

A FRAMEWORK TO ASSESS THE HARMS OF CRIMES

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Introduction

Despite growing concern for victims of crime among the general public, policy-makers, and academics (e.g., Spalek, 2006, and Walklate, 2007), neither criminology nor the adjacent social sciences have made a serious effort to systematically identify, evaluate, or compare the harms associated with different crimes—broadly understood as violations of stakeholders’ legitimate interests¹—as distinct from the perceived seriousness or costs of crime. Policy-makers and academics have tended to view crime as a “harm” in its own right, making few attempts to distinguish the consequences of one criminal activity from another.

More recently, members of wide-ranging policy communities, including that of crime control, have turned their attention to harm reduction as a goal (Sparrow, 2008). Several national and regional policy-making and law-enforcement agencies are considering harm as a basis for prioritizing and targeting criminal activities. The United Kingdom (UK) offers the clearest example: “the overarching aim of the [Organised Crime] Control Strategy is to achieve a tangible and lasting reduction in the harm caused to the UK by organised crime” (SOCA [Serious Organised Crime Agency], 2008: n.p.).² Agencies in other nations—e.g., the Australian Crime Commission, the Canadian Criminal Intelligence Service, the Belgian Justice and Home Affairs Ministries, and the Dutch Ministry of Justice—are considering related approaches (Tusikov, 2012; van der Beken et al., 2011; Dorn and van de Bunt, 2010).

¹ Ashworth (2006: 30-31) and Feinberg (1984: 31-36), for example, address harms to “people” and focus on traditional interpersonal crime. For our delineation of stakeholders, which refers to bearers of harms and is somewhat broader, and our definition of interests, see *infra*.

² Whether SOCA’s successor agency, the National Crime Agency, will maintain this position remains to be determined. A Home Office (2011) planning document continues to embrace the concept of harm, but the new agency, which will be formally stood up in 2013, has not yet—at the time of this writing—released a formal operating strategy.

Within the European Union (EU) bureaucracy, the past decade's shift in emphasis from "organized" crime to a combination of organized and "serious" crime (e.g., Council, 2002 and 2009) also resonates with harm (Dorn, 2009).

Largely independent of these policy developments, some critical criminologists (e.g., Hillyard and Tombs, 2004) have proposed replacing the notion of crime with that of social harm and making the reduction of social harm the key goal of broader social policy, not just crime control—but offer little practical guidance.

More fundamentally, in criminal law theory the harm "caused" by a criminal activity is considered crucial to justify the very criminalization of such activity, the penalties assigned to it by law-makers, and the penalties imposed on single offenders by judges (e.g., Ashworth, 2006: 30-39). However, such assessments are not empirically-based and indeed mostly remain implicit (*ibid.*).

The increasing interest in harm-based approaches to crime-control policy implies a need for sound methods to systematically assess the harms of criminal activities, but identifying, evaluating, and comparing such harms presents substantial conceptual and technical challenges. In another paper (Paoli and Greenfield, 2013), we review the status of harm in crime-control policy and the literature on the harms of crime and related concepts and, on this basis, identify the major conceptual and technical challenges associated with assessing the harms of crime.

In this paper, we develop a framework, consisting of a set of tools and a multistep analytical process, with which to systematize the empirical assessment of harm and address at least some of those challenges. In section 1, we introduce the framework and explain its origins. In sections 2, 3, and 4, we present three tools of the framework (i.e., the taxonomy, scales, and matrix) and the process. For illustrative purposes, we interweave examples from an application of the framework to wholesale cocaine trafficking (hereafter referred to as "cocaine trafficking") in Belgium. Noting that the application derives from a larger project on organized crime, undertaken to help policy-makers and law-enforcement agencies establish

strategic, long-term priorities in organized crime control, we discuss the potential roles of the framework in policy analysis in section 5.³ We conclude, in section 6, with remarks on the strengths and weaknesses of our approach.

1. Origins and Components of the Framework

We developed our framework in response to an evident need for a systematic, empirically-based approach to assessing harms; in particular, one capable of responding to the conceptual and technical challenges that would inevitably greet such an effort. Chief among the challenges are those of morality, cultural and socio-economic variability, subjectivity, infinitude, causality, standardization, quantification, and incommensurability. Paoli and Greenfield (2013) discuss these challenges at length. In this paper, we summarize them to ground our presentation of the framework. As that presentation unfolds in sections 2-4, we explain how each component responds to each challenge.

The challenges of morality, variability, and subjectivity result from the inherently normative nature of calling something a “harm” in the first place. The decision to apply this label depends on the identification of “legitimate” interests according to the “dominant political morality” (MacCormick, 1982: 30), which, in turn, depends on a society’s cultural and socio-economic arrangements.

Questions of legitimacy pertain not just to interests, *per se*, but to claimants and their sometimes-competing perspectives on the consequences of criminal activities. Here, we highlight two related questions. First, should all claimants be treated as equally legitimate? That is, should harms to all individuals, entities, etc. count with the same weight or importance, regardless of their status, be they victims

³ The larger project, titled “Danger: Appraising the Dangerousness of Organised Crime,” was funded by the Belgian Federal Science Policy Office for a three-year period (see Vander Beken et al., 2012).

or perpetrators? Second, how should we address outcomes that might look like harms from one claimant's perspective and benefits from another? For example, a crime, such as drug production or trafficking, might generate revenues that benefit not just perpetrators, but also the larger economy.

The challenges of infinitude and causality are related. That of infinitude arises from the infeasibility of creating an exhaustive list of harms. First, it is impossible to identify and assess all harms *a priori* and, second, a list that includes ancillary effects could, in practice, go on forever. The challenge of causality, also referred to as the problem of "remote harms" (Ashworth, 2006: 49-50, and Ryberg, 2004: 64-65), arises from the temporal, spatial, and behavioural distance that can separate conduct from consequences. Remote harms stand in such a relation to a conduct that it is not clear whether they should be ascribed to that conduct; for example, drug trafficking triggers events that are harmful, in part, because of the intervening choices of other actors (e.g., dealers and users).

The remaining challenges of standardization, quantification, and incommensurability might be regarded as somewhat more "technical" than the others, but are nevertheless also "conceptual." Even though the hurtfulness of a crime depends on the specific situation of the victim, no broad-based empirical study can fully assess the harms to each victim separately. Some standardization, at least for individuals, therefore, seems unavoidable. The problems of quantification and incommensurability can be stated even more simply. Not everything that matters can be quantified nor can it be measured or compared according to a common standard (Caulkins and Reuter, 1997: 1148, and Caulkins et al., 2011). To omit those things that cannot be quantified, let alone compared, is tantamount to assigning them a societal weight of "zero."

Taking on each of these challenges, in turn, our framework allows for the identification, evaluation, and, within limits, qualitative comparison of the harms associated with wide-ranging criminal activities. It consists of a set of tools and a

multistep process with which to apply them; specifically, it draws together a model of the criminal activity, a taxonomy of the types and bearers of harms, scales for evaluating the severity and incidence of harms, and a matrix for prioritizing harms. The process begins with the development of a “business model” that depicts the typical logistics or *modus operandi* of a criminal activity and provides a strong evidentiary base for identifying possible harms, evaluating their severity and incidence, prioritizing them, and establishing their causality.

Figure 1 about here

In constructing our framework, we draw heavily from the literature on criminal harm assessment, most notably, von Hirsch and Jareborg (1991). Albeit exclusively focusing on individuals, the two legal theorists offer the most structured attempt to categorize the harms of crime we know of, one which Ashworth (2006: 37) describes as “pathbreaking.” In their paper, “Gauging Criminal Harm: A Living Standard Analysis,” they focus on the damages associated with common interpersonal crimes, such as theft, burglary, and assault (ibid.: 3-4) and develop guidelines for assessing the *standard* impact that a crime has on the immediate victim’s “standard of living.” This is defined, following Sen (1987), as the “economic means” and “non-economic capabilities” for achieving a certain quality of life (ibid.: 7 and 10-11) and serves in both von Hirsch and Jareborg’s and our framework as the benchmark for assessing the severity of the harms.⁴

In addition, we borrow insights from the literatures of other policy-oriented communities, specifically the drug policy community (e.g., MacCoun et al., 1996, MacCoun and Reuter, 2001, and Newcombe, 1992) and, less predictably, the national security community (e.g., Greenfield and Camm, 2005). The national security community, faced with concerns about the “bad consequences” in military

⁴ Von Hirsch, Ashworth and Jareborg (2005) restate the approach with modest revisions.

operations—and many similar conceptual and technical challenges—has long-used a risk management tool that bears direct relevance to our effort (see Greenfield and Paoli, 2012).

Although we initially developed the framework as part of a larger project focusing on organized crime, our approach is not specific to either organized crime or its activities. In the context of that project, we tested the framework with applications to cocaine trafficking, human trafficking, VAT fraud, and tobacco smuggling and counterfeiting, but we believe it is applicable to many other crimes. As we discuss later, in the context of policy analysis, the framework might also be used to better assess whether certain activities merit criminalization.

2. Taxonomy of Bearers and Types of Possible Harms

We have constructed a two-dimensional taxonomy of the possible harms associated with criminal activities: one dimension addresses the bearers of harm and the other addresses the types of harm. Our taxonomy distinguishes among bearers in four different classes, consisting of individuals; private-sector entities, including businesses and non-governmental organizations (NGOs); government entities; and the environment, both physical and social (see table 1). Harms can take the form of damages to functional integrity, material interests, reputation, or privacy, but not all types of harm are relevant to all classes of bearers.

Whereas some classification systems include “the community” as an independent bearer (e.g., Newcombe, 1992, and SOCA, 2010), we try to allocate “communal” harms to their ultimate bearers, including the individuals, businesses, NGOs, and government agencies that compose a community. For reasons that we discuss below, we also treat the environment as a bearer. Similarly, we allocate harms to “the economy” to the actors and entities that compose the economy. In this regard, we differ substantially from Kopp and Besson (2009) and Dorn and van de Bunt (2010) who speak to “systemic” harms. For Kopp and Besson (2009: 312),

systemic harms encompass all harms that do not directly affect individuals. Our approach requires additional care in allocating the harms that Kopp and Besson and others would call “systemic”—e.g., decreases in local real estate prices resulting from drug dealing—to their ultimate bearers.

In some instance, however, we acknowledge that we have only identified the “near-ultimate” bearers of harms. For example, many or most harms borne by the government, private-sector entities, and the environment, are borne ultimately by individuals, e.g., taxpayers, shareholders, employees, and residents. But, given the practical realities of data availability and analytical complexities, it would be difficult, if not impossible to derive results at the individual level for all such harms.

Table 1 about here

For individuals, we delineate types of harms much as von Hirsch and Jareborg (1991) delineate them,⁵ but note three divergences: we expand the category of “physical integrity,” which we re-name “functional integrity,” to include both physical and psychological losses; we consolidate another category; and we add a new category, i.e., that of “reputation.”⁶ Violations of functional integrity may result in physical and psychological losses, bounded by death at one extreme and by momentary pain, discomfort, or anxiety⁷ at the other. Psychological damages may occur along with physical injuries or separately and might arise from humiliation, which von Hirsch and Jareborg (1991) treat as a separate category, and affronts to dignity. Material interests can run the gamut from the most basic means of

⁵ Von Hirsch and Jareborg (1991: 19) posit four interest dimensions: physical integrity, material support and amenity, freedom from humiliation, and privacy or autonomy.

⁶ The inclusion of psychological losses accords with the prevailing opinion of the drug-related harm literature. See, for example, MacDonald et al. (2005), MacCoun et al. (1996), MacCoun and Reuter (2001), Newcombe (1992). Victimologists also stress the relevance of the psychological and emotional impact of victimization (e.g., Spalek, 2006).

⁷ Here we use the term “anxiety” colloquially.

subsistence to the amenities of modest comfort and luxury. Damages to “reputation”—a category of our own initiative, but deriving from legal precedent—arise from actions or events affecting others’ view of the individual. They might involve instances of mistreatment or exploitation, as could occur in cases of human trafficking, or stem from instances of physical assault, verbal harassment, or mere association. A violation of privacy, such as an unauthorized entry or the control of personal documents, such as a passport, might occur in a burglary, kidnapping, or case of human trafficking.

We delineate the harms to private-sector entities, government entities, and the environment analogously. For example, under the category of “functional integrity,” a business, NGO, or government body would suffer a loss of operational integrity, rather than a loss of physical or psychological integrity. A business or NGO might experience a material loss as a loss of value in their balance sheet, possibly concurrent with other damages, whereas governments might suffer a loss of tax revenue. A business, NGO, or government body might also suffer a loss of “privacy.” Unauthorized access to and possible misuse of the entity’s premises or sensitive or proprietary information might render it less able to pursue its institutional interests. Such unauthorized access might occur in cases of burglary or VAT fraud, during which business documents, official documents, and other data are especially vulnerable, e.g., through falsification. Damage to a business, NGO, or government’s reputation can occur under a variety of circumstances, including those involving an employee, official, or representative’s participation in a criminal activity, but we argue that such entities experience at least some reputational loss whenever rule- or law-breaking leaves the impression that they are weak.

For the environment, which we divide according to physical and social dimensions, we limit the analysis to functional integrity, consisting of physical, operational, and aesthetic integrity. It might be possible to trace some of these harms to individuals or entities; however, in many settings, including those in which

environmental property rights—and attendant responsibilities for management and oversight—lack clear delineation, that attribution would be complex at best. Concerns about the physical environment include air, water, and soil pollution; noise and light pollution; inaccessibility of open spaces; and obstruction or destruction of landscapes. Concerns about the social environment include public nuisance, social fragmentation, and community disassociation. Drug dealing might, for example, create a persistent public nuisance, resulting in the *de facto* appropriation of public spaces. The remaining categories of harm, i.e., harms to material interests, reputation, and privacy, are either inapplicable or duplicative.

In constructing the taxonomy we have tried to account for at least some of the challenges of cultural and socio-economic variability, subjectivity, infinitude, and causality that greet harm assessment.

Seeking to allow for difference in societal values and socio-economic conditions, we speak of “possible” harms and, for the most part, allow policy-makers the latitude to decide whether certain consequences of criminal activities should be considered harmful and whether certain individuals or entities (e.g., offenders) should be deemed legitimate bearers of harms.

Acknowledging the problem of infinitude, we have attempted to construct a broadly inclusive taxonomy, but we make no claim that it is exhaustive.

Reflecting our initial interest in organized crime, our taxonomy also accommodates complex criminal endeavors, involving multiple inter-related activities. It can be used, for example, to identify the harms associated with a primary criminal activity, such as cocaine trafficking; the harms associated with “accompanying” activities, such as money laundering, corruption, and the use or threat of violence, that might facilitate or occur along with the primary activity;⁸ and

⁸ The decision to include accompanying activities implies that perpetrators might, themselves, constitute the bearers of the harms of some accompanying activities. Victimologists have long recognized striking similarities between the victim and offender populations and, in the case of violent crime, frequent overlap (see Fattah, 1992: 32-33).

the harms associated with downstream activities, such as drug dealing and use, that are at least partially “enabled” by the primary activity. The harms of “enabled” activities constitute remote harms because they are mediated by the choices of victims and others along the supply chain.

Lastly, recognizing that the strength of the causal link between an activity or event and any subsequent harm might vary significantly and require thorough analysis, our taxonomy does not presume causality; rather, it lists the possible harms “associated with” a criminal activity. Some harms might emerge directly from that activity or event. Others might be “remote,” as defined above, or accumulative (*ibid.*: 65-66); that is, they arise only if the act triggering the harm is combined with similar actions (e.g., as in the case of repeated VAT fraud). Still others might derive not from the activity, itself, but from the policy environment.

Notwithstanding our emphasis on breadth and inclusivity, we set four noteworthy bounds on our assessments of cocaine trafficking, human trafficking, VAT fraud, and tobacco smuggling and counterfeiting in Belgium.

First, we excluded material losses that occur when one criminal steals another’s illegally-obtained or inherently-illegal possessions and the harms to wholly-illegal enterprises or shell companies.

Second, we excluded any benefits associated with the activities. Although advocating “full accounting” as an aspirational goal (see Greenfield and Paoli, 2012), we chose to focus on gross harms in our initial applications to Belgian crime. Were we to assess the harms of other activities (e.g., human smuggling) in other places (e.g., Afghanistan, in the case of opium production), that approach could seriously skew our findings.

Third, we excluded law-enforcement costs. This decision goes against frequent practice in the cost-of-crime literature (e.g., Cohen 2005), but is not without precedent in the criminological literature. The logic behind our decision is thus: if law-enforcement costs were added, then the criminal activities that are

already most heavily prioritized by law-enforcement agencies—as reflected in the agencies’ funding—would likely appear to be more harmful than others that have been less heavily prioritized, thereby creating a vicious cycle. As Levi and Burrows (2008: 294) observe, the inclusion of law-enforcement costs can yield paradoxical results, “if one includes the costs of responses to crime as part of the ‘costs of crime’, the less that is done about them, the lower are the ‘costs of crime’.” Funding is not a direct measure of harm; rather, it reflects a society’s concern about the harm (see Dorn and van de Bunt, 2010: 9).

Fourth, and along similar lines, we excluded costs incurred by private entities or individuals to protect themselves from crime. Individuals, and in most cases businesses and NGOs, do not assess the threat of each criminal activity separately, making it impossible to identify, let alone estimate, the costs of efforts to prevent each particular activity. Moreover, prevention costs are not solely a function of the inherent ‘toxicity’ of crime itself, but are also a function of the perceptions of individuals and entities. A business, for example, might incur security expenses for three reasons: an internal desire to hedge risks, the demand from employees and customers for particular protections, and government regulation mandating certain security measures (Jackson, Dixon and Greenfield, 2007: 34-35). Lastly, prevention costs are often bundled together with general compliance and technological systems and it would be very difficult to disentangle them empirically from the costs of these other activities (Levi and Burrows, 2008: 310).

We did not, however, exclude costs of repair or replacement. Examples include the costs of healthcare borne by individuals or government entities for treating injuries accruing from criminal activity or the costs of repairing or substituting assets damaged or stolen by criminals, including increases in insurance premiums that might result from repair or replacement.

3. Two Scales and a Matrix

We have developed two ordinal scales and a matrix that combines them to evaluate the severity and incidence of each harm and to compare results across harms. Our approach to severity draws from von Hirsch and Jareborg (1991) and the national security literature, specifically, Greenfield and Camm (2005); our approach to incidence and our matrix draw only from the latter. Although intending to remain true “in spirit” to these underlying references, we have introduced a handful of modest—hopefully clarifying—changes in wording.

To evaluate severity, we specify a scale with five broad categories, ranging from “catastrophic” to “marginal” (see table 2). For individual victims, the first four categories—catastrophic, grave, serious, and moderate—correspond to intrusions at each of the four living-standard levels; the fifth category—marginal—pertains when a crime does not encroach substantially at any level. A corollary of using the living standard as a benchmark is that some interest dimensions emerge as more “basic” than others: whereas the violation of an individual’s functional integrity may result in a catastrophic harm, the violation of his or her reputation cannot (see von Hirsch and Jareborg, 1991: 21).

We apply the same scale to harms to other bearers, but use a standard-of-living analogy for private-sector and government entities. Recalling that “living standard” refers to various “means” and “capabilities,” we assess the harms to an entity in relation to its ability to fulfill its “mission,” defined as the entity’s *raison d’être*. In many countries (e.g., the United States), federal, state, and local government agencies publish mission statements; they are also common, possibly the norm, among medium and large businesses and NGOs in developed countries. Admittedly, some mission statements amount to image-crafting; nevertheless, the underlying concept of an entity’s *raison d’être* still holds.⁹

⁹ We have not developed an overarching benchmark for the environment. Even if the environment is divided into the subclasses of physical and social environment, functional

Table 2 about here

In assessing harms to individuals, we attempt to estimate the *standard* impact of a criminal activity on the living standard of individual victims, assuming, as do von Hirsch and Jareborg (1991: 4), that “injury occurs to someone who is neither especially vulnerable nor resilient” in the context of the society under consideration. Thus, we do not distinguish between the effects of an event on the basis of an individual’s specific life circumstances: for example, we would treat the loss of a cash-containing wallet identically, regardless of the victim’s wealth.¹⁰

In contrast, for other bearers, we consider the level of analysis. A branch or division of a local government agency—or the entire agency—might be heavily affected by corruption, whereas the overall government remains fundamentally intact. The same also applies to the environment. A neighborhood might be heavily affected by a particular crime, whereas the nation, taken as a whole, might suffer little damage. Given the impossibility of typifying such entities, we try to delineate subclasses when more than one bearer per class is affected. For businesses and NGOs, we might distinguish between small- and medium-scale entities, on the one hand, and large-scale entities on the other. For government entities, we would consider harms to local, regional, or central public bodies. For the environment, already specified as either physical or social, we might introduce local, regional,

integrity is, in both cases, the only affected interest dimension. We realize that this category is, in itself, very broad and highly differentiated. As none of the four criminal activities so-far considered has generated multiple harms to the environment, we have had no opportunity to test this part of the framework.

¹⁰ Scholars also debate whether the punishment meted out for a crime should reflect and be calibrated upon the different subjective experiences of those who are punished. However, the predominant view is that punishment should be meted on objective grounds, although the convicts’ personal circumstances might be taken into account in debating the role of mercy. (See Gray, 2010, for a review of the debate and rejection of the subjectivist standpoint.)

national, or global distinctions. In the current project, we have tried to conduct case-by-case assessments of the harms to private-sector and government entities, but this might not be possible in a context larger than Belgium.

The same criminal activity usually affects more than one interest dimension; that is, it yields different types of harms of possibly different severity. The only clear exception is that of the “catastrophic” harm associated with death, in which case, the victim is no longer able to experience a material, reputational or other loss, though his or her heirs might. Other activities are “messier.” An assault, for example, can affect both the victim’s functional integrity and reputation, but it can affect each interest dimension differently. If the assault produces major injuries requiring hospitalization and impinging on an adequate standard of living, the harm to functional integrity may be rated as “serious.” If the same assault has only a minimal and fleeting effect on how others view the victim, the reputational harm may be regarded as “marginal.”

As these examples demonstrate, a given type of criminal activities, e.g., violence, may come in different forms. In our analysis we effectively create subcategories of activities for violence (e.g. murder, rape, petty assault) and corruption (e.g., low-level bribes v. co-opting of high-level government representatives), to more precisely assess the severity (and incidence) of each harm and, in the case of accompanying activities, such as violence, to establish a one-to-one correspondence between each subcategory and the harm.

For incidence, we also use a scale with five broad categories: always, persistently, occasionally, seldom, and rarely. Our assessment of cocaine trafficking in Belgium, for example, indicates that body-packing¹¹ yields marginal harms “occasionally” and catastrophic harms “rarely,” the latter occur with fatal overdoses. If a type of harm is not relevant to a specific activity in a given context, we label it

¹¹ Body-packing refers to the practice of ingesting drugs to conceal them during transport. Drug-containing balls that body packers ingest can break, leading to death or severe injury.

“not applicable.” Our Belgian cocaine trafficking assessment yields no evidence of physical or social environmental harms during import; hence, we regard them as not applicable in that context.

Our prioritization matrix jointly rates the severity and incidence of harms (see table 3). In combination, these ratings can provide a preliminary basis for prioritizing harms, whereas a severity or incidence rating, alone, cannot.¹² For example, a grave harm might seem to merit more attention than a moderate harm, but if the grave harm is rare and the moderate harm is persistent, the moderate harm might, instead, merit more attention. That an interest dimension is more or less “basic” does not affect the design or application of the matrix; rather, it affects the placement of harms in the matrix and the outcome of the analysis. Violations of functional integrity can engender more severe harms than violations of reputation, potentially placing them closer to the “top” of the matrix, but, as in the comparison of grave and moderate harms, their relative ranking will still depend ultimately on their relative incidence. Moreover, the combination of our two scales can account for accumulative harms; that is, those harms that pose significant concern only if they are repeated. In the case of corruption, the occasional involvement of a low-level employee of a transportation company in cocaine trafficking might cause only marginal harm to the company’s mission. However, if numerous employees engage in corrupt acts, even if they are all low-level, the company’s operational integrity, reputation, and perhaps also privacy might be endangered.

Table 3 about here

As should be apparent from our rating scales, we do not insist on quantifying all harms. When available, we use quantitative data to inform our evaluation, but our framework does not fundamentally require quantification. This flexibility “buys”

¹² We describe the prioritizations as “preliminary” because, to arrive at a more “final” determination, one would also need to evaluate the relative costs of implementing measures to address harms.

us the freedom of employing alternative means of analysis; we do not, so-to-speak, leave any credible information on the table. Following von Hirsch and Jareborg (1991), the national security doctrine, and other scholars in the drug policy community (e.g., Nutt et al., 2010), we acknowledge the limitations of expert judgment, but accept it as valid. Such acceptance can help to mitigate the bias of strict adherence to quantification, but, admittedly, it can also open the door to a different kind of “bias,” i.e., that of professional perspective. Different experts might—and often do—have different opinions. Therefore, we recommend triangulating expert opinion with observations from other sources.

Another advantage of our approach is that it allows comparisons of a fuller range of harms among individuals and, with some restrictions, within the classes of private-sector entities, government entities, and the environment. However, although we can claim progress in addressing incommensurability, we cannot claim to have eliminated the challenge. Different types of harms to individuals can be held to a common standard, i.e., the “standard of living,” as can different types of harms to a private-sector entity or government entity vis-à-vis its “mission,” enabling within-class comparisons, but damages to an individual’s standard of living and an entity’s mission capability are not readily comparable.¹³ As such, harms remain largely incommensurable across classes. Likewise, we cannot readily aggregate harms. We can tally the numbers of highest, medium, and lowest priority harms associated with each criminal activity and make inferences from the distributions, but we cannot state unequivocally whether a set of ten low-priority functional harms, five medium-priority material harms, and one high-priority reputational harm is “better” or “worse” than a set of twelve, four, and two.

Nevertheless, our approach offers the benefit of making use of all available

¹³ In this regard, we are no worse off than those attempting monetization and other forms of quantification in that we can still use quantitative information to make the same partial comparisons of harms that they can make. See Heaton (2010) for an overview of the cost-of-crime literature and Paoli and Greenfield (2013) for a critical discussion.

information, be it quantitative or qualitative, and, lacking need for large data sets or elaborate statistical methods, the potential advantage of speed. It demands rigorous thinking, but, absent an extensive data collection, one can still exploit the facts on-the-ground to conduct a rapid, yet systematic assessment.

In presenting three principle tools of our framework, i.e., the taxonomy, rating scales, and matrix, we noted several ways in which it addresses the challenges of harm assessment. Table 4 provides a summary. Although some challenges cannot be overcome fully—for example, we cannot eliminate all the influences of the “dominant political morality”—we can address substantial elements of cultural and socio-economic variability, subjectivity, infinitude, causality, standardization, quantification, and incommensurability.

Table 4 about here

4. The Harm Assessment Process

The harm assessment process consists of a series of steps that involves data collection, sorting, and analysis (see figure 1).

We begin the process by constructing a business model, defined loosely as the *modus operandi*, for the criminal activity. In mafia-like cases of organized criminal activities, one might imagine an actual business model; whereas, in other circumstances, the notion of a true “business model” would be too formal. Taking the approach developed by Sieber and Bögel (1993) and Huisman et al. (2003) in studies of organized crime in Germany and the Netherlands, respectively, the business model of a criminal activity consists of the depiction of the typical logistics of that activity. We use the business model to characterize the key operational phases of the activity and, for complex crimes, the functions and modes of “accompanying” and “enabled” activities. The business model provides essential building blocks of information.

After constructing the business model, we:

- Identify the possible harms associated with criminal activities, such as cocaine trafficking, and the bearers of those harms; this step involves sorting harms by primary, accompanying, and enabled activities and classifying harms according to type and bearer, using the taxonomy.
- Evaluate the severity and incidence of harms; this step involves rating the severity and overall incidence of each harm, using the severity and incidence scales. The overall incidence accounts for both the incidence of each harm in relation to the criminal activity (what we refer to as the “within-activity” incidence) and the incidence the criminal activity itself. A criminal activity might always produce serious harm but if the activity occurs only very rarely, it might not merit concern.
- Prioritize harms, using the matrix of severity and incidence.

Lastly, we attempt to establish the causality of harms. Although we have not developed a specific tool for this step, we proceed in two stages; we account first for the “distance” between a criminal activity and a harm and second for the extent to which the policy environment might give rise to the harm.

In the discussion that follows, we describe each step of the assessment process in terms of our application to cocaine trafficking in Belgium. We conclude with comparative comments on our application of the framework to human trafficking, also in Belgium, illustrating the different ways in which harms unfold under different circumstances. Both applications draw information from an extensive collection of primary data and secondary spanning a period of about seven years (see Paoli et al., 2012 and 2013).

Construct Business Model

To start, we constructed a business model that identifies the typical phases of this activity: namely, import and export or wholesale distribution (see figure 2). For the

import phase, we also distinguished each of the major sea, air, and land routes. We identified money laundering, the threat or use of violence, and corruption as the three main “accompanying” activities. Drug dealing and drug use compose the two main “enabled” activities, but we did not assess drug use.

Figure 2 about here

We found that the Port of Antwerp and Brussels International Airport dominate the trade as points of entry and that most of the cocaine that enters Belgium likely transits onward to other countries in Europe. On the basis of various estimates of consumption (e.g., Van Nuijs et al., 2009), seizures (e.g., Centrale Dienst Drugs, 2010), and flows (e.g., U.S. Department of State, 2010: 143), we concluded that cocaine trafficking is a prominent criminal activity in Belgium and that imports more than amply cover domestic use: upwards of 30 tons of cocaine might flow into Belgium each year, amounting to perhaps as much as 10 times the amount that Belgian users consume in the same time frame.

Identify possible harms

Given what we learned from the business model, we singled out harms that appeared to be plausible. Consistent with our stated goals of breadth and inclusivity and intending to leave as many normative decisions as possible to policy-makers, we included the harms to perpetrators that are incurred in the conduct of a criminal act, except as noted previously vis-à-vis illegally obtained or inherently-illegal possessions; for example, we included physical and psychological harms to body packers, but did not include the material harms arising from the theft of cocaine shipments or weapons. We attributed particular harms to the activities in each phase, i.e., import and export or wholesale distribution, and classified them according to type and bearer on the basis of the taxonomy.

As a general proposition, we argued previously that harm to government reputation occurs whenever a law is broken and, consequently, the government appears to be ineffectual. In assessing importation, specifically, we found that:

- Harms to the physical and psychological integrity of individuals might arise either from cocaine trafficking via the air route, e.g., when body packers overdose, or from the use or threat of violence along any route. In the latter case, traffickers, couriers, other facilitators, and, more rarely, government officials or representatives might be victimized.
- Harms to the operational integrity, reputation, and “privacy” of government entities might arise if officials or representatives (e.g., law-enforcement or customs officers) engage in corrupt practices.
- Harms to the operational integrity, reputation, and “privacy” of transport and import-sector businesses might arise if corrupt officials, employees or traffickers misuse the assets of those businesses. Reputational damage does not require internal collaboration; moreover, it can occur even if a business initially lacks any knowledge of misuse.
- Harms to the material interests of individuals, government entities, or businesses might occur independently or arise in conjunction with harms to physical, psychological, or operational integrity if the latter involve or require either medical treatment or the repair or replacement of material goods.

Evaluate severity and incidence

We then evaluated the severity and incidence of each of the “possible” harms. Whereas we identified the set of possible harms on the basis of plausibility, in assessing incidence and severity, we confined ourselves to the evidence of realization found in criminal records, academic and grey literatures, and expert opinion. As such, a harm that we deemed “possible” on the basis of the business model might not materialize in this evaluation with a rating.

We began the evaluation by estimating the incidence of the primary activity, i.e., cocaine trafficking. Recalling that 30 or more tons of cocaine might flow into Belgium annually and given data on the variability of shipment quantities (ranging from grams to tons) and the frequency of seizures, it seemed reasonable to conclude that small-scale operations occur at least daily, large-scale operations occur at least weekly, and trafficking is a “persistent” criminal activity.

Next, we conducted a detailed evaluation of the severity and “within-activity” incidence of the harms of each primary, accompanying, and enabled activity for the period under review, roughly 2003-2009.

A summary of our evaluation of the functional harms to individuals that arise during the import of cocaine and the harms to the Belgian government resulting from corruption illustrates the approach.

With regard to functional harms to individuals, we found evidence that the import of cocaine yields marginal to catastrophic harms to individuals in Belgium, but only rarely. To the extent that catastrophic harms arose during import, they did so only in the context of “body-packing,” a form of trafficking that can present harms to individuals’ physical and psychological integrity, including their dignity, and, in the extreme, can result in overdose and death. According to our sources, deaths occur exclusively in the context of air transit, which we describe as occurring “in Belgium” for purposes of this analysis. We found evidence of two such deaths between 2003 and 2009. Our assessment is consistent with studies carried out in other countries, which find that cocaine body-packers rarely incur lethal or very serious complications (e.g., Bulstrode et al., 2002). Given the lack of Belgian statistics, we rely on those studies to conclude that body-packing may yield additional marginal to grave functional harms, also rarely (see Paoli et al., 2013).

Concerning harms to the Belgian government from corruption, we found evidence linking three law-enforcement officers—a police officer, police trainee, and customs officer—with either a criminal case or investigation of cocaine trafficking.

According to the experts whom we interviewed in Antwerp and Brussels and foreign sources (e.g., U.S. Department of State, 2010: 143), no other cases of cocaine-related corruption have ever come to the fore. We found no evidence that the episodes yielded any substantial damage to the operational integrity, reputation, or privacy of the Belgian police or customs. Thus, we regarded the “within-activity” incidence of harms created by cocaine-related corruption to the operational integrity, reputation, and privacy of the Belgian government—or any of its subunits—as “rare” and the severity as “marginal.”

In contrast, we assessed the severity of the general reputational harm to the Belgian government from law-breaking to be “marginal,” but regarded it as “always” accompanying cocaine trafficking.

For the most part, our assessment of the within-activity incidence of harms held fast as our evaluation of the overall incidence. In concept, we should “multiply” the within-activity incidence by the incidence of the activity itself, to arrive at the overall incidence, but multiplying a within-activity incidence by “persistently,” which is the overall incidence of cocaine trafficking, usually does not result in a perceptible difference. The case of the general reputational harm to the Belgian government presents a notable exception: because cocaine trafficking occurs just “persistently” and not “always,” the overall incidence of the general reputational harm to the Belgian government was not “always,” but “persistently.”

Establish policy priorities

Taken together, the ratings of incidence and severity provide a basis for preliminarily establishing policy priorities. For example, whereas corruption-derived reputational harms appeared to be a low-priority for the Belgian government, the general reputational harm, although marginal, was scored as a medium priority.

While our approach facilitates the systematic assessment of wide-ranging harms, it does not, as noted previously, fully enable the aggregation of harms within a particular class of bearers or direct comparisons of analogous harms across

different classes of bearers. With regard to the former, a small set of low-priority harms for one bearer in one arena, such as the Belgian government vis-à-vis cocaine trafficking, might be better or worse than an even smaller set of low-priority harms coupled with a medium-priority harm for the same bearer in another arena, such as human trafficking. With regard to the latter, medium-high-priority functional harms to individuals, as occur in body-packing, might merit more or less concern than medium-high-priority functional harms to private-sector or government entities. Notwithstanding the caveats, we can still look at the broad sweep of ratings and draw insight from their distribution: for example, we find that the harms of cocaine trafficking most notably involve, but are not limited to, the individuals who are, themselves, traffickers.

Establish causality

This final step does not implement a specific “tool,” such as a model, taxonomy, scale, or matrix; rather, it involves two distinct analytical stages.

First, we assess the “distance” between the harms and the primary activity. The harms of enabled activities, for example, constitute remote harms, because they are not just spatially-temporally distant but are mediated by the choices of other actors along the supply chain. In the case of cocaine trafficking in Belgium, the situation was clear-cut: only the rare and marginal harms that accrued from retail dealing were remote. All of the other harms were directly associated with cocaine trafficking, as it has transpired in Belgium. Von Hirsch and Jareborg (1991: 33-34) consider discounting for harms that occur only through the victims’ consent, explicitly mentioning the harms of drug use as a consequence of drug trafficking, but propose no formula for calculating the discount. A discount might be a useful response to varying “distance,” but absent objective criteria for developing a formula, we choose to leave all such harms in-play as we find them: determining which remote harms to include and with what weights constitutes a normative decision, one that we regard as outside our analytical domain.

Second, we examine the extent to which the harms associated with a criminal activity arise from the policy environment, including the prohibition of the criminal activity and related regulations and enforcement practices. We carry out this assessment on the basis of counterfactual reasoning, a common test of the validity of claims of causation in the social sciences and in historical studies (Calhoun, 2002): namely, we consider what might have happened had the policy not been in place—for example, had cocaine trafficking not been prohibited. In the case of cocaine trafficking, we came to the conclusion that most or all of the harms associated with that activity, its accompanying activities (i.e., money laundering, violence, and corruption), and retail dealing appeared to arise from the legal status of cocaine and from law-enforcement practices around that status. There would be little or no body-packing and less corruption and violence if cocaine could be legally imported into and traded in Belgium (MacCoun and Reuter, 2001: 105-112, draw a similar conclusion in another context).

The purpose of this exercise is to assess the extent to which possible harms can be considered intrinsic to an activity. It also helps to single out the arenas in which policy-makers might have the most leverage, inasmuch as the harms accrue from their own policies. Unless germane to policy decisions, we do not attempt to establish the ultimate cause or causes of the primary activity.¹⁴

The relevance of establishing causality has been set forth in other bodies of literature, but from somewhat different perspectives. Much as MacCoun and Reuter (2001) and MacCoun et al. (1996) look to the primary sources of drug-related harms,

¹⁴ In our application of the framework to four Belgian criminal activities, we regarded it as unnecessary to explore the causal link between criminal activities, their harms, and specific characteristics of the broader socio-economic and environmental context. In other circumstances, the search for the causes of harms might need to account for that context and consider factors other than policy. For example, deforestation and other environmental damages associated with coca production vary depending partly on land ownership patterns and terrain. Were we to assess the harms of coca production, socio-economic and environmental factors would need to enter into the assessment.

Greenfield and Camm (2005: 47-48) conclude that establishing the “root” cause of a bad consequence affecting a military mission or other national security operation is essential; otherwise, a policy-maker might act inappropriately to address the consequences. In the case of criminal activities, establishing causality serves an additional and related purpose; that is, it enables one to assess the impact of the legal status of the activity. As noted by Maltz (1990: 41-47-8), an activity might cause harm, whether it is illegal or legal (e.g. Anielski and Braaten, 2008: 81-99, in the case of gambling), while another activity might cause harm in part or whole because it is illegal (e.g., the harms deriving from the violence and corruption associated with cocaine trafficking). Moreover, one cannot weigh the pros and cons of different policy options without ascertaining causality.

After linking most or all of the harms of cocaine trafficking to the policy environment, we must, however, caution against over-interpretation. Without assessing the harms associated with cocaine use and establishing their causes, which we did not do in our analysis, we cannot say whether the balance of the harms resulting from cocaine, itself, and those produced by policy is positive or negative (see also MacCoun and Reuter, 2001: 127).

Having used a specific activity, i.e., cocaine trafficking, to illustrate our approach, one might reasonably ask if the approach would provide utility in other contexts and what differences we might see in those contexts. In response, we would note that we have also tested the framework thoroughly in the context of human trafficking and preliminarily in the contexts of VAT fraud and tobacco smuggling and counterfeiting. We found that the framework ‘holds up’ and, as one might expect, yields sharply different results in each case. In the case of human trafficking, we found that many of the harms were intrinsic, i.e., stemming from the activity not policy, and that they accrued not to traffickers but to their victims. In that case, we also found that it was the infrequency of the activity, *per se*, that resulted in largely low-level rankings, not the “within-activity” incidence or severity

of the harms. On that basis, we asked whether, in some instances, it might be necessary to emphasize the within-activity incidence of harms in policy choices; that is, if a government decided not to tolerate human trafficking in any volume, it might be more appropriate to apply rankings on the basis of the incidence of the harm in relation to the activity than on the basis of the overall incidence.

5. Potential Roles in Policy Analysis

In contemplating the value of future application of the framework, we have been able to identify at least five roles in policy analysis.¹⁵

First, if the assessment process is repeated for different kinds of criminal activities, taking existing statutes and policies for granted, the findings can be used to “compare” the activities’ harmfulness and equip policy-makers and law-enforcement agencies with evidence to establish strategic, long-term priorities. Given the incommensurability of harms across different classes of bearers and the difficulty of summing harms within classes, our framework cannot give an overall ranking of criminal activities, but it does allow for qualitative comparisons and rankings within each class of bearers, i.e., individuals, government entities, etc. For example, we can use our assessments of the harms of four different criminal activities in Belgium to compare the distributions of the different types of harms across the activities and, depending on the shapes of those distributions, make general inferences about the activities’ relative harmfulness.

Second, our framework can also help law-enforcement agencies decide which perpetrators, if any, merit special attention and thereby help them set their

¹⁵ In contemplating other possible uses of the framework, we note that our framework is not just “evidence based,” but to some extent it is also “evidence dependent.” Among other things, this means that the framework might be less relevant in contexts in which information gleaned from past events, including case histories and court records, has little or no predictive power. One obvious example is that of a cataclysmic terrorist episode.

operational or tactical, short- to medium-term priorities.¹⁶ The assessment process might, for example, reveal that certain types of perpetrators, distinguished by demographic traits, location, criminal affiliations or other characteristics, disproportionately engage in particularly harmful activities.

Third, our framework can be used to assess and compare the impact, including the unintended consequences and distributional effects, of different policy measures. The analysis, at least a well-structured thought exercise, must be repeated under different policy scenarios. In the case of our application, one might compare the harms associated with cocaine trafficking under the current prohibitionist regime with those under alternative regimes. More generally, the framework could inform the assessment of whether specific activities warrant criminal status, given the harms associated with them. From this empirical perspective, some activities that have been deemed “criminal” might not seem to warrant that status and other activities that are regulated by administrative or civil law might (see von Hirsch et al., 2005: 187). Ashworth (2006: 53-54 and 46-47) stresses the need for empiricism, particularly in relation to so-called “regulatory” offences (e.g., failure to comply with requirements to file documents with official agencies) that involve only minor harm. Ashworth (ibid.) and others also points out that various instances of corporate law-breaking, such as those involving pollution and safety, might merit full criminalization and substantial sentences, given the considerable damages they involve. On that basis, the harm assessment could be carried out not only *ex post* but also *ex ante*, to better understand the implications of introducing new policy measures or offences. If the framework is expanded to account for the benefits of activities (“full accounting”), it could be applied to any repeated activity that, even if legitimate, is suspected of generating harms in addition to (economic) benefits (e.g., tobacco production and trade).

¹⁶ For the distinction between strategic and operational priorities of law-enforcement agencies, see Osborne & Wernicke, 2003: 7.

Fourth, the framework, particularly the severity scale, can provide an empirical benchmark for reviewing existing sentences and sentencing guidelines and, if desired, establishing new guidelines that are more proportionate to the underlying harms of offenses. Similarly, it could be used to consider the standardization of jury awards (see also Sunstein, 2008). These decisions are inherently normative but they would be stronger if they were informed by an empirical assessment of the harms associated with specific crimes in a specific socio-political context. Von Hirsch et al. (2005: 218 and 186-187) regard such empirical research as “profitable,” noting that both the jurisprudence of crime seriousness and the related legal doctrine have so far remained underdeveloped.

Fifth, by considering harms to a variety of collective bearers and the environment in addition to individuals, the approach here proposed could provide the conceptual framework and empirical evidence to expand restorative justice programs beyond their current focus on interpersonal crimes.

6. Concluding Remarks

As Ashworth (2006: 39) notes, “the task of assessing the seriousness of the offence is ... as complex and problematic as it is unavoidable and fundamental.” In providing a means of identifying, evaluating, and, with some restrictions, comparing harms across criminal activities, our framework represents a potentially important advancement for evidence-informed policy-making. It extends von Hirsch and Jareborg’s approach by considering other bearers, in addition to individuals, and its application constitutes the first empirical test of their “pathbreaking” (Ashworth, 2006: 37) model. Unlike this and other taxonomic predecessors (e.g., MacCoun et al., 1996, and Newcombe, 1992), our framework has the advantage of being applicable to many different forms of crime, including those complex crimes wherein harms do not derive from a single actor or activity. Moreover, instead of focusing only on harms that can be quantified, the framework offers a basis for systematically

harvesting available information, whether quantitative or qualitative, including expert opinion, and at the same time it avoids giving “a misleading sense of precision” (von Hirsch and Jareborg, 1991: 28).

Sen (1987) asked, why must we reject being vaguely correct in favor of being precisely wrong? In that spirit (see also Nutt, 2011, and Room, 2011), it is our hope that this framework will promote the cause of “vague correctness” as an analytically preferable alternative to “precise wrongness.”

The conceptual and technical challenges of the exercise remain daunting, but we have acknowledged them explicitly and, in so doing, we have been better able to identify methods of addressing them and, whenever relevant, to spell out the limitations of those methods. Realizing the problems of quantification, for example, we propose a qualitative alternative—a choice that also raises the possibilities of rapid assessments and cross-country comparisons. Facing the dilemma of incommensurability, we propose “benchmarking” as a basis for making comparisons of harms to particular classes of bearers, but recognize that it is still not possible to compare harms across classes. Along similar lines, we are open in acknowledging the normative dimensions of the process.

Despite the remaining challenges, the harm framework provides the tools and delineates the steps necessary to reliably assess harms of criminal activities and begin research in this crucial but still neglected area of study. If “harm” is to play a larger part in policy-making, it is time for criminologists and other social scientists to flesh out and apply methods to support that process.

Figure 1. Harm assessment process

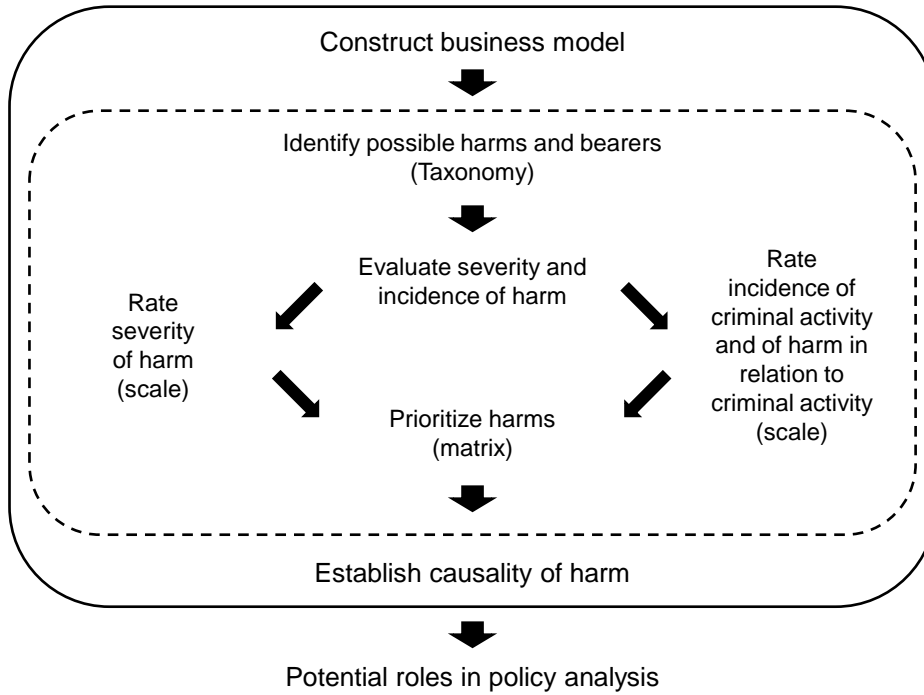


Table 1. Bearers and types of harms

	Bearer of harm			
	Individuals	Private-sector entities	Government entities	Environment
Type of harm				
Functional integrity	X*	X**	X**	X***
Material interest	X	X	X	n/a
Reputation	X	X	X	n/a
Privacy	X	X	X	n/a

Legend:

X Applicable

n/a Not applicable

* Functional integrity consists of physical and psychological integrity

** Functional integrity consists of operational integrity

*** Functional integrity consists of physical, operational, and aesthetic integrity.

Table 2. Benchmarks for severity ratings

	Individuals	Entities
Severity Rating	Level of Living-Standard at which Damage Occurs	Level of Mission Capability at which Damage Occurs
Catastrophic	1°. Subsistence	1°. Viability
Grave	2°. Minimal standard of living	2°. Minimal mission capabilities
Serious	3°. Adequate standard of living	3°. Adequate mission capabilities
Moderate	4°. Enhanced standard of living	4°. Enhanced mission capabilities
Marginal	Marginal or no effect at any level	

Notes: Viability consists of survival, but with maintenance of no more than elementary institutional capacities to function

Table 3. Matrix for prioritizing harms

Severity	Incidence				
	Always	Persistently	Occasionally	Seldom	Rarely
Catastrophic	H	H	H	H/M	M/H
Grave	H	H	H/M	M/H	M
Serious	H	H/M	M/H	M	L
Moderate	H/M	M/H	M	L	L
Marginal	M/H	M	L	L	L

Notes: H = Highest priority; M = Medium priority; L = Lowest priority

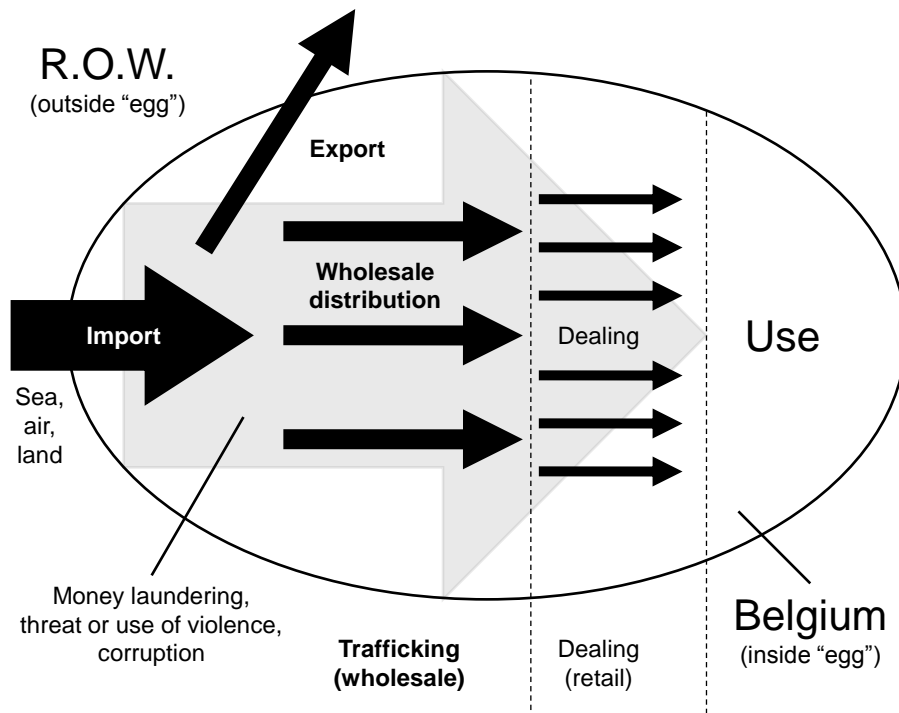
Source: Based on Greenfield and Camm, 2005, 48.

Table 4. Means of addressing elements of challenges

Challenge	Approach
Cultural and socio-economic variability and subjectivity	Taxonomy lists sources of “possible harms”
Infinite	Taxonomy claims to be encompassing, not exhaustive; accommodates harms of complex crimes that entail immediate, accompanying, and enabled activities
Standardization	Rating scales address “average” individuals and typical entities, using common benchmarks, i.e., standard of living and ability to fulfill mission, respectively
Causality	Taxonomy speaks of harms “associated with” activity
Quantification	Rating scales exploit both quantitative and qualitative data harvested during development of business model
Incommensurability	Matrix, inclusive of underlying rating scales and benchmarks, enables limited comparisons of harms to bearers in same categories, e.g., among individuals

Notes: Framework also addresses causality in the assessment process, which concludes with an explicit two-part evaluation.

Figure 2. The business model



Legend:
ROW = rest of world

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