Tonry, ed., *Ethnicity, Crime, and Immigration* (Chicago: Chicago University Press, 1997), 386.

27. Interpol, *European Heroin Scene: Balkans—The Focus* (Lyon: Interpol, 1997), 18.

28. Hans-Jörg Albrecht, "Ethnic Minorities, Crime, and Criminal Justice in Germany," in Tonry, *Ethnicity, Crime, and Immigration,* 64–65.

29. Killias, "Immigrants, Crime, and Criminal Justice," passim.

30. Vincenzo Ruggiero, "Albanian Drug Trafficking in Europe," in M. Natarajan and Peter Hough, eds., *Illegal Drug Markets: From Research to Policy,* Crime Prevention Studies, vol. 11 (Monsey, N.Y.: Criminal Justice Press, 2000), 224–49.

31. Donald Cressey, *Theft of the Nation* (New York: Harper and Row, 1969), passim.

32. The best evidence is simply the ease with which new sellers enter and the speed with which they depart. There may be rents for various capacities but certainly no power to exclude; see M. Katz and H. Rosen, *Micro-Economics* (Burr Ridge Ill.: Irwin, 1994).

33. Patrick Clawson and Rensselaer W. Lee III, *The Andean Cocaine Industry* (New York: St. Martin's Press, 1998), epilogue, 134.

34. If demand is inelastic with respect to price, then a seller with market power can increase revenues and decrease costs by cutting production, until reaching a level at which the demand for cocaine and heroin may have elasticity of greater than one with respect to final price at current levels. It is very likely that elasticity is less than one with respect to high-level prices, though there are extreme models of price mark-up from import to trafficking that would yield a different result.

35. Tom Schelling, "Economic Analysis of Organized Crime," in *President's Commission on Law Enforcement and the Administration of Justice, Task Force Report Organized Crime* (Washington, D.C.: United States Government Printing Office, 1967), 48–61.

36. Patricia A. Adler, *Wheeling and Dealing: An Ethnography of an Upper-Level Drug Dealing and Smuggling Community* (New York: Columbia University Press, 1985), 66.

37. Peter Reuter and John Haaga, *The Organization of High-level Drug Markets: An Exploratory Study* (Santa Monica, Calif.: RAND, 1989), 39–40.

38. Evringham and Rydell, *The Demand for Cocaine,* passim.

39. Fuentes, "Life of a Cell," passim.

40. There is an ambiguity as to whether this total was for a single organization or a confederation associated with Miguel Rodriguez-Orejueta, a principal figure in the Cali Cartel.

41. This appeared not to be so much compensation for longer time as for the number of potential police encounters.

42. M. Nataranjan, "Understanding the Structure of a Drug Trafficking Organization: A Conversational Analysis," in Nataranjan and Hough, *Illegal Drug Markets,* passim.

43. Ruggiero and Smith, *Eurodrugs,* passim.

44. Interpol, *European Heroin Scene,* 10.

45. Adler, *Wheeling and Dealing,* passim.

46. Raimondo Cantanzaro, *Men of Respect: A Social History of the Sicilian Mafia* (New York: Free Press, 1988), passim.

47. Michael Halter, "The Changing Structure of American Gambling in the Twentieth Century," *Journal of Social Issues* 35, no. 3 (1979), 223–42.

48. United States Department of State, *International Narcotics Control Strategy,* passim.

49. Fuentes, "Life of a Cell," 19.

50. Ruggiero and Smith, *Eurodrugs,* passim.