

# A Method for Organized Crime Harm Assessment: Connecting Associated Crimes

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**Abstract** The increasing call for harm-focused approaches warrants a method for assessing the harm of organized crime. A harm assessment of organized crime can be of use to law enforcement agencies for prioritizing efforts and designing policies that aim to counter organized crimes based on the harm they cause. It can also be used by other institutions that can intervene and support law enforcement indirectly in preventing and counteracting organized crime. However, assessing the harm of organized crime entails dealing with the complex structure of intertwined criminal activities and addressing the fact that organized crime groups commit other crimes to support their main criminal activity. This research introduces a novel method for Organized Crime Harm Assessment (OCHA method) and demonstrates it with the application to the case of heroin trade into and within England and Wales. The challenges of applying the OCHA method are identified and discussed, as well as its limitations, contributions, and opportunities for future research.

## Introduction

Many countries, including the UK, Australia, and the Netherlands, have developed national and regional strategies for countering organized crime groups (OCGs) in an attempt to reduce the negative impact these groups have on society (Boerman *et al.*, 2017; Department of Home Affairs, 2018; HM Government, 2018). As part of this strategic focus, law enforcement agencies regularly conduct assessments to better understand the current and future threats of organized crime activity. Assessments are completed for a range of activities including drugs (DEA, 2019), child sexual exploitation and abuse (WePROTECT Global

Alliance, 2019), illegal firearms, fraud, human trafficking, and cybercrime (NCA, 2019). The results from these assessments are then used to decide on interventions that aim to counter and mitigate these organized crime activities. The estimation of the harm that is caused by organized crime is a key objective of these assessments and should play a central role in the design of crime control policy against OCGs (Greenfield and Paoli, 2013).

Akin to harm is the seriousness of organized crimes. In the realm of sentencing guidelines, seriousness has been defined as a combination of harm and culpability of the offender (Ignatans and Pease, 2016; Curtis-Ham and Walton, 2018).

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Under this definition, seriousness does not necessarily reflect the magnitude of harms (i.e. negative consequences) of a crime. A crime may be more serious than another crime because of the offender's history (e.g. they are recidivists or had a wilful misconduct), but the harms may be the same for both crimes (Mitchell, 2019). For example, manslaughter is considered less serious than murder because of differences in the intentions of the offender, but the harm (i.e. loss of life) is the same in both cases. More specific to organized crime, the term seriousness has been used to indicate that a crime has a complexity and sophistication that should be accounted for in legislation, and that it is harmful (Sergi, 2017).

The use of the seriousness of organized crimes as a criterion to prioritize countering efforts requires an assessment of harms (Paoli and Greenfield, 2018). A harm-focused approach would bring an added value to the decision making of law enforcement and development actors (e.g. public sector agencies, non-profit organisations, and multilateral agencies) directly and indirectly working on the countering of organized crime and mitigation of its impacts. Paoli and Greenfield (2018), for example, propose the use of 'harmfulness' as a criterion to decide if an act can be considered criminal; to inform how law enforcement could prioritize the countering of different organized crimes; and for the design of sentencing guidelines and programmes that assist victims. They also argue that the concept of harmfulness could be extended to understand the impacts of interventions so that they too, can be analysed from a harm perspective (see also Borrión *et al.*, 2020). For example, many studies have found that interventions aiming to curtail drug trafficking have been more harmful than they have been effective (Caulkins and Reuter, 2009; Blaustein *et al.*, 2017). Ignatuschtschenko (2021) also argues that harm assessments should inform the investment in countering crime and poses two more potential benefits of harm assessments namely to identify and evaluate harm in its

different forms (e.g. financial, physical, psychological, reputational, etc.) and so that the focus of intervention becomes mitigating the harm in its different levels (e.g. individual, societal, environmental, governmental, etc.). Indeed, placing harm at the core of the design of direct and indirect interventions to counter organized crime would shift the focus from the offenders to the victims (Ignatuschtschenko, 2021) and would therefore motivate a policy discourse that prioritizes the reduction of harm over enforcement goals such as apprehension and interdiction, in the case of drug trafficking. Interventions derived from such harm assessments could be direct, in the case of law enforcement, but also indirect and mitigating in the case of development actors that can build resilience in communities and state actors, and to alleviate the impacts of OC (GIATO, 2016). However, a systematic method for the estimation of harm has yet to be developed.

In recent years, several advances have been made in creating and using harm assessment methods in policing. These include the Crime Harm Index (Sherman, 2007; 2013) and the Harm Assessment Framework (HAF) (Greenfield and Paoli, 2013) and have become useful tools for considering the harmful consequences of crime rather than just measuring crime incidence. These tools, however, are insufficient for accurately assessing the harmful consequences of organized crime because they do not account for the harm caused across the successive stages of an organized criminal activity. These tools also do not consider the harmful consequences of the crimes that are connected to a specific organized criminal activity (e.g. incidents of violence that are related to an OCG's involvement in the supply of illegal drugs).

To estimate the harm caused by organized crime requires an assessment of how the criminal activity unfolds across the many stages that are involved in crime commission and the interconnectivity of criminal activity. Understanding the commission of an organized crime activity across several stages helps in the examination of the causal relationship

between events in a sequence across the activity and in the development of explanations about specific actions performed within a wider activity. In the illicit drug trade, for example, these stages include the production of the drug, its transportation, wholesale, and street distribution. Organized crime activity can also involve a diverse range of connected criminal activities that contribute or are associated to the main criminal activity (Hancock and Laycock, 2010; von Lampe, 2011; Lavorgna, 2018), and are often essential to the activities and survival of OCGs (Pascual, 2017). For example, in the illicit cocaine trade, associated criminal activity can include the theft of chemicals that are used in the processing of coca paste to cocaine, and thefts committed by drug addicts to obtain money to purchase cocaine. An organized crime activity can also be connected to other organized or non-organized crimes, such as corruption (Gounev and Bezlov, 2010), money laundering (Gilmour, 2016; Bayona-Rodríguez, 2019), human labour exploitation and trafficking (Shelley, 2012), and violence (Goldstein, 1985; Desroches, 2005). Thus, a comprehensive harm assessment of organized crime must not only consider the main criminal activity (such as the cocaine trade) but must also consider the harmful consequences of connected activities as they play out across the many stages of the main criminal activity.

Attempts to assess the harmful consequences of OCG activity have mainly focused on their involvement in the illegal drugs trade (see discussion in Paoli and Greenfield, 2013). Most of these attempts, however, have only focused on the harm that is associated with drug use rather than the wider range of harms associated with the illegal drugs trade. For example, Moxham-Hall and Ritter (2017) identified 10 indices in their systematic review of illicit drug and alcohol harm indices, all of which assessed the harms of drug use and did not include assessments associated with the harmful consequences of the illegal drugs trade. Focusing on only one stage of an organized crime activity limits the assessment of the harm the

activity causes, which in the case of the drugs trade must also include an assessment of harm relating to the production and supply activities that are part of this activity (Caulkins and Reuter, 2009; Greenfield and Paoli, 2012). Other methods to assess the harm caused by organized crime have focused instead on the OCG as the unit of analysis (Mulholland and Cole, 2021). However, in using OCGs as the unit of analysis for assessing harm restricts the assessment of harm from organized crime because the OCG may not be involved in performing all the activities (Felson, 2006; Bright and Delaney, 2013; Bright, 2017).

In this article, we introduce a method for assessing the harm of organized crime for all stages of an organized crime activity. The harm assessment method includes the measurement of harm that is associated with connected crimes. In the next section, we critique in more detail the suitability of existing harm assessment tools for measuring the harmful consequences of organized crime. We then introduce the Organized Crime Harm Assessment (OCHA) method as an instrument to measure the harm caused by activities performed by OCGs and examine its use applying it to the heroin trade into and within England and Wales. We finish by discussing the challenges in the application of the OCHA method and conclude by identifying opportunities for improvements and future research.

## Crime harm assessment

All techniques for measuring the harmful consequences of crime involve applying some form of weighting procedure to each crime incident. That is, rather than just measuring the number of incidents, crime harm measurement involves weighting each incident according to an assessment of its impact. Early attempts to assess the harm of crimes used information from surveys to construct weights (Sellin and Wolfgang, 1964; Rossi *et al.*, 1974; Wolfgang *et al.*, 1985), and to evaluate the

seriousness of offences (Pease, 1988). Other approaches have used the costs of crime as weights to distinguish differences between the harmful effects of crime (Savona, 2009; Cohen and Bowles, 2010; Wickramasekera *et al.*, 2015; Heeks *et al.*, 2018). This can help remove much of the subjectivity in determining harm weights in comparison to when only people's opinions are used (Levi, 2016). Using the costs of crime does, however, have several shortcomings: Some crimes are difficult to cost; a measure of cost can be prone to inflationary adjustments, and, as costs likely differ between countries, a cost of crime approach is prone to international inconsistency.

In recent years, the two most widely applied approaches for the assessment of harm have used sentencing guidelines as weights of harm or have applied a qualitative framework that considers the severity and incidence of criminal acts. We next examine these two approaches in detail.

## Crime harm index

Crime Harm Indices (CHIs) apply weights to incidents of recorded crime based on a measure of the harm these crimes produce. This approach, for example, results in individual incidents of sexual assaults being more greatly weighted than each incident of shoplifting because of the greater harm caused by a sexual assault. A CHI approach, therefore, produces a measure of crime that offers a more considered understanding of the harmful consequences of crime than is generated when only counts of crime are considered (Sherman, 2007, 2013). In general, the CHI is calculated as the product of the crime count (incidence) and the harm weight for that crime.

Several approaches have been developed to weight the harms of crimes. Sherman (2013) proposed using sentencing guidelines as the means for weighting harm, stating they offer a pure weight of harm because of how sentencing represents democratic values of the consequences of crime, they are

publicly available and they offer consistency for measuring harm in different contexts under the same jurisdiction (Sherman *et al.*, 2016). There are, however, several different approaches in how sentencing guidelines have been used for weighting harm. The Cambridge CHI (Sherman *et al.*, 2016) uses the starting point for sentences (e.g. the number of prison days) to calculate weights, whereas others such as the California CHI (Mitchell, 2019) use maximum sentences. Other approaches have used the actual sentences given to offenders rather than sentencing guidelines (Curtis-Ham and Walton, 2018). When sentencing guidelines are not available, some have created their own sentencing guidelines to generate harm weights (Andersen and Mueller-Johnson, 2018; Rinaldo, 2018).

The use of sentencing guidelines to weight the harms of crimes does, however, come with limitations. Some researchers have argued that sentencing guidelines are based on too many other factors to make them appropriate for weighting the harm of crime (Maguire and McVie, 2017), with some challenging the fundamental premise that they are democratically defined (Paoli and Greenfield, 2018; Ransley *et al.*, 2018). Tusikov (2012), for instance, argued that sentencing guidelines can be contaminated by political interests. However, the processes involved in creating sentencing guidelines used by a criminal justice system does include a period of research and public consultation (Sentencing Council, 2021), which means that the process of defining the guidelines can accommodate evidence-based findings and democratic involvement, and that their use for weighting crime harm can be improved as research into their use develops.

In practice, CHIs that use sentencing guidelines have become widely used in a range of policing contexts. Examples include the Cambridge CHI (Sherman *et al.*, 2016), the Swedish CHI (Kärrholm *et al.*, 2020), the WA-CHI for Western Australia (House and Neyroud, 2018), the Danish CHI (Andersen and Mueller-Johnson, 2018), the

CA-CHI for California (Mitchell, 2019), the New Zealand CHI (Curtis-Ham and Walton, 2018), and the crime index for Northern Ireland (Macbeth and Ariel, 2019). These indices have been used to measure how crime has changed over time (Andersen and Mueller-Johnson, 2018), to examine how crime harm concentrates in space (Bland and Ariel, 2015; Weinborn *et al.*, 2017; Norton *et al.*, 2018; Fenimore, 2019; Macbeth and Ariel, 2019), to measure the extent of crime harm that is caused by offenders (Frydensberg *et al.*, 2019; Ratcliffe and Kikuchi, 2019), and to evaluate crime prevention interventions (Ariel *et al.*, 2016; Gibson *et al.*, 2017; Mitchell, 2019).

## Harm assessment framework

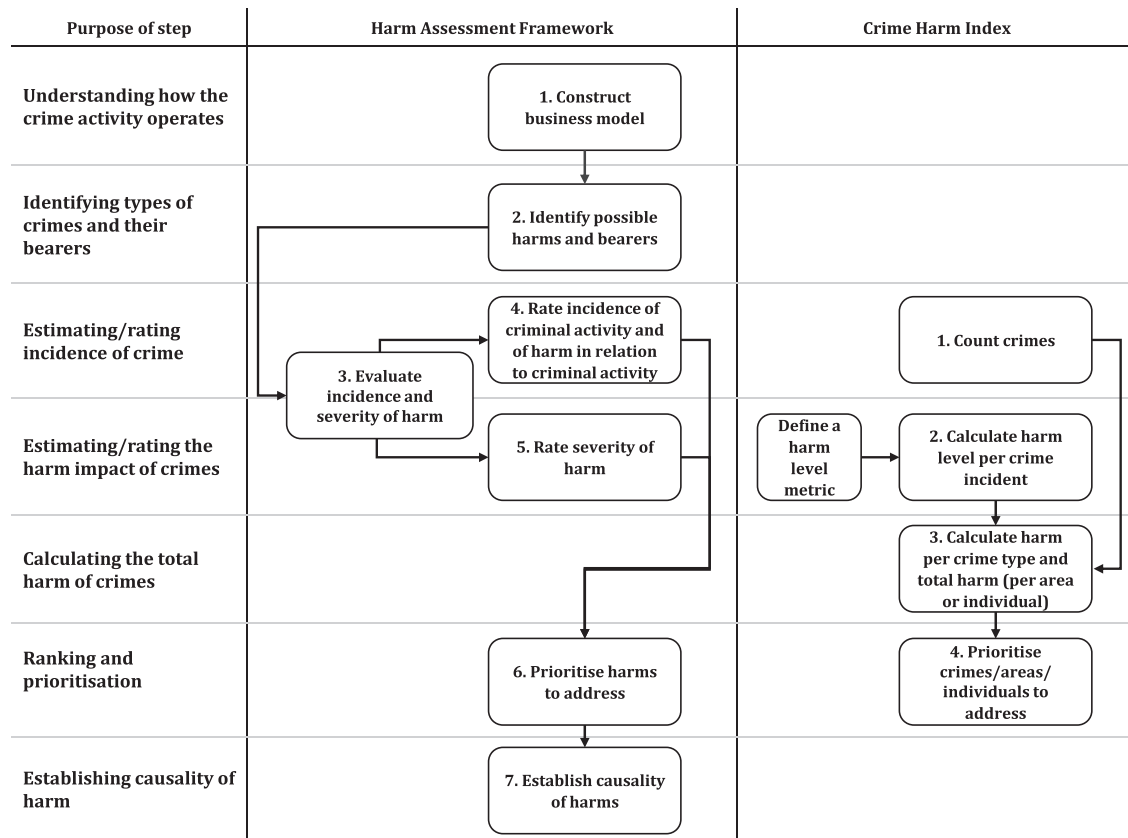
The HAF proposed by Greenfield and Paoli (2013) is an alternative approach to the CHI for measuring harm. The HAF involves generating a model of the primary crime activity, and its accompanying and enabled activities. The harms associated with the primary criminal activities that are identified in the model and the accompanying and enabled activities are then mapped against harm and harm bearer taxonomies and rated using ordinal severity and incidence scales. In the taxonomies, harms are classified in terms of functional integrity, material interest, reputation, or privacy. Harm bearers are classified as individuals, private sector entities, government entities, or the environment. Severity and incidence ratings are combined in a matrix to rank harms by low, medium, and high priority. To rate incidence, a qualitative scale is used: continuous occurrence, persistent occurrence, occasional occurrence, seldom occurrence, and rare occurrence. Rating the incidence involves assessing the incidence of the crimes and of the harms caused by the crimes. For example, for the activity of sex trafficking, Greenfield *et al.* (2016) rated the incidence of sex trafficking and then rated the incidence of harms such as loss of life, and psychological and physical damage. To rate

severity, a qualitative scale was used—catastrophic, grave, serious, moderate, and marginal—with loss of life, for example, being rated as a catastrophic harm, and other physical and psychological harms being ranked as grave harms. The harm rankings generated using the HAF are then prioritized based on the assessment of severity and incidence. The HAF has been used in the assessment of the harm of cocaine trafficking (Paoli *et al.*, 2013), cannabis cultivation (Paoli *et al.*, 2015), human trafficking and labour exploitation (Greenfield *et al.*, 2016; Davies, 2018), cybercrime (Paoli *et al.*, 2018), and piracy (Peters and Paoli, 2020).

## The suitability of the CHI and HAF for assessing the harm of organized crime

In this section, we examine the sequence of steps that are involved in the application of the CHI and the HAF. We do this to identify similarities and differences between the two approaches, and to identify the strengths and limitations of each. From this comparison, we identify potential ways the two approaches can be used for assessing the harm of organized crime and the additional requirements for this type of harm assessment.

Figure 1 depicts a comparison between the CHI and the HAF, showing how each approach progresses through a series of steps that result in the assessment of harm. The steps in the HAF and the CHI were extracted from Greenfield and Paoli (2013) and Sherman (2013), respectively. From this figure, we can identify that the main differences between the CHI and HAF are in how they select the crimes for harm assessment and how they measure the harm that crime incidence causes. The HAF uses a business process model to select crimes that are considered as harmful and identifies the bearers of these crimes, from which ratings of the incidence and severity of harms are produced. The CHI uses crimes reported to the police to measure the incidence of crime, grouped by



**Figure 1:** Comparison of the HAF (Greenfield and Paoli, 2013) and the Crime Harm Index (Sherman, 2013).

crime type (e.g. a count of sexual assaults, a count of shoplifting incidents, etc.) and then applies a harm weight to each of these crime-count groupings. In the case of the HAF, the assessment of harm is calculated using a qualitative matrix that combines incidence and harm rankings. For the CHI, harm is calculated as the product of the crime counts and the harm weights. Organizing the processes that are involved in each approach in the manner shown in Fig. 1 helps to evaluate the suitability of each approach for assessing the harm of organized crime.

Both methods have limitations when considering the harmful consequences of an organized criminal activity. The CHI only considers crimes that are grouped by crime type categories to determine an assessment of harm; it does not include

connected crimes that are perpetrated in any of the stages of an organized crime activity. The HAF expands the analysis to include not only the primary crime activity but also two types of connected activities: accompanying activities, and enabled activities. For example, in the assessment of the harms of cocaine trafficking, Paoli *et al.* (2013) classified trafficking as the primary crime activity, and retail supply and use of cocaine as enabled activities. However, the HAF does not explain how to carry out the analysis across the different stages, without double-counting harm.<sup>1</sup> A ‘whole process’ view of the organized crime activity that considers harm across an entire organized crime activity is, therefore, lacking.

The HAF and CHI have other limitations. The HAF has been criticized for being difficult to

measure (Mitchell, 2019). The CHI relies on reported crimes to calculate crime harm (Sherman *et al.*, 2016). Therefore, for the purposes of organized crime activity where much of the activity is clandestine and goes unreported, the use of the CHI in measuring organized crime activity is limited. The CHI has also been criticized as an oversimplification of harm assessment (Paoli and Greenfield, 2018).

In principle, the HAF and the CHI are useful approaches for assessing crime harm but as shown above, they also have intrinsic limitations for estimating the harm caused by organized crime. Specifically, improving the assessment of harm caused by organized crime requires an approach that considers harm across all the stages of an organized crime activity and includes the harm caused by connected crimes.

## OCHA method

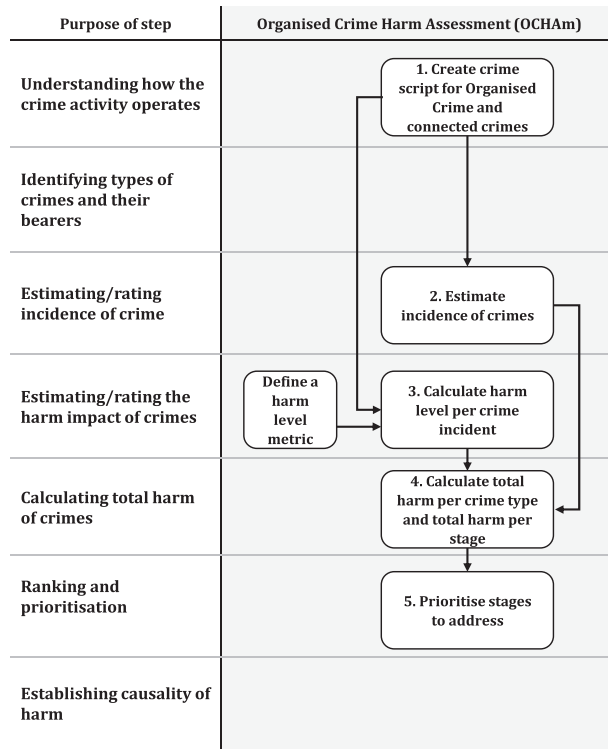
In this section, we introduce the OCHA method. This method is designed to address the shortcomings of the CHI and HAF in the assessment of harm of organized crime and act as a template for researchers and practitioners to make more accurate assessments of the harmful consequences of organized crime. The method we propose includes the assessment of harm across many stages of an organized crime activity and the inclusion of crimes that are connected to activities in each stage. To create the OCHA method, we used a design methodology, following the steps proposed by Collatto *et al.* (2018) and that incorporates design principles described by Dresch *et al.* (2015). We drew from existing solutions—namely the CHI and the HAF—to design the OCHA method and used the heroin trade into and within England and Wales to demonstrate its application, identify challenges and discuss potential ways these can be overcome.

<sup>1</sup> In Paoli *et al.* (2013), trafficking and retail supply are considered two separate activities, one preceding the other. Because enabled activities can also be construed as direct activities (depending on the perspective adopted), adding the harm estimates from all activities (including connected activities) across all stages together is likely to overestimate the total harm.

The OCHA method is a five-step process that involves creating a crime script for the organized crime activity, associating connected crimes to each key stage within the crime script, estimating the incidence of crimes, defining the harm level for each incident, calculating the total harm for each stage of the crime script, and prioritizing the stages for intervention (see Fig. 2).

The first step involves creating a model of the crime commission process for the organized crime activity and associating connected crimes to each stage. Crime scripts (Cornish, 1994) are useful for identifying the different stages within an organized crime activity as they place emphasis on the sequence of events involved in criminal activities (Bullock *et al.*, 2010). Using a crime script at this stage is conceptually similar to the construction of a business process model (Borrion, 2013), the latter being suggested in the HAF as the first step for assessing harm. Crime scripts have been used in researching organized crime activity, including human sex trafficking (Savona *et al.*, 2013), environmental crime (Tompson and Chainey, 2011), the transnational illegal market in endangered species (Moreto and Clarke, 2013), theft of oil from pipelines (Alonso Berbotto and Chainey, 2021), and the drugs trade (Chiu *et al.*, 2011; Jacques and Bernasco, 2013). Dehghanniri and Borrion (2021) provide a comprehensive review of the application of crime scripts.

Figure 3 shows the key stages within a crime script of the heroin trade in England and Wales. This heroin trade involves five stages: production, transnational distribution, wholesale, retail, and consumption (Natarajan, 2010; Kinlock and Gordon, 2015). Heroin is mainly cultivated and manufactured in Afghanistan (FATF, 2014; UNODC, 2020), and brought to Europe through the Balkan route via Iran and Turkey (EMCDDA and EUROPOL, 2019). In this script, transnational



**Figure 2:** The Organized Crime Harm Assessment method (OCHA method).



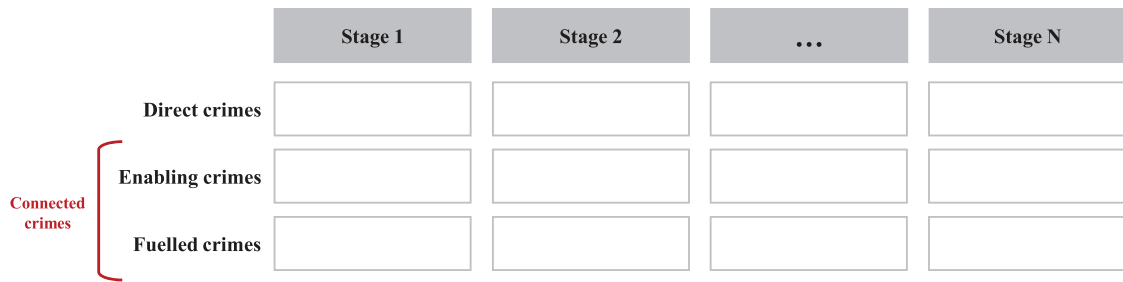
**Figure 3:** Stages of the heroin trade into and within England and Wales.

distribution, wholesale, and retail take place in England and Wales (McSweeney *et al.*, 2008).

To identify the crimes that are associated to an organized crime activity, we propose the use of a taxonomy of association that refers to three different types of crime: direct offences, enabler offences, and fuelled offences. Direct offences are those that are most directly related to the organized crime activity. They often relate to an illegal commodity, a target or a victim. Examples of direct offences include the recruitment of victims for human trafficking and the production of heroin in the case of drug trafficking.

Enabling offences are those that facilitate direct offences but do not necessarily involve the victim or illegal commodity and could be replaced by another enabling activity (e.g. money laundering, fraud, violence to protect drug markets, and corruption). Fuelled offences are those that are facilitated by direct offences and do not involve the victim, target, or illegal commodity (e.g. human trafficking funded with income from drug-production as a crime fuelled by drug trafficking). Enabler and fuelled crimes are connected crimes to the organised crime (OC) activity (see Fig. 4).





**Figure 4:** Taxonomy of crimes associated to an organized crime activity.

Table 1 illustrates the use of the taxonomy and its integration with the crime script from Fig. 3 for heroin trade in England and Wales. For this example, direct offences are the production, supply, possession, and import/export of heroin, and the use of premises for these drugs trade-related activities as defined in the Misuse of Drugs Act of 1971 and the Customs and Excise Management Act of 1979 (Sentencing Council, 2012). Enabler offences included money laundering at the production, transnational distribution, and wholesale stages (FATF, 2014; Levi, 2014; Soudijn, 2016; EMCDDA and EUROPOL, 2019); corruption during transnational distribution (Pearson *et al.*, 2001; Gounev and Bezlov, 2010; EMCDDA and EUROPOL, 2019); violence at the retail stage (Hopkins *et al.*, 2013); and forced labour during production, transnational distribution, and wholesale (EMCDDA and EUROPOL, 2019). ‘County lines’<sup>2</sup> is an emerging form of criminal exploitation in the UK (Stone, 2018; Robinson *et al.*, 2019; Spicer *et al.*, 2019) and was found to be associated to the retail phase (NCA, 2019). In the matter of sexual exploitation, Bean (2014, p. 226) described prostitution as part of what he called the ‘snowball’ criminality of drug markets. He described the nexus between prostitution and the drugs market: ‘it is possible to see prostitution as a market within a market, the largest and most important being the drug market, but assisted and sustained by the sex market’. Fuelled offences included acts of terrorism during the

production and transnational distribution phases (FATF, 2014) and human trafficking for sexual exploitation during transnational distribution and retail phases (Shelley, 2012; Bean, 2014; EMCDDA and EUROPOL, 2019).

The second step of the OCHA method involves estimating the incidence of crime. In the case of connected crimes (enablers and fuelled), the incidents of interest are those that occur due to the organized crime activity. Often, it is not possible to generate an actual number of these incidents and instead an estimation is required. Hopkins *et al.* (2013) estimate, for example, that 6% of homicides that occur in a single year in England and Wales are connected to organized crime.

Estimating the incidence of crimes that are connected to the heroin trade into and within England and Wales proved to be challenging. This is because limited literature and other accounts generated by policing agencies currently exist on the incidence of these crimes. UK police recorded crime (Home Office, 2019), the UK Focal Point Annual Report (2017a, b), the UK Drug Report from the EMCDDA (2019), and the UNODC (2019) World Drug Report were examined for this purpose but these sources were limited in their content. Although disappointing, this finding did not expose a weakness of the OCHA method as a method for assessing the harm of organized crime but rather identified a challenge that we return to in the discussion section.

<sup>2</sup> County Lines refer to criminal activities where illegal drugs are transported from one area to another, and often from cities to less populated areas, usually by children or vulnerable people who are coerced into it by criminal groups.

**Table 1.** Direct, enabler, and fuelled crimes associated to the heroin trade

Stages	Production	Transnational distribution	Wholesale	Retail	Consumption
Direct crimes	Production; possession with intent to supply	Importing; possession with intent to supply	Supplying or offering to supply, possession with intent to supply		Importing/exporting; Possession of a controlled drug
Enabler crimes	Permitting premises to be used for production; Money laundering, criminal exploitation—modern slavery violent crimes (i.e. homicide)	Money laundering, corruption, criminal exploitation—modern slavery, violent crimes (i.e. homicide)	Permitting premises to be used; Money laundering, criminal exploitation—modern slavery	Criminal exploitation—modern slavery; violent crimes (i.e. homicide); controlling prostitution for gain	Theft (i.e. shoplifting, car theft, etc.); Burglary; Robbery
Fuelled crimes	Funding terrorism	Funding terrorism; Human trafficking for sexual exploitation		Human trafficking for sexual exploitation; controlling prostitution for gain	Violent crimes (e.g. homicide, manslaughter, etc.); Cruelty to or neglect of children

The third step involves defining the harm weights for each crime incident. In this demonstration of the OCHA method, we adopt the same weighting approach used by most CHI's—the lowest starting points (LSPs) for a sentence for offenders who have not previously been convicted. This involves determining the number of prison days associated with a sentence and using only the days until when the offender becomes eligible for parole for this calculation. If the starting point is expressed in hours, hours are converted to days. If the starting point is a fine, then the number of days is calculated as the days it would take an adult to earn the fined amount while working at the minimum wage rate (see [Sherman \*et al.\*, 2016](#)).

In our illustrative application of the OCHA method, harm weights were calculated using the suggested LSP in the Sentencing Guidelines for England and Wales ([Sentencing Council, 2021](#)), as per the Cambridge CHI. Additional considerations need to be made when calculating harm weights for drug-related offences. First, sentencing starting points for drug offences vary according to the classification of the drug (A, B, or C).

Heroin is classified as a class A drug ([UK Government, 2021](#)) for which LSPs for offences associated with class A drugs are higher than those for classes B and C. Secondly, some LSPs may vary depending on the phase in which an offence has occurred. Thirdly, the LSP for possession offences differ when paired with an intention to supply. Fourthly, LSPs vary according to the amount of drug found. [Table 2](#) lists examples to illustrate each consideration.

The fourth step involves calculating the total harm for all crime incidents for each stage of the organized crime activity. This is the product between the incidence and the harm weight for each crime, which is then totalled to generate a crime harm value for each stage of organized crime activity. The final stage involves prioritizing where to focus attention and target resources. The harm assessment for each stage of criminal activity provides a measure of harm that can be used by a law enforcement agency to determine the stage of an OC activity that generates most harm and to which the agency's intervention efforts should be targeted. The total harm for each stage relating to

**Table 2:** Examples of variations in harm weights of drug offences due to drug classifications, trafficking phase, intention, and amount found

Consideration	Example
<p>First: Sentencing starting points for drug offences vary according to the classification of the drug</p> <p>Second: Some LSPs may vary depending on the phase in which an offence has occurred</p>	<p>Offence: Production of a controlled drug</p> <ul style="list-style-type: none"> <li>• Class A drug</li> <li>• LSP = 18 months<sup>a</sup></li> <li>• Harm weight = 547.5</li> </ul> <p>Offence: Supplying or offering to supply a class A drug</p> <ul style="list-style-type: none"> <li>• If directly offered to a drug user: <ul style="list-style-type: none"> <li>• LSP = 36 months<sup>a</sup></li> <li>• Harm weight = 1,095</li> </ul> </li> <li>• Class B drug <ul style="list-style-type: none"> <li>• LSP = Band C fine<sup>a</sup></li> <li>• Harm weight = 3</li> </ul> </li> <li>• Class C drug <ul style="list-style-type: none"> <li>• LSP = Band C fine<sup>a</sup></li> <li>• Harm weight = 3</li> </ul> </li> </ul> <p>• If offer to supply occurs at any other stage (for example, distribution):</p> <ul style="list-style-type: none"> <li>• LSP = 18 months<sup>a</sup></li> <li>• Harm weight = 547.5</li> </ul>
Third: LSP for possession offences differ when paired with an intention to supply	<p>Offence: Possession of heroin</p> <ul style="list-style-type: none"> <li>• If not paired with an intention to supply: <ul style="list-style-type: none"> <li>• LSP = Band C fine</li> <li>• Harm weight = 3</li> </ul> </li> <li>• If paired with the intention to supply at any stage other than retail: <ul style="list-style-type: none"> <li>• LSP = 18 months<sup>a</sup></li> <li>• Harm weight = 547.5</li> </ul> </li> <li>• If paired with the intention to supply directly to a user: <ul style="list-style-type: none"> <li>• LSP = 36 months<sup>a</sup></li> <li>• Harm weight = 1,095</li> </ul> </li> </ul>
Fourth: LSPs vary according to the amount of drug found	<p>Offence: Production of a controlled drug</p> <ul style="list-style-type: none"> <li>• Amount = 5 kg <ul style="list-style-type: none"> <li>• LSP = 7 years</li> <li>• Harm weight = 2,555</li> </ul> </li> <li>• Amount = 1 kg <ul style="list-style-type: none"> <li>• LSP = 5 years</li> <li>• Harm weight = 1,825</li> </ul> </li> <li>• Amount = 150 g <ul style="list-style-type: none"> <li>• LSP = 3 years 6 months</li> <li>• Harm weight = 1,277.5</li> </ul> </li> <li>• Amount = 5 g <ul style="list-style-type: none"> <li>• LSP = 18 months</li> <li>• Harm weight = 547.5</li> </ul> </li> </ul>

<sup>a</sup> Assuming the lowest threshold for amount of heroin found (5g).

the example of the heroin trade into and within England and Wales is discussed in the next section.

## Discussion

As law enforcement agencies and other institutions endeavour to counter organized crime due to its many negative impacts to society, a harm assessment method that can orient where to focus these efforts is needed. The OCHA method is a method for assessing organized crime harm that uses organized crime activities as the unit of analysis. Different to other measures of harm assessment, the OCHA method emphasizes the importance of understanding the process of an OC activity and decoupling it into its different stages. The use of crime scripts to map the process of the OC activity allows a 'more objective assessment and understanding' of an organized crime activity (Tompson and Chainey, 2011, p. 179) given the methodical process it entails, and helps to tackle the inherent complexity of organized crime (Brayley *et al.*, 2011; Savona *et al.*, 2013; Chainey and Alonso Berbotto, 2021).

The OCHA method also furthers understanding on the extent of an OC activity by considering connected crimes. The taxonomy of connected crimes presented in the current study encourages thinking about how crimes relate to organized crime, as either direct, enabler or fuelled crimes. Other classifications have focused on the link between organized crime and violence (Goldstein, 1985; Reiss and Roth, 1993), thereby excluding other types of crimes connected to organized crime. The taxonomy we introduce provides novel possibilities for research, such as examining if there are similarities between different organized crimes. The taxonomy may also guide how agencies such as Europol, the US Federal Bureau of Investigation, the UK's National Crime Agency, and the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) report their

findings about organized crime. We encourage further research that considers if more categories should be added to those we have introduced. One option is to include crimes arising because of policy with the argument that a substantial number of harms derived from organized crime, particularly in the drugs trade, are a result of their illicit status and law enforcement action (Jacques and Allen, 2015; Ratcliffe, 2015). For example, Werb *et al.* (2011, p. 87), concluded in their systematic review that 'gun violence and high homicide rates may be an inevitable consequence of drug prohibition and that disrupting drug markets can paradoxically increase violence.' Including this category would require defining and operationalizing the concept of policy-induced crimes.

We have demonstrated the application of the OCHA method to the heroin trade into and within England and Wales, showing that it is possible to break down an organized crime activity into its different stages and consider which crimes are perpetrated at each stage. We have also shown that each stage involves different crimes, not only direct, but different enabler and fuelled crimes, and hence the harm assessment for each stage will be different. Recognizing that harm is different at each stage, provides greater insight into how harm is distributed across the crime commission process. The application has also shown that it is possible to calculate harm weights for heroin trade-related crimes.

The OCHA method is designed to be applicable to different types of organized crime. Other than the drugs trade, it could be applied for example to human sex trafficking. Possible stages of human sex trafficking could be recruitment, transportation and exploitation, and enabler crimes could be forgery and corruption in transportation, and threats, violence and forced prostitution during exploitation (Savona *et al.*, 2013). Another example is in wildlife trafficking where stages include attacking, and killing the animal, escaping, and selling as stages in wildlife trafficking (Eloff and Lemieux, 2014). Corruption, theft, fraud, money

laundering, and extortion, among other financial crimes have been found to enable these activities (Viollaz *et al.*, 2018).

The application of the OCHA method to assess the harms of the heroin trade into and within England and Wales has, however, uncovered several challenges in how to accurately and precisely measure the harm that is caused by organized crime activity. The first task involved identifying the stages of the organized crime activity. Although several sources of information were used to identify the stages of the heroin trade into and within England and Wales, this might be more difficult for other, less researched organized crime activity such as labour trafficking (Cockbain *et al.*, 2018), and more novel forms of activity such as the use of cryptocurrencies for money laundering (NCA, 2018).

A second challenge the research exposed was in the identification of connected crimes, both enabler and fuelled crimes. Our analysis of the heroin trade showed that the focus of research on this topic was most usually about the connections between the heroin trade and specific types of crime (e.g. the heroin trade and violent crime). Very little research to date has examined more widely the range of crimes that are connected to organized crime activity. This required us to examine information from multiple sources to generate an accurate account of the crimes that were connected to organized crime activity. Another challenge was the estimation of incidence of direct and connected crimes. Sherman *et al.* (2016) and other authors of CHIs use official crime count records to estimate the incidence of crime to generate assessments of harm. However, information about organized crime and the crimes that OCGs commit is not as systematically recorded as crimes used in CHIs (Tusikov, 2012). Also, because OCG activities are often performed discreetly and go undetected (Hobbs and Antonopoulos, 2014; Pascual, 2017), a comprehensive account of the criminal acts an OCG commits is not recorded by police agencies. Police reports only reflect a

proportion of organized crime that they have detected and prosecuted (Pascual, 2017), and changes in organized crime that is observed by police agencies may be a reflection of their law enforcement efforts (Windle and Silke, 2019). Additionally, determining whether an offence is connected with an organized crime is a challenge given that law enforcement agencies do not necessarily register when a crime is attributed to OCGs (Dorn and Bunt, 2010; Tusikov, 2012) nor do they detail if it is connected to an organized crime activity (e.g. to protect the OC activity or to finance it). Intelligence about OCGs recorded by national or regional police agencies would have been useful for the current study, but access to these were not possible for this research because of the sensitive and restricted nature of these data. However, use of these data can also be limited because often these data do not contain information about the nature of the criminal activity, such as how the activity is committed, the roles that individuals perform, the equipment that is used, and the connected crimes that are committed across the main criminal activity (Chainey and Alonso Berbotto, 2021). Gathering information about the incidence of connected crimes associated with the drugs trade has the added challenge of attribution of causality (Singleton *et al.*, 2018). For example: How to establish if a homicide was the result of a drug-trade activity? or how to determine if a theft was perpetrated to fund drug use? As De Bont *et al.* (2018) have noted, missing data, fragmented data, comparability issues, and data quality issues in police-recorded data are obstacles for determining the full provenance of drug-related homicides.

The application of the OCHA method in the case of the heroin trade into and within England and Wales has illustrated the need for methods to be developed that provide better estimates for incidence of direct, enabler, and fuelled crimes. We noted in our findings on the application of the OCHA method to the heroin trade in England and Wales the disappointment in not being able to fully estimate the incidence of connected crimes.

This finding did not expose a weakness of the OCHA method as a method for assessing the harm of organized crime but rather identified a challenge for researchers and law enforcement agencies to address. The clandestine nature to a lot of organized crime activity means that information about this activity can often be limited. However, [Alonso Berbotto and Chainey \(2021\)](#) have shown that in such situations open sources of intelligence (OSINT) within a crime scripting process can provide a detailed account of organized crime activity, and which in turn can be used for generating a more accurate estimation of the incidence of connected crimes. We anticipate conducting further research that examines how OSINT, alongside other sources of information, can be used to address the challenge of estimating the incidence of connected crimes across an organized crime activity. In addition, as institutions, practitioners, and researchers have become more conscious about the importance of gathering information about the wider activities that OCGs perform when engaged in a main criminal activity, new initiatives have emerged to address the lack of information about these wider activities. For example, the UNODC's (2016) initiative for an international classification standard for crime provides a transnational tool for producing statistics on crime and criminal justice, and now facilitates comparability among the different information sources that have implemented it.

The further challenge our research has exposed was the calculation of harm weights. England and Wales were chosen as the setting for the example we used because of the availability of clear sentencing guidelines. However, these guidelines may not exist in other settings. Researchers and practitioners interested in applying the OCHA method may need to adapt their choice and use of guidelines, similar to how [Curtis-Ham and Walton \(2018\)](#) and [Mitchell \(2019\)](#) have done in their use of CHIs, or create new guidelines (e.g. [Andersen and Mueller-Johnson, 2018](#); [Rinaldo, 2018](#)). Future research could address how sentencing

guidelines are designed and how they could be used for evaluating crime harm.

## Conclusion

Despite advances in creating and using harm assessment methods in policing, such as CHI and the HAF, the available tools are insufficient for accurately assessing the harmful consequences of organized crime. In particular, these tools do not account for the harm caused across the successive stages of an organized criminal activity and do not consider the harmful consequences of the crimes that are connected to a specific organized criminal activity.

In this article, the OCHA method is introduced to address these shortcomings, demonstrated with application to the heroin trade into and within England and Wales. The OCHA method involves creating a crime script of the crime commission process, identifying connected crimes to the organized crime activity, estimating the incidence of crimes, and devising crime harm weights. From this, the OCHA method offers a means for determining how harm distributes across an organized crime activity. Although challenges remain in accurately measuring the harm that is caused by organized crime, the method we introduce offers a valuable step forward in how the harmful consequences of organized crime activity can be quantified.

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