

# In the shadow: illegal markets and economic sociology

Jens Beckett\* and Frank Wehinger

*Max Planck Institute for the Study of Societies, Cologne, Germany*

\*Correspondence: [beckert@mpifg.de](mailto:beckert@mpifg.de)

Although illegal markets have considerable economic significance and are of theoretical importance, they have been largely ignored by economic sociology. In the first part of this article, we propose a categorization for illegal markets. In the second part, the structural characteristics of illegal markets are described along the three coordination problems of valuation, competition and cooperation. By conceptualizing the structure of illegal markets based on general coordination problems, which are also cornerstones in the study of legal markets, we can locate the systematic differences in the functioning of markets that operate illegally. The article concludes by appealing to economic sociology to strengthen research on illegal markets and suggesting areas for future empirical research.

**Keywords:** illegal markets, sociology of markets, markets, criminology, economic sociology, informal economy, valuation, cooperation, competition

**JEL classification:** D40 market structure and pricing, O17 formal and informal sectors, shadow economy, institutional arrangements, Z13 economic sociology, economic anthropology; social and economic stratification

Research on markets stands at the center of economic sociology (Zelizer, 1979; White, 1981; Fligstein, 2001b). Over the past three decades, sociologists have investigated almost every existing type of market based on a variety of theoretical premises. Almost all of this research in economic sociology, however, starts from the assumption of the legality of market exchange. While illegal markets are a subject in criminology (Arlacchi, 1998; Nardo, 2011), general sociology (Gambetta, 1988b; Gambetta, 1993), history (Spillane, 2000), anthropology (Hart, 1988) and economics (Reuter, 1985; Feige, 1989; Paul and Wilhite, 1994), the field of economic sociology finds only scarce connection to this research, apart from research on the informal economy (Portes and Haller, 2005).<sup>1</sup>

<sup>1</sup>This may partially be explained by the difficulties of conducting empirical research in this field.

This is not only an important lacuna in academic research. Illegal markets are also a phenomenon of great economic, political and social significance. Although estimates of the size of illegal markets are notoriously difficult to make—actors do not publish revenue and profit figures—existing estimates indicate that annual revenues on illegal markets may well surpass one trillion dollars.<sup>2</sup> Politically, the existence of illegal markets presents the state and law enforcement with significant challenges. Socially, illegal markets are important because of the challenge they pose to the moral order of societies.

The very limited attention to illegal markets in economic sociology is also an important failure because of the theoretical insights that might be gained from the study of these markets. Ignoring illegal markets excludes an important source of variance from scholarship on markets, foreclosing theoretical advances in the understanding of legal markets. Most importantly, illegality deprives actors of the legal protection of property rights provided by the state for legal market transactions and limits their access to business strategies and organizational forms. 'In the absence of a stable legal framework and credible enforcement of contracts, long-term productive investment becomes impossible' (Portes and Haller, 2005, p. 409). What consequences for the functioning and organization of markets arise when there is a lack of legal protection for market actors, the threat of legal prosecution of market participants due to their market activities, and the absence of social legitimacy for the exchange? Answering these questions by investigating illegal markets helps us to understand more fully the significance of property rights and law enforcement in the operation of markets and to identify 'which informal institutions effectively motivate relevant economic outcomes' (Feige, 1999, p. 15).

The purpose of this article is exploratory and conceptual. Its aim is to offer a basis for empirical research on illegal markets in economic sociology by ordering the field conceptually and hinting at research questions that seem promising. We

---

<sup>2</sup>Authors working in the field and in public institutions such as the UNODC (United Nations Office on Drugs and Crime) have tried to assess the size of illegal markets. All the figures must be read with great caution, however. The wide margins of estimates alone show their imprecision. The estimates at the upper end are often challenged by other researchers, who argue that the figures are widely exaggerated. It is generally believed that the drug market is the largest illegal market. The UNODC estimated its worldwide revenue to be \$322 billion in 2003 at the retail level (UNODC, 2005, p. 17). Another especially large market is believed to be the trade in counterfeit and pirated products, for which worldwide revenue of \$250 billion was estimated for 2007 (OECD, 2009, p. 1). An estimated \$380 billion is spent on illegal sports betting in the USA each year (Smith *et al.*, 2003, p. 10). Other markets are much smaller but may nevertheless comprise a substantial part of the trade in the product. It is estimated that the revenue from transactions involving stolen or counterfeit art is worth between \$2 and \$6 billion (Bernick, 1998, p. 106), which would amount to up to 20% of the total market. It is also estimated that about 10% of the worldwide market for medication consists of fake medication (Cockburn *et al.*, 2005, p. 302). For an overview of the assessments of the size of various illegal markets, see Wehinger (2011).

first define illegal markets and classify different dimensions of illegality in market exchange. Based on the existing literature on illegal markets, we then sketch the most important properties of their structure and operation. We will describe the operations of illegal markets proceeding from three essential coordination problems: valuation, competition and cooperation (Beckert, 2009). By conceptualizing the structure of illegal markets based on general coordination problems, which are also cornerstones in the study of legal markets, we can locate the systematic differences in the functioning of markets that operate illegally. In the conclusion, we highlight research questions for the further study of illegal markets based on our reflections.

## 1. Illegal markets

Markets are arenas of regular voluntary exchange of goods or services for money under conditions of competition (Aspers and Beckert, 2008).<sup>3</sup> Markets are illegal if the product itself or the exchange of it violates legal stipulations. As a consequence of the posited illegality, the state declines to protect property rights in such markets, does not define and enforce standards for product quality and can prosecute the actors in the market. To distinguish illegal markets from simple economic crime in legal markets both sides must know that the trade involves a contravention of law. Since illegality is defined by law, what constitutes an illegal market differs between legal jurisdictions and over time. The comparative and historical variance of regulation leading to illegal markets and the variance of law enforcement rigidity is itself a pertinent sociological research topic within the field.

Illegal markets share with legal markets that they come into existence only if there is supply and demand for the good offered. However, for an illegal market to emerge, specific conditions must be met. On the demand side, either a legal market will not exist or the goods illegally offered will be cheaper than the ones offered legally, while at the same time the purchaser will be willing to discount the moral costs and (potential) risks arising from the illegality of the purchase. On the supply side, illegal markets depend on their expected profitability for the supplier, which is a function of the costs of production and/or distribution and the risks from law enforcement. Like purchasers, suppliers must be willing to overcome any scruples associated with the illegality of their activities.

The multifaceted character of the phenomena of illegality in markets makes it impossible to distinguish illegal markets simply in terms of the products traded on them. Instead, a close reading of the existing literature on illegal markets

---

<sup>3</sup>If there is only a single, non-recurring exchange, one would not speak of a market. Though competition can be severely limited or—as in the case of monopolies—blocked, competition is part of any ideal-typical definition of a market.

(Wehinger, 2011) makes it apparent that different forms of illegal markets must be identified.

To this end we present a typology that distinguishes four types of illegal markets according to the specific source of illegality: (1) illegality due to the outlawing of the production of specific goods or services; (2) illegality of the market exchange of an otherwise legal product; (3) illegality of exchange due to theft or product forgery and (4) illegality due to the violation of regulatory stipulations. In the first two types, the market exchange of the product category itself is illegal; in the two latter types, illegal markets are nested within legal markets. It is not possible to depict this typology of illegal markets in a simple two by two matrix because the mixture of juridical and social differentiations concerning the sources of illegality creates a multidimensionality that cannot be categorized fully dichotomously (Table 1).

- (1) One type of illegal market is constituted through the exchange of products whose production or provision is illegal as such. Current examples are illegal drugs, child pornography, child prostitution, forced labor, and human trafficking.<sup>4</sup> Production or provision of these products and services is forbidden and therefore the market exchange of these goods constitutes an illegal market.
- (2) A second type of illegal market refers to products or services that are legal as such, but whose exchange on markets is outlawed. The focus here is on the market exchange, which is seen as offensive. As soon as the product or service is treated as a commodity its exchange becomes illegal. An example of this is markets for body parts for transplantation purposes. In the USA the law stipulates that it 'shall be unlawful for any person to knowingly acquire, receive or transfer any human organ for valuable consideration for use in human transplantation' (U.S. National Organ Transplant Act of 1984, quoted from Roth (2007, p. 45)). Similar provisions exist in almost all other countries (Steiner, 2010). In a similar vein, the illegality of prostitution (in some countries) is not a stipulation against sexual relations but against the intrusion of monetary considerations into such relations, i.e. against their commodification. In some instances (e.g. the transfer of organs), already the production of the good (i.e. the removal of the organ) may be illegal if it is intended for sale, depending on national law. However, contrary to type 1, this prohibition of production does not apply to the category of goods or services as such.
- (3) The market exchange of products can also be illegal because the product offered has been stolen or has been forged. The seller of stolen goods is guilty of fencing

---

<sup>4</sup>In the case of human trafficking, not the human body is the illegal product but the displacement of people against their will.

**Table 1** Types of illegal markets

Type	Definition	Examples
1	Production or provision of the good or service illicit	Illegal drugs Child pornography Child prostitution Slavery
2	Production licit, market exchange illicit	Organs Adoptions (in most countries) Surrogacy
3	'Production' (stealing/copying for commercial purposes) illicit, but underlying category of goods licit; market exchange illicit	Fencing of stolen goods Counterfeit consumer goods Counterfeit medicine
4	Violations of regulatory stipulations along the production chain leading to illicit markets at one point in the production or exchange process of the goods/ services	Arms traded with forged end user certificate Untaxed cigarettes Illegally harvested timber Protected species without export certificate

and forgery violates the design and trademark rights of their lawful owner. In many instances, the copying of products is not forbidden as far as the copy is not used for commercial purposes. But in practical terms this is the exception. Counterfeit goods are normally produced to be sold. Therefore one can say that production and trade are in general illegal. In the same vein, the 'production' of stolen goods by stealing (in this case both for private and commercial purposes) and the subsequent fencing are illegal. The common characteristic of markets for forgeries and stolen goods and their difference from the first two market types is that the production of the underlying goods (which are copied or stolen) is legal, and legal objections do also not refer to the exchange of the goods from this product category as such.

Another common characteristic of stolen and counterfeit goods which distinguishes these markets from most of type 1 and type 2 markets is that the exchange does not necessarily constitute a *distinct* market in itself. Stolen or counterfeit art, for instance, may be fraudulently sold through galleries or auction houses otherwise dealing with legally acquired and authentic works (Tijhuis, 2006, p. 163). However, the exchange can also occur under conditions where both parties are aware of the theft or the forgery and would therefore take place in a separate illegal market. Examples are informal counterfeit markets such as *La Salada* in Buenos Aires or the *Xiushui* Market in Beijing, where merchants sell clothing with forged labels and the vendors and customers are fully aware of this (Chaudhry and Zimmerman, 2009, p. 42).

- (4) Finally, illegality on markets can emerge from the violation of legal stipulations in the production and distribution process. Examples of this are the employment of illicit labor, the evasion of taxes or the violation of safety or environmental compliance standards in the production or distribution of goods that are legal as such. Such violations of the law come at the cost of third parties like the state or the environment, but do not necessarily constitute illegality of the product or the exchange of the product category. Illegal markets may exist only at specific points along the production and distribution chain that are often 'invisible' to market participants further downstream in the market. An example for economic transactions that involve an illegal market only when following the production chain upwards is the market for species protected under CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora): the purchase of a piece of art made from the ivory of an illegally poached elephant from a seller within the country is perfectly legal in most countries and does not form part of an illegal market. However, the wholesale dealers who knowingly import such products without the necessary certificate of the country of export and who introduce them into the retail trade are participating in an illegal market.<sup>5</sup> An example where the violation of regulations leads to the damaging of state interests is illegal cigarette markets, where the state is deprived of tax revenues.

As a generalizing approximation one can state that type one and type two illegal markets are constituting distinct illegal markets, mostly visible as such to the participants, while type three and type four markets are more typically entangled with legal forms of market transactions, making the illegal activities less visible to outsiders.

## 2. Informal economy and illegal markets

While research in economic sociology has not paid attention to illegal markets as such, the concept of the informal economy has been influential (Hart, 1988; Portes and Haller, 2005). Since both of the concepts have an apparent overlap, the relationship between them should be clarified. In their definition, Portes and Haller (2005, p. 405) distinguish illegal activities from informal economic activities based on the legality of the final product: 'Illegal enterprise involves the production and commercialization of goods that are defined in a particular

<sup>5</sup>Another example is the trade in so-called 'blood diamonds,' which are channeled to wholesalers in an illegal transaction but cut and sold in the same production and sales facilities as all other diamonds. Studying this market type 4 is especially promising because it reveals the interfaces between legal and illegal markets.

place and time as illicit, while informal enterprise deals, for the most part, with licit goods.' This definition opens a way to understand the different focus of the two concepts. Informal economy, a concept first introduced in economic anthropology (Hart, 1988), refers mostly to the circumvention of certain standards and regulations which opens business and employment opportunities to (often marginalized) actors otherwise excluded from economic opportunities and at the same time often entails their exploitation. In the informal economy economic actors 'fail to adhere to established institutional rules, or are denied their protection' (Feige, 1990, p. 990). Examples are moonlighting, entering a trade without formal permission or dealing in goods violating intellectual property rights.

The concept of illegal markets, by contrast, does not focus on how economically vulnerable groups of the population secure a livelihood also by circumvention of certain legal stipulations, but rather focuses on the understanding of market structures and coordination problems once market transactions are in violation of the law. Both approaches have a different analytical focus even if they refer partly to the same empirical phenomena.

Locating the informal economy on the typology of illegal markets developed here, one would find it primarily in the third and the fourth type. Type one and type two markets are defined by the general illegality of the trade and thereby fall out of the scope of the informal economy as defined by Portes and Haller. The violation of legal stipulations, one of the defining characteristics of the informal economy, is the main characteristic for type four markets. But type 3 or 4 markets do not *necessarily* form part of the concept of the informal economy. An example would be illegal arms trade which falls outside the spectrum of the largely local, little organized exchange activities addressed by the concept of the informal economy. On the other hand, not every infringement of a legal stipulation common in the informal economy leads to an illegal *market*. Garments may be produced circumventing labor law but this does not necessarily have to be common practice in the market or may occur without the customer's knowledge.

### **3. The operation of illegal markets**

Given the heterogeneity of the phenomena of illegality on markets, it is not possible to describe the functioning of illegal markets in a general model. Nevertheless, it is possible to identify the general traits of illegal markets by analyzing existing criminological, sociological, economic and historical research on illegal markets from a theoretically informed perspective.

To systematize our understanding of the functioning of illegal markets, we begin by identifying three coordination problems that confront market actors. These coordination problems we call the problems of value, competition and

cooperation (Beckert, 2009). The typology of coordination problems is anchored in the postulation that for markets to operate, uncertainty in market transactions must be reduced. Market actors need ‘stable worlds’ (Fligstein, 2001b) or ‘calculability’ (Weber, 1978, p. 351) in order for role sets to be reproduced. This holds true for markets under conditions of legality and illegality.

This is a general approach to markets that can also guide the study of illegal markets, because actors on illegal markets are confronted with these coordination problems as well. But the actors’ efforts to resolve such problems are subject to different challenges because of the illegality of their activities, so other solutions must be sought. Illegality, it will be demonstrated, leads to different and often very cumbersome structures in markets.

### 3.1 Value

The problem of *value* refers first to the assignment of value to a certain category of goods (e.g. cars, wine and travel), and second to the assignment of different values to heterogeneous products within the same market. The basis for this is a process of classification and commensuration, in which actors rank products according to how well each product contributes to the fulfillment of a functional need or provides status within a status order of goods (Karpik, 2010; Beckert and Aspers, 2011).

The creation of value for a certain class of goods, a vital issue of competitive struggles on legal markets (Callon *et al.*, 2002), is largely irrelevant in illegal markets. Either the value is beyond doubt for the demander (organ transplants, for example, but also child pornography or drugs), or illegal markets profit parasitically (Wehinger, 2011, p. 14) from the value construction on legal markets (e.g. counterfeit consumer goods). This holds true not only for the value given to a specific class of products, but especially for the symbolic value associated with certain brands (Wilcox *et al.*, 2009, p. 255). The status of luxury goods is established through the marketing activities and reputation of the manufacturer of the original product and parasitically exploited by the producer of the counterfeit, who incurs neither the marketing costs nor the same level of production costs—provided that quality standards for the counterfeit are lower than for the original, as is often the case (OECD, 2008, p. 53).

Limitations in the endogenous creation of value in illegal markets stems also from the difficulty of using advertising and other marketing measures on illegal markets which hinders suppliers from contributing actively to the formation of preferences. An exception may be the offering of free drugs to new customers on illegal drug markets (Coomber, 2003, p. 469; Pearson and Hobbs, 2004, p. 469). The curtailing of marketing instruments on illegal markets makes these markets more demand-driven than legal markets.



Problems of value on illegal markets are to be found primarily among the difficulties of assessing product qualities in the absence of legally enforceable regulations. Problems of asymmetric distribution of information (Akerlof, 1970) show up in illegal markets much more forcefully than in legal markets because goods are not subject to administered quality regulations—such as safety regulations and quality standards. The buyer of a counterfeit medication, for instance, has no reliable information on the effective substances in the product. At the same time, suppliers are excluded from offering the signals of reputation used in legal markets; there are no legally enforceable warranties or damage compensations.<sup>6</sup>

Problems of quality assessment are especially pertinent in markets of types 1 and 2. In markets for counterfeit goods (type 3), makeshift categories can exist that structure the variety of merchandise (Guyer, 2004, p. 88–92). Only for some of the products offered on illegal markets of type 4 are difficulties in assessing product quality absent. An example is illegal markets for cigarettes in which a standardized product is sold but the tax on that product is not paid (Antonopoulos, 2009).

The absence of the quality assurance mechanisms and enforceability of product quality operational in legal markets is an important impediment to illegal markets, limiting market expansion and negatively affecting price. How do actors react to the information asymmetries? How do they assess the quality of the products being offered and how do they enforce the delivery of expected qualities? Research shows that also the suppliers on illegal markets attempt to provide devices to reduce uncertainty regarding product quality (Wendel and Curtis, 2000).

One device of particular importance is the creation of reputation through personalized networks. In markets for illegal drugs, for instance, networks form between dealers and customers, allowing for an iterative game in which the dealer has an increased interest in providing a predictable product quality in order to ensure ongoing business (May and Hough, 2004). Personalized networks also play an important role in legal markets, of course (Granovetter, 1985; Uzzi, 1997). But their role is much more prominent in illegal markets because actors

---

<sup>6</sup>In the case of counterfeit products such as clothing or watches, customers' lack of knowledge regarding product quality is relatively unproblematic. But when the forgeries are spare parts intended for aircraft maintenance, the consequences can be severe. Counterfeit investment products such as forged art can bring about serious financial losses. The same holds true for good-faith purchases of stolen goods when the seller is not able to recompense the buyer in case of detection. Severe consequences must also be expected in the other types of illegal markets: illegal drugs (market type 1) may not have the quality expected by the user (Caulkins, 2007, p. 63); illegal kidney transplants (type 2) may take place under compromised medical conditions (Goodwin, 2006, p. 189); counterfeit medicine (type 3) may be useless or harmful (Gaudiano et al., 2007); toys sold by producers flouting safety standards (type 4) may damage the health of children playing with them.

here are limited in the use of most other devices that actors in legal markets can access to prevent market failure from information asymmetry. The branding of products on illegal markets, although confirmed in some instances (Wendel and Curtis, 2000, p. 230), is the exception rather than the rule, and warranties would not be credible because of their non-enforceability in the judicial system. For these reasons actors are more confined to the use of personal networks. Middlemen who are trusted by both sides may also reduce uncertainty by brokering and intervening in transactions (Zaitch, 2002, p. 251; Kenney, 2007b, p. 28). Sometimes criminal groups are used as guarantors, stepping in if one side cheats the other (Gambetta, 1993, p. 20). This will be discussed in more detail in the section of cooperation.

In some cases the problem of quality assessment does not have to be *resolved* in order for illegal market transactions to take place. Instead the problem is *shifted*. In transactions of type 3, if buyers are unaware of the quality deficiencies of the product offered, the supply side can make parasitic use of the quality standards taken for granted in the legal market. The buyer will only find out after the purchase that the expected quality standards are not met.

In addition, the uncertainty regarding product quality may be accepted by the customer out of either *desperation* or *deliberate ignorance*. *Desperation* can emerge from a lack of an alternative legal market for the product (e.g. organ transplantation) or a lack of the financial means to buy the licit product (e.g. fake medication). *Deliberate ignorance* can be expected if the value of the product emerges primarily from symbolic qualities that are visible to the customer. The purchaser of a faked watch—who is aware of the fact that it is a counterfeit—may be more interested in the label than in the watch's technical finesse. That brand symbols are a cheaply producible and easily recognizable feature may be the main reason—besides the large difference between production costs and retail value—why these products in particular are offered illegally.

### 3.2 Competition

To ensure profits, suppliers must create market structures that provide protection from (price) *competition*. In legal markets, this is the outcome of market struggles between suppliers, the state and intermediaries, leading to cartelization, monopolization, product differentiation, innovation, first-mover advantages, entry barriers and legal regulations structuring competition. The state plays a key role in the market struggles in legal markets by laying down ground rules, for instance in competition law or intellectual property law and by granting subsidies or collecting customs and tariffs (Fligstein, 2001a).

Though profits of firms in illegal markets are also threatened by competition the instruments applied on legal markets are not available to them. The analysis of competition in illegal markets must focus on the alternative strategies firms use

to protect themselves from competitive pressures (1) and on the inefficient competition on illegal markets stemming from intransparency (2).

- (1) Firms operating on illegal markets must try to avoid competition—just like their counterparts in the legal economy. Because the legal means of protection from competition do not apply, they must resort to other solutions. One of the devices applied is corruption. Through corruption, competition between illegal firms, or between legal firms using illegal means and their counterparts abstaining from such practices, can be manipulated. Frequently, criminal actors operate not without or against the state, but in cooperation with corrupt state agencies or individual state employees; the state (the principal) is not able to implement its law because state officials (the agents) make law enforcement itself a tradable commodity. Corrupt state agencies desist from enforcing the law against the illegal activities of the firm in return for a share in the business or a ransom. Illegal entrepreneurs who are unwilling or unable to cooperate with corrupt state agencies risk prosecution. Corruption enhances the stability of illegal markets by stabilizing criminals' low expectations with regard to the effectiveness of law enforcement (Dewey, 2011). State participation in illegal activities can be of such magnitude that state agencies fully control or monopolize the illegal market (Paoli *et al.*, 2007).

Protection from competition through corruption is not only provided by state agencies but also by private 'protection' businesses. The need to pay protection money to organized crime groups in order to enter a market is an entry barrier to a market (Gambetta, 1988a, p. 134), which reduces competition and leads to 'closure of the market' (Weber, 1978, p. 342). The supplying firm does not need to organize illegal entry barriers to the market itself, but can buy the services of organized crime groups who offer 'protection'. The illegal service of protection from competition itself becomes a commodity traded illegally. Protection can involve shielding from new market competitors but can also involve access to new customers, for instance through the commissioning of public work (Gambetta, 1993, p. 22). Payments for 'protection' are associated with high transaction costs and a welfare loss due to lower product quality and higher prices. For market suppliers, however, the (potentially) violent exclusion of competitors from market access secures profits.

Although the state is absent as a regulator of competition, claims that monopolies form in illegal markets (Schelling, 1978) have proved to be incorrect in most instances (Williams, 2001, p. 68). Only in certain narrowly limited areas have criminal groups managed to achieve a monopoly. Examples are the mafia clans in certain communities of southern Italy (Gambetta, 1988b, p. 164; Paoli, 2004, p. 22) and the drug gangs in certain areas of Brazilian cities (Zaluar, 2000). It can be assumed that the ability to control a market

is a function of the level of state prosecution, which reduces organizational capacities of illegal firms (Paoli *et al.*, 2009, pp. 228–229).

The goal of a firm to prosper in competition on legal markets can also be the starting point for illegal markets. Illegal markets of type 3 and 4 are nourished by the demand of participants of legal markets for illegally produced goods or services through which they can reduce production costs. Firms producing legal products may participate in illegal markets of type 3 or 4, to achieve competitive advantages over firms in the same market that confine themselves to legal activities. Buying services on the market for illegal disposal of toxic waste, for example, allows an otherwise completely legal firm to externalize costs stemming from environmental protection regulations by turning to an illegal market for waste removal (Massari and Monzini, 2004, p. 293). Such cost reductions translate into competitive advantages (Westra, 2004, p. 309) and heavily distort the competition between firms willing to use illegal means and those not willing to do so. The same holds true for the use of illicit labor, or the violation of nature protection standards, for instance profiting from logging without permission (Tacconi, 2007). This provides evidence of the importance of the close interconnectedness of the illegal and the legal economy (cf. Brodie and Doole, 2001, p. 2), one of the most interesting topics in the study of illegal markets. Studies on the informal economy (for example, Lozano, 1989) often focus on such illegal activities within the confines of a legal market.

- (2) The second problem concerns the inefficient competition on illegal markets due to intransparency. Price competition is often limited because suppliers as well as customers cannot easily compare the price/quality nexus. The lack of transparency about product quality makes the market opaque to customers and reduces the information content of prices, which distorts competition. Another impediment to the development of competitive market structures is the curtailing of vending opportunities in type 1 and type 2 markets. Competition in these markets suffers because of inhibited marketing activities and the impossibility to offer products openly. While these structural components lead to protection from polypolistic price competition, they also hinder market development and thereby limit profit opportunities. This also holds true in the case of stolen products (type 3), where sales potential is limited because of difficulties in finding customers. Thieves usually sell their merchandise to fences or directly to friends and relatives (Stevenson, 2001, p. 108; Fass and Francis, 2004). Thieves may also sell to drug dealers, because these actors have the necessary networks to resell the goods (Ferrante and Clare, 2006).

These conditions lead to fragmented market structures, in which competition is often structured through personal networks and the only expansion is local (Arlacchi, 1998, p. 205). Both suppliers and customers have to rely on personal

connections to identify the appropriate competitors. The personalized structures typical of illegal markets are a far cry from economists' definition of perfect markets but also far from the much less personalized existing legal markets. If one assumes, in line with economic theory, that the efficiency of markets is enhanced through competition, then illegal markets are structurally inefficient because of limitations in their potential to develop competitive structures. These limitations come from incomplete information and the dangers arising from law enforcement.

### 3.3 Cooperation

Market actors are confronted with problems of *cooperation* emerging from the social risks of exchange, notably that of non-fulfillment of contract. These risks arise from the asymmetric distribution of information regarding price, product quality and the possible opportunism of exchange partners in light of incomplete or non-enforceable contracts. This is already an important problem on markets operating legally (Gambetta, 1988b; Beckert, 2005; Möllering, 2006).

On illegal markets this problem is especially pertinent because the protection of contracts by the state, which is the crucial protector of property rights on legal markets, is absent. 'In the absence of supervisory agents, who is to control unscrupulous producers, purveyors of adulterated goods and defaulters on loans?' (Portes and Haller, 2005, p. 406). Yet actors must not only operate without, but also against the state (Paoli, 2002, p. 145); they face the danger of being prosecuted for their activities, and the magnitude of the problem of cooperation therefore rises dramatically. In the case of child pornography (Jenkins, 2001), actors proceed with such care that one cannot even call large parts of the emerging exchange structures a market. Instead, they can be described as forms of barter among closed groups (Quayle and Taylor, 2002, pp. 345–348). Actors on illegal markets must hide their behavior from state authorities and from people who may cooperate with these authorities. At the same time, they need to interact with others to conduct their business, thereby exposing themselves to the risk of being detected. Actors on illegal markets need to trust exchange partners in many more dimensions than actors conducting legal economic activities.

At the same time, the means available to these actors to enforce trust are much more limited; they more closely resemble pre-modern trust devices than modern ones. While trust in earlier economic configurations was largely anchored in personal relationships, in modern economies trust is mostly made possible through institutions (Zucker, 1986; Giddens, 1990). Institution-based trust allows for the unprecedented time–space distanciation of modern economies (Giddens, 1990) and is the bedrock of the expansion of market relations. One of the most consequential differences between legal and illegal markets is that illegal markets are

strictly limited in the development of institutional trust. This is because the state is absent from the enforcement of contracts and institutional self-regulation on illegal markets cannot operate in the open because of the danger of state prosecution. Even if state officials can be corrupted, trust between trading partners remains scarce because the stronger partner can cheat without consequences and trust is not only in short supply between trading partners, but also within the organization. This has consequences for the structure of firms: ‘The factor limiting the size of firms in a particular industry may be the cost of effectively monitoring individual performance in large groups’ (Reuter, 1985, p. 2). Thus the higher the internal monitoring costs, the smaller the organization.

Another result of these structural conditions is that exchanges on illegal markets must take place within networks to a much greater extent. Indeed, all research on illegal markets agrees on this point. ‘Illicit markets may be distinguished from licit markets by their failure to adopt impersonal forms or intentional communication and distribution of goods’ (Arlacchi, 1998, p. 208). Even personal relations, however, are much more demanding to organize because the risks are much greater than in legal market transactions.

Becoming a party in illegal transactions thus presupposes credible signals of trustworthiness on the side of the trust-taker (Gambetta, 2009) and intensive monitoring on the side of the trust-giver (Spremann, 1988, p. 618). Such signals can be time served in prison or specific tattoos, but also a reputation of reliability from former encounters (Gambetta, 2009, p. 11). The organization of illegal markets on the basis of ‘character trust’ (Zucker, 1986) is a very common phenomenon (Nguyen, 2004; von Lampe and Johansen, 2004; Kenney, 2007a). Market relations are established by individuals who do not occupy a formal position that can easily be taken over by another person, because trust is bound to that individual. Sometimes trust can be passed on to intermediaries (Zaitch, 2002, p. 251; Kenney, 2007b, p. 28). Only in rare instances can a higher degree of internal integration be observed, as in mafia-style groups with formal membership where the whole group is held responsible for members’ actions. ‘Patriarchal family enterprises’ in the heroin trade to Western Europe are able to organize ‘integrated trading lines’ (van Duyn, 1995, p. 350), whereas the import of other illegal substances into other regions is operated by sole entrepreneurs or small groups (Adler, 1993; Zaitch, 2002; Desroches, 2005).

Organizations must be very small, and networks can be only loosely coupled. Studies on human trafficking (Zhang, 2008; Subedi, 2009) report that the typical ‘enterprise’ consists of no more than three to four people. Even in illegal drug markets, organizational structures exhibit patterns of very small units or sole traders (Desroches, 2005, p. 123). Often ‘employees’ are hired only temporarily, and as little knowledge concerning operations is communicated as possible within networks (Dorn *et al.*, 1998; Natarajan, 2000, p. 291). The emergence of

larger groups with a higher internal closeness seems to depend on pre-existing relationships such as ethnic and family kinship or tight local ties (cf. Paoli *et al.*, 2009, p. 205). Certain organizational forms emerging in connection with illegal markets, like youth gangs and motor cycle clubs, turn to the threat of violence as a functional equivalent to protect property rights.

The situation is somewhat different if there are opportunities to corrupt state officials. Bribing state agencies is much easier for larger organizations that are in possession of the necessary financial means (Schelling, 1984, p. 164). Moreover, the larger the influence on law enforcement, the less firms must fear detection by legal prosecution. Organizations on illegal markets also have room to grow in ‘ungoverned spaces’ where the authority of the state is contested (Clunan and Trinkunas, 2010). Larger organizations, sometimes with mixed political and economic goals, can emerge in such areas. Sometimes ungoverned spaces are expanded by bribery, which enables groups like urban youth gangs to create powerful, more hierarchically integrated organizations (cf. Venkatesh and Levitt, 2000, p. 446).

The high stakes involved in the personal relationships and the absence of the enforcement of contracts through the legal system explain the role of violence—or at least the latent threat of violence—against defectors on illegal markets. Violence becomes a mechanism to enforce cooperation. Nevertheless, studies on illegal markets show that violence is used only reluctantly (Coomber and Maher, 2006, p. 741; Antonopoulos, 2008, p. 281), probably ‘to avoid trouble with the public and the police’ (Schelling, 1984, p. 163).

The risks stemming from the possibility of prosecution and asset seizure have also consequences for the price to be paid by consumers (Reuter and Kleiman, 1986, p. 335; Viscusi, 1986, p. 338). Evidence for this is provided by the observation that legalization of type 1 or type 2 markets leads to a drop in price if the legal successor market is organized as a competitive market.<sup>7</sup> On markets for stolen goods, however, the product will be traded with a significant discount to its legal counterpart if buyers are aware that they are buying a stolen product.

---

<sup>7</sup>For some illegal markets of the first and second type—for example, illegal drugs—there is political debate as to whether these should be transformed into regulated legal markets because of the negative social effects of their illegal operations or because of the potential tax income for the state once the market is legalized (MacCoun *et al.*, 1996). There are also examples of markets—alcohol and gambling in the USA—that were once illegal and were legalized. Another consideration in the decision on legalization is the cost associated with the enforcement of prohibition rules. Enforcement imposes a financial burden on the state that may actually outweigh the benefits of prohibition (Miron and Zwiebel, 1995) and engender other unintended consequences because reducing supply could create a basis for even higher possible earnings and thus attract more criminals (McCoy, 2000, p. 218; Levine, 1991, p. 488).

This is because the risk of seizure of the product and its ‘moral defect’ remain also after the purchase.<sup>8</sup>

This discussion of cooperation problems again shows the crucial role of the state: its influence on the capability of actors in these markets to develop the necessary trust to cooperate. The state can fight illegal markets, but it can also become an accomplice, or even the main supplier of illegal products and services (Paoli *et al.*, 2007).<sup>9</sup> No matter what position the state takes, it is always an actor in illegal markets, to whose activities the other actors adjust.

#### 4. Conclusion

Despite the potential importance of the study of illegal markets for market sociology, interest in illegal markets is largely absent from economic sociology. With the exception of work on the informal economy, the criminology, anthropology, law, history and economics research on illegal markets has only a scarce connection to economic sociology.

We have shown here how the structures of illegal markets can be studied within a general framework for investigating markets. The suggested course of action for studying these markets is to first identify the coordination problems in market exchange and to then investigate how actors on illegal markets respond to these problems, i.e. what market structures develop in response to the illegality of activities. There are other possible approaches to the study of illegal markets. Focusing on the culture of the market as the subject matter of investigation, for example, can reveal how social context influences attitudes and behavior of market actors (Sandberg, 2012). Following Fligstein’s (1996) ‘markets as politics’ approach, one could concentrate on the role of important

<sup>8</sup>Stevenson (2001, p. 112) finds that stolen goods are traded at between 14 and 38% of the regular selling price. The discount is even higher for more expensive goods and if large quantities are sold (Henry, 1976, p. 795). Whether there is a price difference at all, however, depends on the distribution of information. This can be observed in the art market, where unrecognized counterfeits are sold for the same price as authentic pieces by the artist. Given the importance of information for pricing (at least in type 3 and type 4 markets), suppliers do have an interest in hiding the legal defects of their products. Investigating this camouflage is an interesting topic in the study of illegal markets. Studies of markets for stolen products show that this process often involves several transactions, with the product becoming legitimated on the market through its association with vendors of increasingly legitimate status (Aarons, 2001, p. 29; Bogdanova, 2011; Massy, 2000, p. 141).

<sup>9</sup>How much the state invests in combating illegal markets and whether it prohibits certain forms of market transactions can also be influenced by non-governmental organizations. This is the case with regard to the diamond trade. The timber market, in contrast, is still strongly affected by illegal logging; lobbying efforts for national or international regulation have not yet yielded the intended results (Banks *et al.*, 2008, pp. 6–7; Maletz, 2009).



institutional actors and templates in the formation of illegal markets. While these and other approaches of economic sociology are fruitful to shed light on important aspects of illegal markets, our perspective on crucial coordination problems provides a comprehensive analytical framework for the systematic comparison of the operation of legal and illegal markets along a set of problems equally important to actors in legal and illegal markets. The use of this framework promises insights from the study of illegal markets which are indirectly also relevant for our understanding of the operation of legal markets.

One counterfactual theoretical insight that can be derived from the study of illegal markets is the crucial importance that formal institutions, and their enforcement through the state, have for (legal) market development (Fligstein, 2001a, b). In illegal markets, formal institutions involved in securing property rights are beyond reach for the actors. Social ties play a pre-eminent role as a functional substitute, but these are nonetheless inferior to the real thing. A close look at the operation of illegal markets shows that in most instances these markets develop only poorly, compared with legal markets: valuation is difficult because of the lack of information, competition is deficient and cooperation is risky. The reliance on personal networks to solve coordination problems is a liability for these markets and makes them appear to have certain pre-modern flavor shown by the lack of formal institutions generating trust and the predominance of personal relations. This results in an 'overembeddedness' (Uzzi, 1997) of market transactions in illegal markets due to pervasive cooperation problems that inhibit efficient organizational size and information flows.

The difficulties to overcome the discussed coordination problems in valuation, competition and cooperation stand at the root of severe restrictions in the possibilities for the enlargement of illegal markets and the associated organizations. Often the organization of illegal markets is characterized by the segmental differentiation characteristic of pre-state societies (Paul and Schwalb, 2011, p. 135). Though illegal markets are highly adapted to their environment and efficient within this framework, they are not able to achieve the scope and the level of efficiency observable in legal markets. The 'reputation system' that replaces the legal mechanisms in environments of lacking state authority work only in limited locations and cannot be easily extended to larger areas (cf. Milgrom *et al.*, 1990, p. 20). Moreover, illegal markets suffer from instability, which prevents the sustainability of larger social organizations that could enforce sanctions and provide information (cf. Greif, 1993). The study of illegal markets can thus highlight indirectly the importance and functioning of institutionally secured structures for the emergence of complex exchange relations with wide time-space distanciations. It also shows how these institutionally secured structures are substituted in case of their absence.

There are differences between market types, however. While the aforementioned characteristics generally apply to markets of type 1 and type 2, some (but not all) illegal market transactions of type 3 and type 4 can profit from the existence of a legal market that facilitates market organization and communication (such as in illegal arms markets). Suppliers of counterfeit clothing ‘often aim to infiltrate the supply chain of the licit companies’ (Staake *et al.*, 2012, p. 664) in order to parasitically benefit from the organizational forms of the legal markets.

The organizational features of illegal markets and the explanation for these therefore constitute an important set of research questions. Although network-shaped organizational styles are predominant, production chains are organized in many different patterns (Arlacchi, 1998, p. 205). There are large differences within market types and, at the same time, similarities across them. The theft and sale of small products is organized very differently from, say, car theft, which requires a much more sophisticated organizational structure. While the former involves only thieves and fences (Johns and Hayes, 2003), there are many differentiated roles and refined technical and commercial processes in auto theft (Sieber and Bögel, 1993, pp. 78–110). The illegal cigarette trade (type 4) and the illegal drugs trade (type 1), however, may have more in common than their different classifications would suggest at first sight. On the other hand, the organization of the illegal drug trade ranges from individual traders and networks of loosely coupled individuals (Massari, 2005, p. 9; Desroches, 2007, p. 834) to hierarchically organized groups (Curtis, 2007, p. 883). Further clarification is necessary, not only of the differences in organizational structure, but also of the functioning of the different forms. The composition, stability, internal processes and functions of networks in illegal markets should be compared with their counterparts in the legal economy.

Illegal markets, however, are not only confronted with the mere absence of formal institutions regulating exchange; the actors are also subject to state prosecution. This, too, inhibits the development of complex organizational structures (Paul and Schwalb, 2011), especially on type 1 markets, but it also establishes an affinity between illegal market activities and weak or corrupt state agencies or states (Koivu, 2007, p. 4; Paoli *et al.*, 2009). Illegal markets can operate especially well within the confines of failing or corrupt state structures.

Future studies could investigate the operation of single markets (and compare them) or examine specific questions such as the interface between legal and illegal activities, the organizational features of the market, or the means by which the coordination problems of valuation, competition and cooperation are resolved. Historical examples of prohibitions and their suspension—alcohol, prostitution, mind-altering drugs—have made it possible to investigate the appearance and disappearance of illegal markets and thereby understand the conditions for their emergence. The investigation of newly emerging illegal markets, such as

those for body parts (Foster, 1997) or surrogate mothers (Krawiec, 2010), allows us to study illegal markets in the making. The role of social norms (especially for type 2 markets) in justifying the permission or prohibition of markets and the relationship between legality and legitimacy should be taken into consideration in this endeavor (cf. Satz, 2010).

The investigation of illegal markets is not only relevant for the better understanding of the functioning of these markets and the further development of market sociology. Understanding illegal markets and their consequences has an important social function: the inability of the state to eradicate illegal markets can exacerbate social afflictions (illegal drugs) or impair general trust in state and market institutions. The very presence of illegal markets has the potential to erode the belief that certain illegal activities are illegitimate at all and thus to undermine social norms by deviating from custom. Although illegal markets can promote economic development as part of the informal economy, they are often destructive (cf. Baumol, 1990).

It is strongly desirable that economic sociology turns more strongly to the investigation of illegal markets and let go of one of its most basic implicit premises, namely that the activities on markets are legal. The intent of this article is to shed light on an aspect of markets that until now has been largely confined to the shadows of research in economic sociology.

## Acknowledgements

We are deeply indebted to Renate Mayntz for her thoughtful input on this article through many conversations and for her detailed comments on earlier drafts. Many thanks also to the two anonymous reviewers and to Matías Dewey and Paola De Vivo for their comments on an earlier draft.

## References

- Aarons, L. (2001) 'Art Theft: An Exploratory Study of the Illegitimate Art Market in Australia', *Australian and New Zealand Journal of Criminology*, **34**, 17–37.
- Adler, P. (1993) *Wheeling and Dealing: An Ethnography of an Upper-Level Drug Dealing and Smuggling Community*, New York, Columbia University Press.
- Akerlof, G. A. (1970) 'The Market for "Lemons". Quality Uncertainty and the Market Mechanisms', *Quarterly Journal of Economics*, **84**, 488–500.
- Antonopoulos, G. A. (2008) 'The Greek Connection(s)', *European Journal of Criminology*, **5**, 263–288.
- Antonopoulos, G. A. (2009) 'Cigarettes of 'Ambiguous Quality' in the Greek Black Market', *Trends in Organized Crime*, **12**, 260–266.

- Arlacchi, P. (1998) 'Some Observations on Illegal Markets'. In Vincenzo, R., Nigel, S. and Taylor, I. R. (eds) *The New European Criminology: Crime and Social Order in Europe*, London, Routledge, pp. 203–215.
- Aspers, P. and Beckert, J. (2008) *Märkte. Handbuch der Wirtschaftssoziologie*, Andrea Maurer, Wiesbaden, VS Verlag für Wissenschaften.
- Debbie, B., Davies, C., Gosling, J., Newman, J., Rice, M., Wadley, J. and Walravens, F. (2008) *Environmental Crime: A threat to our future*, Environmental Investigation Agency. [http://www.unodc.org/documents/NGO/EIA\\_Ecocrime\\_report\\_0908\\_final\\_draft\\_low.pdf](http://www.unodc.org/documents/NGO/EIA_Ecocrime_report_0908_final_draft_low.pdf)
- Baumol, W. J. (1990) 'Entrepreneurship: Productive, Unproductive, and Destructive', *Journal of Political Economy*, **98**, 893–921.
- Beckert, J. (2005) *Trust and the Performative Construction of Markets*, Vol. 05/8, Cologne, Max Planck Institute for the Study of Societies.
- Beckert, J. (2009) 'The Social Order of Markets', *Theory and Society*, **38**, 245–269.
- Beckert, J. and Aspers, P. (eds) (2011) *The Worth of Goods*, Oxford, Oxford University Press.
- Bernick, L. (1998) 'Art and Antiquities Theft', *Transnational Organized Crime*, **4**, 91–116.
- Bogdanova, E. (2011) *Valuing the Past: The Constitution of the Antiques Market in Russia*, University of Cologne, PhD thesis.
- Brodie, N. and Doole, J. (2001) 'Illicit Antiquities'. In Brodie, N., Doole, J. and Renfrew, C. (eds) *Trade in Illicit Antiquities: The Destruction of the World's Archaeological Heritage*, Oxford, McDonald Institute for Archaeological Research, pp. 1–6.
- Callon, M., Méadel, C. and Rabeharisoa, V. (2002) 'The Economy of Qualities', *Economy and Society*, **31**, 194–217.
- Caulkins, J. (2007) 'Price and Purity Analysis for Illicit Drug: Data and Conceptual Issues', *Drug and Alcohol Dependence*, **90**, 61–68.
- Chaudhry, P. and Zimmerman, A. (2009) *The Economics of Counterfeit Trade*, Berlin Heidelberg, Springer.
- Clunan, A. L. and Trinkunas, H. A. (2010) 'Conceptualizing Ungoverned Spaces: Territorial Statehood, Contested Authority, and Softened Sovereignty'. In Clunan, A. L. and Trinkunas, H. A. (eds) *Ungoverned Spaces: Alternatives to State Authority in an Era of Softened Sovereignty*, Stanford, Stanford University Press, pp. 17–33.
- Cockburn, R., Newton, P., Agyarko, E., Akunyili, D. and White, N. (2005) 'The Global Threat of Counterfeit Drugs: Why Industry and Governments Must Communicate the Dangers', *PLoS Med*, **2**, 302–308.
- Coomber, R. (2003) 'There's no such Thing as a Free Lunch: How "Freebies" and "Credit" Operate as Part of Rational Drug Market Activity', *Journal of Drug Issues*, **33**, 939–962.
- Coomber, R. and Maher, L. (2006) 'Street-Level Drug Market Activity in Sydney's Primary Heroin Markets: Organization, Adulteration Practices, Pricing, Marketing and Violence', *Journal of Drug Issues*, **36**, 719–753.

- Curtis, R. (2007) 'You're Always Training the Dog: Strategic Interventions to Reconfigure Drug Markets', *Journal of Drug Issues*, **37**, 867–892.
- Desroches, F. J. (2005) *The Crime that Pays: Drug Trafficking and Organized Crime in Canada*, Toronto, Canadian Scholars' Press.
- Desroches, F. J. (2007) 'Research on Upper Level Drug Trafficking: A Review', *Journal of Drug Issues*, **37**, 827–844.
- Dewey, M. (2011) *Fragile States, Robust Structures: Illegal Police Protection in Buenos Aires, Hamburg*, GIGA.
- Dorn, N., Oette, L. and White, W. (1998) 'Drugs Importation and the Bifurcation of Risk', *British Journal of Criminology*, **38**, 537–560.
- Fass, S. M. and Francis, J. (2004) 'Where Have all the Hot Goods Gone? The Role of Pawnshops', *Journal of Research in Crime and Delinquency*, **41**, 156–179.
- Feige, E. L. (1989) *The Underground Economies*, Cambridge, Cambridge University Press.
- Feige, E. L. (1990) 'Defining and Estimating Underground and Informal Economies: The New Institutional Economics Approach', *World Development*, **18**, 989–1002.
- Feige, E. L. (1999) 'Underground Economies in Transition: Noncompliance and Institutional Change'. In Feige, E. L. and Ott, K. (eds) *Underground Economies in Transition: Unrecorded Activity, Tax Evasion, Corruption and Organized Crime*, Aldershot, Ashgate, pp. 11–27.
- Ferrante, A. and Clare, J. (2006) *Known Burglars & the Stolen Goods Market in Western Australia: What is Stolen and Where Does it Go to?* accessed at [http://www.law.uwa.edu.au/\\_\\_data/assets/pdf\\_file/0020/118406/L\\_on\\_Crime-Special\\_Burglary\\_Series\\_No4-Burglary\\_And\\_The\\_Stolen\\_Goods\\_Market\\_In\\_WA-2007.pdf](http://www.law.uwa.edu.au/__data/assets/pdf_file/0020/118406/L_on_Crime-Special_Burglary_Series_No4-Burglary_And_The_Stolen_Goods_Market_In_WA-2007.pdf) on September 11, 2012.
- Fligstein, N. (1996) 'Markets as Politics: A Political-Cultural Approach to Market Institutions', *American Sociological Review*, **61**, 656–673.
- Fligstein, N. (2001a) *The Architecture of Markets, An Economic Sociology for the Twenty-First Century Capitalist Societies*, Princeton, Princeton University Press.
- Fligstein, N. (2001b) *The Architecture of Markets: An Economic Sociology of Twenty-First-Century Societies*, Princeton and Oxford, Princeton University Press.
- Foster, T. (1997) 'Trafficking in Human Organs: an Emerging Form of White-Collar Crime', *International Journal of Offender Therapy and Comparative Criminology*, **42**, 139–150.
- Gambetta, D. (1988a) 'Fragments of an Economic Theory of the Mafia', *Archives Européenne de Sociologie*, **29**, 127–145.
- Gambetta, D. (1988b) 'Mafia: The Price of Distrust'. In Gambetta, D. (ed.) *Trust: Making and Breaking Cooperative Relations*, New York/Oxford, Basil Blackwell, pp. 158–175.
- Gambetta, D. (1993) *The Sicilian Mafia: The Business of Private Protection*, Cambridge, MA, Harvard University Press.
- Gambetta, D. (2009) *Codes of the Underworld: How Criminals Communicate*, Princeton and Oxford, Princeton University Press.

- Gaudio, M. C., Maggio, A., Cocchieri, E., Antoniella, E., Bertocchi, P., Alimonti, S. and Valvo, L. (2007) 'Medicines Informal Market in Congo, Burundi and Angola: Counterfeit and Sub-Standard Antimalarials', *Malaria Journal*, **6**, 22–29.
- Giddens, A. (1990) *The Consequences of Modernity*, Stanford, CA, Stanford University Press.
- Goodwin, M. (2006) *Black Markets: The Supply and Demand of Body Parts*, New York, NY, Cambridge University Press.
- Granovetter, M. (1985) 'Economic Action and Social Structure: The Problem of Embeddedness', *American Journal of Sociology*, **91**, 481.
- Greif, A. (1993) 'Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition', *The American Economic Review*, **83**, 525–548.
- Guyer, J. I. (2004) *Marginal Gains: Monetary Transactions in Atlantic Africa*, The Lewis Henry Morgan lectures. Chicago, IL, University of Chicago Press.
- Hart, K. (1988) 'Kinship, Contract and Trust: The Economic Organisation of Migrants in an African City Slum'. In Gambetta, D. (ed.) *Trust: Making and Breaking Co-operative Relations*, Oxford, Blackwell, pp. 176–193.
- Henry, S. (1976) 'The Other Side of the Fence', *Sociological Review*, **24**, 793–806.
- Jenkins, P. (2001) *Beyond Tolerance: Child Pornography on the internet*, New York, NY, New York University Press.
- Johns, T. and Hayes, R. (2003) 'Behind the Fence: Buying and Selling Stolen Merchandise', *Security Journal*, **16**, 29–44.
- Karpik, L. (2010) *Valuing the Unique: The Economics of Singularity*, Princeton, NJ, Princeton University Press.
- Kenney, M. (2007a) 'The Architecture of Drug Trafficking: Network Forms of Organisation in the Colombian Cocaine Trade', *Global Crime*, **8**, 233–259.
- Kenney, M. (2007b) *From Pablo to Osama: Trafficking and Terrorist Networks, Government Bureaucracies, and Competitive Adaptation*, University Park, PA, The Pennsylvania State University Press.
- Koivu, K. (2007) Protection for Sale? A Comparative Historical Study of Organized Crime. Ringberg, Max Planck Summer Conference.
- Krawiec, K. D. (2010) 'A Woman's Worth', *North Carolina Law Review*, **88**, 1739–1770.
- Levine, H. (1991) 'From Prohibition to Regulation: Lessons from Alcohol Policy for Drug Policy', *The Milbank Quarterly*, **69**, 461–494.
- Lozano, B. (1989) *The Invisible Work Force: Transforming American Business with Outside and Home-based Workers*, New York, NY, The Free Press.
- MacCoun, R., Reuter, P. and Schelling, T. (1996) 'Assessing Alternative Drug Control Regimes', *Journal of Policy Analysis and Management*, **15**, 330–352.
- Maletz, O. (2009) The Impact of Transnational Private Regulation: A Case Study of Forest Certification in Russia. PhD Dissertation, Cologne, University of Cologne.

- Massari, M. and Monzini, P. (2004) 'Dirty Business in Italy: A Case Study of Illegal Trafficking in Hazardous Waste', *Global Crime*, **6**, 285–304.
- Massari, M. (2005) 'Ecstasy in The City: Synthetic Drug Markets In Europe', *Crime, Law, and Social Change*, **44**, 1–18.
- Massy, L. (2000) *Le vol d'oeuvres d'art: Une criminalité méconnue*, Collection des "travaux" et "monographies" de l'Ecole des sciences criminologiques Léon Cornil. Bruxelles, Bruylant.
- May, T. and Hough, M. (2004) 'Drug Markets and Distribution Systems', *Addiction Research and Theory*, **12**, 549–563.
- McCoy, A. W. (2000) 'Coercion and its Unintended Consequences: A Study of Heroin Trafficking in Southeast and South West Asia', *Crime, Law and Social Change*, **33**, 191–224.
- Milgrom, P. R., North, D. C. and Weingast, B. R. (1990) 'The Role of Institutions in the Revival of Trade: The Law Merchant, Private Judges, and the Champagne Fairs', *Economics and Politics*, **2**, 1–23.
- Miron, J. A. and Zwiebel, J. (1995) 'The Economic Case Against Drug Prohibition', *The Journal of Economic Perspectives*, **9**, 175–192.
- Möllering, G. (2006) *Trust: Reason, Routine, Reflexivity*, Oxford, Elsevier.
- Nardo, M. (2011) 'Economic Crime and Illegal Markets Integration: A Platform for Analysis', *Journal of Financial Crime*, **18**, 47–62.
- Natarajan, M. (2000) 'Understanding the Structure of a Drug Trafficking Organization: A Conversational Analysis'. In Natarajan, M. and Hough, M. (eds) *Illegal Drug Markets: from Research to Prevention Policy*, Monsey, NY, Criminal Justice Press, pp. 273–298.
- Nguyen, T. H. (2004) 'The Business of Illegal Gambling: An Examination of the Gambling Business of Vietnamese Cafés', *Deviant Behavior*, **25**, 451–464.
- OECD. (2008) *The Economic Impact of Counterfeiting and Piracy*, Paris, OECD Publishing.
- OECD. (2009) *Magnitude of Counterfeiting and Piracy of Tangible Products: November 2009 Update*, Paris, OECD. Accessed at <http://www.oecd.org/dataoecd/57/27/44088872.pdf> on September 11, 2012.
- Paoli, L. (2002) 'Flexible Hierarchies and Dynamic Disorder: the Drug Distribution System in Frankfurt and Milan', *Drugs: Education, Prevention and Policy*, **9**, 143–151.
- Paoli, L. (2004) 'Italian Organised Crime: Mafia Associations and Criminal Enterprises', *Global Crime*, **6**, 19–31.
- Paoli, L., Rabkov, I., Greenfield, V. and Reuter, P. (2007) 'Tajikistan: The Rise of a Narcostate', *Journal of Drug Issues*, **37**, 951–979.
- Paoli, L., Reuter, P. and Greenfield, V. (2009) *The World Heroin Market: Can Supply be Cut?* Oxford, Oxford University Press.
- Paul, C. and Wilhite, A. L. (1994) 'Illegal Markets and the Social Costs of Rent-Seeking', *Public Choice*, **79**, 105–115.

- Paul, A. and Schwalb, B. (2011) 'Wie organisiert ist das organisierte Verbrechen? Warum es die Mafia nicht geben dürfte und warum es sie trotzdem gibt', *Leviathan*, **39**, 125–140.
- Pearson, G. and Hobbs, D. (2004) 'E is for Enterprise: Middle Level Drug Markets in Ecstasy and Stimulants', *Addiction Research and Theory*, **12**, 565–576.
- Portes, A. and Haller, W. (2005) 'The Informal Economy'. In Smelser, N. J. and Swedberg, R. (eds) *The Handbook of Economic Sociology*, Princeton, NJ, Princeton University Press, pp. 403–428.
- Quayle, E. and Taylor, M. (2002) 'Child Pornography and the Internet: Perpetuating a Cycle of Abuse', *Deviant Behavior*, **23**, 331–361.
- Reuter, P. (1985) *The Organization of Illegal Markets: An Economic Analysis*, Washington, DC, National Institute of Justice.
- Reuter, P. and Kleiman, M. A. R. (1986) 'Risks and Prices: An Economic-Analysis of Drug Enforcement', *Crime and Justice: An Annual Review of Research*, **7**, 289–340.
- Roth, A. E. (2007) 'Repugnance as a Constraint on Markets', *Journal of Economic Perspectives*, **21**, 37–58.
- Sandberg, S. (2012) 'The Importance of Culture for Cannabis Markets', *British Journal of Criminology*. First published online: June 11, 2012.
- Satz, D. (2010) *Why Some Things Should Not Be For Sale*, Oxford, Oxford University Press.
- Schelling, T. C. (1978) 'Economic Analysis of Organized Crime'. In Wickman, P. and Whitten, P. (eds) *Readings in Criminology*. Lexington, D. C. Heath, pp. 160–170.
- Schelling, T. C. (1984) *Choice and Consequence*, Cambridge, MA, Harvard University Press.
- Sieber, U. and Bögel, M. (1993) *Logistik der Organisierten Kriminalität : wirtschaftswissenschaftlicher Forschungsansatz und Pilotstudie zur internationalen Kfz-Verschlebung, zur Ausbeutung von Prostitution, zum Menschenhandel und zum illegalen Glücksspiel*, Vol. 28. Wiesbaden, BKA-Forschungsreihe.
- Smith, G., Wynne, H. and Hartnagel, T. (2003) *Examining Police Records to Assess Gambling Impacts: A Study of Gambling-related Crime in the City of Edmonton*, Edmonton, Alberta Gaming Research Institute. [http://dspace.ucalgary.ca/bitstream/1880/1628/1/Gambling\\_and\\_crime.pdf](http://dspace.ucalgary.ca/bitstream/1880/1628/1/Gambling_and_crime.pdf)
- Spillane, J. (2000) *Cocaine: From Medical Marvel to Modern Menace in the United States*, Baltimore, MD, Johns Hopkins University Press.
- Spremann, K. (1988) 'Reputation, Garantie, Information', *Zeitschrift für Betriebswirtschaft*, **58**, 613–629.
- Staake, T., Thiesse, F. and Fleisch, E. (2012) 'Business Strategies in the Counterfeit Market', *Journal of Business Research*, **65**, 658–665.
- Steiner, P. (2010) *La transplantation d'organes: un commerce entre les être humains*, Paris, Gallimard.
- Stevenson, R. (2001) 'The Stolen Goods Market in New South Wales, Australia - An Analysis of Disposal Avenues and Tactics', *The British Journal of Criminology: an*



- International Review of Crime and Society: An International Review of Crime And Society*, **41**, 101–118.
- Subedi, G. (2009) 'Trafficking in Girls and Women in Nepal for Commercial Sexual Exploitation: Emerging Concerns and Gaps', *Pakistan Journal of Women's Studies*, **16**, 121–146.
- Tacconi, L. (2007) 'The Problem of Illegal Logging'. In Tacconi, L. (ed.) *Illegal logging: Law enforcement, livelihoods and the timber trade*, Sterling, Earthscan Publications Ltd., pp. 1–16.
- Tijhuis, A. J. G. (2006) *Transnational Crime and the Interface between Legal and Illegal Actors: The Case of the Illicit Art and Antiquities Trade*, Nijmegen, Wolf.
- UNODC. (2005) World Drug Report 2005, Vienna, United Nations Office on Drugs and Crime. [http://www.unodc.org/documents/wdr/WDR\\_2010/World\\_Drug\\_Report\\_2010\\_lo-res.pdf](http://www.unodc.org/documents/wdr/WDR_2010/World_Drug_Report_2010_lo-res.pdf)
- Uzzi, B. (1997) 'Social Structure and Competition in Interfirm Networks: The Paradox of Embeddedness', *Administrative Science Quarterly*, **42**, 35–67.
- van Duyne, P. C. (1995) 'The Phantom and Threat of Organized Crime', *Crime, Law and Social Change*, **24**, 341–377.
- Venkatesh, S. A. and Levitt, S. D. (2000) 'Are We a Family or a Business? History and Disjuncture in the Urban American Street Gang', *Theory and Society*, **29**, 427.
- Viscusi, W. K. (1986) 'The Risks and Rewards of Criminal Activity: A Comprehensive Test of Criminal Deterrence', *Journal of Labor Economics*, **4**, 317–340.
- von Lampe, K. and Johansen, P. O. (2004) 'Organized Crime and Trust: On the Conceptualization and Empirical Relevance of Trust in the Context of Criminal Networks', *Global Crime*, **6**, 159–184.
- Weber, M. (1978) *Economy and Society*, Berkeley, CA, University of California Press.
- Wehinger, F. (2011) *Illegale Märkte: Stand der sozialwissenschaftlichen Forschung (Forschungsbericht)*, Cologne, Max-Planck-Institut für Gesellschaftsforschung.
- Wendel, T. and Curtis, R. (2000) 'The Heraldry of Heroin: "Dope Stamps" and the Dynamics of Drug Markets in New York City', *Journal of Drug Issues*, **30**, 225–259.
- Westra, L. (2004) *Ecoviolence and the Law: Supranational Normative Foundation of Ecocrime*, Ardsley, NY, Transnational Publishers.
- White, H. (1981) 'Where do Markets Come from', *American Journal of Sociology*, **87**, 517–547.
- Wilcox, K., Kim, H. M. and Sen, S. (2009) 'Why Do Consumers Buy Counterfeit Luxury Brands?', *Journal of Marketing Research (JMR)*, **46**, 247–259.
- Williams, P. (2001) 'Cooperation among Criminal Organizations'. In Berdal, M. and Serrano, M. (eds) *Transnational Organized Crime and International Security: Business as Usual?*, Boulder, CO, Lynne Rienner Publishers, pp. 67–80.

- Zaitch, D. (2002) *Trafficking Cocain: Colombian Drug Entrepreneurs in the Netherlands, Studies of Organized Crime*. The Hague, London and New York, Kluwer Law International.
- Zaluar, A. (2000) 'Perverse Integration: Drug Trafficking and Youth in the Favelas of Rio de Janeiro', *Journal of International Affairs*, **53**, 653–671.
- Zelizer, V. (1979) 'Human Values and the Market: The Case of Life Insurance and Death in 19th Century America', *American Journal of Sociology*, **84**, 591–610.
- Zhang, S. X. (2008) *Chinese Human Smuggling Organizations: Families, Social Networks, and Cultural Imperatives*, Stanford, CA, Stanford University Press.
- Zucker, L. G. (1986) 'Production of Trust: Institutional Sources of Economic Structure, 1840–1920', *Research in Organizational Behavior*, **8**, 53–111.