Pursuing Cultural Goals, Rejecting Institutional Means: An Anomic Analysis of Illegal Labor Market Wages and Household Dynamics

Bryan L. Sykes

February 7, 2005

Contents

Abstract

Despite the plethora of research on the causes and consequences of illicit drug consumption, the distributors of these substances have garnered very little attention. In most of the analyses on this topic, the sellers, users, and the state are the only actors. I contend there are other important latent actors and processes that need to be considered. In this paper I will show that the seller's decision to embed himself in the illegal economy needs to be situated in the context of household dynamics (family demography). Using pooled data from the Arrestee and Drug Abuse Monitoring Program (ADAM), I investigate how household size and composition affect illegal wages earned from illicit drug sales. My findings support the dearth of research on illegal earnings, and they also show that the effect of father-presence in the household has little effect on mitigating the illegal revenues of the seller any more than if the seller lived in a single female-headed household. Lastly, I find that the size of the household is less important than its composition.

1 INTRODUCTION

Illegal drug consumption pervades many urban communities in the United States. Despite government programs that assist individuals in abating their drug use, burgeoning (illicit) substance consumption persists. The market demand for these substances may be so great that some individuals feel their cost-to-benefit ratio is low. Moreover, other social, economic, and demographic forces may serve as catalysts for these individuals to enter the drug production market. The lack of human capital, depressed labor market opportunities in a neighborhood, or the well being of one's family and household members could be factors that propel an individual into this market as suppliers of illicit drugs.

Research has yet to situate the motivations of illegal substance distributors within the context of their familial relations and obligations. Existing research focuses mainly on how family disruption in black, urban communities cause persistent high rates of crime (Sampson 1987); how exogenous forces (unemployment and neighborhood quality) affect and account for the magnitude of crime and incarceration levels (Alba, Logan et al. 1994; Western and Beckett 1999); and the role family structure plays in the intergenerational reproduction of poverty (McLanahan 1985; McLanahan and Booth 1989). Researchers treat these micro and macro processes as independent when, in fact, their interdependence may (better) explain the reasons behind a person being embedded in the illegal labor market as a drug supplier. Temporary shocks of unemployment, arrest, disability, and parental absence can place household income in disequilibrium; however, household income lost, due to these shocks, is mitigated when other household members obtain employment in legal and illegal sectors of the economy. If father absence has a detrimental economic effect on female-headed households, and if labor market opportunities are depressed in a neighborhood laden with crime, then illegal wages from drug sales may assist households in returning to economic equilibrium, if the seller does not act in his own self-interest.

This is an important social stratification issue for three reasons. First, people with less human capital may try to mitigate their poverty through illegal means in order to sustain themselves and their families at consumption levels commensurate to people with more human capital and higher

wages. Second, because policing methods disproportionately target minority communities as both suppliers and consumers of drugs (Cole 1999), the social/class position of the parents-and, indirectly, the household-has implications on the probability of a drug seller being a non-white, since neighborhoods are racially segregated (Massey 1990; Massey and Denton 1993). Lastly, because poverty status is contingent on household income, which varies across family structures (McLanahan 1985) and household size, examining a drug seller's household characteristics enables one to investigate whether or not these additional (illegal) wages ameliorate the plight of impoverished family units.

Because researchers have overlooked the specific effects household characteristics have on an individual's probability of entering the illegal economy as an illicit drug supplier, our understanding of why some poor family members choose to embed themselves in illegal labor market activities is not fully understood, if at all. Disentangling neighborhood, labor market, and household effects may help to explain the cyclical and intergenerational processes whereby father absence translates into 1) household poverty for single mothers, 2) young males becoming drug sellers in order to reap the benefits of immediate economic returns to illegal activities, thereby abating household poverty, and 3) reproducing single households if the drug seller becomes a father and is incarcerated or resides outside the primary household of his child(ren). I argue that illegal drug revenues are a function of the size and composition of the household, the seller's educational investments, the legal

wages of the seller, household income, local labor market opportunities, and the age at which the individual is immersed in the supply market.

2 THEORETICAL FRAMEWORK

2.1 Anomie, Culture Goals, Rationality, and Opportunity Structures

Entering the illegal labor market, as an illicit substance supplier, may seem like an economically irrational decision, given the risks involved (mortality and incarceration); yet the decision to enter such a market could also be the result of endogenous, long-term shocks of unemployment in the household, especially if the actor and his family members do not have sufficient capital (i.e., talent and education) to ensure the economic survival of the household. The rationality of drug selling should not only be situated in economic logic but also in sociological theory. Durkheim's (1951) theory of anomie focuses on the ways in which social conditions can spawn deviant behavior as a result of unlimited aspirations and the breakdown in regulatory norms (i.e. man's social desires are kept in check by external regulating forces–society and its mores). When the collective order is disrupted, men's aspirations begin to rise beyond the point of fulfillment, thereby leading to a moral deregulation or *anomie* (Durkheim 1951).

Extensions of this theory focus on how institutionalized procedures are

the mechanisms by which culture goals are achieved in society, and when one's social position or class location hinders an individual from achieving the culture goal, anomie ensues because individuals strive for cultural goals through the rejection of institutional norms (Merton 1938). Merton (1938) argues that a moral conflict ensues when actors feel obligated to pursue the culture goals through institutional means, even though they may be shut off from legitimate and efficacious institutional means. Ultimately, these actors may employ innovative and illegal methods to achieve the desired culture goal. Ethnographic research on the business ventures of gang members, for example, shows that the decision to sell drugs is motivated by the seller's desire to increase the socioeconomic conditions of himself *and* his family, which underscores how deviant individuals *can* come to make rational decisions as to what is in their best interest (Jankowski 1993). This suggests that the decision to enter the illegal economy might bear positive externalities for future household consumption, if the prospective seller enters the illicit drug market with the intent to achieve the desired culture goals.

Although illegal behavior can be a response when individuals perceive themselves to be cut off from the necessary legal means to achieve the culture goal, such behavior does not explain *why* individuals living and operating under the same social conditions reach different decisions about how to achieve the culture goals. One theory focuses on the *differential availability of illegal means* (Cloward 1959). Cloward (1959) contends that the anomie theory assumes conventional means are "differentially distributed," and in

his theoretical scheme, learning and opportunity structures are 1) finite and 2) location-specific within social structure.

2.2 Toward A Theory of Drug Selling: The Household Size and Composition (HSC) Hypothesis

Popular media, politicians, law and order officials, and much of society hold a strong belief that drug sellers lead ostentatious and prodigal lifestyles, whereby they are the sole consumers of their wages. Whereas it may be true that some distributors lead extravagant lifestyles, there is no research to substantiate such absolute impressions, nor is there evidence that the legal and illegal revenues are for the benefit of self-consumption; such impressions could be widely inaccurate. These pop culture archetypes overdraw men's real life motivations, but the economic rationality implicit in them is so compelling that social science should not rule them out without a test. Furthermore, there is no reason to believe that sellers in the illegal drug market act only or primarily out of self-interest, for their actions may be based on the economic state of their household. In this context, the household size (HS) and composition (HC) could have a major impact on the illegal revenues of a drug seller (i.e., how much the distributor wants to sell and how much he makes) if financial hardships within the household emerge and persist. In such instances, the seller could live outside the household and remit partial earnings (similar to that of migrant workers), or the seller could reside within

the household in order to ensure the financial well being of its members.

The HSC theory has two components: one part is based on the overall household dependency ratio as a function of the number of dependents to legal wage earners independent of composition, henceforth referred to as the dependency ratio effect (DRE) or an age structural effect (ASE); the second component focuses on composition independent of size. The DRE could have two competing effects. First, household size could positively or negatively affect illegal revenues. As the number of household members increases, one might expect there to be a positive relationship between illegal revenues generated and household size, if the household dependency ratio is above some threshold. If such is the case, then the drug seller may be trying to increase household production so that members can consume a sufficient amount of daily goods (food, shelter, clothing, education, etc.). Alternatively, if the dependency ratio is low, then one might expect a negative relationship between household size and illegal revenues generated. This would imply that the seller's illegal wages would decrease because household production is spread across working-age members, and if the seller is a rational actor, then it would be in his best interest to reduce his risk of being apprehended by law enforcement officials.[1]

[1]If the household is composed of elderly members, then their pensions, retirement benefits, and social security payments act as sources of revenue similar to working-aged adults. If some working-aged adults do not contribute to household income, then this theoretical model may or may not hold true. However, it seems highly unlikely that all adult members will be unemployed in a household distribution skewed toward working-aged adults. Even if such is the case, then unemployment and disability payments act as incoming sources of revenue for the household.

Consider the following matrix.[2]

$$\mathbf{DRE} = \begin{bmatrix} 1.00 & 2.00 & 3.00 & 4.00 & 5.00 \\ .50 & 1.00 & 1.50 & 2.00 & 2.50 \\ .30 & .67 & 1.00 & 1.33 & 1.67 \\ .25 & .50 & .75 & 1.00 & 1.25 \\ .20 & .40 & .60 & .80 & 1.00 \end{bmatrix}$$

Let the i^{th} row represent the number of legal wage workers in a household (W), and let the j^{th} column be the number of dependents in the household (D). Suppose HS = i+j thereby yielding the total number of household members (HS). Now let $DRE_{i,j} = \frac{D}{W}$. According to my theory, there could be some dependency ratio threshold (δ) that may incite people to engage in illegal activity due to household production constraints. Assume that households with equal numbers of workers and dependents is in economic equilibrium (i.e. $\delta = 1$) because workers have just enough resources to accommodate the number of dependents and themselves. If $\delta > 1$, then household consumption could be threatened because economic resources are spread out over more individuals and the workers would have to produce more in order to return the household to steady-state equilibrium. Drug selling could be one of many externalities due to the household DRE.

Secondly, the composition of the household (HC) may affect the illegal

[2]To avoid trivial solutions, I focus on households that have at least one dependent and one legal wage earner.

drug revenues of the seller. If the seller resides with his parents or other biological kin (children, siblings, extended family, etc.) then he may have more of a vested interest in their increased consumption of everyday goods than that of his friends and/or sexual liaisons. Furthermore, the presence of parents could suppress the illegal earnings of the seller. More specifically, it could be that the effect of father's presence within the household would be much more negatively related to the seller's illegal income than the mother's presence because males tend to earn higher legal wages. However, a mother's presence in the household may also reduce the seller's wages if he is concerned about exposing her to a possible risk, as a consequence of his illicit activities.

2.3 The Effect of Human Capital Investments and Legal Revenues on Illegal Wages

Economic literature mostly examines the effects of human capital investments on (legal) labor market wages. To date, there are very few studies, if any, that investigate the effect of human capital investments on illegal labor market wages. It could be that as drug sellers acquire more human capital skills and legal labor market earnings, their illegal income shrinks because of the returns to education and additional skills. Moreover, if the drug seller is a rational actor, then he would want to decrease his illicit drug sales when his legal income rises because the original cost-to-benefit ratio has changed (i.e., the benefits of drug distribution have remained fairly fixed over time, but the

cost of selling drugs would be higher due to the seller's gains in education and skills, if he is apprehended by law enforcement officials).

A drug seller's legal wages could also affect his desired illegal income. It could be that drug sellers also have legal incomes-(possibly) at all or different stages in the life-cycle-that augment their illegal earnings. Once again, if the drug seller is a rational actor, he would spread his risk across (legal and illegal) labor markets, thereby creating the impression that any illegal wages he earned could be from his legal employment-depending on his education and skill-base. Levitt and Venkatesh (2000) find that, among street level drug sellers, their illegal hourly earnings are less than minimum wage despite the risks involved and their employment in the legal labor market. Yet, an interesting question arises from this discussion: What is the elasticity of illegal earnings with respect of legal wages?

3 SUBSTANCE ABUSE AND ECONOMICS

The links between illicit substance consumption, illegal drug distribution, and differential arrests, prosecutions, and sentencing outcomes, for different racial groups, are well known (Schmitt 1991; Schmitt 1991; U.S. Sentencing Commission 1995; Tonry 1997; Weich and Angulo 2000; Oliver 2002). Although the fraction of blacks who commit drug offenses is roughly proportional to their percentage of the U.S. population (Riley and National Institute of Justice 1997; Substance Abuse and Mental Health Services National Adminis-

tration 1999), the Bureau of Justice Statistics reports that blacks account for 38% of those arrested for drug offenses, 59% of all drug-related convictions (Bureau of Justice Statistics 1997) and more than 50% of all drug offenders in U.S. state correctional facilities (Mauer 1999). Furthermore, even though black youths have lower levels of drug use, per capita, when compared to white youths (Bureau of Justice Statistics 1992; National Institute on Drug Abuse 1997), police departments use racial profiling methods that disproportionately target minorities as drug traffickers and consumers (Harris 1997; Koch Crime Institute 1998; Cole 1999; Common Sense for Drug Policy 1999; Harris 1999; Oliver 2002). Interests in these areas of crime, deviance, and law are important because policy recommendations are often attached to their findings.

While many criminologists and sociologists focus on the aforementioned aspects of drug use and distribution, the legal system, and policy initiatives, economists have tried to disentangle the consequences of illicit substance consumption on wages. Despite the paucity of literature-as it relates to the effects of drug use on labor market wages, future employment, and job mobility-researchers have made gallant strides in unearthing the positive and negative wage outcomes among illicit substance users. Kaestner (1991) examines the effects of cocaine and marijuana use on the wages of young adults, using data from the 1984 National Longitudinal Survey (NLS). He develops a model that accounts for the interdependent relationship between drug use and wages. Causality occurs in both directions; drugs are consumption goods,

which implies that usage (and the amount of usage) depends on income, and one's wage could be negatively impacted if drug consumption interferes with one's work. Kaestner finds that increased use of cocaine or marijuana is associated with higher wages, and that the effects of age and gender do not alter the positive relationship between illicit substance consumption and income. His results further suggest that drug users are expected to have higher wages than nonusers in most cases, which, as he contends, is due to users having more labor market experience.

Unlike Kaestner's (1991) findings, research also shows that the effect of both marijuana and cocaine use on men's wages is negative, while women who consume cocaine have large, positive wage estimates (Kaestner 1994). In his updated article, Kaestner (1994) uses data from the 1984 and 1998 NLSY to fit fixed-effects models in order to obtain better estimates of the relationship between illicit substance consumption and income. He finds that, for men, a one-unit increase in cocaine use would reduce an individual's wage from 28% (if currently a user) to 22% (if one is a new user), and that a one-unit increase in marijuana use is expected to reduce a man's wage by 9% (if he is a current/habitual user) or 52% (if he is a new user). Kaestner argues that, "an individual's initiation into use has a more adverse impact on the individual's wage than an increase in use for a previous year," (Kaestner, 1994, p.463).

Like Kaestner, Register and Williams (1992) use data from the 1984 NLSY to study the effect of marijuana and cocaine use on the work pro-

ductivity of young men. They use wages as a proxy for productivity and find that long-term and on-the-job use of marijuana negatively affects wages. Yet, Register and Williams' research also indicates that the net productivity effect for all marijuana users was positive regardless of whether or not those individuals engaged in long-term or on-the-job drug use. The authors did not find a statistically significant association between cocaine use and productivity.

Although many economists focus on the effect of substance abuse on one's wages, research also exists in the area of job mobility. Kandel and Yamaguchi (1987) studied the effect of drug use on job mobility. They find that drug use has a strong effect on job separation (i.e., drug use predicts job turnover and decreased tenure), which they attribute to preexisting differences among individuals who start using drugs (selection effects) instead of the effect of the drugs themselves.

Research also shows that the impact of drug use on earnings could be related to life-cycle consumption patterns. Using the data described previously, Kandel et al. (1995) investigate whether or not the stage of the life-cycle matters when examining the effect of drug use on wages. They find that the effects of illicit substance use on wages is positive in the early stages of labor force participation (the late twenties) and negative in later stages (by the mid-thirties). Kandel et al contend that it takes more than a decade for the negative effects of drug use on wages to appear. They suggest that compensation contracts and investments in training, as well as different

types of job changes among users and nonusers (in the short and long run), partially explain the observed opposite relationship between drug use and earnings at different stages of the life-cycle.

Lastly, research also exists in the area of labor supply and drug use. Kaestner (1994) investigates whether the frequency and timing of marijuana and cocaine use are systematically related to labor supply. He uses cross-sectional and panel data from the 1984 and 1988 NLSY to obtain the estimates. The cross-sectional data indicate that illicit drug use has large, negative effects on labor supply, while longitudinal data, however, suggest that substance use does not have a significant adverse impact on labor supply.

The review of the literature highlights an apparent research myopia: drug suppliers have not been studied at all, while the effect of drug consumption on income has been studied-and continues to be studied-thoroughly. Although other research highlights the negative effects of drug use on the number of missed work-days (Zarkin, French et al. 1992) and the rate of unemployment and the length of time unemployed (Miller, Cisin et al. 1978; Kandel 1984; White, Aidala et al. 1988; Kandel and Davies 1990), the effect of household size and composition on drug consumption has not garnered any attention. Furthermore, researchers have neglected to investigate the relationship between illegal revenues (from drug production) and attributes of the family and household (i.e., the size and members). It is this area that serves as the focus of my research.

4 METHODOLOGY

4.1 Data

I use pooled, cross-sectional data from the 1998 and 1999 Arrestee Drug Abuse Monitoring (ADAM) Program, which measures the levels and trends of people arrested and booked in 35 U.S. cities. Participation in the project is voluntary, and the collected information remains anonymous and confidential. The survey relies on self-reported consumption of illegal substances, and positive urinal tests reveal the types of drugs that are in the respondent's system at the time of interview. Data on the arrestee's legal and illegal wages are reported for the last month, as well as the revenues spent on illegal drug consumption. Demographic variables, such as the arrestee's race, income, age, sex, education, and household characteristics (e.g., size, type, and the relationship to people in the household), are included. Arrestee's current and previous offense(s), the seriousness of the offense (as indicated by felony or misdemeanor designations), and the previous arrest history are also present in the data. Despite detailed questions about the composition and size of the arrestee's living environment, household income is not obtained.

4.2 Measures

The arrestees were asked to quantify their legal and illegal wages in the past 30 days and to explain their main source of that income. Income, age, education, household size-the sum of parents, spouses, boy/girlfriend,

children, siblings, extended kin, friends, and unrelated members presently residing in the reported living quarters-are continuous variables; and the presence of the arrestee's mother, father, boy/girlfriend, and/or spouse is dichotomously coded (1 if yes and 0 if no). Also, I created a dummy variable to indicate whether or not the arrestee is a drug seller (1 if yes and 0 if no) if any of the three charges he was arrested for involved drug sales or if he stated that his main source of income in the last 30 days was from drug sales.

4.3 Theory Evaluation

To evaluate the plausibility of the HSC theory (and DRE indirectly through HS), I will test several hypotheses. First, if illegal revenues are negatively related to increases in household size,then this could provide evidence for ASE theory of drug selling, if the household dependency ratio is high $\delta > 1$ because there are more members of working age.[3] Since I do not have data on the ages of each member within the household, I will assume that the age structure is old, since 22% of the respondents say they live with their biological children (i.e., one might think that $\delta < 1$ for the household DRE). Second, I anticipate the relationship between human capital (as measured by education) and illegal revenues to be negative and strong because of increased opportunity costs as education increases. Finally, HC could matter differently for biological and non-biological households. Yet, even within bi-

[3]My concept of "old" refers to anyone who is 16 or older, since there are some households that have more children (younger than 16) than adults. I choose 16 as the cutoff because that is the age at which an individual can legally obtain work.

ological households, one might expect parental presence in the household to have a strong, negative effect on illegal wages, and that father-presence would suppress illegal income more strongly than the mother-presence, since males tend to have higher earnings.

4.4 Methods

There is reason to believe that respondents who report zero illegal and/or legal wages may be different from arrestees who report such wages. This sample selection bias could substantially over predict illegal income estimates. Including all zero illegal income responses in my analysis would dramatically affect the role household characteristics have on a drug seller's illegal income. I use a Tobit model, which allows one to deal with censored regression models for limited dependent variables. More specifically, this procedure accounts for the fact that illegal wages are inherently censored at zero and the high percentage of respondents report zero wage values. The Tobit model will yield unbiased estimates in the presence of high zero illegal wage earners, compared to the use of a multivariate OLS model. I assume that the functional form of multivariate model will follow a log-linear earnings distribution. The structural equation for the Tobit model is

$$y_i = \begin{cases} y_i^* = \mathbf{x_i}\beta + \varepsilon_i & if y_i^* > \tau \\ \tau_y & if y_i^* \leq \tau \end{cases}$$

$$where \quad \varepsilon_i \sim \mathbf{N}(0, \sigma^2) \tag{1}$$

Since all cases are used in the model, y* is the latent variable observed for values greater than τ and is censored for values less than or equal to τ. I add one dollar to all respondents, and I code ln(y) = $\tau_y = 0$ since some people did not report illegal wages. This leads to $\tau = \tau_y = 0$.

4.5 Models

Equation (2) represents the multivariate tobit model. I estimate the log of monthly illegal earning as a function of household size and composition, personal characteristics, human capital investments, and arrest/drug history on his illegal earnings.

$$ln(y_i) = \alpha + \beta_1 X_1 + \sum_{i=2}^{6} \beta_i X_i + \beta_7 X_7 + \sum_{i=8}^{18} \beta_i X_i + \beta_{19} X_{19} + \varepsilon_i \qquad (2)$$

where i indexes individuals; X_1 is a dummy variable for whether or not the person is a drug seller; $X_{2:6}$ is a vector of covariates representing demographic characteristics (legal income, education (in years), age, race, gender, and a zip code poverty index); X_7 is the number of members in the household; $X_{8:18}$ is the composition vector for detailing who the household members are; X_{19} indicates whether the individual has served time in jail or prison; and ε_i is the normal error term.

5 FINDINGS

5.1 Sample and Household Characteristics

Table 1 provides individual and household descriptive statistics for the entire sample (N=74944). 72.5% of the sample is between the ages of 15 and 35, and 77.6% of the arrestees are male.[4] Non-whites comprise 68% of individuals in the study, while only 8% of the sample is engaged in illicit substance distribution. Almost 86% of these arrestees have completed 12 or fewer years of high school education.

Also, over 84% of the arrestees live in households that have five or fewer members. The specific composition of membership is a follows: mothers are present in 31% of the households, while only 13% of the respondents surveyed answered that their fathers are present in the household. Ten percent of the sample resides in households that have both the biological mother and father is present. Twenty-two percent of the respondents live with their children and almost 30% are in household where their siblings are present.

Moreover, partner presence is worth discussing. Ten percent of the arrestees reside with spouses, while 27% of live with boy/girlfriends. Less than one-fifth of respondents share living quarters with other relatives, and almost 5% of the arrestees are in households with their grandparents. Finally, the presence of other individuals in the household is worth knowing. Eighteen percent of arrestees reside in spaces where their friends are present, while

[4]For convenience purposes, age was recoded into a categorical variable for this table.

11.3% of respondents live with other unrelated individuals.

5.2 How Much They Make: Legal and Illegal Wages by Distributor Status

Table 2 illustrates the legal and illegal wages the arrestees earned in the last 30 days. For the entire sample, the mean and median legal wages are greater than their illegal income. Yet, examining only the sample could obfuscate earning disparities between non-drug distributors and drug sellers. Non-drug distributors' legal wages are slightly higher than those of drug sellers, while drug distributors have higher illegal earnings than non-sellers.

5.3 The Effects of Individual and Household Characteristics

Next I examine the life-cycle earnings profile of drug sellers independent of other factors. The age at which wages are maximized (5) is calculated by taking the derivative (4) of equation (3) and solving for age after it has been set equal to zero.

$$ln(y_i) = \beta_0 + \beta_1 X_1 + \beta_2 X_1^2 + \epsilon_i \quad (3)$$

$$\frac{\partial \ln(y)}{\partial X} = \beta_1 + 2\beta_2 X_1 \quad (4)$$

$$\text{where } 0 = \frac{\partial \ln(y)}{\partial X}$$

$$max(X_1) = \left| \frac{-\beta_1}{2\beta_2} \right| \quad (5)$$

Figure 1 shows that older drug sellers earn more up to the age of 34, after which, sellers over the age of 34 begin to experience a decline in their illegal drug wages. This life-cycle earnings maximization profile occurs much earlier in life than for non-institutionalized workers.

Figure 2 illustrates that as household size increases, drug sellers' illegal wages decrease, and that the seller's illegal wage reaches a minimum when there are 8.6 members in the household. Figure 3 indicates that a drug seller's education is positively related to his illegal revenues.

Finally I fit a log-log model (6) to calculate the elasticity of illegal wages controlling for legal wages. The elasticity is defined as:

$$ln(y_i) = \beta_0 + \beta_1 ln(X_1) + \epsilon_i \quad (6)$$

$$\text{where } \beta_1 = \frac{100 * (\Delta Y/Y)}{100 * (\Delta X/X)}$$

I calculate an elasticity of .0804. So a 1% change in legal wages is associ-

ated with a statistically significant ($p < .001$) .0804% change in illegal wages. Moreover, Figure 4 shows the effect of a drug seller's legal wage on his illegal earnings. When the seller is perfectly embedded in the illegal market, his illegal wages are approximately $365 per month. As the seller makes more legal wages, his illegal income begins to rise. This could be due to the fact that increases in household size may require additional production on his part in order to ensure equal consumption across the household members, if $\delta > 1$ for the household dependency ratio.

5.4 Evaluating the HSC Hypothesis

Table 3 illustrates the effect household size and position, personal characteristics, human capital investments, and previous arrest history have on illegal wages. Model 1 shows that household size has a small, but significant, negative effect on the illegal wages of the drug seller. The seller's legal wages tend to reduce the income generated from illicit substance sales.

In model 2, I focus on the composition of the household. As you can see, the size effect remains positive, but has changed in magnitude. Each additional household member raises illegal wages, but this increase is offset by the stronger, negative effects of certain members in the household. It could be that these members, excluding the children, are not only of working age but also embedded in the formal labor market.

Further, models 3 and 4 add controls for non-biological household members. Controlling for these individuals attenuates the size effect *as well as* the

impact of having biological kin present in the household. Removing kin from model 4 increases the illegal revenues of the seller, unless he is married. The sellers could be improving their own socioeconomic conditions independent of their families but it does not preclude positive externalities from existing (in the form of earnings remittances to family members, as Jankowski (1993) finds).

Finally, I add controls for whether or not the respondent was arrested in the last year (model 5). Whether or not a person served time in the last year does have a strong, positive and significant effect ($p < .001$) on one's illegal wages. The effect of household size remains negative and weak.

6 CONCLUSION

Despite societal beliefs that all or most drug sellers are only engaged in the illegal economy, my research shows that some sellers are also embedded in the legal labor market (Table 2). Their legal labor market earnings are positively related to their illegal wages from illicit drug sales. Moreover, a drug seller's illegal market wage decreases as the household size increases. This could be due to an older age structure in the household, which may suggest that the contribution of adult and adolescent members to household productivity strongly reduces the seller's illegal wage, even though it may also increase the likelihood that the person will sell drugs.

Furthermore, there seems to be evidence for the HC theory. Household

composition matters size effects in determining the seller's illegal income than household size. For single parent households, father-presence does not reduce a seller's illegal wage any more than if the seller was in living in a household headed by his mother. However, the presence of both parents, in the household, has a stronger effect on reducing a seller's illegal income than the sole presence of either parent, when the household is composed of biological kin. Residing with a boy/girlfriend has a strong ($p < .0001$), positive effect on a seller's illegal income, even after controlling for the presence of friends and other unrelated members. This suggests that biological affiliations among household members suppresses illegal income while non-biological acquaintances exacerbates it.

Education is positively related to a drug seller's illicit labor market earnings. It could be that the 14.5% of the sample that has more education were subsidizing their human capital investments with the illegal revenues generated from illicit drug transactions. Moreover, if sellers are apprehended, tried, and found guilty of drug sales or having the intent to distribute drugs in their possession, then they may not qualify for federal student aid because of felony convictions.[5] If they are not awarded assistance because of their conviction, then this may serve to further immerse the sellers in the illegal economy because their future human capital investments are dependent on illicit drug sales and revenues.

[5]On FAFSA forms, all students applying for federal education assistance must answer the question regarding whether or not they have been convicted of a felony crime.

Therefore, household size and composition, personal characteristics, human capital investments, and previous arrest history may help to explain the likelihood of a person entering the illegal labor market as drug sellers, for these statistically significant factors partially elucidate the variation in drug seller's illegal wages. Economic demographers, economists, sociologists, and criminologists need to focus more attention on the role of household size and composition-as motivating factors–when examining illegal labor market wages of drug sellers. This area of research has gone unnoticed for far too long.

7 LIMITATIONS

Unobserved heterogeneity, a special case of selection bias, may be a severe problem in this analysis. It could be that individuals arrested for drug production and consumption may be less skilled or experienced in concealing their illicit sales transactions than others who were not arrested. Furthermore, differential and vigorous policing in certain neighborhoods could exacerbate these differences in who is, and is not, arrested for drug trafficking and consumption.

Moreover, because these data are not random, it is difficult to generalize beyond those who were arrested and volunteered for this study. There is reason to believe that the people arrested are different from those who were not arrested, and respondents who volunteered may be unlike individuals who

chose not to partake in the study. I am unable to quantify these sources of bias and error, but future studies would benefit from a randomized sample of criminals embedded in the illegal drug economy. However, procuring a sample frame for such a population is extremely difficult, thereby making statistically appropriate sampling procedures not an option for many researchers.

Lastly, the lack of longitudinal and panel data are another limitation of this study. Because I use pooled, cross-sectional data, the patterns I obtain over age do not reflect a cohort trend, but rather a period trend. However, if there were a series of cross-sectional data on this issue every five to ten years and the overall trend exhibited persists, one could argue that the period effects may resemble the overall cohort trend. Nonetheless, my results would benefit from confirmation with longitudinal data analysis.

8 WORKS CITED

Alba, R., J. Logan, et al. (1994). "Living with Crime: The Implications of Racial/Ethnic Differences in Suburban Location." Social Forces 73(2): 395-434.

Bureau of Justice Statistics (1992). "Drugs, Crime and the Justice System." U.S. Department of Justice, http://www.usdoj.gov/.

Bureau of Justice Statistics (1997). Source book for Criminal Justice Statistics 1997. Washington D.C., U.S. Department of Justice.

Cole, D. (1999). No equal justice : Race and Class in the American Criminal Justice System. New York, New Press : Distributed by W. W. Norton.

Common Sense for Drug Policy (1999). "The Effective National Drug Control Strategy." http://www.csdp.org/edcs/page30.htm.

Harris, D. (1997). "'Driving While Black' and All Other Traffic Offenses: The Supreme Court and Pretextual Traffic Stops." Journal of Criminal Law and Criminology 544(87).

Harris, D. (1999). "The Stories, Statistics, and the Law: Why 'Driving While Black' Matters." Minnesota Law Review 265(84).

Kaestner, R. (1991). "The Effect of Illicit Drug Use on the Wages of Young Adults." Journal of Labor Economics 9(4): 381-412.

Kaestner, R. (1994). "The Effect of Illicit Drug Use on the Labor Supply of Young Adults." The Journal of Human Resources 29(1): 126-155.

Kaestner, R. (1994). "New Estimates of the Effect of Marijuana and Cocaine Use on Wages." Industrial and Labor Relations Review 47(3): 454-470.

Kandel, D. (1984). "New Estimates of the Effect of Marijuana and Cocaine Use on Wages." Industrial and Labor Relations Review 47: 454-70.

Kandel, D., K. Chen, et al. (1995). "The Impact of Drug Use on Earnings: A Life-Span Perspective." Social Forces 74(1): 243-270.

Kandel, D. and M. Davies (1990). "Labor Force Experiences of a National Sample of Young Adult Men: The Role of Drug Involvement." Youth and Society 21: 411-45.

Kandel, D. and K. Yamaguchi (1987). "Job Mobility and Drug Use: An Event History Analysis." American Journal of Sociology 92(4): 836-878.

Koch Crime Institute (1998). The Falling Crime Rate.

Massey, D. S. (1990). "American Apartheid: Segregation and the Making of the Underclass." The American Journal of Sociology 96(2): 329-357.

Massey, D. S. and N. A. Denton (1993). American apartheid : Segregation and the Making of the Underclass. Cambridge, Mass., Harvard University Press.

Mauer, M. (1999). Race to Incarcerate. New York, The New Press.

McLanahan, S. (1985). "Family Structure and the Reproduction of Poverty." The American Journal of Sociology 90(4): 873-901.

McLanahan, S. and K. Booth (1989). "Mother-Only Families: Problems, Prospects, and Politics." Journal of Marriage and the Family 51(3): 557-580.

Miller, J., I. Cisin, et al. (1978). Highlights from the National Survey on Drug Abuse:1977, Washington D.C., George Washington University Social Research Group.

National Institute on Drug Abuse (1997). "Drug Abuse Among Racial/Ethnic Minorities." http://www.nida.nih.gov/.

Oliver, P. (2002). "Racial Disparities in Criminal Justice." http://www.ssc.wisc.edu/ oliver/RACIAL/RacialDisparities.htm.

Register, C. and D. Williams (1992). "Labor Market Effects of Marijuana and Cocaine Use Among Young Men." Industrial and Labor Relations Review 45(3): 435-448.

Riley, J. and National Institute of Justice (1997). "Crack, Powder Cocaine, and Heroin: Drug Purchase and Use Patterns in Six Cities." Department of Justice.

Sampson, R. J. (1987). "Urban Black Violence: The Effect of Male Joblessness and Family Disruption." American Journal of Sociology 93(2): 348-382.

Schmitt, C. (1991). Getting Minorities Fairer Plea Bargains. San Jose Mercury News. San Jose, CA: 1A.

Schmitt, C. (1991). Plea Bargaining Favors Whites As Blacks and Hispanics Pay Price. San Jose Mercury News. San Jose, CA: 1A.

Substance Abuse and Mental Health Services National Administration (1999). "National Household Survey on Drug Abuse in 1997." U.S. Department of Health and Human Services,.

Tonry, M. H. (1997). Sentencing Matters. New York, Oxford University Press.

U.S. Sentencing Commission (1995). "Special Report to Congress: Cocaine and Federal Sentencing Policy." 186-188.

Weich, R. and C. Angulo (2000). Racial Disparities In the American Criminal Justice System. Washington, D.C., Leadership Conference on Civil Rights: 185-218.

Western, B. and K. Beckett (1999). "How Unregulated is the U.D. Labor Market? The Penal System as a Labor Market Institution." The American Journal of Sociology 104(4): 1030-1060.

White, H., A. Aidala, et al. (1988). "A Longitudinal Investigation of Drug Use and Work Patterns among Middle-Class White Adults." The Journal of Applied Behavioral Science 24(455-69).

Zarkin, G., M. French, et al. (1992). The Relationship Between Illicit Drug Use and Labor Supply. unpublished paper.

Table 1: Descriptive Statistics of Individual and Household Characteristics

Age Category	**(percent)**	**Household Size**	**(percent)**
6-14	0.8	1	9.7
15-20	21.1	2	22.2
21-25	17.2	3	21.8
26-30	17.5	4	19.0
31-35	16.7	5	12.6
36+	26.7	6+	14.7
Sex		Parental Absence? (Yes)	
Male	77.3	Mother	30.0
Female	22.7	Father	13.0
		Mother & Father	10.0
Race		Partner Presence? (Yes)	
Non-whites	68.0	Spouse	10.0
Whites	32.0	Boy/Girlfriend	27.1
Drug Seller?		Extended Kin? (Yes)	
Yes	8.0	Grandparents	4.9
No	92.0	Other Relatives	17.8
Education		Other Members? (Yes)	
Less than HS	60.5	Children	22.0
High School	25.0	Siblings	29.6
Some College	11.9	Friends	18.3
College Degree	2.6	Unrelated	11.0

Table 2: Legal and Illegal Wages Earned in the Last 30 Days by Level of Analysis

Income	Mean	Median	N
Entire Sample			
Legal	6.15	6.46	74944
Illegal	4.19	3.73	75191
Non-Drug Sellers			
Legal	6.41	6.69	60988
Illegal	6.19	6.22	8733
Drug Sellers			
Legal	6.14	6.26	3844
Illegal	7.08	7.17	3388

Table 3: The Effect of Household Size, Personal Characteristics, Human Capital Investments, and Previous Arrests on Illegal Wages

Variable	M1		M2		M3		M4		M5	
Constant	4.633	***	4.421	***	4.487	***	4.191	***	3.670	***
	0.185		0.202		0.203		0.194		0.210	
Drug Seller	4.589	***	4.520	***	4.492	***	4.502	***	4.413	***
	0.079		0.081		0.081		0.081		0.079	
Household Size	-0.073	***	0.188	***	-0.126	*	-0.128	***	-0.122	*
	0.013		0.021		0.061		0.016		0.060	
Age	-0.003		-0.006	*	-0.003		0.001		-0.004	
	0.003		0.003		0.003		0.003		0.003	
Male	-0.247	***	-0.226	***	-0.153	**	-0.153	***	-0.245	***
	0.060		0.064		0.064		0.062		0.064	
Non-white	-0.324	***	-0.239	***	-0.231	***	0.220	***	-0.159	**
	0.057		0.060		0.060		0.060		0.059	
ln(legal income)	-1.084	***	-1.037	***	-1.023	***	-1.023	***	-0.956	***
	0.003		0.003		0.003		0.003		0.003	
Education	0.132	***	0.121	***	0.121	***	0.122	***	0.126	***
	0.013		0.013		0.013		0.013		0.013	
Mother			-0.810	***	-0.424	***			-0.408	***
			0.077		0.105				0.104	
Father			-0.844	***	-0.421	*			-0.396	*
			0.167		0.183				0.181	
Both Parents			0.605	**	0.452	*			0.443	*
			0.198		0.200				0.197	
Grandparents			-0.463	***	-0.128				-0.141	***
			0.101		0.117				0.116	
Children			-0.810	***	-0.424	***			-0.408	***
			0.077		0.105				0.104	
Siblings			-0.289	***	0.038				0.029	
			0.035		0.068				0.065	
Other Relatives			-0.224	***	0.098				0.088	***
			0.030		0.065				0.065	
Spouse					-0.331	***	-0.288	**	-0.265	*
					0.120		0.091		0.119	

Continued on next page

Variable	M1	M2	M3	M4	M5
Boy/Girlfriend			0.536 ***	0.634 ***	0.498 ***
			0.065	0.064	0.095
Friends			0.432 ***	0.474 ***	0.395 ***
			0.065	0.026	0.065
Unrelated			0.240 ***	0.262 ***	0.206 **
			0.067	0.032	0.066
Served Time					1.567 ***
					0.057
N	64596	58210	58209	58210	57920
X^2	8413	7912	8053	7994	8788
D_f	7	14	18	11	19

Figure 1: The Life-cycle Illegal Earnings Profile for Drug Sellers

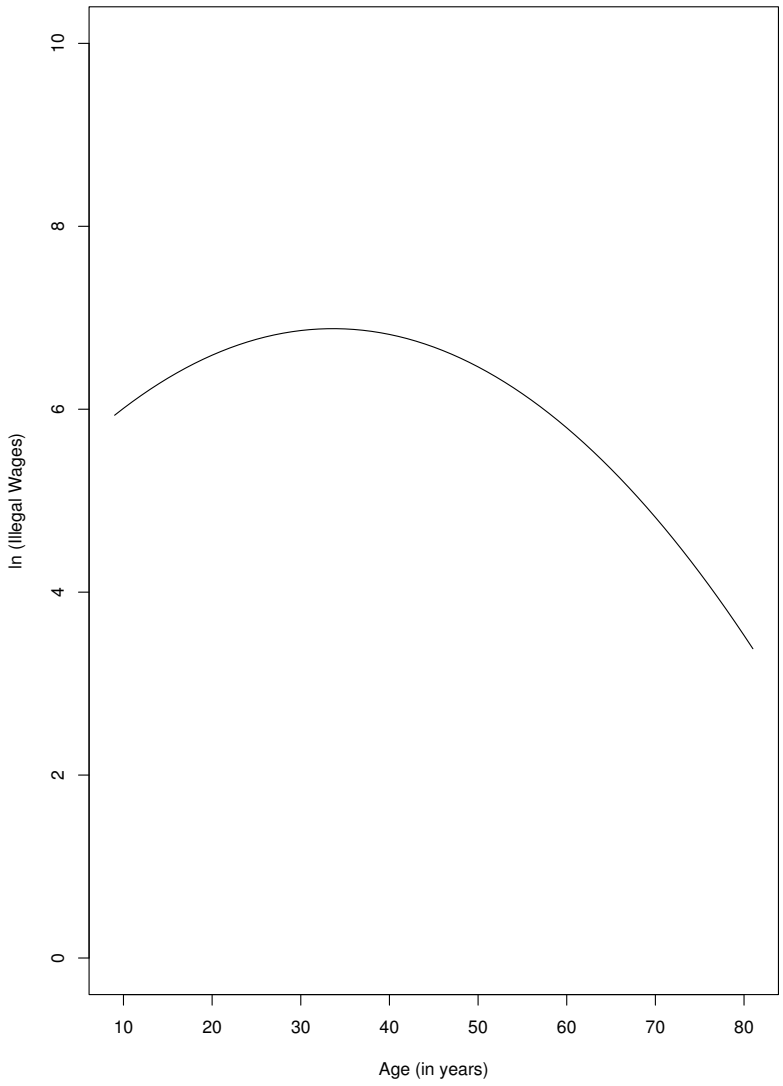

Figure 2: The Effects of a Drug Seller's Household Size (as a quadratic function) on Illegal Wages

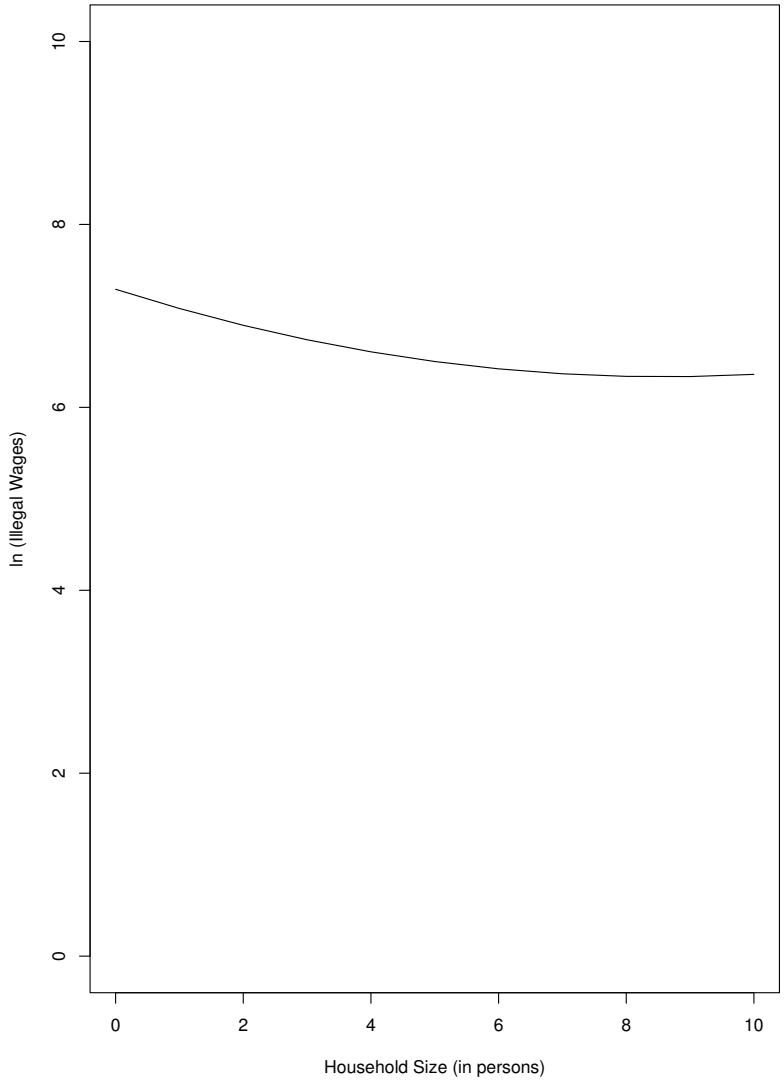

Figure 3: The Effects of a Drug Seller's Education on Illegal Wages

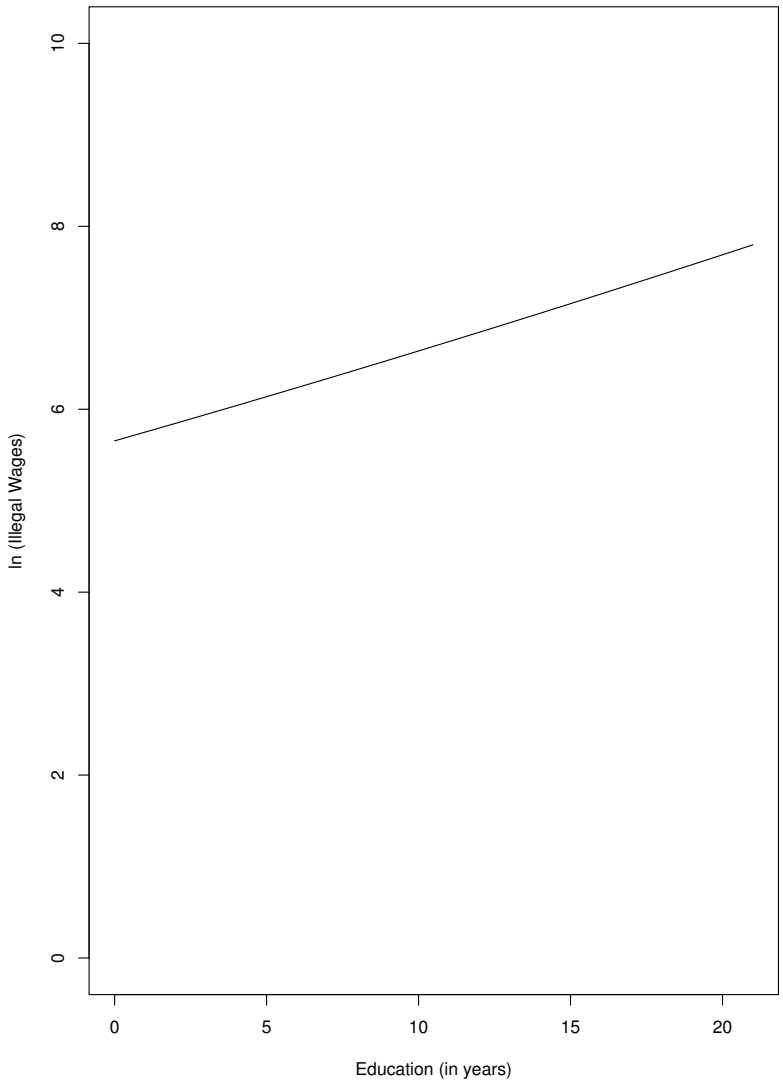

Figure 4: The Life-cycle Illegal Earnings Profile For Drug Sellers as a Function of Legal Earnings