
A GEOGRAPHIC ANALYSIS OF ILLEGAL DRUG MARKETS

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***Abstract:** Past research has established two important geographic principles concerning the retail sales of illegal drugs: (1) illegal drug markets tend to be spatially concentrated, and (2) the location and marketing characteristics of these markets will vary depending on whether the customers are local or regional. The present research will build on these principles and determine whether the location of illegal drug markets in Wilmington, Delaware can be predicted using variables that measure the relative size of the local demand combined with variables that measure accessibility to regional customers. The data include arrest records from the Wilmington police department for the years 1989, 1990 and 1991 in order to be comparable with the 1990 census data.*

INTRODUCTION

The sale of illegal drugs in the United States is a multibillion-dollar enterprise. Like any other large-scale enterprise, there are areas where raw materials are produced, locations where these raw materials are processed into a finished product, and sites where the finished product is sold or distributed to the consumer. It is the quantity demanded by the final consumers and the price they are

willing to pay that determines the level of profit at each stage of the enterprise. One criterion for determining the quantity demanded at a given price is the location of the illegal markets. In other words, the quality of the sales location is directly related to the quantity of profit for the illegal drug dealers.

We are not sure how illegal drug dealers choose their market locations. If it is by trial and error, the most profitable sites will attract competition and the unprofitable locations will soon go out of business. If it is chosen through some sense about which location is most profitable, this knowledge would be valuable information for public policy planners whose objective is to remove as much profit as possible from this illegal enterprise. Proceeding from this latter perspective, this analysis seeks to identify (from a retail marketing perspective) the advantageous locations. Then, using data from Wilmington, Delaware, in the United States, we test whether or not such locations have been chosen as sites for illegal drug markets. In this manner, we determine whether marketing principles are useful for predicting where illegal drug markets are likely to locate and where they are likely to be displaced spatially if they are successfully closed in one location. We can also identify factors associated with successful market locations that can be altered to create a less-profitable location for illegal drug dealers. We begin by determining the spatial structure of demand for illegal drugs much as a marketing consultant would determine relative demand in a sales area for any legal product.

SPATIAL ASPECTS OF ILLEGAL DRUG MARKETS

The National Institute of Justice funding of the Drug Market Analysis Program led to the most important findings concerning the siting of illegal retail drug markets (Maltz, 1993). This research was housed in five cities: San Diego, Jersey City, Pittsburgh, Kansas City, and Hartford. Three of these five sites produced important findings concerning the spatial characteristics of illegal retail drug markets.

Eck's (1994) analysis focused on San Diego. He determined that there was not just one type of drug market. In fact, four types of drug markets were identified using contrasting concerns for security on the part of drug dealers and their customers: neighborhood, open regional, semi-open regional, and closed regional markets. These categories result from the interaction of two variables. The first is whether the customers are local or regional. The second is whether the location of the drug market attracts customers or whether customers determine the location of the drug market through a social network. The first variable is closely related to Reuter and McCoun's

(1992) variable, which categorized drug markets based on whether customers were residents of the transaction neighborhood, or whether they were generally outsiders who brought money into the neighborhoods where the drug transactions occurred. If the customers were largely outsiders, the markets tended to be open and located near major thoroughfares that funnel customers into the region. If the customers were local, markets would tend to be closed and located at sites most accessible to the local demand. Locations catering to nonresidents can be very different from those serving a local clientele.

Weisburd and Green (1995) focused their analysis on Jersey City, New Jersey. They determined that illegal drug market places could be spatially concentrated, and mapped "intersection areas" that were hot spots of illegal drug sales. They discovered that these drug hot spots made up only 4.4% of the street sections of Jersey City. However, they accounted for approximately 46% of narcotics sales arrests. These results illustrate the degree to which illegal drug markets are spatially concentrated in Jersey City, New Jersey.

Olligschlaeger (1997) examined illegal drug sales in Pittsburgh. His analysis moves beyond describing where illegal drug markets are located by attempting to predict where they will be sited in the future. He developed a new spatio-temporal forecasting method (chaotic cellular forecasting, based on neural networks) for use as an early warning system for police and public policy analysts concerned with the location of emerging illegal drug markets. He was successful in tracking displacement in time and space, identifying new hot spots before street officers were aware of their existence. He also found that the illegal drug markets were concentrated in space.

These studies used various types of police data to identify drug markets. In San Diego, Eck (1994) used police records of arrests, calls for service, and patrol information. He also collected information from agencies other than the police on the type of structure of the dealing location. In Jersey City, Weisburd and Green (1995) used police arrest data for drug offenses and for crimes assumed to covary with the location of illegal drug markets. In Pittsburgh, Olligschlaeger (1997) supplemented police data on drug-related calls for service and arrests with data from the revenue office on property ownership, tax evaluation, and property characteristics.

We built on the San Diego, Jersey City and Pittsburgh studies to analyze drug markets in Wilmington, Delaware. Wilmington is an excellent environmental laboratory in which to examine illegal drug markets. It is a small city (population of 72,000), which is also part of a large agglomeration (Philadelphia metropolitan area), and which manifests many of the features considered typical of older U.S. cities.

Wilmington is a central city, with large proportions of minority and lower middle class populations living in largely segregated conditions. The downtown is dominated by high-rise buildings, and is also typically accessible by a major highway (1-95). Transportation and movements in the city are overwhelmingly based on automobiles (as our analysis will repeatedly point out), much more so than in mass-transit based cities in Europe and developing nations. This special feature of American cities makes spatial comparisons with cities elsewhere difficult; therefore, we hesitate to claim international generalization of our analysis. Indeed, the different policy and cultural environments in countries around the world would allow for few generalizations. Our spatial analysis is further circumscribed in that its lessons are likely to be true only of automobile based cities in the United States.

Wilmington also contains a surprisingly wide variety of environments for a city of its size. Housing types range from the very expensive in the northwest to the very modest in the center and southeast. It contains an active port, financial institutions, and corporate headquarters — notably the Du Pont Chemical Corporation. Finally, it contains a small tourist and entertainment industry.

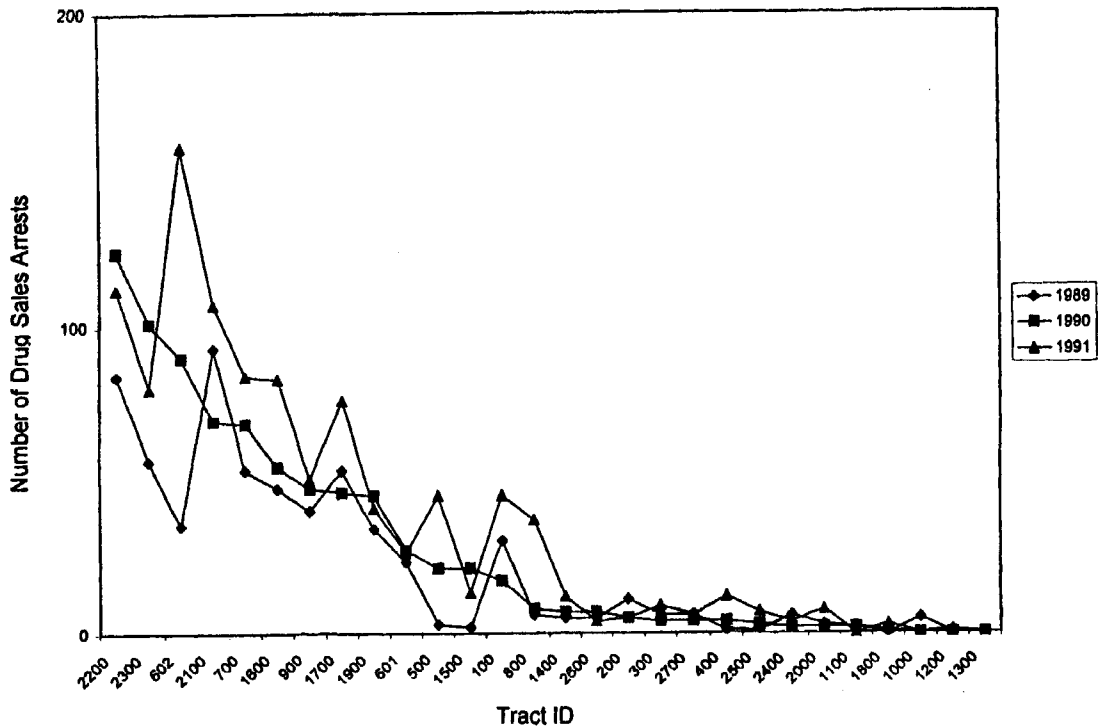
There are a variety of locations that theoretically should attract illegal drug dealers. We used police arrest data for illegal drug sales to identify spatial concentrations of illegal drug sales. One problem with police arrest data is that police may stop making arrests while an illegal market is still operating. This policy is termed "containment" (Rengert, 1996) and occurs when police write-off an area while concentrating on keeping the sale of drugs from spreading to surrounding communities. Therefore, we tested for the temporal consistency of the spatial arrangement of arrests for illegal drug sales.

We used data from the years 1989, 1990, and 1991 (at the census tract level) so as to be close to the 1990 census data used later in this analysis. The census tract is an enumeration unit that on average contains about 4000 people. The problems inherent at this aggregation — over-inclusiveness and error-prone border effects — are well known. We are, however, in good company since the census tract is the most widely used intra-urban analytical unit in the U.S. The broad outlines of the scale of arrests over time are suggested in Figure 1. Figure 2 illustrates the spatial arrangement of drug arrests in Wilmington. Notice in Figure 1 that there is temporal consistency in the spatial arrangement of arrests for illegal drug sales. Figure 2 demonstrates the spatial concentration of drug arrests in a few census tracts located in central and eastern Wilmington.

In the following analysis, we determine whether we can identify the high-ranked census tracts using models of retail marketing de-

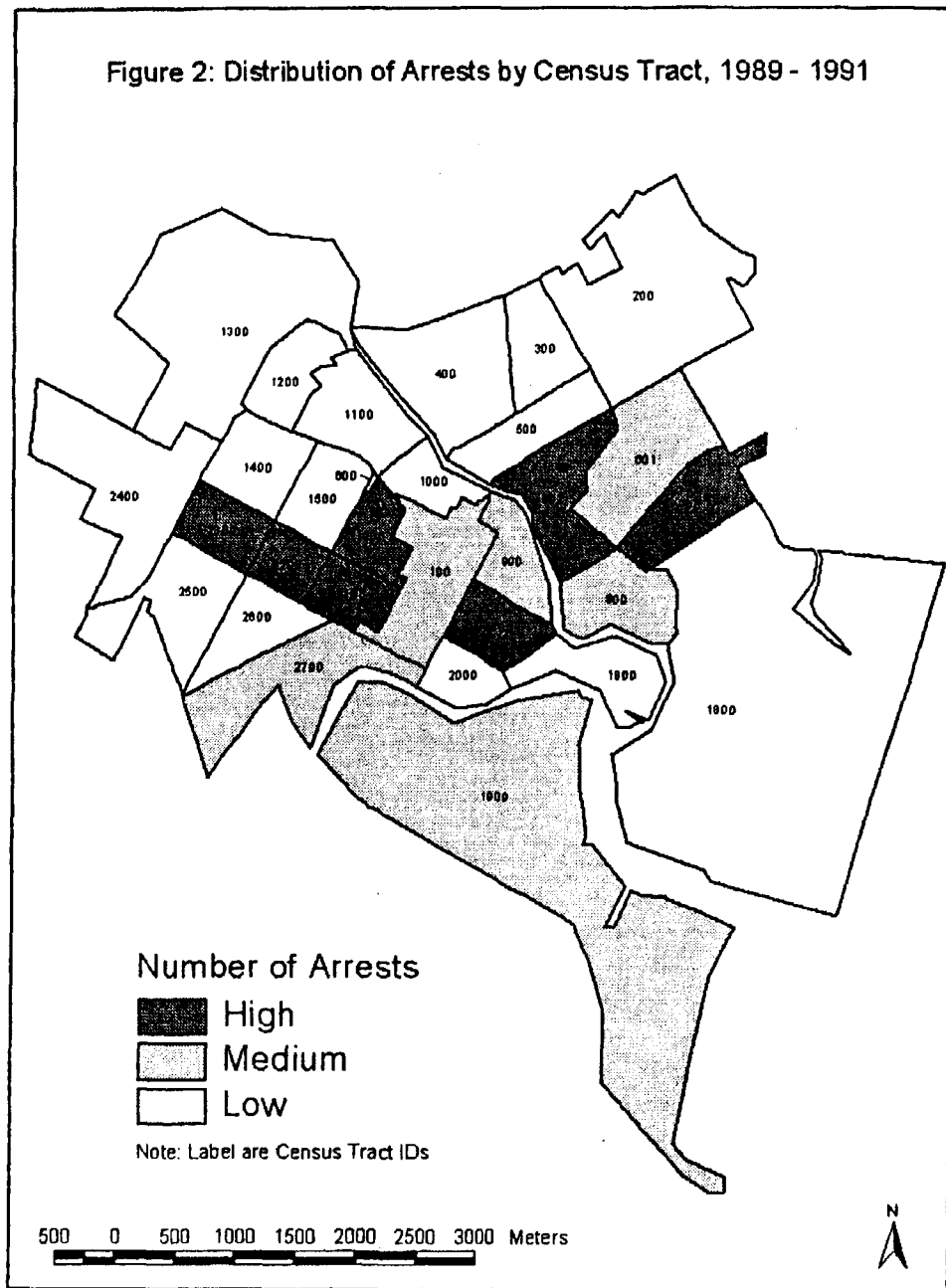
veloped in geography. To begin, we focused on the demand of local addicts. If an illegal drug dealer wished to serve the needs of local addicts, he or she would first need to identify their individual characteristics. In marketing geography, we use demographic profiling to determine the characteristics of a hypothetical person who would have the greatest demand for illegal drugs.

Figure 1: Number of Drug Sales Arrests, Wilmington DE 1989-1991



DEMOGRAPHIC PROFILE OF DEMAND FOR ILLEGAL DRUGS

There have been many studies that identify the characteristics of addicts. These studies generally agree with the findings of The National Household Survey on Drug Abuse (U.S. Department of Health and Human Services, 1993). Addicts tend to be young (18 to 30 years of age), have less than a high school education, and are unemployed in the formal economy. These variables formed the basis of our demographic profile of the local spatial demand for illegal drugs.



Other studies also have identified and used these variables in the analysis of illegal drug use. Olligschlaeger (1997) used a younger age profile of 12 to 24 years to identify the population at risk for drug use in Pittsburgh. However, in Inciardi's (1995) sample of heroin users, he found the median age of first use to be over 18 years. Only alcohol

had a median age of first use below 15 years. The median age of first drug use excluding alcohol identified in Inciardi's (1995) study was 15.2 years.

In their study of crack users in Miami, Florida, Inciardi and Pottier (1995) determined that school attendance was not a high priority among the school age crack users. Twenty-two percent of the subjects had dropped out of school. More telling, 89.4% had been expelled or suspended from school. Since the entire sample of 254 youths was below 17 years of age (some as young as 12), school dropout rates will undoubtedly be higher as the sample approaches and exceeds 18 years of age. Concerning the informal economy to obtain money for crack use, these 254 youths were responsible for over 220,000 criminal offenses during the twelve months prior to the interview. The main source of income was from drug sales. Over 61% of the offenses were for illegal drug sales, 11.4% were vice offenses including prostitution, 23.3% were property offenses, and 4.2% were major felonies such as robbery and burglary. It would be difficult to maintain a serious educational career while simultaneously concentrating on a career of crime and drug abuse (Rengert and Wasilchick, 1985).

McCoy, Miles and Inciardi (1995) determined that female crack cocaine users over the age of 18 also were not likely to be high school graduates. Of the sample of 235 female crack users, 59.7% did not have a high school diploma, 64.5% exchanged sex for money and 24.2% exchanged sex for drugs. Again, these activities are not conducive to a serious formal career (Rengert and Wasilchick, 1985).

When we focus directly on employment, Fagan (1993) identified unemployment as an important factor leading many youths to choose to sell illegal drugs in postindustrial cities. As industries close or move from these cities, high-wage low-skill fabrication and assembly jobs also disappear leaving few, if any, legitimate alternative employment opportunities of the same caliber. John Ball (1991) determined that drug addicts are typically not legally employed. He describes how they support their drug habits in the informal economy. He found that addicts in New York, Philadelphia, and Baltimore committed an average of 603, 631, and 567 offenses respectively each year in those cities. These rates compute to well over one offense per day. In other words, crime is a routine activity in the daily lives of these drug addicts. Finally, Pettway (1994), in his ethnographic study of addicts in the Philadelphia inner city, found the vast majority to be unemployed in the formal economy.

These studies illustrate that not only local demand, but also the local availability of labor to sell illegal drugs may be closely related to the unemployment and school-dropout status of an area. Therefore,

if one were an illegal drug dealer concerned with maximizing profits from sales to a local clientele, a major consideration would be accessibility of the site to the young, the unemployed, and the post-teens with less than a high school education. This leads to methods of identifying such sites, methods developed in marketing geography.

MARKETING GEOGRAPHY

The retail sale of illegal drugs has principles in common with the sale of legal products. For both the goal is to make a profit. Illegal operations also have the additional goal of avoiding apprehension. The location of the sales enterprise is a strong factor in the attainment of both goals (Rengert, 1996). Ghosh and McLafferty (1987:2) highlight the importance of spatial location:

A well-designed location strategy is an integral and important part of corporate strategy for retail firms. Whether selling goods or services, the choice of outlet locations is perhaps the most important decision a retailer has to make. It is through the location that goods and services are made available to potential customers. *Good locations allow ready access, attract large numbers of customers, and increase the potential sales of retail outlets.* [Emphasis added]

Seldom have the locations of illegal enterprises been evaluated from this marketing perspective (Eck, 1994). More commonly, the locations are related to the social and economic status of neighborhoods (Davis et al., 1993), and the deterioration of the built environment (Skogan, 1990).

Marketing geographers have identified several strategies for determining optimal locations for retail firms (Davies, 1984). One such strategy is a location-allocation model (Ghosh and McLafferty, 1987). Location-allocation models of retail geography consist of five basic elements: (1) the objective function; (2) demand points; (3) feasible sites; (4) a distance matrix; and (5) an allocation rule.

In the present study, we used the objective function of maximizing sales volume by minimizing distance to potential customers. The demand points are assumed to be the centroids of census tracts in Wilmington, Delaware. In this initial analysis, we used a "planar model" that assumes feasible sites for illegal drug markets exist everywhere in Wilmington. This assumption was relaxed later in the analysis to mask wealthy housing areas where drug markets are not likely to be established. Computing the distance between the centroids of census tracts in Wilmington formed a distance matrix. The allocation rule is that potential customers are assigned to the census

tract that minimizes total distance traveled by potential customers of illegal drugs.

THE ANALYSIS

We began the analysis by determining which census tract is the most centrally located in Wilmington. This was determined by summing the distances between each census tract and all the others in Wilmington (the columns in the distance matrix). The census tract with the smallest sum, tract # 1600, is the most centrally located in Wilmington (Figure 2).

This tract is the most accessible to the total area if we ignore transportation infrastructure and the distribution of potential customers. Secondly, we determined which census tracts contain the most arrests for illegal drug sales per square kilometer during the years 1989-91. This turned out to be census tract 2200 (see Table 1). In other words, if police arrests for drug sales are an indicator of the location of illegal drug sales, then they were more concentrated in census tract 2200 than any other. There also were high concentrations in census tracts 2100, 2300, and 1600.

We next turned to the spatial arrangement of local demand for illegal drugs in Wilmington. We considered each variable in turn and then combined them into a profile of spatial demand for illegal drugs. The first factor was age; the number of people between the ages of 15 and 29 who resided in each census tract in Wilmington. The objective was to determine the census tract to which these people would have to travel the least distance if they all purchased illegal drugs within the same tract. This can be computed by weighting the distance matrix by the number of people aged 15 to 29 in each census tract. This weight gives us the total number of person-miles that would have to be traveled if all illegal drugs were purchased in a single census tract. From the perspective of each specific census tract, when we sum each column, we have the number of person miles all persons aged 15 to 29 in Wilmington would have to travel if all of them traveled to a given census tract to purchase illegal drugs. Given this factor, the most accessible census tract to 15- to 29-year-old residents of Wilmington was tract # 600 (Figure 2). This is a very small tract near the Central Business District of Wilmington. It contained no arrests for the sale of illegal drugs.

The next factor considered was educational attainment. The census listed the number of individuals over 18 years of age who have not graduated from high school for each census tract in Wilmington. If we weight the distance matrix by this factor and sum the columns to determine the census tract that is most centrally located for those

over 18 without a high school diploma, it is tract # 1600. This also is the most centrally located tract in Wilmington. It also was a major center of arrests for drug sales, although it was not the highest in the city.

Table 1: Drug Arrests per Square Kilometer

Census Tract #	Area (sq KM)	Drug Arrest Total	Drug Arrest % by Tract	Arrests (sq KM)
2200	0.26	320	13.3%	1230.8
2100	0.30	270	11.2%	900.0
2300	0.35	239	9.9%	682.9
1600	0.32	186	7.7%	581.3
1700	0.38	174	7.2%	457.9
602	0.64	284	11.8%	443.8
700	0.55	205	8.5%	372.7
900	0.40	132	5.5%	330.0
500	0.49	69	2.9%	140.8
100	0.79	91	3.8%	115.2
800	0.54	51	2.1%	94.4
601	0.85	77	3.2%	90.6
1500	0.41	36	1.5%	87.8
1400	0.49	24	1.0%	49.0
2000	0.28	13	0.5%	46.4
300	0.47	19	0.8%	40.4
2600	0.45	16	0.7%	35.6
1900	4.44	114	4.7%	25.7
1000	0.28	5	0.2%	17.9
2500	0.76	13	0.5%	17.1
400	1.02	17	0.7%	16.7
2700	0.91	15	0.6%	16.5
200	1.79	21	0.9%	11.7
2400	1.29	12	0.5%	9.3
1100	0.60	4	0.2%	6.7
1200	0.41	1	0.0%	2.4
1800	6.07	4	0.2%	0.7
600	0.01	0	0.0%	0.0
1300	2.25	0	0.0%	0.0
TOTALS	27.80	2412	100%	

Finally, we considered the unemployment factor. When we weight the distance matrix by the number of unemployed persons living in each census tract and sum the columns, we determined which census tract is most centrally located to unemployed persons in Wilmington. This again was tract # 1600.

Our next step was to combine the three factors into a single weight for the distance matrix to create a composite geo-demographic profile of locations for illegal drug sales. Since we did not have data on the individual characteristics of those arrested for illegal drugs in Wilmington, we used data from the National Household Survey on Drug Abuse (U.S. Department of Health and Human Services, 1993). We determined the proportion of each category in this national sample that used drugs in the past year. For the age category used in our analysis, the proportion using drugs ranges from 14% to 29%. Therefore, we weighted the age factor by .20. About 30% of the people with less than a high school education used drugs in the past year. Therefore, we weighted our educational attainment factor by .30. Finally, 37% to 41% of the unemployed used drugs in the past year. Therefore, we weighted our unemployment factor by .39. These weighted scores were summed for each census tract and applied as a composite weight to the distance matrix. When the three demographic factors were combined, census tract # 1600 again turned out to be the most accessible.

LIMITATIONS OF THE INITIAL LOCATION-ALLOCATION MODEL

There are two important limitations of the simple form of the location-allocation model. The first is the assumption of a "planar model" in which any location in the city of Wilmington is a potential site for an illegal drug market. Clearly residents of stable neighborhoods with expensive homes are not likely to tolerate open-air drug markets in their midst. In fact, even indoor drug sales locations have been sites of confrontations in stable neighborhoods (Lacayo, 1989). Therefore, we relaxed this assumption to mask out residential areas in which the median value of housing was above average for the city.

The second limitation is the assumption that local addicts will travel anywhere in Wilmington to purchase illegal drugs. Petti way (1994) determined that most addicts do not travel beyond a mile in their journey to purchase illegal drugs. Therefore, we modified our model with a dummy variable of zero if a census tract center was beyond a mile of another and a value of one if it was equal to or less than a mile.

We combined these two revisions of the original model by first excluding from the analysis combinations of census tracts that are more than a mile from each other. Following this, we used the composite factor model, which did not consider census tracts containing residential units valued above the median for the city, and did consider the next most optimal census tract. In this case we no longer used the distance matrix. In its place we used a matrix containing zeros and ones and identified those tracts that were within a mile of the largest number of people who fit our composite profile of potential illegal drug users.

This analysis produced more realistic spatial arrangements than the previous analysis. Figure 3 illustrates there are two clusters of census tracts that are within one mile of the most potential customers who were identified by the composite demographic profile and are below the median value of housing for the city of Wilmington. The most advantageous location is the area including the contiguous census tracts 2200, 2300, and 1400. These three tracts ranked first, second, and third on our composite profile of potential customers while still containing homes below the median for the city. Using these same criteria, the census tracts that ranked fourth and fifth form a second cluster to the east along state highway 13. They are the contiguous census tracts 900 and 602.

These census tracts identified in our final analysis rank near the top in terms of arrests for the sale of illegal drugs. In fact, each forms the heart of a major spatial cluster of arrests for illegal drug sales in Wilmington. Tract 2200 is also the location of a major interchange from interstate highway 1-95. Therefore, it also is expected to serve the nonlocal commuter traffic funneled into the city.

To this point, we had not considered these nonlocal customers commuting into the city; we only considered the spatial arrangement of local demand for illegal drugs. However, Eck (1994) determined that local markets may be the most difficult for police to identify and therefore may not be identified by police arrest records. They may be indoors and require a social network to determine their exact location. They are less likely to be open-air markets that focus on the demand for illegal drugs by commuters. The best locations for selling drugs to commuters are more likely to be open markets near or along major transportation arteries funneling automobile traffic into the city (Eck, 1994).

THE ILLEGAL MARKET FOR NONRESIDENT DRUG USERS

The major transportation artery funneling drivers into Wilmington is 1-95 — an interstate highway connecting East Coast cities. There are three interchanges leading off of 1-95 in Wilmington. We assumed that the closer an area is to one of these interchanges in Wilmington, the more advantageous it is to establish an open-air drug marketplace to serve some of these commuters. In Figure 4 we developed a spatial model of the location of sales areas relative to these interchanges.

In this spatial model of demand for illegal drugs by those who do not reside in Wilmington, we created distance bands of 500 meters in width from each intersection from highway 1-95 in Wilmington. Twelve distance bands were required to encompass the entire city (see Figure 4). However, the outer bands contained large areas that were not within the municipal boundary of Wilmington. In this analysis we only considered areas within a distance band that also were within the city. The area within each distance band that also was within Wilmington was then divided by the number of arrests for sale of illegal drugs that have occurred within this same area. The result is the number of arrests for illegal drug sales per square kilometer in each distance band in Wilmington.

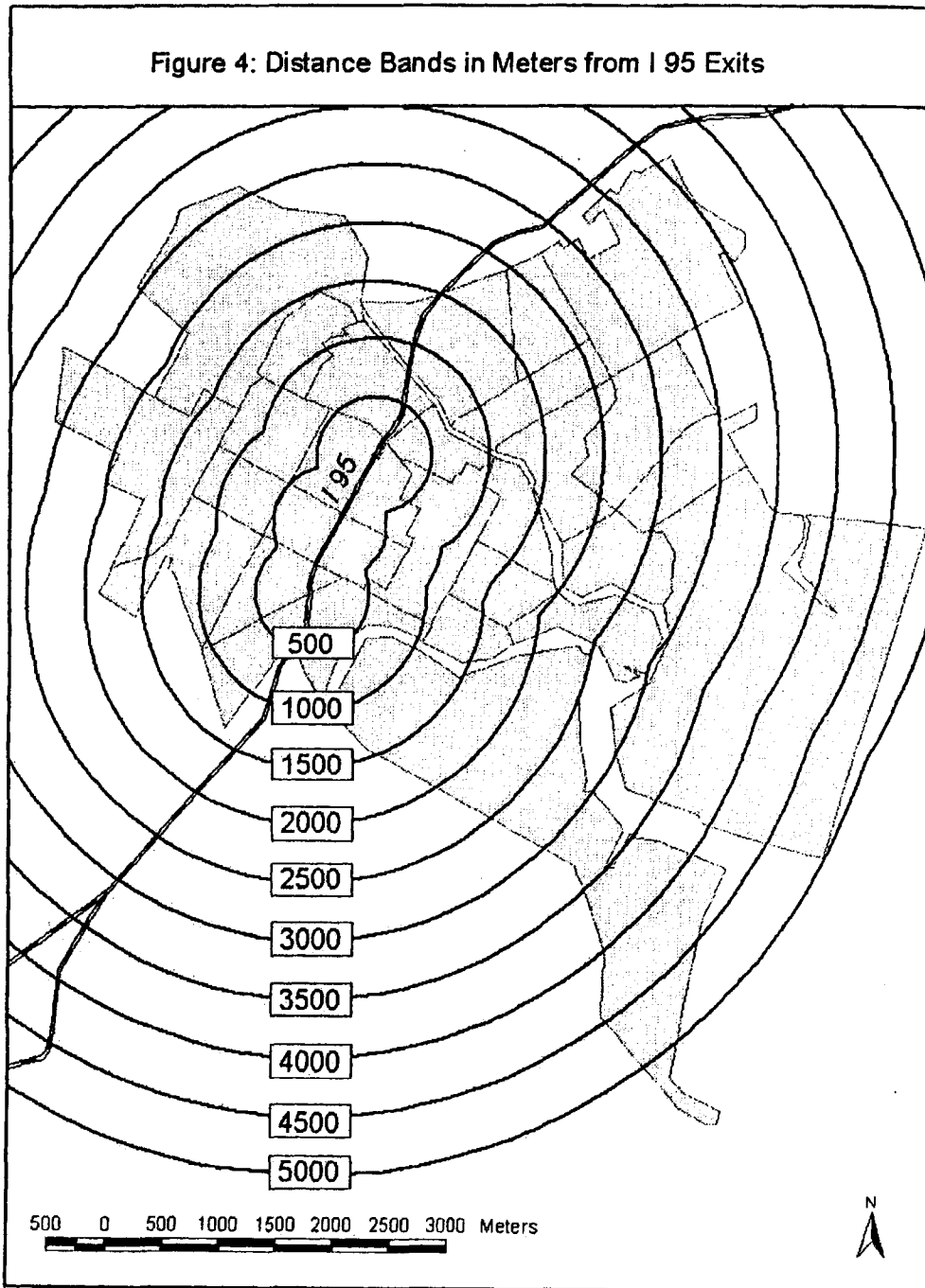
We expected that the inner distance band that contains the interchanges from interstate 1-95 will contain the most drug sales arrests per square kilometer. We also expected that each succeeding distance band outward from this inner band would contain fewer illegal drug sales arrests per square kilometer. We expected this to decrease monotonically with distance from the 1-95 interchanges. Note, that the analysis here is likely to be applicable only to automobile-based cities. Cities based on public transportation, such as New York City, and cities in developing countries may have drug sales concentrated about public transportation stations rather than highway interchanges (Block and Davis, 1996).

Table 2 illustrates the results from this analysis of the spatial arrangement of commuter demand for illegal drugs. Our expectations are largely substantiated by actual data on illegal drug-sale arrests per square kilometer. In fact, the inner band that contains the interchanges from interstate highway 1-95 contains nearly 2.6 times the arrests per square kilometer than the next highest band. Especially high is census tract 2200, which is largely within this distance band and is predicted to have both high local and commuter demand.

The prediction of advantageous locations for the sale of illegal drugs from an economic and geographic marketing perspective is valuable information for both the police and public policy planners. The key issues are what policies one can derive from this information in order to make the sale of illegal drugs less profitable and, therefore, less likely to be established in each location. In the final section of this paper, we identify potential policies designed to take some of the profit out of illegal drug sales by making the market places less spatially accessible and by decreasing the local demand for illegal drugs.

Table 2: Drug Arrests by Distance Band

Distance Band (m)	Area (sq KM)	Drug Arrest Total	Drug Arrest % by Band	Arrests (sq KM)
500	2.001	711	29.5%	355.3
1000	3.369	460	19.1%	136.5
1500	4.046	244	10.1%	60.3
2000	4.134	562	23.3%	135.9
2500	3.625	232	9.6%	64.0
3000	2.675	195	8.1%	72.9
3500	2.454	6	0.2%	2.4
4000	1.9	2	0.1%	1.1
4001 +	3.571	0	0.0%	0.0
TOTALS	27.775	2412	100.0%	



POLICY IMPLICATIONS OF THE MARKET ANALYSIS

Tactics Focusing on Customers From Outside the City

There are several tactics designed to make open-air drug markets less accessible to people who do not reside in the community. Since it is not feasible to eliminate the exits from a major interstate highway in a city, one tactic is to rearrange street patterns so that illegal drug markets are less accessible from the exits. Commuters prefer easy in-and-out routes much like drive-through restaurants. A tactic to make access more difficult is to establish or change the pattern of one-way streets. This can be accomplished by designating a series of three or more streets as one way onto the feeder route off the exit rather than toward a drug market place. If the commuter is required to drive four or more blocks before being able to exit a feeder route, she or he will spend more time and feel less secure traveling through an often strange and potentially hostile neighborhood (Rengert and Wasilchick, 1989).

A related tactic is to establish a series of dead end streets leading from the feeder highway. Again, nonresidents will feel less comfortable buying illegal drugs in an area where they are required to spend time attempting to turn around to get back on the feeder road and the interstate. This tactic is termed the "St. Louis Private Street Plan" (Newman, 1973). It is essentially the same as creating cul-de-sacs (of the type that suburban residents enjoy in their neighborhoods) in the city. It has been determined that this type of street is less crime-prone than one that has many avenues of egress (Bevis and Nutter, 1977).

Another tactic that focuses on the nonresident who purchases drugs in the city is to arrest the buyer and require him to forfeit the vehicle used during the purchase. This practice was termed "operation fishnet" in Philadelphia. It was designed to discourage commuters from entering urban neighborhoods to purchase drugs.

There are many problems associated with this tactic including the possible confiscation of borrowed vehicles or vehicles belonging to a company rather than to the individual purchasing the drugs. Also, the past practice of the police is to keep the operation a secret from the public so that more cars can be confiscated before the public is aware of this possibility. A better tactic to discourage the commuters from visiting drug market places is to advertise beforehand that cars will be confiscated from those who drive into a community to purchase drugs and then carry out the tactic, perhaps on a random time basis. Then, when the public is notified of the confiscated cars, they are more likely to take this possibility seriously than if it is accom-

plished secretly. Secrecy can be punitive but cannot simultaneously be a deterrent.

The best-known tactic focused on open-air drug markets is the "weed and seed" program (Rengert, 1996). This tactic is to plan a police sweep through a community to rid it of illegal drug dealers combined with training of residents to assist the police in resisting their return. Effective cooperation is essential between the police and residents of the community who may not trust the police. If successful, there is a multiplier effect, since a given amount of police resources can be more effective than when there is no community cooperation.

Tactics Focusing on Local Demand

Public policy should not ignore local demand. Rengert (1996) illustrates that even less noxious indoor dealing can have an adverse effect on a community since the dealer can not control the activities of drug users once they leave the establishment. By spatially aggregating the drug dependent property offenders at a dealing location, the market also aggregates the related property and violent crime that tend to focus on the immediate environment. Therefore, even seemingly unobtrusive drug dealers, because of the crime they attract, can destroy the social fabric of a community. Localized demand for illegal drugs should not be ignored, since it determines where a local market place will be profitable.

There are many tactics that focus on the local demand for illegal drugs. The most obvious is to establish effective treatment programs so that those who wish to kick the habit have a means of doing so.

Public policy should also focus on the temporal dimension of addiction. A common feature of drug addiction is that it requires time to afford and to enjoy illegal drugs (Rengert and Wasilchick, 1985). One means of curtailing the time available to experimental drug users is to enact an effective school-attendance policy. There are benefits to taking school truancy seriously and providing meaningful education for urban as well as suburban and rural youth. This may require a more effective means of funding public education other than local property taxes, where low-income housing areas invariably have under-funded schools. It also may entail transfers of resources from more wealthy districts to inner-city schools. Note, again, the importance of national and local policy environments — the specific contexts of both truancy and funding sources for public education vary widely worldwide, and any generalization beyond the U.S. could only be misleading and uninformed.

An effective jobs program that requires time on the job means time that cannot be spent on illegal drug procurement and use. This

is related to an effective educational program but goes further. While employment training should be for jobs that are available in the postindustrial city, they will not be effective if they are make work-jobs programs. The current welfare-to-work programs that are sweeping the United States seek to remove people from public assistance and to move them into gainful employment. However, if the available jobs are unattractive compared with those available in the informal economy (such as illegal drug sales), it is likely that many will not accept them (Fagan, 1993).

Finally, the antidrug campaigns reported by the local and national media need to be focused on potential users better than they have been in the past. Many of these radio and television spots have been written without research on what concerns potential drug users, especially young people. They have tended to focus on health issues that have little meaning for youth, as compared to the middle-aged ad writers who create these media campaigns. Recently, these ads have changed their focus to a major concern of many youth: social acceptance. Using popular sports figures is also more likely to maintain the attention of potential users than ads that use a person from the streets who tells of the dangers of drug abuse.

The importance of targeting these potential users can not be over emphasized. They create the market and therefore the profits from illegal drug sales. If addicted, many form a symbiotic relationship with illegal drug dealers by softening the social fabric of a neighborhood through their crime. This in turn allows drug dealers to operate more openly. Through geographic market analysis, we attempted to predict where it is most profitable to locate these local markets, although not all may have attracted the attention of the police. If these local markets have locational advantages, they may be the forerunners of more noxious open-air drug market places.



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