



Griffith Criminology Institute

# Working Paper on the Development of the Queensland Crime Harm Index

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## Executive Summary

Changing criminal and social environments are driving increasing demands for police services globally, resulting in a clear need for evidence-based mechanisms to inform policing decisions. Policing jurisdictions around the world are examining different models for informing decision-making, including how to allocate resources across the breadth of their responsibilities. To date, however, no guidance exists detailing the most effective approach for systematically informing these often complex policing decisions. The effectiveness of police agencies is largely measured by how well they respond to and reduce crime. Traditional performance measures typically rely on crime counts. Yet counting individual crime offences tells us little about the severity of those crimes, or their impact on victims or communities.

Crime Harms Indexes are establishing their credentials internationally as an effective tool for understanding policing priorities, ascertaining community perceptions of crime and harm, and informing policing decisions. Collectively, these indexes are assuming a key role in informing professional and effective policing practice in a manner which both genuinely accommodates and respects community views as well as recognising the professional knowledge of police and other bodies within the criminal justice sector.

The Queensland Police Service (QPS) commissioned researchers at the Griffith Criminology Institute (GCI) to study how the ‘harms’ caused by various types of crime are experienced by Queensland residents, and to produce an evidence-based tool that helps police prioritise and target their efforts.

The Queensland *Crime Harm Index* (CHI) project thus represents an innovative joint initiative between the QPS and GCI to develop a Crime Harm Index tailored for Queensland. Development of the index was intended to assist the QPS to deliver appropriate and responsive policing services as environments change. Unlike some other international indexes, the Queensland CHI is directly based on what Queenslanders say about crime harms.

In 2018, the team published a preliminary paper providing a rationale and brief overview of the proposed methodology for the Queensland CHI (Ransley et al, 2018a). Since then, results and findings have been delivered to QPS both in written reports and presentations, with a major unpublished report delivered to QPS in December 2018 (Ransley et al 2018b). This working paper presents some, but not all, of that report in a publicly accessible format. This has been done in response to several requests from other Australian agencies and researchers keen to understand our work. In particular, the Queensland Sentencing Advisory Council requested access to findings related to community perceptions of the harms caused by different types of crime, which are detailed in this report.

The key output of the GCI/QPS collaboration is the *Queensland Crime Harm Index*, a weighted ranking of 33 broad crime types listed according to perceptions of the seriousness of the harm they cause throughout Queensland. The Queensland Crime Harm Index was calculated by

integrating responses provided by 2,000 Queensland residents and 1,138 personnel working in the QPS (1,068 of whom were sworn police officers). It was then applied to all offences listed in the QPS internal information system, and to those listed in the Australian Bureau of Statistics Australian and New Zealand Standard Offence Classification (ANZSOC). GCI's collaboration with QPS has resulted in an index which is situationally and contextually responsive to Queensland. Given the relative similarities in crime types and community views across the nation, this index is also likely to have relevance in other Australian jurisdictions.

This working paper presents the findings from the community survey and the construction of the weighted Queensland Community Crime Harm Index. The working paper also provides an updated review of the literature to date.

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## **1. Literature Review: What are Crime Harm Indexes?**

Crimes cause harm, and some crimes cause more harm than others. The concept of crime harm has been important to the development of criminal law and policy, and to sentencing practices. More recently, assessments of the relative harmfulness of offences have been used in law enforcement, to help prioritise resource allocation and targeting of offences and offenders that cause the most harm to society. Often, these assessments have taken the form of an 'index' of crime harms.

This review of the crime harms literature first examines how crime harm has been conceptualised. We then consider different approaches to assessing and measuring crime harm, before briefly detailing the approach selected for the Queensland Crime Harm Index commissioned by the Queensland Police Service (QPS). This review draws on prior published and unpublished work conducted by the authors and other team members that has been funded by QPS. That work has been updated and expanded for this review, at the request of the Queensland Sentencing Advisory Council.

### **1.1 Concepts of harm, seriousness and wrongfulness**

#### ***1.1.1 Harm in criminal law and sentencing***

Concepts of *harm* have been important to the development of criminal law, particularly in common law systems (Ashworth, 2006). Indeed, the 'harm principle' (Mill, 1860) has been central to criminalisation and the setting of criminal penalties since the mid-1800s. The harm principle holds that people should be free to act as they wish unless their actions cause harm to another. Hence, the occurrence or threat of harm is a key factor justifying legal interventions and punishments (Kleinig, 1978; Eser, 1966; Ashworth & Horder, 2013; Simester & von Hirsch, 2011). In this context, harm is caused by the actions or non-actions of a person (Kleinig, 1978). Some scholars note that many harms are insufficiently criminalised despite having significant impact on individuals and society. Such harms include those committed by corporations or against the environment (Hillyard & Tombs, 2007; Pemberton, 2007).

Despite the historical importance of the harm principle, there has been ambiguity on what is meant by harm. Hall (1960) defined crime-related harm in formal terms as 'the impairment of an interest deemed worthy of legal protection – that makes the perpetrator's conduct sanctionable' (p.213), with von Hirsch (1983) similarly referring to injury resulting from or risked by a prohibited act. More recent definitions attempt to capture a broader and more articulated set of harms, with Malz (1990) identifying five dimensions of harm caused by crime as those that have physical, economic, psychological, community and societal impacts. Paoli & Greenfield (2013) expand on this to note that crime harms can be violations of functional integrity, material interests, reputation, and privacy, and comprise acts against individuals, corporate entities, and the environment. Fear of crime within communities can also be seen as an additional aspect of harm (Bolt, 2009).

While these definitions are useful in helping understand the parameters of crime-related harm, they give little guidance on how harm should be reflected in law and practice. Here, the related concepts of *seriousness* and *wrongfulness* have been influential (Adriaenssen et al, 2019, 2020; Paoli & Greenfield, 2013; Borg & Hermann, 2023; Simpson et al, 2023). Warr (1989), for example, defined harmfulness as involving the consequential impact of an offence on the individual victim, with assessments of harm therefore requiring an assessment of the seriousness of the act's actual or potential consequences. Wrongfulness on the other hand involves issues of moral culpability and just deserts for acts committed (Stylianou, 2002; Paoli & Greenfield 2013). Sentencing policy and law tend to enshrine both seriousness and wrongfulness, with penalties that reflect, in part, the seriousness of the offence, and in part, the moral wrongness of the offending act and actor (Paoli & Greenfield 2013).

Theorists have understood the roles and relative importance of seriousness and wrongfulness in different ways. One influential stream of theory focuses on proportionality, with sentences required to respond to the perceived moral wrongfulness of acts and offender culpability for them, while consequentialist approaches focus on the extent and seriousness of harm caused (Duff, 2013; Ashworth, 2006; Ashworth & Horder, 2013; Simester & von Hirsch, 2011). But as Simpson et al. (2023) note, 'these concepts are intimately entangled: seriousness is sometimes understood as a cause of punitiveness and sometime as its effect' (p.584). Paoli and Greenfield (2013) describe the relationship as 'perceived seriousness is considered a function of the perceived consequences and wrongfulness of an act' (p. 363). Thus, they argue, perceptions of harm and wrongfulness are both important components of seriousness.

Adriaenssen et al (2019, 2020) expand on Paoli and Greenfield's (2013) work defining seriousness as a combination of wrongfulness and the severity of harmfulness, with wrongfulness being 'violations of moral norms', and severity being the extent and gravity of injury inflicted. They also note two further important factors, first the *incidence* or frequency of the crime, and secondly the *frequency* of the harm caused. They combine these four factors – wrongfulness of the offence, severity of harms caused, incidence of the crime, and incidence of the harm – into a conceptual framework (Adriaenssen et al, 2020, p.131) and suggest this framework can guide assessments of crime seriousness (discussed further below). This definition suggests that even crimes that considered individually have relatively low impact, when committed frequently may be experienced by a particular community as causing high harm. Hence the volume of particular offences can contribute to perceptions of its harm. They suggest that while criminal justice experts might provide more 'objective' assessments of actual harmfulness, public attitudes can be important to understanding wrongfulness (pp.145-146).

Overall, while there is agreement in the literature that harm, seriousness and wrongfulness are all important to criminal law, there is less agreement on how these factors relate to each other, including their relative importance. This variation in thought has been important in understanding the different ways in which harms have been measured and ranked.

### **1.1.2 Harm and policing**

In addition to the role of harm in law and sentencing, there has been growing interest in integrating harm-based approaches to crime-control policy, beginning with drug-related and organised crimes (Paoli & Greenfield, 2013; MacDonald et al., 2005; UNODC, 2005; Maher & Dixon, 1999), to both target and prioritise criminal activities (Paoli & Greenfield, 2013). The concept of harm has also become important in law enforcement more generally, where police have been criticised for focusing their crime-fighting priorities largely on high-volume property offences, rather than on reflecting the concerns of communities about what harms them most (Greene, 2014). Additionally, when assessing the effectiveness of policing outcomes, there has been growing interest in measuring the impact of police efforts on harms rather than the traditional focus on offence counts. Such counts measure shifts in the volume of offending, but not necessarily the resultant harms or the impact on public safety (Andersen & Mueller-Johnson, 2018). This is problematic because high volume crimes may not be as harmful as low volume crimes to either victims or society. High volume crimes may also not be of greatest concern to the public.

The growing popularity of theories of evidence-based policing, under Sherman's (2013) formulation, requires police to track, target and test incidences of crime. Sherman and others have argued that identifying the most harmful forms of offending is important, particularly for the targeting of crime, but also when tracking and testing (Sherman, 2020; Sherman, Neyroud and Neyroud, 2016; Ratcliffe, 2015; Curtis-Ham & Walton, 2018).

As a result of these concerns, police scholars and agencies have sought to develop a comprehensive measure that encompasses the broad and complex role of police while giving suitable weight to serious offences that are of greatest concern to the public (Ratcliffe, 2014; Ransley et al, 2018a). These comprehensive measures have been called 'Crime Harm Indexes'. An appropriate harm index can account for the fact that most harm is caused by only a few offenders (Sherman, 2007). Such indexes therefore allow for the prioritising of scarce policing resources. Further, tracking harm measures can be a way of evaluating policing success and failure (Ransley et al, 2018a). However, in common with conflicting ideas about harm in criminal law and sentencing, there are varying views on what constitutes harm in law enforcement, and how it can best be assessed (Brown, 2013; Bolt, 2009), as discussed next.

## **1.2 Assessing crime harm**

The literature canvasses different approaches to the assessment of crime harm. The following sections describe some of the more influential approaches; specifically, those that use (1) perceived crime seriousness, (2) offence counts, (3) estimation of crime costs, (4) structured assessments, and (5) sentencing outcomes and guidelines.

### **1.2.1 Perceived crime seriousness**

Attempts to create a crime index using the perceived seriousness of different crimes first became prominent when Sellin and Wolfgang (1964) began reporting on perceptions of crime seriousness. They used community surveys that ranked the relative seriousness of

specific offences (Selling & Wolfgang 1964; Wolfgang et al. 1985), which meant that a rank order of the perceived seriousness of these offences could be established. For example, a child skipping school was seen as the least serious offence, while planting a bomb that kills 20 people was seen as the most serious offence. Sellin and Wolfgang (1964) developed an assessment tool focused primarily on the perceived seriousness of juvenile delinquency, although their work was later used to assess the seriousness of adult criminality (Selling & Wolfgang, 1964; Wolfgang, Figlio, Tracy & Singer, 1985). Wolfgang et al.'s (1985) work demonstrated that offence seriousness is a measurable construct (Wellford & Waitrowski, 1975). A number of studies across various jurisdictions replicated Sellin and Wolfgang's (1964) approach to measuring community perceptions of crime seriousness to create a ranked crime index (e.g., Akman, Normandeau & Turner 1966; Heller & McEwan, 1973; Riedel 1975; Kwan et al. 2002), although much of this work is now decades old.

However, an important feature established by studies of crime seriousness is the degree of consensus across the public and criminal justice professionals regarding judgments of crime severity (Stylianou, 2003). An early study by Rossi, Waite, Bose and Berk (1974) explored characteristics of 140 crime seriousness ratings by a household sample in Baltimore. The study found consensus among the majority of participants regarding the ranking for offences, with younger and more highly educated participants more likely to rank offences closer to the entire sample's average rating (Rossi et al., 1974). This study highlighted that norms relating to crime seriousness are widely diffused throughout society (Rossi et al., 1974).

Levi and Jones (1985) similarly undertook a study of crime seriousness perceptions in England and Wales that surveyed representative samples of 960 members of the public and 368 police officers. The study found while there was high concordance between public and police participants regarding the seriousness of violent offences and theft, the public rated the seriousness of burglary, fraud and other 'victimless crimes' more highly than police officers (Levi & Jones, 1985). Figlio (1975) compared the perceived severity of offences by 717 convicted offenders and 216 middle-class non-offenders in New York. The study found large consensus between the groups, particularly for serious crimes, such as property and bodily violations (Figlio, 1975). In addition, studies of perceived seriousness of crime using population samples have not found correlations between gender and judgments of crime seriousness (Wilson, Walker & Mukherjee, 1986; Rossi et al., 1974).

Many subsequent studies have consistently found widespread consensus in the perceived seriousness of various offences (Paoli & Greenfield 2013; Figlio 1975; Wilson, Walker & Mukherjee 1986; Rossi et al. 1974; Robinson & Darley 2007). This phenomenon has been described as '*relative consensus*' (Miethe, 1984). Extensive research over many decades has found 'widespread public agreement and relative consistency regarding the relative rank ordering of offences by seriousness' (Simpson et al 2023, Wolfgang et al 1985).

Given this relative consensus, Adriaenssen et al (2020) examined what factors were most influential in forming these public attitudes to the seriousness of crime. Their findings suggest that 'the public adheres to moralism more than to consequentialism' (p.145) meaning that rankings of crime seriousness are most affected by perceived moral wrongfulness, in partial contradiction of some earlier studies, but in conformance with



others (e.g. Alter, Kernochan and Darley, 2007). Adriaenssen et al (2019) examined how individual values, attitudes and beliefs drive perceptions of crime seriousness. They particularly examined how perceptions are shaped by a person's propensity for 'conservation values' (i.e. tradition, conformity and security), legal cynicism (i.e. attitudes to the merits and legitimacy of law) and religiosity (intensity of religious belief) (p. 320). The study measured public attitudes to a limited set of offences across the categories of personal, property and drug crimes. They found that individuals with higher levels of conservation values and religiosity rate crimes generally as more serious and harmful, but that legal cynicism has no impact on ratings of harm severity (2020, p.328-329). They also found conservation has most impact on ratings for assaults, property crimes and drug offences (p.329). They conclude that their study indicates some 'impact of values, attitudes and beliefs on crime perceptions' (p.329), but with significant qualifications based on their methodology.

Another recent study focused on the impact of perceptions of crime, harm and blameworthiness on public punitiveness (Simpson et al 2023), while also applying the crime harm concept to white collar offending, arguing that because the public are less familiar with this type of offence, the assessment of their harm is more problematic. Additionally, white collar crimes necessitate consideration of the role of organisational actors in offending, and the relative roles of criminal law as opposed to civil or administrative regulation (Simpson et al 2023, pp.587-588). Key findings from this study were that offence harmfulness drives perceptions of white-collar crime seriousness (2023, p. 607), with organisational offenders seen as more serious than burglary involving the same financial loss. Importantly, this research found that perceptions of offence seriousness drives support for public policies, thus decoupling individual punitive attitudes from seriousness, with the authors noting:

Recognising that seriousness does not necessarily require extreme punitiveness gives politicians and sentencing commissions permission to think outside traditional crime-control platforms. (Simpson et al 2023, p.609)

There have been few surveys of community perceptions of crime harm in Australia. An early exception was the National Offence Index (NOI), developed in the 1990s based on an index of offence seriousness developed by the Western Australian Crime Research Centre, which in turn was based on both public perceptions and legislated sentences (Australian Bureau of Statistics (ABS), 2018). The ABS used this research, coupled with sentence severity and practitioner consultation, to develop and adapt the NOI. While there were revisions in 2018 to extend the scope of offences included in the NOI, the underlying methodology was not changed (ABS, 2018). However, the extent to which the NOI continues to incorporate community perceptions as opposed to sentencing outcomes and practitioner perspectives is unclear, and the original perceptions research was conducted over 40 years ago.

Construction of crime harm indexes based on rankings of community perceptions of crime seriousness have been criticised on several grounds. Critics suggest that other measures of crime seriousness are more objective and that perceived seriousness may be misinterpreted and not actually equate to *harmfulness*. The first criticism arises because public perceptions may be inaccurate, swayed by media portrayals, dependent on personal experiences and liable to change over time (Stylianou 2003; Kwan et al. 2000; Shoemaker & Bryant 1987;

Cullen, Link & Polanzi 1982; Piquero, Carmichael & Piquero 2008). The second criticism centres on the potential for confusion about the meaning of seriousness. For example, Warr (1989) suggests that many people filling out surveys are likely to confuse the related but distinct concepts of seriousness and wrongfulness, both of which may in fact be different to perceived harmfulness. Others have noted the substantial costs in conducting widespread community surveys, and argued that this limits the viability of their use for harm indexes (Sherman et al, 2016).

On the other hand, community surveys have the advantage of reflecting community views, rather than those of officials, judges or police. In this sense, they can provide a democratic approach to assessing perceived seriousness or harm and an understanding of how communities perceive both crime harms and the appropriateness of the police response. And as discussed, the research generally has shown considerable consistency across community demographics and over time and place, meaning that an appropriate and well-constructed survey can have lasting benefits in genuinely reflecting community views on harms caused by crime.

### **1.2.2 Offence counts**

While unweighted crime rates, or raw offence counts, have been widely used as an indicator of the intensity or impact of crime, their use has long been challenged as misleading (Kwan, Ip & Kwan, 2000; Blumstein, 1974; Wolfgang, 1963). This is because not all offences are created equal (Sherman et al, 2016). Thus, using crime counts as an indicator of crime problems in society can lead to distorted resource allocation and accountability (Sherman, et al 2016), and can be an 'inadequate basis for crime policy' (Ignatans & Pease, 2016, p.184).

Prior to the development of weighted crime indexes, the Federal Bureau of Investigation's (FBI) crime index was the most common social indicator used by scholars and government agencies in the United States. The FBI crime index was an unweighted national index based on data published by the Uniform Crime Reports (UCR) and was calculated as the total sum of police reports of the seven 'index crimes'. These seven index crimes included criminal homicide, aggravated assault, robbery, burglary, auto theft and larceny of over 50 dollars (Blumstein, 1974; Biderman & Reiss, 1967). The FBI crime index was criticised for failing to differentiate variance in the severity of heterogeneous crimes, as well overlooking unreported crimes (Blumstein, 1974), and for its reliance on crime counts, with the volume of offences of theft overshadowing low volume yet more serious offences such as homicide (Blumstein, 1974). From the 1970s there was debate over the appropriateness of using the FBI crime index to measure crime (Blumstein, 1974), so it was eventually discontinued in 2004 (O'Leary, Morgan & Santos, 2015). Many other jurisdictions used similar volume-based counts as the basis for their crime policy (Blumstein, 1974).

More contemporary weighted crime indexes based on *harm-related* concepts have been advocated in recent years (Sherman, 2007; Sherman, Neyroud & Neyroud, 2016; Ransley et al, 2018a; van Ruitenburt & Ruiters, 2023). But as discussed, assessments of crime harm are complicated by the complex interplay between wrongfulness, harm and seriousness. Additionally, there is ongoing debate about whether such assessments should be framed primarily by public perceptions or by governments and courts (Tonry, 2015). This has led to

different approaches being adopted to evaluating crime harm, seriousness and wrongfulness, including those discussed in the next sections. A growing literature centres on other approaches, including those based on estimating costs of crime, those based on surveys of public or expert perceptions, and those based on sentencing practices or outcomes (van Ruitenburg & Ruiter, 2023; Tylberg, 2021). These approaches are discussed next.

### **1.2.3 Estimating crime costs**

Estimates of crime costs have been used as an alternative tool for policy makers and researchers to assess the impact of crime on society (Brand & Price, 2000). The first studies to assess cost of crime estimates measured *direct financial costs* of crime to victims such as medical care costs, property loss and damage, and lost earnings (McCollister, French & Fang, 2010; Thaler, 1978). Many studies determining direct financial costs of crime to victims have also tested the impact of crime on house prices (Dubourg & Hamed, 2005; Lynch & Rasmussen, 2001; Thaler, 1978).

There has also been a focus on measuring *indirect financial costs* of crime. Indirect financial costs are costs of crime shared by society, including lost output due to reduced productivity, medical expenses, and labour costs (McCollister, French & Fang, 2010). Multiple studies have focused on economic costs of specific crimes, including drug abuse (Rice, Kelman & Miller, 1991; Mark, Woody, Juday & Kleber, 2001) and domestic violence (Laing & Bobic, 2002). Walker (1997) highlights limitations of measuring indirect financial costs of crime, stating long-term, indirect financial costs of crime are difficult to define and measure.

Additionally, assessing the *intangible costs* of crime involves indirect losses suffered by victims of crime, including decreased quality of life, pain, psychological distress and fear of crime (McCollister, French & Fang, 2010; Cohen, 1988; Cohen & Miller, 1998; Moore & Shepherd, 2006). Methods within the literature used to measure intangible costs of crime are wide-ranging and include the quality-of-life method, measurements of life satisfaction (Frey, Luechinger & Stutzer, 2008; Ambrey, Fleming & Manning, 2012), and the analysis of specific types of victimisation (Stanko & Hobdell, 1993). Additionally, a popular method taken by numerous studies to measure intangible costs of crime is the jury compensation approach (Cohen, 1988; Rodgers, 1993) which involves estimation of the monetary value of pain, suffering and fear as is required in personal injury cases.

Cost of crime studies have also assessed *criminal justice costs* resulting from crime, including government funds spent on police protection, corrective, legal and adjudication services, and cost of incarceration (Macmillan, 2000; Cohen, 1988; Walker, 1992). Walker (1997) estimated the minimum total cost of crime in Australia by measuring costs of the criminal justice system (state/territory expenditures and commonwealth departments related to crime), direct victim costs, and costs allocated to crime prevention, including by the security industry (Walker, 1997). The study found total criminal justice system costs in 1996 to be \$6.4 billion, 63 per cent of which consisted of police, administration of justice, correction and juvenile corrections costs (Walker, 1997). The study estimated the minimum total cost of crime in Australia in 1996 as \$18 billion, with white-collar crime accounting for the largest component of crime costs (Walker, 1997). A more recent Australian study estimated the cost

of crime for 2011 to be \$47.6 billion (Smith, Jorna, Sweeney & Fuller, 2014), by incorporating both recorded crimes and unreported crimes from victimisation surveys (Smith et al., 2014). The dollar value for each crime type was measured by calculating a wide range of crime costs, including intangible losses, actual loss, loss of output through criminal conduct, medical expenses, costs relative to crime prevention and response, costs of maintaining police, prosecution, courts and correctional agencies, as well as other government agencies whose functions relate to crime (Smith et al., 2014).

Three predominant methods have been used to measure non-criminal justice crime costs: hedonic valuation, contingent valuation, and calculations of the value of statistical life (Paoli & Greenfield, 2013). *Hedonic valuation* attempts to calculate intangible costs of crime by comparing property value of high and low crime areas (Paoli & Greenfield, 2013; Linden & Rockoff, 2008; Troy & Grove, 2008). Methods of *contingent valuation* capture both tangible and intangible costs of crime and involves asking participants how much they would pay to avoid a particular crime (Paoli & Greenfield, 2013). The contingent valuation method has been used in studies to evaluate unit costs of offences, including benefits of reducing gun violence (Ludwig & Cook, 2001), as well as to measure the public's willingness to pay for crime control programs (Cohen & Piquero, 2009). Calculation of the *value of statistical life* is similar to contingent valuation methods and refers to the measurement of society's willingness to pay for marginal reduction of a risk, or crime (Paoli & Greenfield, 2013). This method has been popular among scholars in measuring the cost of crime (Cohen, Rust, Steen & Tidd, 2004; Cohen, 1998; Baron & Maxwell, 1996), and also among policy-makers considering the costs and benefits of new regulation. Viscusi (2008) reviewed the value of statistical life across various US health and safety regulators, finding it averaged about \$7 million, with that figure resulting from an individual's willingness to pay for reduction of a fatality risk of 1 in 10,000, and that this amount rises and then declines over a person's life cycle (Viscusi, 2008, p.311).

These studies have assessed global views of the cost of crime, but have not unpacked the relative costs of individual offence types. McCollister, French and Fang (2010) argue that establishing societal costs of individual offences is essential to effective economic evaluation of community policing and drug treatment programs. But there are multiple challenges in operationalising the cost of crime as a measure. First, the determination of harm is susceptible to inflationary adjustments, with units of cost varying each year (Ratcliffe, 2014). Second, there are many low volume crimes that result in significant harm that are not easily calculable, for example child sexual abuse. Ratcliffe (2014) argues it is low volume-high harm crimes that hold greater importance in harm-focused policing models. Moreover, many studies that have calculated crime cost estimates categorise offences into large groups, thus are limited by being unable to distinguish between types of offences within these large categories (McCollister, French & Fang, 2010).

In recent years, there has been increased global focus on the development of *drug indexes* that operationalize harm using cost estimates. Despite claims of 'fundamental incalculability' (Caulkins et al., 2011), there have been numerous quantitative indexes of drug-related harms. These include the United Kingdom Home Office Drug Harm Index, the Australian Federal Police Drug Index, the United Nations Office of Drugs and Crime Index and the NZ Drug Harm Index. The United Kingdom Home Office Drug Harm Index (UK DHI) was

developed in 2005 as an overarching measure for the Drug Strategy target, which ultimately aimed to reduce harms caused by Class A drugs (i.e., the most dangerous drugs; Goodwin, 2007). Developed by MacDonald, Tinsley, Collingwood, Jamieson and Pudney (2005), the UK DHI measures harms generated by illicit drug use by combining robust national indicators into a single-figure time-series index. The UK DHI measures 19 harm variables that were categorised as either a crime, health or community drug harm (Macdonald et al., 2005). Costs measured in the DHI included drug-related crime costs, drug nuisance, and health care costs of drug abuse (Macdonald et al., 2005). Community harm variables related to drug dealing and included the number of drug trafficking offences and community perceptions of drug dealing (MacDonald et al., 2005). The Home Office utilised the index as a tool to monitor the success of the Drug Strategy policies through the analysis of year-to-year changes in values (Goodwin, 2007). The UK DHI has been criticised for failing to include many relevant harms and only selecting those that are available in official statistics and survey data (Ritter, 2009). Relevant excluded harms include work productivity and absenteeism, parenting issues, unemployment, and homelessness (Ritter, 2009). Ritter (2009) suggests rather than excluding these harms, they could be introduced to the index as best-estimates from routine data.

Another approach to assessing drug crime harms is the Australian Federal Police Drug Harm Index, developed with the purpose of encapsulating the value of drugs seized by Australian Federal Police (McFadden, 2006). Specifically, the AFP Drug Harm Index (AFPDHI) provides the costs of harm that would have resulted had both domestic and international seized drugs reached the Australian community (McFadden, 2006). Originally, the AFPDHI was limited to major drugs of importation, including cocaine, amphetamines and heroin, however it was revised to include cannabis (McFadden, 2006). The index calculated both tangible and intangible harm of illicit drugs, including labour costs, health care costs, drug-related road accidents, crime costs, resources in abusive consumption, as well as costs relating to loss of life, pain and suffering (McFadden, 2006). The prevalence and consumption of illicit drugs was combined with social costs to estimate the economic cost per kilogram (McFadden, 2006). The AFPDHI index was used to measure the value of seized illicit drugs by the AFP between the years 1998 to 1999 and 2002 to 2003 and found seizures saved the Australian community up to \$3.1 billion dollars in harm (McFadden, 2006).

McFadden (2016) raises numerous limitations of the AFPDHI, including that it is a broadly based estimate that assumes each kilogram of an illicit drug will incur the same damages/harm, as well as fails to acknowledge that the majority of drug-related costs are likely to be attributed to a specific subset of users. Further, the AFPDHI is limited to the direct impact of consumption, in turn ignoring indirect deterrent impacts of drug law enforcement (McFadden, 2006). Despite these limitations, Nutley (2003) states the AFPDHI provides a platform for evidence-based decision-making and provides a foundation for reporting the Government's framework performance in drug policy.

A third drug crime index is the United Nations Office of Drugs and Crime (UNODC) Index, also referred to as the UNODC Illicit Drug Index, that measures the extent of plant-based and synthetic drug production, trafficking and use in a specific country (UNODC, 2005; Ritter, 2009). The UNODC index was developed with the aim of establishing a single, standard measure of a country's overall drug problem that could be compared across regions

(UNODC, 2005). The UNODC index is composed of three sub-indices: a drug production, drug trafficking and drug abuse index (UNODC, 2005). A harm factor was composed to accommodate the differences of harm caused by different drug types (Ritter, 2009). Treatment demand, toxicity, deaths, and injecting drug use were used to establish both risk and harms for each drug type (Ritter, 2009). The 'production' sub-index calculated estimates using data from land surveys, the number of consumers, and the seizures of both end products and precursors. The 'trafficking' sub-index used reported drug seizures and drug route indicators compiled from law enforcement data (UNODC, 2005). Estimates of each sub-index estimates were converted into typical doses and weighed by a harm factor (Ritter, 2009). The 'abuse' index was calculated by multiplying the calculated the number of users by the average annual dose, of which was subsequently weighted using the harm factors (UNODC, 2005; Ritter, 2009). Criticisms of the UNODC index are that manufacturing and trafficking of illicit drugs are not primary indicators of a drug problem. Further, that measuring treatment demand may not reflect the extent of the drug problem, but rather could indicate policy responses (Ritter, 2009).

The New Zealand Drug Harm Index (NZDHI) was developed by Slack, O'Dea, Sheerin, Normin, Wu and Nana (2008) to provide a metric of societal harm caused by illicit drug consumption in New Zealand (Slack et al., 2008). Similar to Australia's AFPDHI, the NZDHI estimates the gross economic benefit of drug seizures by the New Zealand Police, ultimately determining the extent of harm avoided over time (Slack et al., 2008). Four categories of illicit drugs included in the index were cannabis, opioids, stimulants and LSD (Slack et al., 2008). The NZDHI replicated cost estimates used by the AFPDHI, and additionally included expenditures of customs, labour costs, private prevention-of-crime expenditures, community expenditures by corrections, as well as homicide, and pain and suffering as intangible costs (Slack et al., 2008). The intangible cost of a life used was based on the value of statistical life estimate established by Land Transport New Zealand (Slack et al., 2008). Further, illicit drugs measured in this index were those seized by both the Customs Service and New Zealand Police (McFadden, 2006).

The NZDHI measured four categories of social cost: personal harm, community harm, intervention costs and total social costs (McFadden, 2016). The NZDHI index was constructed in three steps. First, the total harm resulting from drug consumption in the base year of 2005/06 was estimated (Slack et al., 2008). The estimates of total harm and amount of illicit drugs consumed were then used to determine the cost of harm per kilogram of each drug type. Next, social costs of illicit drug use were measured in consistent, real value terms (Slack et al., 2008). Lastly, the index was built using the base year harm per kilogram that was calculated based on drug use to the quantity of drugs seized between 2000 and 2006 (Slack et al., 2008). Slack et al. (2008) highlight methodological issues of the NZDHI, stating it assumes prevalence of drug use remains the same over time. However, Single et al. (2001) argue estimates of harm are likely to remain the same over a three to five year time frame.

As discussed, numerous studies have used costs estimates as a means of calculating crime harm. All have limitations. Wickramasekera, Wright, Elsey, Murray and Tubeuf (2015) undertook a systemic review of 21 studies that have estimated the cost of crime. They found large variance in the total estimates that were assumed to be the result of changes in crime trends, inconsistent definitions of crime categories, variations in methods, underreporting in

crime, and changes in unit costs (Wickramasekera et al., 2015). Wickramasekera et al. (2015) concluded current crime cost estimates in the literature are ineffective and require improvements to reporting standards. Additionally they highlighted the need for up-to-date studies and the establishment of a universal definition of crime categories. These limitations restrict the usefulness of cost estimates as a means of ranking crime harms.

#### **1.2.4 Greenfield and Paoli's structured harm assessment framework**

Greenfield and Paoli (2013) designed a framework drawing from the work of von Hirsch and Jareborg (1991), who offered a structured attempt to categorise crime harms and developed guidelines for assessing the standard impact a crime has on the immediate standard of living of a victim. As such, this approach incorporates both perceptions of crime harm, and assessments of its cost. The framework is comprised of a two-dimensional taxonomy of possible gross harms associated with criminal activities (Greenfield & Paoli, 2013). The purpose of the taxonomy is to capture the full range of potential harms capable of being affected by different offence types. Hence it includes as one dimension assesses the bearers of harm, consisting of individuals, government entities, private-sector entities and the environment, with other dimension assessing types of harms, including functional integrity, reputation, material interest and privacy. Scales and a matrix guide the assessment process (Greenfield & Paoli, 2013). The framework does not include law-enforcement costs, on the basis that criminal activities prioritised by law enforcement agencies receive the most funding and are therefore likely to appear most harmful (Greenfield & Paoli, 2013).

Paoli et al. (2013) used this framework to analyse harms from cocaine trafficking in the Netherlands and Belgium. The study assessed 62 criminal proceedings and interviewed 43 law enforcement experts and 25 convicted cocaine traffickers and dealers (Paoli et al., 2013). The study found harms of cocaine trafficking to mainly derive from drug control policy, highlighting the ineffectiveness of supply-side interventions (Paoli et al., 2013). Greenfield and Paoli's (2013) harm assessment framework has additionally been applied to assess harms associated with human trafficking, VAT fraud, tobacco smuggling, and cannabis cultivation (Paoli, Decorte & Kersten, 2015).

This framework, therefore is an innovative attempt to systematically identify and rank the different harms related to particular offences. It relies on expert or insider assessments rather than community perceptions or offence counts, and is focused on the different types of harms caused by particular offences, rather than a comparison between different offence types. This makes Greenfield and Paoli's (2013) framework well-suited to understanding the harms of a particular crime type, rather than comparing and ranking crime harms globally.

#### **1.2.5 Sentencing outcomes and guidelines**

An alternative approach to assessing crime harm has become popular, which utilises offence sentences to produce crime harm indexes (Ratcliffe, 2014; Sherman, 2013). Indexes can be based on *actual sentencing outcomes* or *sentencing guidelines*. They all assume that more serious offences attract more severe penalties, which is reflected in sentencing outcomes (van Ruitenburg & Ruiter, 2023; Simpson et al, 2023).

An example of an index based on *actual sentences* is the Canadian Crime Severity Index (CCSI) developed by Canada Statistics in 2004 (Wallace et al., 2009). The CCSI operationalizes crime seriousness by measuring both the incarceration rate for a particular offence type and the average length of prisons sentence (in days) for the specific type of offence. Individual offence weights are a factor of the average actual sentence length given by courts, and the incarceration rate for it. Three separate indexes have been developed for all crime, violent crime, and for non-violent crime (Wallace et al., 2009). The index is updated every five years. The Crime Severity Score produced by the UK Office of National Statistics follows a similar methodology (Bangs, 2016), as does an index used in Ireland (Linehan, 2016).

The use of actual sentences to calculate a crime harm index does not distinguish other non-harm related factors that influence sentencing decisions, including for example the offender's prior criminal history and other aggravating or mitigating factors. Such indexes therefore are assessments of sentencing practices as much as they are of the offence itself (Ransley et al, 2018a). The New Zealand Crime Harm Index attempts to control for this by calculating offence weights based on the 15<sup>th</sup> percentile of equivalent prison days, as a method of reducing the influence of offender characteristics (Curtis-Ham & Walton, 2017), and this type of approach has now been adopted elsewhere (see van Ruitenburg & Ruiters, 2023; Tylberg, 2021).

A more recent development has been the development of indexes based on *sentencing guidelines* rather than actual sentences, including the Pennsylvania Offence Gravity Score Index (Ratcliffe, 2014) based on offence gravity scores used in Pennsylvania's sentencing guidelines. Gravity scores are non-mandatory guidelines available for trial judges in determining an appropriate penalty for an offence (Ratcliffe, 2014). The Pennsylvania Offence Gravity Score Index was calculated as a factor of gravity scores from the sentencing guidelines, and reported offence frequency (Ratcliffe, 2014). Sherman (2016) refers to Ratcliffe's index of offence gravity scores as a 'compelling illustration of the potential of crime weighting in police prioritisation and performance assessment' (p. 3).

However, the model has been criticised over its short weighting range (Sherman, 2016). While the weighting range for Wolfgang et al.'s (1985) ranked index of perceived crime seriousness was between one and 200, and the weighting range of the Canadian Crime Severity Index was between seven and 7,042, Ratcliffe's (2014) weighting range was only between a ranking of one for a minor misdemeanour and 15 for murder. Issues regarding Ratcliffe's (2014) weighting range are additionally evident when comparing gravity score rates of offences with other indexes. For example, the Pennsylvania Offence Gravity Score rated homicide to be twice the gravity of a robbery, in contrast to the Canadian Crime Severity Index which rated homicide to cause the equivalent harm of 12 robberies (Sherman, Neyroud & Neyroud, 2016). Further, using Ratcliffe's (2014) proposed harm index, 60 traffic stops equated to one homicide, which was argued by Sherman (2016) as unrealistic.

The Cambridge Crime Harm Index (Cambridge CHI) developed by Sherman and colleagues (2016) also measures the total harm from crime based on sentencing guidelines and was developed as a classification system which could be used as a tool for prioritising police responses to criminal activity in Britain (Sherman, Neyroud & Neyroud, 2016). The value for each offence is calculated by multiplying the offence count by the days of imprisonment



recommended under the national sentencing guidelines for a first-time offender convicted of that offence. The focus on sentences for first-time offenders is argued to circumvent the individual offender factors involved in using actual sentences to construct an index (Sherman et al., 2016).

However, the Cambridge CHI only includes reported offences and thereby excludes that proportion of offending that is police-detected, as is for example, much drug, traffic and public order related offending (Ransley et al, 2018). This is justified by saying police-detected crime is not a reliable measure of crime harm, but rather measures police resources or success in making more arrests (Sherman et al., 2016). For this reason, the Cambridge CHI does not include traffic arrests, shoplifted detected by store security officers and drug arrests (Sherman et al., 2016). Under-reported crimes, such as many sexual and domestic violence offences, are also likely under-represented as a result (Ransley et al, 2018).

Since its development, the Cambridge CHI has been employed by multiple British police agencies and used in numerous studies, such as Bland and Ariel's (2015) assessment of the escalation of harm in domestic violence cases, Weinborn, Ariel and Sherman's (2016) study of crime reduction effects of police hot spot patrols, and Jackman's (2015) study of sex offenders. Other studies in Western Australia and Uruguay have applied the Cambridge CHI in the absence of their own local crime harm index (Sherman, 2016).

Tylberg (2021) conducted a systematic literature review on crime harm indexes, assessing various indexes against five criteria. The first three criteria were argued by Sherman et al (2016) to be essential in the creation of any crime harm index and are that the index is democratic in that it has public legitimacy, reliable in that it can be applied irrespective of changes in sentencing or offender demographics, and inexpensive in that it can be developed and maintained within reasonable resources. Another two criteria were added by Curtis-Ham and Walton (2017) who added that indexes should also be valid in that the measure should be of the offence type and not offender characteristics, and easily operationalized in that practical applications of the index should be within operational reach. Tylberg (2021) identified nine indexes across six countries and found clear differences (p.18) in the extent to which they meet these criteria. One of the major differences was in the granularity of offences ranked, with the Danish index for example aggregating offences into 45 categories (p.19), possibly affecting the reliability of outcomes.

In a recent scoping review of literature on crime harm indexes based on sentencing, Van Ruitenburg and Ruitter (2023) identified 141 articles relevant to the topic that met their search criteria. These articles relate to studies of indexes based on actual sentences, guidelines, or a combination thereof. The review lists the applications or developments of the Cambridge CHI in jurisdictions across the United Kingdom, Australia, and Europe (2023, pp.441-443), as well as independently developed indexes based on sentencing. Van Ruitenburg and Ruitter (2023) discuss the rationales and challenges for the indexes described, before synthesising results on the operationalisation and use of the indexes. They also discuss critiques, including the exclusion of non-reported crimes and disorder, and the lack of any allowance for differential impacts from crime on particular communities and individuals (2023, p.432). They note the critique of Paoli and Greenfield (2018), that sentencing guidelines reflect policy and political decisions made by governments and judges,

rather than seriousness or harm, and are not an accurate reflection of community perceptions. As Morrell and Rowe (2019) argue, sentencing decisions are influenced by historical and political priorities. There is little evidence that either legislated penalties or sentencing guidelines are accurate reflections of communities' views of the seriousness, harmfulness or moral wrongness of particular types of conduct.

### **1.3 Approach of the Queensland Crime Harm Index**

The Queensland Police Service (QPS) requested the development of a crime harm index that would assist in its prioritisation of multiple contemporary policing challenges. As noted in Ransley et al. (2018a), the functions of QPS have been expanded across a range of new crime and social challenges. Senior officers were concerned to ensure that any prioritisation and targeting of resources reflected community concerns and values, and encompassed as much policing activity as possible rather than focusing purely on reported crime. This meant any harm index had to include police-detected offences as well as those reported by the community.

Based on these considerations, the research team based at the Griffith Criminology Institute considered which of the models cited above was best suited to the goals of QPS. . In contrast to England and Wales, Australian jurisdictions do not use sentencing guidelines, although there have been recent proposals for change in Victoria (McGorrery et al, 2018). Further, many offences share the same or similar legislated penalties. These factors make the adoption of the Cambridge CHI model difficult – it could only be achieved by using the index developed for England and Wales, or by using actual sentencing data. The first option was inappropriate due to likely jurisdictional differences between the UK and Queensland, and the second was inappropriate because of the disadvantages already discussed relating to indexes based on actual sentences.

While there are many strengths of the Paoli and Greenfield (2013) framework which involves the synthesis of expert and stakeholder opinion on crime harm, it has typically been applied to a small subset of offences (e.g. drug crime, corruption), rather than the full range of crimes in which QPS was interested. It has not been developed to compare the harm caused by different crime types.

Finally, and importantly, the QPS was particularly concerned to ensure the legitimacy of the Queensland Crime Harm Index (QCHI), by ensuring it reflected community views, rather than just those of judges and lawmakers. This suggested a community perception survey, to ensure a genuine measure of how the Queensland community perceives and ranks the harms caused by different types of crime. The prevalence of relative consensus in community perceptions of crime as discussed above (see Section 2.1) suggest that the findings of such a survey should be relatively stable across time, and socio-demographic factors including, age, gender, race and location, meaning that the results from one comprehensive survey should have a lasting value.

To counteract any influence on community views from media portrayals and past victimisations, it was decided to also field the survey to police personnel. It can be assumed that police views are more informed by the actual occurrence and impact of crime, and that

the results of a police survey could be used to help counteract any inappropriate influencing of community views by media portrayals or past victimisations. In the next section of this report, we outline the methodology used to develop and calculate the Queensland Crime Harm Index.

## 2. Queensland Community Survey

### 2.1 Survey Methodology

Crime harm indexes have been developed to provide meaningful measures of harm that can inform effective police responses. As highlighted earlier in this report, gauging community perceptions of crime harm is useful for determining what the public sees as the most serious crime harms as well as for tracking how such perceived harms may change over time. Griffith University researchers therefore considered the views of Queensland residents about crime harm when constructing the Queensland Crime Harm Index.

The following sections of this report canvas the methodology used to field the Queensland Community Survey, which was then used to construct the *Queensland Crime Harm Index*. They also present the findings of the survey, showing how the Queensland community ranked the perceived harms of various crimes. Finally, the process undertaken to construct the Queensland Crime Harm Index, and the specific Queensland Community Crime Harm Index will be presented.

#### ***Sample selection and recruitment***

*The Queensland Crime Harm Index Community Survey* was a survey conducted in 2017 with a random selection of 2,000 Queensland residents aged 18+ years. Data were collected via Computer Assisted Telephone Interviewing (CATI), where participants were asked about their perceptions of the harm caused by various crimes, as well as their perceptions of safety in their neighbourhood, their experience of crime, and police priorities.

The sample of 2,000 Queensland residents was separated into two discreet types. One was 1,800 surveys with the Queensland general population (Queensland/Rest of state). The other was a 'non-Urban booster sample' comprising 200 surveys with residents in non-urban areas of Queensland using the Australian Bureau of Statistics (ABS) SA3 boundaries. For both sample types, a dual frame random digit dial (RDD) landline/listed mobile sample design was employed with a 40:60 landline/mobile split. This 40:60 split was used in an attempt to achieve the greatest possible representation of the Australian population. All mobile samples received a pre-approach text message indicating they would be contacted about their possible participation in a study being conducted by Griffith University. Griffith University engaged the Social Research Centre (SRC) at the Australian National University to recruit the sample and to field the survey.

The SRC had a customised approach to the random generation of landline telephone numbers with the commercial list provider *SamplePages*. Landline numbers were randomly generated and tested at the time of each request, rather than being drawn from a pre-existing (and potentially ageing) pool of numbers. This ensured that there is opportunity for new localities to be included in the survey, as well as the numbers having more chance of being a 'live' connected number. For the landline sample a 'best estimate' of postcode was assigned to each record at the number generation and testing stage, based on information available about the geographic area serviced by each individual telephone exchange.

Mobile phone numbers were also sourced from *SamplePages'* listed mobile phone numbers, to create fieldwork efficiencies by ensuring the majority reside within the state. These listed numbers were used strictly for research purposes and included telephone numbers listed in the white pages along with lists from other parties such as charities, telemarketing companies and other business entities.

A total of 12,688 sample records were generated for the study of which 12,348 were initiated during the fieldwork period. The number of records generated for each region was based on the quota for that region along with estimates of per cent yield based on similar surveys conducted in these regions. The non-urban booster sample of N=200 was managed separately.

### ***Sample exclusion and inclusion***

Exclusions to the survey included:

- Respondents who were not current residents of Queensland;
- Residents of institutional quarters (prisons, nursing homes, etc.); and
- Selected respondents who:
  - Were incapable of undertaking the interview due to a physical health condition;
  - Did not have the cognitive capacity due to a mental disability (e.g., dementia);
  - Were under the effect of drugs or alcohol (interviewer judgement call);
  - Households where no adults over the age of 18 were usually residents.

For the landline sample, the qualifying respondent was any person in the household aged 18+, and who agreed to complete the survey. In the case of the mobile sample, the qualifying respondent was the telephone answerer, if aged 18+ years.

All interviews were conducted in English.

### ***Interviewers***

All interviewers and supervisors selected to work on the Community Survey attended a briefing session delivered by the Social Research Centre (SRC) project team before the main fieldwork period, which focussed on all aspects of survey administration, including:

- Survey context and background
- Research approach and call procedures
- Respondent liaison
- Detailed examination of the survey questionnaire
- Comprehensive practice interviewing.

Professor Kristina Murphy from Griffith University dialled in via teleconference to the briefing session and provided contextual information for the interviewers. This had the benefit of helping to improve interviewer engagement and confidence in administering the survey. Additional briefings were held as necessary. Briefing sessions were delivered using PowerPoint slides. A total of 47 interviewers were briefed on the survey.

### **Contact procedures**

To make contact with prospective survey respondents, call procedures included:

- A four-call regime for the mobile sample with an upper limit of six calls, and a six-call regime for a landline sample with an upper limit of eight call attempts;
- Maintaining a spread of calls over weekday evenings, weekdays during the day and weekends;
- Appointments were set for any time that the call centre is operational (weekdays between 9 am to 8:30 pm; weekends 11 am to 5 pm);
- Sending a pre-notification SMS to mobile numbers (details below);
- For mobile phones, capping the maximum number of unanswered call attempts to no more than four to avoid appearing overzealous in our attempts to achieve interviews;
- Pre-recorded answering machine messages were left for records that had no contact. Two messages were left on landlines and one message for mobile records. The second landline message was modified slightly to acknowledge the first message.

### **Procedures to maximise response**

Procedures to maximise response included:

- 1800 number operation to address respondent queries and support the response maximisation effort, and the establishment of a respondent page on the SRC website (with responses to frequently asked questions);
- Provision upon request of contact details for the Griffith University Human Research Ethics Committee (HREC);
- Provision upon request for the respondent to be contacted by the researchers at Griffith University.

Further, a pre-notification SMS was sent to the mobile sample informing respondents they had been selected to participate in the research and would be receiving a call from the SRC in the coming days. The message was as follows:

Griffith Uni and the Social Research Centre will call soon about a survey on policing priorities and how crime is perceived by Queenslanders. Reply '1' if you are a Queensland resident, '2' if not. For more info or to opt out call 1800 023 040.

The mobile sample was managed during fieldwork to remove those who opted out or replied as out-of-scope (not a resident of Queensland) in response to the SMS. A summary of the outcome of the pre-notification SMS messages is shown in Table 1.

**Table 1 SMS and Replies**

<b>SMS</b>	<b>N</b>	<b>%</b>
<b>Sent</b>	<b>8,029</b>	<b>100.0</b>
<b>Replies</b>		
No reply	7,169	89.3
Not Queensland resident	410	5.1
In Queensland Resident	392	4.9
Opt out	58	0.7

### ***Survey instrument***

All respondents were invited to participate in a 15-minute survey. Queensland residents who agreed to participate in the survey were routed through a series of questions to ensure informed consent and to confirm their eligibility. The Appendix contains a full copy of the survey instrument. The survey was structured as follows:

- Section A: Introduction and consent
- Section B: Safety and security
- Section C: Perceptions of crime harm
- Section D: Police priorities
- Section E: Victimization
- Section F: Participant background
- Section G: Survey close

### ***Response rates***

Interviewing began on Wednesday 19 April 2017. Table 2 presents the final call results by sample type (landline vs. mobile) for all numbers initiated. Of the 12,348 numbers to which calls were initiated, interviews were achieved with 2,000 Queenslanders. The average number of calls per interview was 24 and the average calls per sample record was 3.2.

In terms of call outcomes, there were a few major differences between the sample frames. The most noticeable difference was in the ineligible numbers proportion, which was 13.6% for landline and 4.1% for mobiles. This was mainly due to a high number of non-residential landline numbers (6.7%). The mobile sample also had a higher proportion of no contact outcomes compared to the landline frame (55.2% mobile and 49.1% landline). The mobile sample also had a higher proportion of out-of-scope contacts (6.7%) in comparison to the landline frame (3.1%), mainly due to a higher proportion of numbers of non-Queensland residents in the mobile sample (4.2% mobile compared to 0.3% for landline). These differences in call outcomes were typical of similar surveys conducted by the SRC at the time.

**Table 2 Result at last call attempt**

Final Outcome	Total		Landline		Mobile	
	N	%	n	%	n	%
<b>Total numbers initiated</b>	<b>12,348</b>	<b>100.0</b>	<b>4,653</b>	<b>100.0</b>	<b>7,695</b>	<b>100.0</b>
<b>Ineligible numbers</b>						
Telstra message/number disconnected	366	3.0	172	3.7	194	2.5
Not a residential number	418	3.4	314	6.7	104	1.4
Fax/Modem/Call restrictions	169	1.4	149	3.2	20	0.3
<i>Subtotal ineligible numbers</i>	<i>953</i>	<i>7.7</i>	<i>635</i>	<i>13.6</i>	<i>318</i>	<i>4.1</i>
<b>No Contact</b>						
No answer	2477	20.1	1080	23.2	1397	18.2
Engaged	173	1.4	102	2.2	71	0.9
Answering machine	3714	30.1	1065	22.9	2649	34.4
Unresolved/appointments	171	1.4	38	0.8	133	1.7
<i>Subtotal no contact</i>	<i>6535</i>	<i>52.9</i>	<i>2285</i>	<i>49.1</i>	<i>4250</i>	<i>55.2</i>
<b>Out of scope contacts</b>						
Selected respondent away duration	30	0.2	10	0.2	20	0.3
Not QLD resident / don't know if QLD resident	341	2.8	13	0.3	328	4.3
Aged under 18	111	0.9	9	0.2	102	1.3
Too old / frail / deaf / unreliable / deceased / unable to do survey	107	0.9	73	1.6	34	0.4
Claims to have done survey	4	0.0	2	0.0	2	0.0
Language difficulty (LOTE)	71	0.6	39	0.8	32	0.4
<i>Subtotal out of scope contacts</i>	<i>664</i>	<i>5.4</i>	<i>146</i>	<i>3.1</i>	<i>518</i>	<i>6.7</i>
<b>In-scope contacts</b>						
Completed interviews	2000	16.2	820	17.6	1180	15.3
Household refusal	253	2.0	253	5.4	0	0.0
Respondent refusal	1327	10.7	484	10.4	843	11.0
Refused state / postcode / mobile safety question / alternative number	29	0.2	8	0.2	21	0.3
Remove number from list	27	0.2	3	0.1	24	0.3
Terminated midway	19	0.2	9	0.2	10	0.1



Final Outcome	Total		Landline		Mobile	
	N	%	n	%	n	%
Opted out to SMS	2	0.0	0	0.0	2	0.0
SMS refusal	57	0.5	0	0.0	57	0.7
SMS out of scope	407	3.3	0	0.0	407	5.3
1800 ICS Refusal	49	0.4	2	0.0	47	0.6
Over quota*	26	0.2	8	0.2	18	0.2
<i>Subtotal in-scope contacts</i>	<i>4,196</i>	<i>34.0</i>	<i>1,587</i>	<i>34.1</i>	<i>2,609</i>	<i>33.9</i>

\* Surveys were terminated if the respondent's quota had been filled at the time of call.

The *response rate* used for this report is AAPOR Response Rate 3 (RR3)<sup>1</sup>. This relies on estimating the proportion of cases of unknown eligibility that may have been eligible for the survey and including this estimate in the denominator for the calculation of the survey response rate. The formula for Response Rate 3 is:

$$RR3 = \frac{I}{I + (R + NC + O) + (UH + UO)}$$

*I* = Interviews

*R* = Refusals

*NC* = Non-contacts

*O* = Other

*e* = Estimate of the proportion of unknown outcomes likely to have been in-scope

*UH* = Unknown, if household / occupied

*UO* = Unknown, other

The *e* value for this survey is the default value calculated by the AAPOR online Response Rate Calculator<sup>2</sup>. In this case 0.683. This was calculated as follows:

$$e = \frac{(Interviews) + (Eligible non - interviews)}{(Interviews) + (Eligible non - interviews) + (Not eligible)}$$

On this basis (refer to Table 3) the overall **response rate** for the survey was 23.7% (25% for the landline frame and 22.9% for the mobile phone frame).

The **cooperation rates** for a survey (interviews/interviews + refusals) are more typically reported. The overall cooperation rate was 54% (54.4% for the landline frame and 53.7% for the mobile frame).

<sup>1</sup> AAPOR, 2011.

<sup>2</sup> For more complete instructions about how to classify final dispositions see the complete Standard Definitions and Eligibility Calculation documents at <http://www.aapor.org>.

**Table 3 APPOR Response Rates**

	Total Sample	Landline	Mobile
<b>Total phone numbers used</b>	<b>12,348</b>	<b>4,580</b>	<b>7,768</b>
I=Complete Interviews	2000	820	1180
R=Refusal and break off	1705	686	1019
NC=Non Contact	30	10	20
O=Other	354	153	201
E	0.683	0.715	0.662
UH=Unknown Household	6365	2247	4118
UO=Unknown other	0	1	2
<b>Response Rate 3</b>			
$I/((I) + (R+NC+O) + e(UH+UO))$	23.7%	25.0%	22.9%
<b>Cooperation Rate 3</b>			
$I/(I+R)$	54.0%	54.4%	53.7%

### **Survey refusal**

Of the respondents who gave a reason for their refusal (n=1,664), the majority (89.9%) gave the following three reasons for their refusal:

- not interested (42.8%);
- no comment / hung up (37.3%);
- too busy (9.8%).

A summary of reasons for refusal is provided in Table 4. The other reasons given by the 77 respondents whose refusal reason did not fit the below categories included respondents not feeling well enough to participate, feeling they were too old, they were dealing with personal issues such as death or illness in the family. Several were members of the Queensland Police Service and did not want to participate, and some others were not interested in answering questions about the police.

**Table 4 Reasons for refusal summary**

Reasons for Refusal	Total	
	n	%
<b>Total refusals</b>	<b>1,664</b>	<b>100.0</b>
Not interested	713	42.8
No comment / just hung up	620	37.3
Too busy	163	9.8
Never do surveys	29	1.7
Don't trust surveys / government	16	1.0
Too personal / intrusive	12	0.7
Don't like subject matter	9	0.5
Don't believe surveys are confidential / privacy concerns	9	0.5
Silent number	9	0.5
Survey length is too long	4	0.2
Get too many calls for surveys / telemarketing	3	0.2
Other	77	4.6

***Sample representativeness***

The survey included some key questions about participants' backgrounds. The questions were asked to gauge the characteristics of the sample, which can be compared to population estimates gathered by the Australian Bureau of Statistics (ABS). In doing so, the representativeness of the sample can be attained. Drawing on data from the ABS 2016 and 2011 waves of the National Census, we were able to provide a comparison between the survey sample and the wider Australian population.<sup>3</sup>

Table 5 outlines the breakdown of participants by sex compared to a sex distribution of population data in Queensland. Male participants in the survey were under-represented (by 7.4%) and females were over-represented (by 7.3%) when comparing proportions to Census figures of data in Queensland. Table 6 outlines participants' *educational attainment* and offers a comparison with 2011 Census data. The figures highlight that highly educated participants were over-represented in the survey. Participants who did not complete high

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<sup>3</sup> A key aim of this study was to examine non-urban vs urban differences in attitudes towards crime harms. As such, a non-urban boost sample of 200 participants was added to the overall survey sample. For the purposes of analysing the representativeness of the survey sample, the non-urban booster sample has been removed.

school were under-represented in the survey. Please note, the 2011 Census does not capture individuals who are undertaking a trade or apprenticeship in their statistics on education. Table 7 presents a comparison of the *age* distribution between the sample and the census. Participants in each age group over 35 years old are over-represented in the survey. However, participants aged between 18 and 34 years old are under-represented in the survey. While we surveyed participants aged 18+, data from the 2016 Census includes people aged between 15 and 17. The inclusion of this age group may account for the discrepancy in proportion figures in Table 7. Additionally, when stratifying by age, there is an over-representation of participants aged 65 and over (by 10.0%).

**Table 5 Distribution of sex in the Survey and the 2016 ABS Census**

Sex	Sample %	Population %	Difference %
Male	41.9	49.3	-7.4
Female	58.0	50.7	+7.3
Missing	0.1	-	-
Total	100.0	100.0	

**Table 6 Distribution of Educational Attainment for the Survey and the 2011 Census**

Educational Attainment <sup>4 5</sup>	Sample %	Population %	Difference %
Did not complete high school	20.8	30.0	-9.2
Completed high school	16.7	35.0	-18.3
Trade/Apprenticeship	5.3	-	-
TAFE/Technical Certificate	13.1	8.7	+4.4
Diploma	13.5	2.2	+11.3
Bachelor's Degree	19.8	4.4	+15.4
Post-Graduate Degree	10.1	6.7	+3.4
Other	0.6	-	-
Missing	0.3	-	-
Total	100.0	100.0	

<sup>4</sup> The population proportions were estimated by dividing the proportion of responses in each education category and dividing by the total population (in 2011 the population was approx. 23,401,892; ABS, 2011)

<sup>5</sup> Population statistics were gathered from the *2011 Australian Census* as information pertaining to educational attainment was not available for the 2016 Australian Census at the time of writing this document.

**Table 7 Distribution of Age Comparison between the Community Survey and the 2016 Australian Census**

Age group	Sample %	Population %	Difference %
15-19 years <sup>6</sup>	1.1	6.1	-5.0
20-24 years	3.1	6.7	-3.6
25-29 years	3.6	7.1	-3.5
30-34 years	5.9	7.3	-1.4
35-39 years	8.0	6.7	+1.3
40-44 years	8.4	6.8	+1.6
45-49 years	10.3	6.8	+3.5
50-54 years	10.6	6.5	+4.1
55-59 years	10.8	6.2	+4.6
60-64 years	11.1	5.6	+5.5
65 years and over	25.2	15.8	+9.4
Missing	1.9	-	-
Total	100.00	100.00	

### **Missing Data**

As the survey was completed via telephone, question non-response (i.e., missing data) was very low for each survey item. The majority of items had a non-response rate of between 0.0% and 0.3%. One question asking respondents' age (Q15) had a non-response rate of 0.6%. The items with the largest non-response rates were Q19 (8.5% non-response data) and Q19a (6.6% non-response data), which both asked participants about their annual income. Asking about an individual's income can be perceived to be invasive. It is therefore likely to generate a high proportion of non-response data as a result of the sensitive nature of this question (Davern, Rodin, Beebe, & Thiede Call, 2005). Moore and colleagues (2000) suggest questions pertaining to income are not answered either because the participant does not want to divulge their income and thus refuse to answer the question, or they cannot recall the amount. Upon inspection of the income items in this survey, a similar pattern is revealed.

<sup>6</sup> Note: we sampled participants aged 18+

## 2.2 Survey Findings

### *Sample Demographics*

The survey included some key questions about participants' backgrounds. When examining the gender breakdown of survey respondents, 57.5% were female respondents and 42.5% were male respondents. Participants were aged between 18 and 94 years old, and the average age was 52.97 years old. Male participants ranged in age from 18-94, with their average age being 53.39, while females ranged in age from 18 to 91, and their average age was 52.7.

The majority of respondents reported being non-Indigenous Australians (71.8%), followed by British or European (16.1%), New Zealander, Pacific Islander, or other Oceania (3%), Asian (1.7%), and Middle Eastern, African, Central/Southern American, and North American, who represented 0.5%, 0.4%, 0.3% and 0.2% respectively. Almost 2% (1.6%) of the sample identified as Aboriginal or Torres Strait Islander (ATSI).

In terms of educational attainment, almost 20% of participants reported that they had not finished high school (19.1%). A similar amount of respondents had completed a post-graduate degree (19%). Almost 17% (16.7%) of participants reported that they had completed a trade or apprenticeship. Almost 15% of participants had completed a diploma (13.2%) or a bachelor's degree (13.2%), and 5.8% had completed a TAFE/technical certificate.

With respect to income, only a quarter (25.7%) of the sample responded to the question. From these participants, most reported that they earned between \$20,000 to less than \$40,000 (7.9%), followed by 4.5% of respondents reporting an annual income of less than \$20,000. Almost 4% (3.7%) of participants earned between \$40,000 and less than \$60,000, while less than 3% reported earning \$80,000 to less than \$100,000 (2.5%), \$60,000 to less than \$80,000 (2.4%), and \$100,000 to less than \$150,000 (2.1%). Table 8 presents a summary of the demographic background variables.

**Table 8 Summary of demographic characteristics of the Community Survey sample**

Benchmark	Mean	Median	SD	%	Range
<b>Age</b>	<b>52.97</b>	<b>54</b>	<b>15.79</b>		<b>18-94</b>
<b>Gender</b>					
Male				42.5	
Female				57.5	
<b>Race/Ethnicity</b>					
<i>Australian (non-ATSI)</i>				71.8	
<i>Aboriginal or Torres Strait Islander (ATSI)</i>				1.6	

Benchmark	Mean	Median	SD	%	Range
<i>New Zealander, Pacific Islander, or other Oceania</i>				3.0	
<i>British or European</i>				16.1	
<i>Asian</i>				1.7	
<i>Middle Eastern</i>				0.5	
<i>African</i>				0.3	
<i>North American</i>				0.2	
<i>Central/Southern American</i>				0.4	
<i>Other</i>				4.1	
<b>Educational Attainment</b>					
<i>Did not complete high school</i>				19.1	
<i>Completed high school</i>				3.0	
<i>Trade/Apprenticeship</i>				16.7	
<i>TAFE/Technical Certificate</i>				5.8	
<i>Diploma</i>				13.2	
<i>Bachelor's Degree</i>				13.2	
<i>Post-Graduate Degree</i>				19	
<i>Other</i>				9.3	
<b>Household Income</b>					
<i>Less than \$20,000</i>				4.5	
<i>\$20,000 to less than \$40,000</i>				7.9	
<i>\$40,000 to less than \$60,000</i>				3.7	
<i>\$60,000 to less than \$80,000</i>				2.4	
<i>\$80,000 to less than \$100,000</i>				2.5	
<i>\$100,000 to less than \$150,000</i>				2.1	
<i>\$150,000 or more</i>				2.8	

### **Crime Harm Rankings**

The primary aim of the Survey was to ascertain how members of the public viewed the harm caused by different crimes. From their responses, a ranking of crime harms can be made. Participants were asked a series of questions about a range of crimes and were required to indicate how harmful they considered the crime to be to victims, their families, and the community. Response categories for each crime ranged from 0 to 100, with 0 indicating

participants believed the crime ‘*causes no harm at all*’ to victims, their families and the community, while 100 indicates participants believed the crime ‘*causes the most extreme harm possible*’ to victims, their families and the community. Hence, a higher crime harm score indicates the crime is perceived to be more harmful. The order of presentation of the 33 crime types rated was randomised.

Table 9 presents the descriptive statistic scores (e.g., mean, median and standard deviation) and rank order of community perceptions of crime harms for each crime type listed in the survey. Findings showed participants ranked *child sexual abuse* as the crime with the highest harm ranking (95.72%). Also in the top five crimes with the highest harm ranking by participants was *murder* (95.61%), followed by *rape* (94.55%), *child physical abuse causing physical injury* (91.54%), and *domestic violence* (90.8%). The five crimes with the lowest harm ranking included *vandalism* (damage to private or public property; 61.26%), *shoplifting* (56.28%), *illegal prostitution* (54.56%), *petty theft* (theft of low value items; 51.21%), and *public nuisance offences* (drunk or disorderly, swearing; 51.01%).

**Table 9 Descriptive statistic scores and ranking of crime harms by crime type**

\*Note: Mean and Median scores closer to 100 indicate the crime is considered more harmful

How much harm do you think the following crimes cause to victims, their families, or the community:	Mean	Median	SD
Child sexual abuse	95.72	100	12.38
Murder	95.61	100	13.88
Rape	94.55	100	13.21
Child physical abuse causing physical injury	91.54	100	15.23
Domestic violence	90.80	100	14.38
Terrorism (a violent act to achieve a political or religious aim)	90.46	100	19.12
Death caused by dangerous driving	90.03	100	16.33
Sexual assault, other than rape	89.65	98	15.56
Grievous bodily harm (physical assault with serious permanent injury)	88.38	90	14.97
Drug trafficking (manufacture or trade of illegal drugs)	86.45	90	18.48
Drunk and drug driving	86.06	90	18.01
Organised crime (drug trade, extortion by organised gangs, e.g., bikies)	83.55	90	19.47
Robbery (stealing with violence)	82.89	85	17.14
Arson	81.86	90	20.51



How much harm do you think the following crimes cause to victims, their families, or the community:	Mean	Median	SD
Corruption (dishonest or fraudulent conduct by a person in authority)	78.54	80	20.88
Cruelty to animals	78.09	85	24.00
Internet fraud (identity theft, credit card fraud, romance fraud)	76.27	80	21.92
Breach of biosecurity and quarantine laws (introduction of animals, plants, disease or pests to Australia)	76.13	80	23.62
Burglary (break-in at a home, store or business)	74.34	80	19.82
Illegal possession of firearms	73.73	80	25.32
Environmental crime caused by corporations or farms (pollution/illegal dumping/environmental destruction)	73.51	80	23.91
Fraud (deception intended to cause financial loss to the victim)	71.18	75	22.26
Drug possession	68.85	75	27.04
Vehicle theft/joyriding	68.11	70	23.13
Physical assault with minor, or no injury	66.66	70	22.91
Theft of work equipment (theft of tools, farming equipment)	66.03	70	24.64
Livestock theft (theft of cattle, sheep, etc.)	65.64	70	25.07
Illegal trade of Australian plants or animals	64.96	70	27.45
Vandalism (damage to private or public property)	61.26	60	25.36
Shoplifting	56.28	50	25.76
Illegal prostitution	54.56	50	30.32
Petty theft (theft of low value items)	51.21	50	25.31
Public nuisance offences (drunk or disorderly, swearing)	51.01	50	25.73

### ***Policing priorities***

In addition to gauging how members of the public viewed crime harms, the survey also measured how the public believes police should allocate resources to prevent and respond to crime. Participants were asked the extent to which they believed police should put more

resources into 15 different crime-related problems. Participants could select a response ranging from 1 (*Definitely put a lot less resources into this*) to 5 (*Definitely put a lot more resources into this*) on a Likert scale. Higher scores indicate participants believe the police should devote *more* resources to the issue listed. Again, the order of presentation of the 15 police activities was randomised.

Of the list of crime problems police could dedicate resources to, survey findings show participants believed *domestic violence* should be given the most resources (mean = 4.36). Participants also reported that law enforcement should dedicate more resources to *addressing violent extremism* (mean = 4.17), followed by *keeping a close watch on known criminals* (mean = 4.13), *dealing with organised crime groups* (mean = 4.12), and *solving crimes/catching criminals* (mean = 4.09). Table 10 presents the findings for each crime problem. Interestingly, the first two items presented in Table 10 (working to address domestic violence and addressing violent extremism) reflect two of the crimes rated as having the highest crime harm ranking in Table 9. We can assume, therefore, that if the resource allocation list would have included some of the other crimes listed as most harmful in Table 9 then these would also have received greater support for higher resource allocation.

**Table 10 Desired police resource allocation for crime problems**

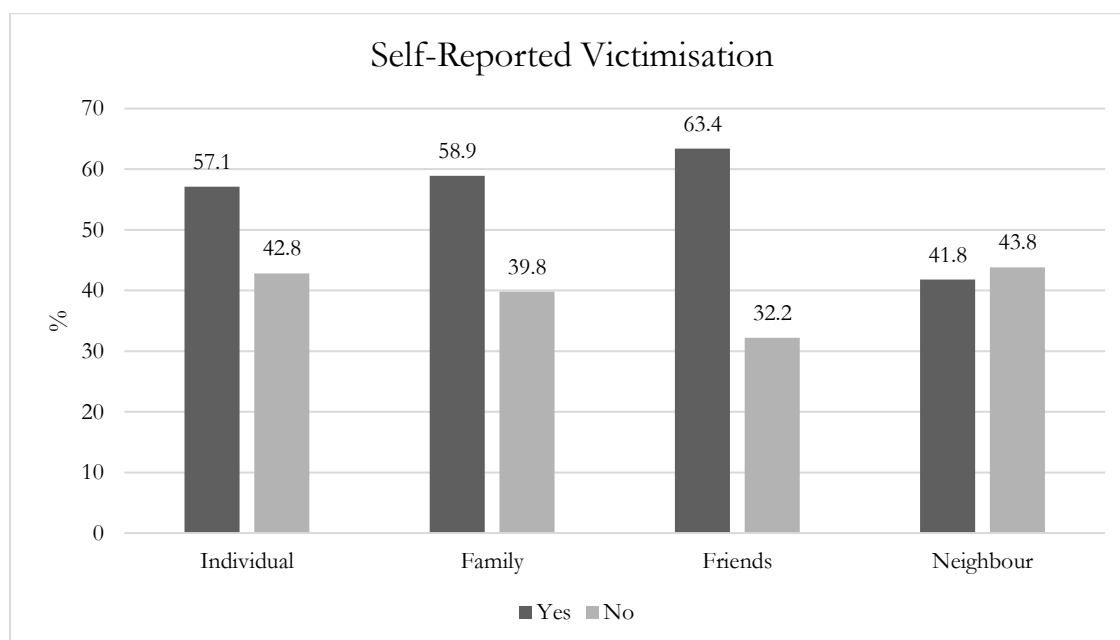
Should Police put more or less resources into...	Mean	Median	SD
Working to address domestic violence	4.36	5	0.80
Addressing violent extremism	4.17	4	0.85
Keeping a close watch on known criminals	4.13	4	0.84
Dealing with organised crime groups	4.12	4	0.87
Solving crimes/catching criminals	4.09	4	0.81
High visibility patrols in trouble areas	4.09	4	0.83
Addressing alcohol fuelled violence	4.09	4	0.85
Responding quickly to emergencies/accidents	3.84	4	0.81
Addressing the crime and safety concerns of rural communities	3.82	4	0.78
Car patrols in suburbs	3.77	4	0.88
Providing crime prevention advice to the public	3.62	3	0.83
Policing Indigenous communities	3.59	3	0.91
Dealing with anti-social behaviour	3.55	3	0.83
Handling complaints about police	3.40	3	0.88
Involvement in disaster management	3.37	3	0.79

### Prior victimisation

The *Community Survey* also asked participants about previous victimisation. Participants were asked four 'yes/no' questions to understand whether they, their family, their friends, or their close neighbours had been a victim of crime.

Findings showed more than half of participants had personally been a victim of crime (57.1%). Almost two-thirds of participants reported at least one member of their family had been a victim of crime (58.9%), and that at least one of their friends had been victimised (63.4%). Finally, fewer than half of the sample reported that a close neighbour had been a victim of crime (41.8%). Figure 1 presents the victimisation findings (note: Scores do not add to 100% given some respondents refused to answer these questions or did not know).

**Figure 1 Self-reported victimisation**



### 3. Construction of the Queensland Crime Harm Index

#### 3.1 Calculating the Queensland Community Crime Harm Index

The calculation of the weighted Queensland Crime Harm Index proceeded in three steps for each of the 33 crimes: (1) the calculation of a measure of consensus/difference; (2) the calculation of the weight; and (3) the application of the weight to the mean score of the specific crime (see Miethe, 1982). Note that the final *Queensland Crime Harm Index* developed for the Queensland Police Service included weighted scores taken from both the Community Survey as well as responses provided by 1,138 Queensland police personnel to the same survey. Each of the three steps outlined below were applied to data from both surveys separately. Hence, both a *Queensland Police Crime Harm Index* and a *Queensland Community Crime Harm Index* were constructed using the same method. They were then combined to construct the overall *Queensland Crime Harm Index*.

This report and the sections to follow present the construction of the Queensland Community Crime Harm Index only.

##### ***Step 1: calculating the measure of consensus***

To calculate a measure of consensus, we used the proportion of variance in harm assessments for a crime that is explained by different demographic or group variables. Specifically, the higher the proportion of variance explained by such individual/group characteristics, the more these community sub-groups differ in their harm assessments of a specific crime. For example, if harm assessments for say domestic violence significantly and substantively differ between older and younger age groups, there is less consensus between younger and older people on the harm that this specific crime causes. The characteristic of age explains variance in harm assessments to a large extent. In other words, the stronger the relationship between say 'age' and 'harm assessment' is, the higher is the weight of age in explaining the differences in harm assessments.

The proportion of variance, or  $R^2$ , for each of the 33 crimes is calculated by multivariate regression on the harm assessment for this crime within the community, using a number of variables that had been found to have an impact on mean levels of harm assessment among the community (see below). We used the proportion of variance (or the  $R^2$  value) independent of whether these variables made a significant contribution to the overall explanatory power of these variables for differences in harm assessment (F - value). As a rule of thumb, the higher the proportion of explained variance and consequently the higher the  $R^2$  value, the more likely it is that the variables make a significant contribution to the explanation of differences in harm assessments.

##### ***Step 2: Calculating the weight***

The weight for each of the 33 crimes surveyed was calculated in the following way. We designed a formula by subtracting the proportion of variance (i.e., the value of  $R^2$  achieved in step 1) from 1 (i.e.,  $1 - R^2$ ). If there is little difference in harm assessments when examining individual attitudes by key characteristics, such as age and gender, then the value

of  $R^2$  is small and the weight is close to 1. This will result in a Crime Harm Index (CHI) value close to the original mean/average harm rating as the consensus is high. If individuals considerably differ in harm assessments linked to demographic characteristics such as age and gender, then the value of  $R^2$  is higher and the weight of  $(1 - R^2)$  is lower and less than 1. This will result in a CHI value considerably lower than the original mean/average harm rating as the consensus is low.

### ***Step 3: Applying the weight and calculating the CHI***

Finally, we multiplied the mean/average harm rating (average crime harm score) for each of the 33 crimes with the weight  $(1 - R^2)$ . If the mean/average harm rating is multiplied with such a weight, this will result in a Crime Harm Index (CHI) value that is proportionately different than the original mean/average harm rating.

It will result in a CHI for the specific crime close to the original mean value of harm rating if  $R^2$  has a low value and the weight has a value close to 1. This is the case if consensus is high. If  $R^2$  has a high value and the weight consequently has a value much less than 1, this will result in a CHI for the specific crime that is proportionately lower than the original mean value of harm rating for this crime. This is the case if difference is high and consensus is low. Accordingly, higher relative values of the CHI are assigned if consensus is high, and lower relative values of the CHI are assigned if consensus is low.

### **Calculating the Weighted Index**

For the Community Survey we used the following characteristics across all 33 crimes in order to calculate the measure of consensus  $R^2$  for the weight  $(1 - R^2)$  (see Table 11).

- Age as a continuous variable
- Gender
- Personal victimisation: victim vs non-victim
- Education: 2 categories: high school only vs post-high school education.
- Location: rural vs urban<sup>7</sup>
- Australian (includes Indigenous) vs non-Australian

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<sup>7</sup> Rural and urban areas were categorised by utilising Statistical area (SA) information to determine whether participants lived within urban centres or more rural areas. SAs are spatial units outlined by the Australian Statistical Geography Standard (ASGS). SA categories descend from SA4 to SA1 and denote areas within Queensland. For example, at the SA4 level large areas are defined (e.g., Brisbane; Toowoomba; Outback). At the SA3 level, the larger areas at the SA4 level are dissected to show smaller suburban areas (e.g., Brisbane East; Beenleigh; Noosa). The spatial areas continue to decrease in size at the SA2 and SA1 levels. We utilised the SA4 and SA3 spatial classifications to ascertain whether participants lived in an urban or rural area. Participants outlined their postcodes, which were entered into the Australia Post website and compared with the SA3 classification of urban or rural areas. If a participant's postcode was in an urban centre, they were assigned a code of (1) and if their postcode was in a rural area, they were assigned a code of (2).

### 3.2 The Weighted Community Crime Harm Index (QCCHI)

Table 11 presents the average raw crime harm index scores (CHI score) that were presented in Table 9 as well as the consensus score ( $R^2$ ), weight score ( $1-R^2$ ), and weighted Queensland Community Crime Harm Index (QCCHI) once weightings were applied to the raw crime harm scores.

**Table 11. Weighted Queensland Community Crime Harm Index (QCCHI)**

How much harm do you think the following crimes cause to victims, their families, or the community:	Mean CHI score	$R^2$	$1 - R^2$	Weighted QCCHI
Child sexual abuse	95.72	.013	.987	94.48
Murder	95.61	.008	.992	94.85
Rape	94.55	.006	.994	93.98
Child physical abuse causing physical injury	91.54	.026	.974	89.16
Domestic violence	90.80	.044	.956	86.80
Terrorism	90.46	.010	.990	89.56
Death caused by dangerous driving	90.03	.025	.975	87.78
Sexual assault, other than rape	89.65	.012	.988	88.57
Grievous bodily harm (physical assault perm injury)	88.38	.015	.985	87.05
Drug trafficking	86.45	.024	.976	84.38
Drunk and drug driving	86.06	.041	.959	82.53
Organised crime (drug trade, gangs, e.g., bikies)	83.55	.010	.990	82.71
Robbery (stealing with violence)	82.89	.015	.985	81.65
Arson	81.86	.017	.983	80.47
Corruption (dishonest/fraudulent conduct)	78.54	.013	.987	77.52
Cruelty to animals	78.09	.051	.949	74.11
Internet fraud (identity theft, credit card fraud)	76.27	.022	.978	74.59
Breach of biosecurity and quarantine laws	76.13	.013	.987	75.14
Burglary (break-in at a home, store or business)	74.34	.022	.978	72.70
Illegal possession of firearms	73.73	.024	.976	71.96
Environmental crime caused by corporations/farms	73.51	.022	.978	71.89
Fraud (deception intended to cause financial loss)	71.18	.019	.981	69.83
Drug possession	68.85	.054	.946	65.13

How much harm do you think the following crimes cause to victims, their families, or the community:	Mean CHI score	R <sup>2</sup>	1 – R <sup>2</sup>	Weighted QCCHI
Vehicle theft/joyriding	68.11	.030	.970	66.07
Physical assault with minor, or no injury	66.66	.026	.974	64.93
Theft of work equipment (theft of tools, etc.)	66.03	.047	.953	62.93
Livestock theft (theft of cattle, sheep, etc.)	65.64	.032	.968	63.54
Illegal trade of Australian plants or animals	64.96	.041	.959	62.30
Vandalism (damage to private or public property)	61.26	.033	.967	59.24
Shoplifting	56.28	.039	.961	54.09
Illegal prostitution	54.56	.055	.945	51.56
Petty theft (theft of low value items)	51.21	.028	.972	49.78
Public nuisance offences (drunk, disorderly)	51.01	.040	.960	48.97

As can be seen in Table 11, calculating the weighted Queensland Community Crime Harm Index (QCCHI) for each of the 33 crimes by applying the weight (1 - R<sup>2</sup>) to the mean harm scores slightly changed the rank order of the crimes as based on the original mean values. Table 12 summarises the changes in rank order after weighting the community crime harm scores against the rank of the original Crime Harm Index score, and Table 13 presents the final mean score and rank order of the weighted Queensland Community Crime Harm Index.

**Table 12. Rank of perceived harms of 33 crimes measured as either a raw average crime harm score or as a weighted index**

How much harm do you think the following crimes cause to victims, their families, or the community:	Mean CHI Score RANK	Weighted QCCHI RANK
Child sexual abuse	1	2
Murder	2	1
Rape	3	3
Child physical abuse causing physical injury	4	5
Domestic violence	5	9
Terrorism	6	4
Death caused by dangerous driving	7	7
Sexual assault, other than rape	8	6

<b>How much harm do you think the following crimes cause to victims, their families, or the community:</b>	<b>Mean CHI Score RANK</b>	<b>Weighted QCCHI RANK</b>
Grievous bodily harm (physical assault perm injury)	9	8
Drug trafficking	10	10
Drunk and drug driving	11	12
Organised crime (drug trade, gangs, e.g., bikies)	12	11
Robbery (stealing with violence)	13	13
Arson	14	14
Corruption (dishonest/fraudulent conduct)	15	15
Cruelty to animals	16	18
Internet fraud (identity theft, credit card fraud)	17	17
Breach of biosecurity and quarantine laws	18	16
Burglary (break-in at a home, store or business)	19	19
Illegal possession of firearms	20	20
Environmental crime caused by corporations/farms	21	21
Fraud (deception intended to cause financial loss)	22	22
Drug possession	23	24
Vehicle theft/joyriding	24	23
Physical assault with minor, or no injury	25	25
Theft of work equipment (theft of tools, etc.)	26	27
Livestock theft (theft of cattle, sheep, etc.)	27	26
Illegal trade of Australian plants or animals	28	28
Vandalism (damage to private or public property)	29	29
Shoplifting	30	30
Illegal prostitution	31	31
Petty theft (theft of low value items)	32	32
Public nuisance offences (drunk, disorderly)	33	33



**Table 13. Mean scores and ranking of crime harms by crime for the weighted *Queensland Community Crime Harm Index (QCCHI)***

How much harm do you think the following crimes cause to victims, their families, or the community:	Weighted QCCHI Score MEAN	Weighted QCCHI RANK
Murder	94.85	1
Child sexual abuse	94.48	2
Rape	93.98	3
Terrorism	89.56	4
Child physical abuse causing physical injury	89.16	5
Sexual assault, other than rape	88.57	6
Death caused by dangerous driving	87.78	7
Grievous bodily harm (physical assault perm injury)	87.05	8
Domestic violence	86.80	9
Drug trafficking	84.38	10
Organised crime (drug trade, gangs, e.g., bikies)	82.71	11
Drunk and drug driving	82.53	12
Robbery (stealing with violence)	81.65	13
Arson	80.47	14
Corruption (dishonest/fraudulent conduct)	77.52	15
Breach of biosecurity and quarantine laws	75.14	16
Internet fraud (identity theft, credit card fraud)	74.59	17
Cruelty to animals	74.11	18
Burglary (break-in at a home, store or business)	72.70	19
Illegal possession of firearms	71.96	20
Environmental crime caused by corporations/farms	71.89	21
Fraud (deception intended to cause financial loss)	69.83	22
Vehicle theft/joyriding	66.07	23
Drug possession	65.13	24
Physical assault with minor, or no injury	64.93	25
Livestock theft (theft of cattle, sheep, etc.)	63.54	26

How much harm do you think the following crimes cause to victims, their families, or the community:	Weighted QCCHI Score MEAN	Weighted QCCHI RANK
Theft of work equipment (theft of tools, etc.)	62.93	27
Illegal trade of Australian plants or animals	62.30	28
Vandalism (damage to private or public property)	59.24	29
Shoplifting	54.09	30
Illegal prostitution	51.56	31
Petty theft (theft of low value items)	49.78	32
Public nuisance offences (drunk, disorderly)	48.97	33

## 4. Conclusion

This working paper describes the background context to a collaborative project between Griffith University researchers and the Queensland Police Service (QPS). The goal of the project was to develop an evidence-based tool for QPS that could aid it in targeting the most harmful crime problems and targeting resources across disparate crime types. The QPS was also keen to enhance the public legitimacy of the tool's operationalisation by ensuring that community views were adequately represented.

Section 1 of the working paper outlined the current research literature on assessing and ranking the harmfulness of different crimes. Based on that review, it was decided to develop the tool by conducting a representative survey to gauge community perceptions of crime harm amongst Queenslanders. The methodology involved in constructing and fielding the survey, as well as the sampling of respondents, is described in the Section 2 of the report. The survey was broadly representative of the community across common demographic characteristics.

Section 2 of the working paper also sets out findings from the survey, specifically the community's rankings of perceived harms by crime type (see Table 9). The findings show that child sexual abuse is ranked as the most harmful crime type, and public nuisance offences as least harmful. This ranking presented mean and median survey results, but this approach does not account for the degree of community consensus on different offence types. The standard deviations reported in Table 9 indicate that there was some variation in how offences were ranked, and simply reporting average results would only mask those differences.

In Section 3 of the working paper, therefore, we set out our methodology for developing a more sensitive ranking of crime harms that incorporates a measure of community consensus. Table 13 sets out the weighted Queensland Community Crime Harm Index, which takes into account the strength of community agreement on the harmfulness of particular crime types. This approach resulted in some re-ordering of the original rankings presented in Table 9. Rather than child sexual abuse being ranked most harmful, in the weighted index murder emerges as the most harmful offence type. This weighted index is a more accurate and reliable reflection of what the community thinks about crime harm in Queensland.

### ***Further work***

The next stage of the Crime Harm Project involved fielding the same survey with QPS officers and staff. As discussed, this was undertaken in order to address concerns that community views and rankings may have been affected by a lack of knowledge or understanding of crime and its harmfulness, or by unbalanced media portrayals. In the final stage of that work we have produced a consolidated Queensland Crime Harm Index that incorporated both the Queensland community's views and police views. That work will be documented in a separate Working Paper. In future work, we aim to document some of the ways that the tool has been operationalised within the QPS.

## APPENDIX – COMMUNITY SURVEY INSTRUMENT

ALL SURVEYS ARE PRIVATE AND CONFIDENTIAL

### Community Survey Verbal Informed Consent Blurb

[To be read to participant over the phone]

Good afternoon/evening. My name is \_\_\_\_\_ and I work for the Social Research Centre. We are conducting a survey on behalf of the Queensland Police Service and Griffith University to examine how Queenslanders perceive crime in their community. We are looking for people over the age of 18 to participate. Would you, or anyone else in your household aged 18 years or over, be interested in taking part in a 15 minute survey over the phone? If so, I can tell you more about the study.

[Wait for a yes response before reading the following]

The Queensland Police Service has retained Griffith University to ask the Queensland community about their perceptions of different crimes and the harms they cause. This research will assist in our understanding of public attitudes toward crime harm, crime seriousness, and community safety, and will help guide where police can focus more effort and resources.

You have been randomly selected to participate in this research. If you agree to participate you will be asked to complete a short survey over the phone. Your participation is voluntary, your responses will be kept confidential, and no identifying information about you will be released. You can refuse to answer any particular questions or discontinue the survey at any time. The survey will take approximately 15 minutes to complete depending on your answers. You will not be paid for your participation and your responses will not be audio recorded. Your data will be retained by the research team for a minimum of 5 years on a secure computer, after which time it will be archived in a secure data repository. Finally, this study has been approved by the Griffith University ethics committee (GU ref no: 2016/822).

Would you be willing to participate in this survey? If yes, please reply 'yes' to the following question. If not, respond 'no'. Do you provide your informed consent to participate in this study?

[On [date] at [time] Participant #1 had read to them the participant verbal consent script, confirmed they understood the nature of the research and their participation, and agreed to proceed with the phone survey – Interviewer to please record the date and time the participant provided verbal consent to participate in the study].

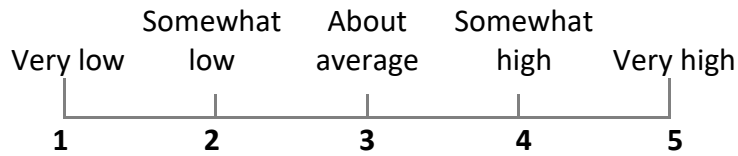
[if 'yes' response provided] "Thankyou." [Interviewer to proceed to survey questions]

[If 'no' response provided, thank the person for their time].

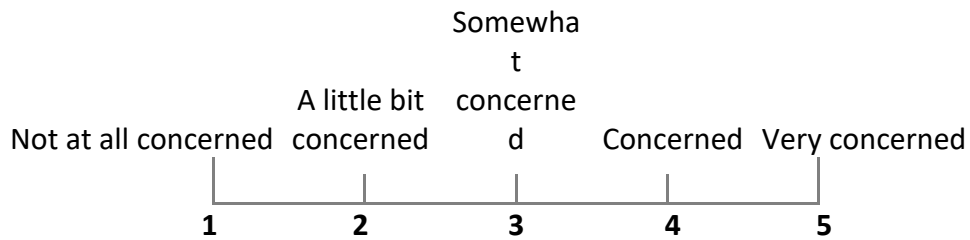
## SAFETY AND SECURITY

To begin with, we will ask you a few questions about crime in your neighbourhood. There are no right or wrong answers.

Q1. Overall, would you say that crime in your neighbourhood is.....



Q2. In your everyday life, how concerned are you about being the victim of crime?



## PERCEPTIONS OF CRIME

Now we will provide you with a list of crimes. Some will be serious, while others less so. In answering the questions about these crimes, we would like you to think of the individual victims, their families or the community who might be affected by the crimes.

Using a scale of 0 to 100, we want to know how much HARM you think the following types of crimes cause to victims, their families, or the community. In deciding how to respond, '0' would indicate you believe the crime causes no harm at all, while a response of '100' would indicate you believe this crime causes the most extreme harm possible. You can use the entire scale of 0 to 100 when giving your response.

Q3. The question is: How much harm does the following crime cause to victims, their families, or the community?

	0	10	20	30	40	50	60	70	80	90	100
a. Murder .....	0	10	20	30	40	50	60	70	80	90	100
b. Rape .....	0	10	20	30	40	50	60	70	80	90	100
c. Sexual assault, other than rape.....	0	10	20	30	40	50	60	70	80	90	100

d. Grievous bodily harm (physical assault with serious permanent injury) .....	0	10	20	30	40	50	60	70	80	90	100
e. Burglary (break-in at a home, store or business) .....	0	10	20	30	40	50	60	70	80	90	100
f. Robbery (stealing with violence) .....	0	10	20	30	40	50	60	70	80	90	100
g. Terrorism (a violent act to achieve a political or religious aim) .....	0	10	20	30	40	50	60	70	80	90	100

Q4. We now ask the same question for the following set of crimes.

How much harm do the following crimes cause to victims, their families, or the community?

		<b>Causes no harm at all</b>										<b>Causes the most extreme harm possible</b>
a. Death caused by dangerous driving .....	0	10	20	30	40	50	60	70	80	90	100	
b. Arson .....	0	10	20	30	40	50	60	70	80	90	100	
c. Physical assault with minor, or no injury .	0	10	20	30	40	50	60	70	80	90	100	
d. Child physical abuse causing physical injury.....	0	10	20	30	40	50	60	70	80	90	100	
e. Child sexual abuse .....	0	10	20	30	40	50	60	70	80	90	100	
f. Domestic violence .....	0	10	20	30	40	50	60	70	80	90	100	
g. Vehicle theft/joyriding .....	0	10	20	30	40	50	60	70	80	90	100	
h. Fraud (deception intended to cause financial loss to the victim).....	0	10	20	30	40	50	60	70	80	90	100	
i. Drug trafficking (manufacture or trade of illegal drugs) .....	0	10	20	30	40	50	60	70	80	90	100	
j. Corruption (dishonest or fraudulent conduct by a person in authority) .....	0	10	20	30	40	50	60	70	80	90	100	

Q5. How about the following crimes? How much harm do the following crimes cause to victims, their families, or the community?

	Causes no harm at all											Causes the most extreme harm possible
	0	10	20	30	40	50	60	70	80	90	100	
a. Illegal possession of firearms .....	0	10	20	30	40	50	60	70	80	90	100	
b. Vandalism (damage to private and public property) .....	0	10	20	30	40	50	60	70	80	90	100	
c. Drug possession .....	0	10	20	30	40	50	60	70	80	90	100	
d. Shoplifting.....	0	10	20	30	40	50	60	70	80	90	100	
e. Other petty theft .....	0	10	20	30	40	50	60	70	80	90	100	
f. Illegal prostitution .....	0	10	20	30	40	50	60	70	80	90	100	

Q6. We have a final set of crimes.

Again, using a scale of 0 to 100, we want to know how much harm you think the following types of crimes cause to victims, their families, or the community.

How much harm do you think the following crimes cause to victims, their families, or the community?

	Causes no harm at all											Causes the most extreme harm possible
	0	10	20	30	40	50	60	70	80	90	100	
a. Internet fraud (identity theft, credit card fraud, romance fraud) .....	0	10	20	30	40	50	60	70	80	90	100	
b. Livestock theft (theft of cattle, sheep, etc) ..	0	10	20	30	40	50	60	70	80	90	100	
c. Theft of work equipment (theft of tools, farming equipment) .....	0	10	20	30	40	50	60	70	80	90	100	
d. Organised crime (drug trade, extortion by organised gangs, eg. bikies).....	0	10	20	30	40	50	60	70	80	90	100	
e. Cruelty to animals.....	0	10	20	30	40	50	60	70	80	90	100	
f. Public nuisance offences (drunk or disorderly, swearing).....	0	10	20	30	40	50	60	70	80	90	100	







Q15. What is your age? \_\_\_\_\_

Q16. What is your postcode? \_\_\_\_\_

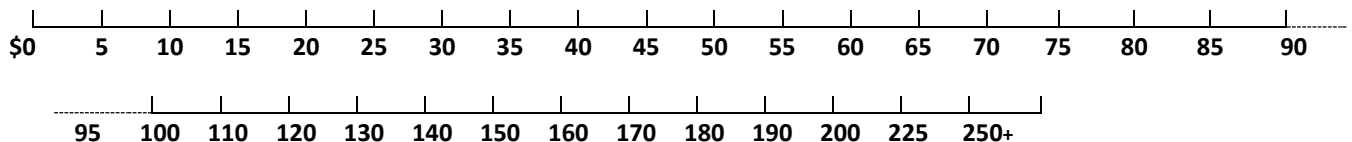
Q17. How would you describe your main racial/ethnic background? Would you describe yourself as... *(Please circle one)*

- Australian - non-Aboriginal or Torres Strait Islander ..... **1**
- Australian Aboriginal or Torres Strait Islander ..... **2**
- New Zealander, Pacific Islander, or other Oceania ..... **3**
- British or European ..... **4**
- Asian ..... **5**
- Middle Eastern ..... **6**
- African ..... **7**
- North American ..... **8**
- Central or Southern American ..... **9**
- Other ..... **10**

Q18. What is the highest level of education you have completed? *(Please circle the highest number that applies to you.)*

- Did not complete high school ..... **1**
- Completed high school ..... **2**
- Completed a trade certificate or Diploma ..... **3**
- University Bachelor Degree ..... **4**
- Post-graduate Degree (eg. Masters or Doctorate) ..... **5**

Q19. What was your total household income in 2016 – how many thousand dollars, before taxes?



**That is the conclusion of the interview. We would like to thank you for your time in completing this survey. The findings will be used by the Queensland Police Service and Griffith University to better understand the Queensland community's views about crime and their priorities for policing.**

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