

THE PARADOX OF CRIME PERCEPTIONS

SAPS crime statistics, Victims of Crime Surveys and the media

MEGAN GOVENDER*

megan.govender@dnaeconomics.com

A disjuncture exists between perceptions of crime and the actual levels of recorded crime. The 2012/13 crime statistics released by the South African Police Service reveal an overall decrease in serious crime between 2002/03 and 2012/13. Yet, during this period, suspicions lingered among the public and media that crime was actually increasing. This article investigates the reporting of crime and demonstrates that household perceptions of property crime and violent crime can be interpreted and reported in contradictory ways. It can be variously shown that most households feel that crime has not decreased, nor do they feel it has increased and nor do they feel it has stayed the same. Consequently, the reporting of the perceptions of crime needs to be carefully and explicitly communicated to mitigate any confusion that may ensue.

Not a day goes by without the newspapers lamenting the high crime rate and the viciousness with which some crimes are perpetrated in South Africa.¹ The daily reporting of crime, especially violent crime, has ensured that crime and attendant issues continually remain in the public domain. Hence, assertions by the South African Police Service (SAPS) that crime rates are falling are often received with scepticism and derision by the public and media alike.² There is a growing suspicion that crime rates may be much higher than official figures divulge, undermining the credibility of the crime statistics.³ O'Donovan notes that crime statistics released by the SAPS have shown a decline from 2001, yet national

victimisation surveys (until 2007) regularly reveal that people's perception is that crime has been increasing.⁴ According to the 2003 National Victims of Crime Survey, 52,9% of people felt that crime had increased over the past three years,⁵ while the 2007 National Victims of Crime Survey indicated that 57,1% of people felt that crime had increased.⁶

This phenomenon is not unique to South Africa. Studies in the United States and Canada also accentuate the dichotomy between public perceptions of crime and official figures.⁷ Numerous arguments have been put forward to clarify this contra-diction. Firstly, the crime statistics do not fully reflect the crime situation, as some criminal activities go unreported.⁸ Secondly, people who have been victims of crime, or know of someone who has been affected by crime, are more inclined to indicate that crime has increased,

* Dr Megan Govender is an economist in the public policy unit at DNA Economics. Prior to joining DNA Economics he worked as a Director (SAPS and IPID) within the Public Finance division at the National Treasury.

even if the incident occurred outside the reporting period.⁹ Thirdly, social factors such as levels of trust in particular communities and concerns or anxiety about children may lead people to indicate that crime levels are increasing.¹⁰ Fourthly, the constant portrayal of crime by the media fuels fear and insecurities. Warr asserts that the continual bombardment of information from the media leads people to believe that the world is a much more dangerous place than it actually is.¹¹

Oddly, even a household's perception that crime has not decreased can be misrepresented. Consequently, the empirical data from victim surveys can be depicted to validate a particular position with regard to how crime is perceived. This article demonstrates that the data on perceptions of crime can be interpreted in several ways and subsequently reported to produce or validate particular views.

The article begins by describing the data that are employed to investigate the linkages between perceptions of crime and the reported crime statistics. Specifically, the article will examine the data from the 2012 Victims of Crime Survey (VOCS),¹² comparing this with the 2011/12 crime statistics (as reported in the addendum to the 2011/12 SAPS Annual Report) to determine if there is a correlation between people's perception and the actual crime rate.¹³

This is followed by an analysis of households' perceptions of crime and the different ways in which the same perceptions can be interpreted and reported. It will subsequently be demonstrated that the perceptions of households of levels of violent and property crime can be reported in different ways to support different contentions: these interpretations are examined nationally and provincially to ensure consistency of the findings.

DATA AND METHODOLOGY

This article uses two data sources to analyse the degree to which perceptions of change in crime levels are comparable to change in actual reported crime.

The actual crime statistics utilised in this article are the figures produced annually by the SAPS. The data are collected and collated at the national department and are representative of the crime situation in the country for a particular financial year.

The VOCS is a national household survey conducted by Statistics South Africa that focuses on people's perception and experiences of crime. The first VOCS was conducted by Statistics South Africa in 1998, while the the Institute for Security Studies (ISS) did the 2003 and 2007 VOCS. Subsequent VOCS (2011 and 2012) were undertaken by Statistics South Africa. The main objectives of the survey are to:

- Provide information about the dynamics of crime from the perspective of households and the victims of crime.
- Explore public perceptions of the activities of the police, prosecutors, courts and correctional services in the prevention of crime and victimisation.
- Provide complementary data on the level of crime within South Africa in addition to the statistics published annually by SAPS.¹⁴

Accordingly, the survey probes people's perceptions of crime and safety, law enforcement, the police, the courts and corruption. The VOCS was undertaken between January and March 2012, reflecting respondents' perceptions for the reference period January to December 2011 (unless the question specified otherwise). The design, data collection, methodology and the non-responses are discussed in detail in the VOCS report.¹⁵ Suffice to note that the sample comprised 31 007 households.

The analysis of the data presented in this article was executed in Stata 11, with the application of a weighting variable to ensure the results are reflective of demographics in South Africa.

The VOCS asks respondents two questions (with three response options) that can be compared against crime statistics. These are:

- Question 2.4: How do you think the level of violent crime (e.g. assault, robbery, murder) in your area has changed in the last three years (January 2009 to December 2011)?
 - 1 = Increased
 - 2 = Decreased
 - 3 = Stayed the same
- Question 2.5: How do you think the level of property crime (e.g. burglary, theft) in your area has changed in the last three years (January 2009 to December 2011)?
 - 1 = Increased
 - 2 = Decreased
 - 3 = Stayed the same

These questions explore citizens' perceptions of the levels of violent crime and property crime over three years, namely January 2009 to December 2011. The SAPS does not specifically categorise crime as violent crime and property crime. The overarching classification of crimes that require police action are termed serious crimes. They are defined by the SAPS as:

- contact crime
 - murder, attempted murder, aexual offences, assault to do grievous bodily harm (GBH), common assault, robbery: aggravating and common robbery
 - Trio crime
 - carjacking, robbery: residential and business
- contact related crime
 - arson, malicious damage to property
- property related crime
 - burglary: residential and non-residential, theft of motor vehicle/cycle, theft out of motor vehicle and stock theft
- crime detected – police action
- other serious crime¹⁶

The SAPS reports on many types of crime, but this article focuses on violent crime and property crime since these categories feature in both datasets (SAPS and VOCS). Moreover, both datasets report nationally as well as per province, which enables comparison across provinces. The SAPS category 'contact crime' is analogous to violent crime and is therefore selected as the

proxy for appraisal of people's perception of violent crime. Similarly, the SAPS 'property related crime' corresponds to people's perception of property crime in the VOCS.

The property related crime variable comprises burglary, residential and non-residential, theft of motor vehicle/cycle, theft out of motor vehicle and stock theft, and is used as a proxy to provide a comparison with people's perception of property crime.

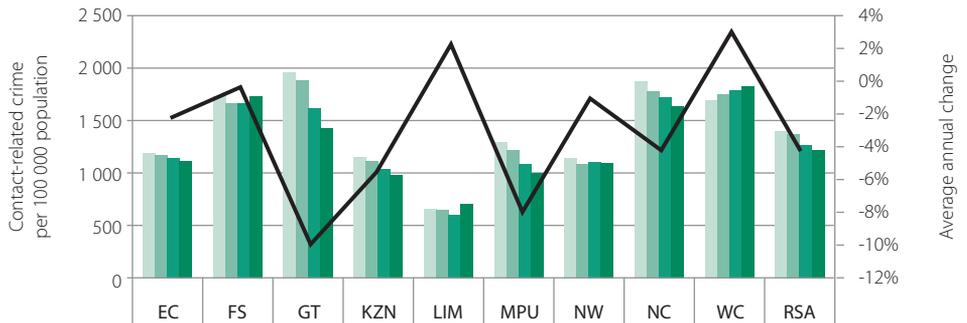
It should be noted that the SAPS reporting period does not coincide with the reporting period for the VOCS. The crime statistics reported in 2012 by the SAPS refer to crimes that were recorded during the period 1 April 2011 to 31 March 2012. The crime statistics can therefore only be compared with eight months (April 2011 to December 2011) of the VOCS, since the respondents were questioned on their perceptions of crime between January 2009 and December 2011. Hence, crime statistics for this period are utilised to yield impartial results. Since the SAPS does not report on crime statistics for this specific period, the crime statistics between 1 April 2008 and 31 March 2012 are used, since they cover the period January 2009 to December 2011.

The SAPS crime statistics therefore reflect a period of 48 months, while the victimisation surveys collect perception data for a 36-month period. The emphasis in this article is not the actual, but rather the change in, crime levels. The selected years will be reviewed to compare the changes in crime levels relative to people's perception of the changes in crime levels.

ANALYSIS

The VOCS questionnaire provides three options (increase, decrease or stayed the same) to ascertain households' perception of crime – these are qualitative measures. The crime statistics are quantitative measures reflecting the actual number of crime incidents reported to the SAPS during that particular financial year. The average annual change in the crime statistics is utilised to determine the change in crime over this period.¹⁷

Figure 1: Contact crime per 100 000 population



	EC	FS	GT	KZN	LIM	MPU	NW	NC	WC	RSA
2008/09	1 198	1 757	1 972	1 162	668,2	1 302	1 152	1 878	1 688	1 405
2009/10	1 186	1 690	1 893	1 122	667,8	1 230	1 108	1 780	1 757	1 371
2010/11	1 152	1 685	1 615	1 035	609,4	1 102	1 120	1 724	1 808	1 277
2011/12	1 119	1 738	1 437	989,7	716,9	1 014	1 116	1 649	1 852	1 233
Average annual change	-2%	0%	-10%	-5%	2%	-8%	-1%	-4%	3%	-4%

Source: Addendum to the 2011/12 SAPS Annual Report. Author's own calculation.

Violent crime/contact crime

Contact crime per 100 000 population decreased between 2008/09 and 2011/12, as reported by the SAPS. It can be observed in Figure 1 that there was an average annual decrease of 4% during this period.

The largest decrease in contact crime per 100 000 population occurred in Gauteng (GT), while there was no change for the Free State (FS), and small increases in Limpopo (LIM) and Western Cape (WC).

An evaluation of households' response to the question 'How do you think the level of violent crime [e.g. assault, robbery, murder] in your area has changed in the last three years (January 2009 to December 2011)?' reveals that 33% of respondents believed that violent crime had increased; 38% believed that violent crime had decreased, and 29% believed it had not changed.

It can be seen in Figure 2 that most households felt that violent crime had decreased; which is consistent with the contact crime per 100 000 crime statistic provided by the SAPS. Moreover, the perception of WC and LIM households (where most households felt that crime had

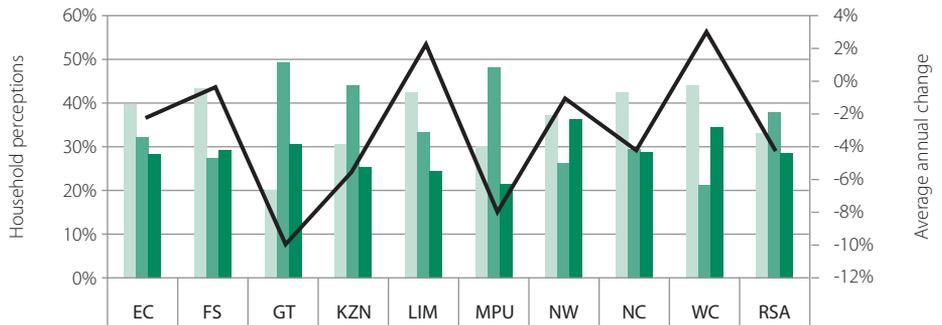
increased) appears to be aligned with actual crime figures, although there is a divergence with the FS household perceptions. The analysis of the SAPS data for the FS indicate there was no average annual change in contact crime per 100 000 population, but most households in the province felt that violent crime had increased.

It may seem that the households' perceptions align with the crime statistics. However, a different analysis of the same figures can provide a contrasting view. It can be construed that if 38% of households felt that crime had decreased, 62% (33% increased and 29% stayed the same) in fact indicated that crime 'did not decrease'.

It can be observed in Figure 3 that most households, nationally as well in the provinces, felt that violent crime between 2009 and 2011 'did not decrease'. Similarly, it can also be demonstrated that households perceived that violent crime 'did not increase' (Figure 4).

While 33% of South African households thought that violent crime had increased, most (67%) households felt that it 'did not increase'. Similar results are reflected in all the provinces, where it is indicated that most households perceived that violent crime 'did not increase'.

Figure 2: Households' perception of violent crime



■ Increase	39%	43%	20%	30%	42%	30%	37%	42%	44%	33%
■ Decrease	32%	28%	49%	44%	33%	48%	26%	29%	21%	38%
■ Stayed the same	28%	29%	31%	26%	24%	21%	36%	28%	35%	29%
— Average annual change	-2%	0%	-10%	-5%	2%	-8%	-1%	-4%	3%	-4%

Source: Addendum to the 2011/12 SAPS Annual Report. VOCS. Author's own calculation.

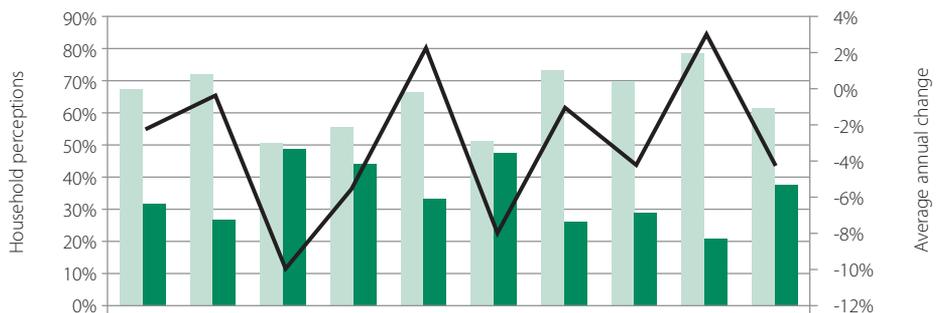
Equally, it can be said that households' perception of violent crime 'did not stay the same', as observed in Figure 5 (overleaf).

From this analysis, 71% of South African households believed that violent crime 'did not stay the same'. This was also reflected at provincial level.

The above analysis paradoxically demonstrates that it can variously be argued that:

- Most households felt that violent crime 'did not increase'
- Most households felt that violent crime 'did not decrease' (if an analysis of dual categories of responses is done)
- Most households felt that violent crime 'did not stay the same' (if an analysis of dual categories of responses is done)

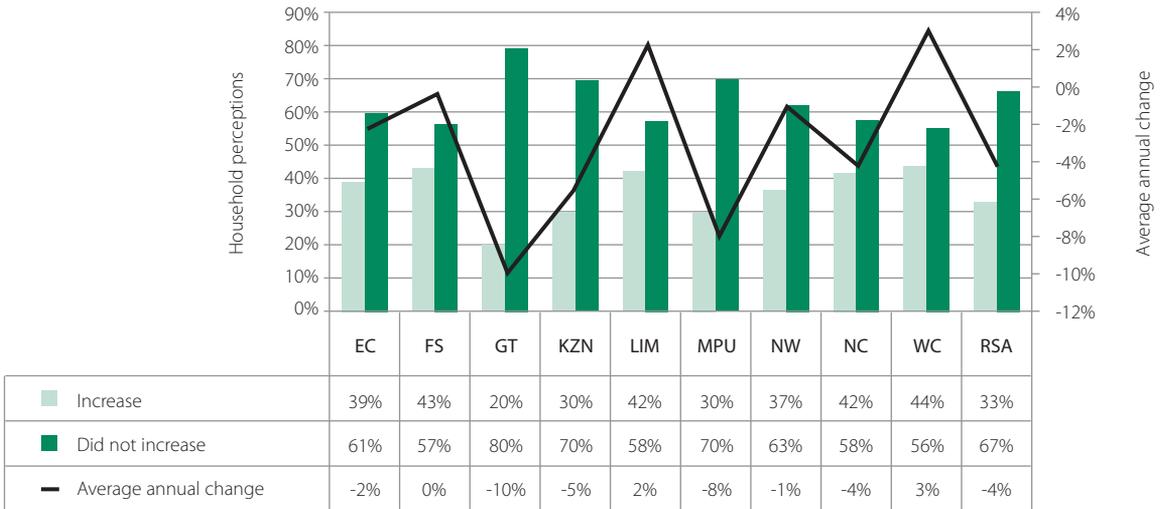
Figure 3: Households that felt violent crime 'did not decrease'



■ Did not decrease	68%	72%	51%	56%	67%	52%	74%	71%	79%	62%
■ Decrease	32%	28%	49%	44%	33%	48%	26%	29%	21%	38%
— Average annual change	-2%	0%	-10%	-5%	2%	-8%	-1%	-4%	3%	-4%

Source: Addendum to the 2011/12 SAPS Annual Report. VOCS. Author's own calculation.

Figure 4: Households that felt violent crime 'did not increase'



Source: Addendum to the 2011/12 SAPS Annual Report. VOCS. Author's own calculation.

Property crime

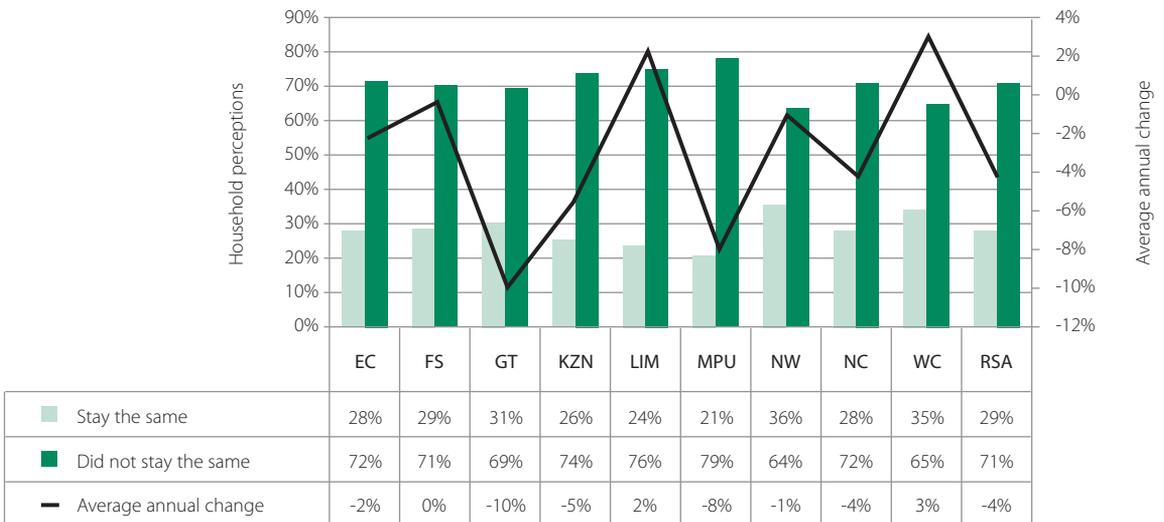
An equivalent analysis can be employed to investigate the perceptions of property crime, and so to determine if there is consistency between households' perceptions and actual crime statistics.

The SAPS statistics reveal that property related crime per 100 000 population decreased at an

average annual rate of 1% between 2008/09 and 2011/12 (Figure 6).

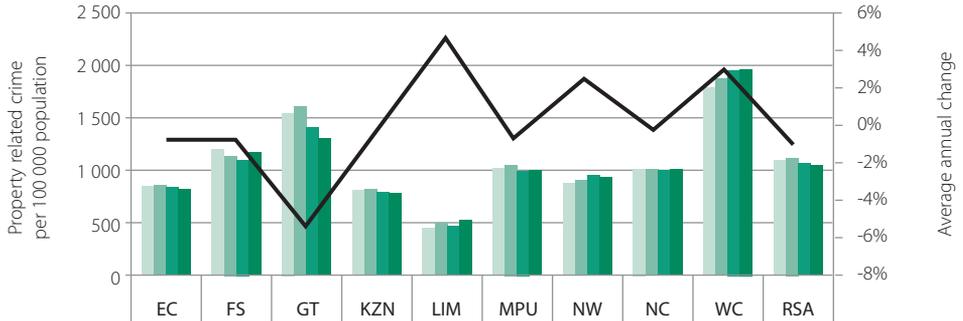
The Northern Cape (NC) did not experience any change in the rate of property related crime during 2008/09 and 2011/12. There was an average annual increase of 3% in the rate of property crimes in the Western Cape (WC) and North West (NW). Gauteng experienced the largest decrease of 6% in property crime.

Figure 5: Households that felt violent crime 'did not stay the same'



Source: Addendum to the 2011/12 SAPS Annual Report. VOCS. Author's own calculation.

Figure 6: Property related crime per 100 000 population



	EC	FS	GT	KZN	LIM	MPU	NW	NC	WC	RSA
2008/09	847	1 201	1 555	806	461	1 034	879	1 018	1 806	1 093
2009/10	857	1 149	1 606	817	504	1 051	907	1 016	1 892	1 122
2010/11	836	1 108	1 412	794	466	987	950	994	1 951	1 069
2011/12	828	1 174	1 312	794	532	1 008	947	1 009	1 973	1 060
Average annual change	-1%	-1%	-6%	-1%	5%	-1%	3%	0%	3%	-1%

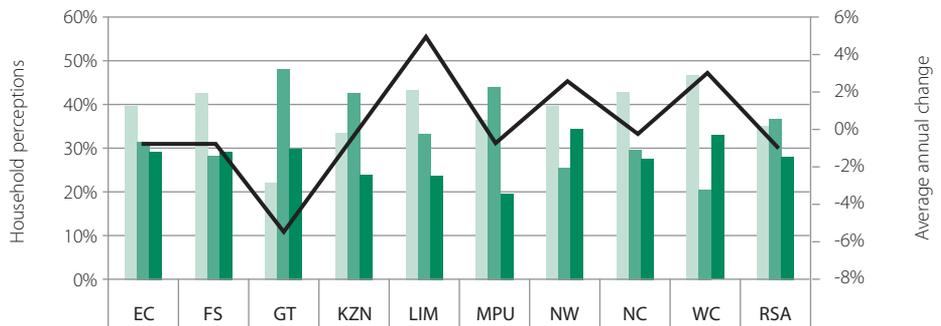
Source: Addendum to the 2011/12 SAPS Annual Report.

An evaluation of households' perception of property crime, 'How do you think the level of property crime [e.g. burglary, theft] in your area has changed in the last three years (January 2009 to December 2011)?' reveals that 37% of South African households believed that property crime decreased, while 35% felt that it increased and 28% felt that it stayed the same (Figure 7).

These results mirror those of the perceptions of violent crime. That is, EC, FS, LIM, NW, NC and WC households felt that property crime had increased, although overall most households felt that property crime had decreased (Figure 7).

The perception of property crime can be interpreted in various ways, as was shown in relation to violent crime. According to the VOCS,

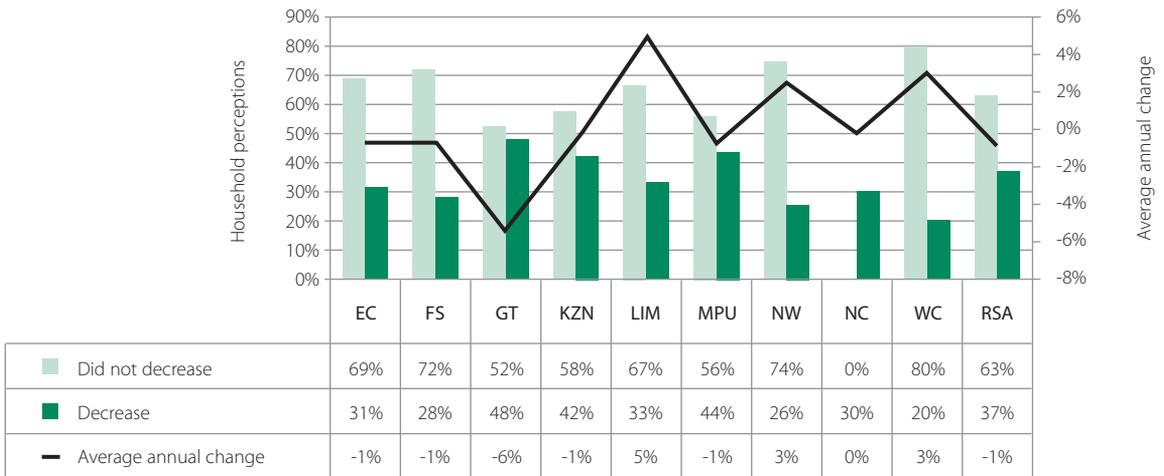
Figure 7: Households' perceptions of property crime



	EC	FS	GT	KZN	LIM	MPU	NW	NC	WC	RSA
Increase	40%	43%	22%	34%	43%	37%	40%	43%	47%	35%
Decrease	31%	28%	48%	42%	33%	44%	26%	30%	20%	37%
Stayed the same	29%	29%	30%	24%	24%	20%	35%	28%	33%	28%
Average annual change	1%	-1%	-6%	-1%	5%	-1%	3%	0%	3%	-1%

Source: Addendum to the 2011/12 SAPS Annual Report. VOCS. Author's own calculation.

Figure 8: Households feeling that property crime ‘did not decrease’



Source: Addendum to the 2011/12 SAPS Annual Report. VOCS. Author’s own calculation.

most households felt that property crime ‘did not decrease’, as illustrated in Figure 8 above.

While the crime statistics reveal an average annual decrease of 1% in property crime, most households (63%) felt that property crime ‘did not decrease’. This finding is consistent across all provinces.

Similarly, it can be demonstrated that most households felt that property crime ‘did not increase’ (Figure 9).

It can be observed from Figure 9 below that 65% of households felt that property crime ‘did not

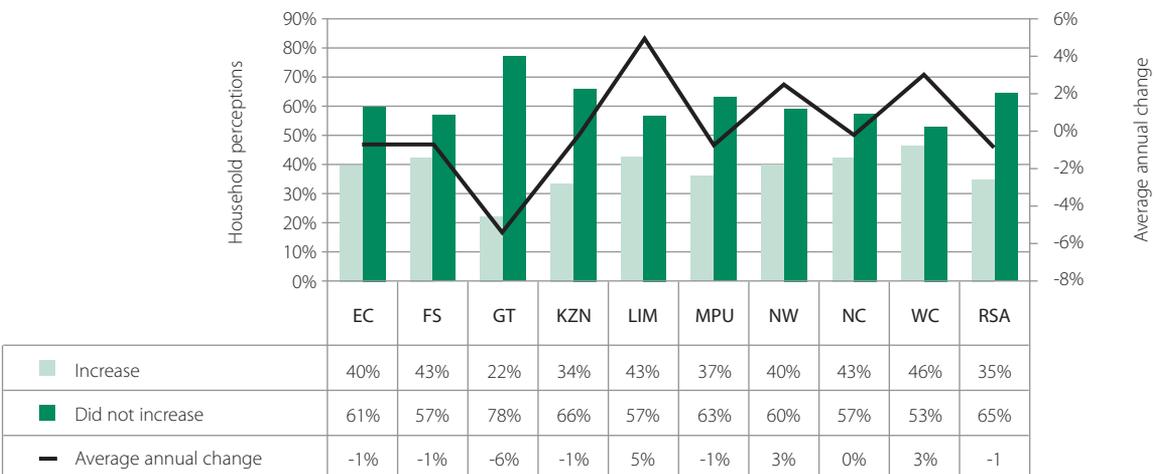
increase’. Similarly, perceptions of crime not increasing, relative to it in reality not increasing, is consistent across all provinces.

Employing the same reasoning, it can be inferred that households’ perception of property crime is that it ‘did not stay the same’ between 2009 and 2011.

It can be observed in Figure 10 that 72% of households felt that property crime ‘did not stay the same’.

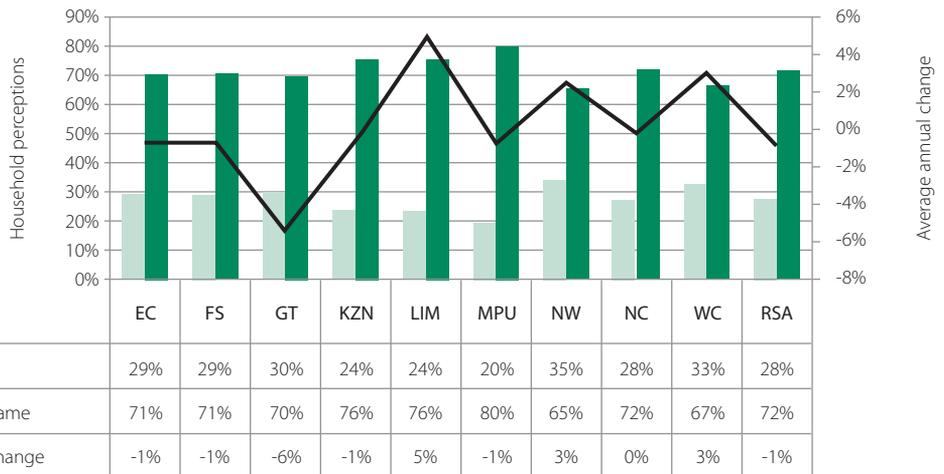
Analogous to the perception of violent crime, the analysis of the perception of property crime paradoxically indicates that:

Figure 9: Households feeling that property crime ‘did not increase’



Source: Addendum to the 2011/12 SAPS Annual Report. VOCS. Author’s own calculation.

Figure 10: Households feeling that property crime 'did not stay the same'



Source: Addendum to the 2011/12 SAPS Annual Report. VOCS. Author's own calculation.

- Most households felt that property crime 'did not increase'
- Most households felt that property crime 'did not decrease' (if an analysis of dual categories of responses is done)
- Most households felt that property crime 'did not stay the same' (if an analysis of dual categories of responses is done)

DISCUSSION

While crime victimisation surveys are not a substitute for actual crime statistics, they are an important instrument to gauge whether perceptions of crime are aligned with crime statistics. They serve as a valuable complement to the official crime statistics since they can be utilised to estimate the 'dark figure' of crime, that is, those incidents of crime that are not officially recorded.¹⁸ Consequently, the information garnered from the surveys can assist authorities to formulate crime prevention policies and strategies as well as educate the public. Nonetheless, victimisation surveys do have limitations, such as the following:¹⁹

- Memory failure
- Inability or unwillingness of victims to talk about their crime experiences
- Recording events that are not defined as crime

- Sample loss (the part of the population not interviewed may be different from those who are)
- Telescoping (the effect of recalling the event as more recent than it actually was), resulting in:
 - over- and under-estimating of crime

The surveys usually do not question the experiences of businesses and organisations, leading to under-estimations of crime. Most surveys ignore the victimisation of children and do not cover certain types of victimisation such as murder, since there is no living victim.²⁰ Victimisation surveys exclude residents of hospitals, prisons and old-age homes, who are often victimised and are not counted in the surveys.²¹ The surveys often exclude foreigners and illegal immigrants whose experiences in many instances go unreported.²²

Sometimes the respondent may not perceive an incident as a crime. For example, domestic violence in a relationship may not be perceived as a criminal offence and may appear as 'normal', under-estimating crime.²³ Moreover, victims may be unwilling to report or discuss experiences of crime such as rape, especially if it occurred within the household.²⁴

In contrast, offences and incidents that fall outside the domain of the definition of a crime

are reported as crimes, resulting in an over-reporting of crime. The failure to include victimisations that occurred in the reference period results in an under-estimation, while the inclusion of victimisation that did not occur within the timeframe produces an over-estimation of victimisation.²⁵

Notwithstanding their shortcomings, victimisation surveys provide important information to the public and the authorities. It is therefore critical that the questions posed in these surveys are aligned with the objectives of the survey and, more importantly, that the responses are reflective of participants' perceptions of crime in the relevant period.

There are three types of questions that can be asked in a survey: open-ended (e.g. What do you think of the level of crime in your area?), closed-ended (Do you think that crime has increased, decreased or stayed the same?) or scale response (On a scale from 1 to 5 please rate the level of service at your local police station).

Open-ended questions allow the researcher to attain more information by exploring in detail issues that may arise in the interview. It is, however, more time-consuming and arduous to analyse the responses provided. This challenge is overcome by utilising close-ended questions, since they offer limited choices and, more importantly, are easy to replicate.

The VOCS primarily employs close-ended questions in the survey, which restricts the respondents to choosing from a set of options for each question. The restriction to a set of limited options for the particular question underpins the contradictions in the perceptions of crime. Most surveys contain a mix of open- and closed-ended questions, but a good rule of thumb for quantitative surveys is to make closed-ended questions the default.²⁶

The analysis in this article reveals that the same perceptions of crime can be interpreted in various ways to validate and justify a particular stance on crime. This paradox is dependent on the way the

questions are framed and the manner in which the results are analysed and presented. The three options; increase, decrease and stay the same will precipitate such results as long as no single category exceeds 50% and the choices are not explicitly explained to respondents.

Even a result of more than 50% for a particular category can foment ambiguity. A scenario where 60% of households indicate that crime increased, 30% felt it decreased and 10% felt it stay the same, would indicate that perceived crime had increased, since only 40% would have believed it had not increased. But these figures also reveal that 70% of people did not think that crime decreased; which could mean that it increased or stayed the same. Similarly, 90% of respondents did not think that crime had not stayed the same; which could mean it either increased or decreased.

Rephrasing the question asked would yield similar results, and create much confusion among the respondents. For example, the questionnaire can be formulated as follows:

- Did you feel that crime increased, and did not decrease or stay the same?
- Did you feel that crime decreased, and did not increase or stay the same?
- Did you feel that crime stayed the same, and did not increase or decrease?

Such confusions would generate misunderstanding among the respondents as well as the interviewer. The analysis of such options would be more complicated, generating further obfuscations of the perceptions of crime.

The misperceptions can be mitigated if reports are qualified. For example, in the case of violent crime above, it can be stated that the perception of violent crime as having increased is relative to it having decreased and having stayed the same, although this too may add to the confusion. These shortcomings can also be moderated if all the categories of responses to the questions posed on crime perception are simultaneously reported. While it may appear redundant to do so, it will

provide clarity to all stakeholders and eschew biases that fester.

CONCLUSION

The reduction of crime is a stated imperative of the government and clearly articulated in government policy. Intensifying the fight against crime and corruption is one of the strategic priorities emanating from the Medium Term Strategic Framework.²⁷ This was subsequently transformed into Outcome 3: 'All people in South Africa are and feel safe', which is the responsibility of the Justice Crime Prevention Safety and Security Cluster. Accordingly, the state has initiated numerous strategies (e.g. increasing police personnel) to reduce crime rates.

The official crime statistics released annually by the SAPS seem to show that crime rates are decreasing over extended time periods. Furthermore, VOCS reveal that households' perceive violent crime and property crime to be decreasing. Yet, the reporting on these findings can be manipulated to suggest that crime is perceived to not be decreasing.

It is therefore important to qualify the increase relative to a decrease and staying the same; as an omission of such a proviso can lead to a different interpretation of the same data. Similar provisions need to be stipulated if the crime rates decrease or stay the same. The reporting of crime perception can also be ameliorated by reporting the results of all categories, especially if no category is greater than 50%. If not, the reporting of people's perception of crime can be presented to legitimise and justify any policy position.

It is further recommended that Statistics South Africa seeks to align the VOCS reporting period with the SAPS crime statistics reporting period, to enable comparisons between the two sets of data.



To comment on this article visit
<http://www.issafrica.org/sacq.php>

NOTES

1. Valeska Abreu, Two more arrested for top cops murder, *IOL News*, 1 July 2013, <http://www.iol.co.za/news/crime-courts/pretoria-gran-in-rape-robbery-ordeal-1.1595412#.UnHqTJAaLIU> (accessed 31 October 2013); Steve Kretzmann, Mystery surrounds Anene Booysen's injuries, *City Press*, 26 May 2013, <http://www.citypress.co.za/news/mystery-surrounds-Anene-booysen-injuries/> (accessed 31 October 2013); South African Press Association (SAPA), Mpuma man jailed for statutory rape, *IOL News*, 21 October 2013, <http://www.iol.co.za/news/crime-courts/mpuma-man-jailed-for-statutory-rape-1.1595303#.UnHqUpAaLIU> (accessed 31 October 2013); Valeska Abreu, Pretoria gran in rape, robbery ordeal, *IOL News*, 22 October 2013, <http://www.iol.co.za/news/crime-courts/pretoria-gran-in-rape-robbery-ordeal-1.1595412#.UnHqTJAaLIU> (accessed 31 October 2013).
2. Franz Krüger, Perceptions cloud crime stats, *Mail and Guardian*, 27 September 2013, <http://mg.co.za/article/2013-09-27-00-perceptions-cloud-sa-crime-stats/> (accessed 31 October 2013).
3. South Africa's murder rate far worse than reported, Getting away with murder, *Rense.com*. <http://rense.com/general39/reose.htm> (accessed 31 October 2013).
4. Michael O'Donovan, *South Africans' perceptions of the police and the courts, Results of the 2007 National Victims of Crime Survey*, Institute of Security Studies Paper 176, December 2008, 1-2.
5. Patrick Burton, Anton du Plessis, Ted Leggett, Antoinette Louw, Duxita Mistry and Hennie van Vuuren, *National Victims Of Crime Survey South Africa 2003*, Institute of Security Studies, <http://www.datafirst.uct.ac.za/catalogue3/index.php/catalog/178/reports> (accessed 16 November 2013).
6. Robyn Pharoh, *National Victims of Crime Survey – overview of key findings*, Institute for Security Studies Paper 175, December 2008, 6-7.
7. Brent Davis and Kym Dossetor, (Mis)perceptions of crime in Australia, *Trends & issues in crime and criminal justice*, 396, Australian Institute of Criminology, July 2010, <http://www.aic.gov.au/documents/F/B/9/%7bFB97F8DD-CE84-4218-90F0-9C072DFD592F%7dtandi396.pdf> (accessed 1 November 2013).
8. Lynn Langton, Marcus Berzofsky, Christopher Krebs and Hope Smiley-McDonald, Victimization not reported to the Police, 2006-2010, *National Crime Victimization Survey, Special Report*, US Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, August 2012, <http://s3.documentcloud.org/documents/408260/victimizations-not-reported-to-police-2006-2010.pdf> (accessed 31 October 2013).
9. Antoinette Louw, *Crime in Pretoria, results of a city victim survey*, Institute of Security Studies, <http://www.issafrica.org/pubs/ptavicsurvey/Ptavictim.html> (accessed 31 October 2013).
10. Anna King and Shadd Maruna, Is a conservative just a liberal who has been mugged? Exploring the origins of punitive views, *Punishment & Society* 11(2) (2009), 147-169.

11. Mark Warr, Crime on the rise? Public perception of crime remains out of sync with reality, criminologist contends, University of Texas at Austin, 10 November 2008, <http://www.utexas.edu/features/2008/11/10/crime/> (accessed 05 September 2013).
12. Victims of Crime Survey 2012, Reference period January to December 2011, Statistical release P0341, Statistics South Africa <http://www.statssa.gov.za/publications/P0341/P03412012.pdf> (accessed 1 November 2013).
13. South African Police Service, An analysis of the National Crime Statistics, *Addendum to the SAPS 2011/12 Annual Report*, http://www.saps.gov.za/saps_profile/strategic_framework/annual_report/2011_2012/saps_crime_stats_report_%202011-12.pdf (accessed 1 November 2013).
14. Ibid, 12.
15. Ibid.
16. Ibid, 13.
17. A change in crime level is often reported as the deviation between any two years, which dramatises the increase or decrease. This article utilises the average annual growth since it reflects the trends in crime, which are aligned with people's perception of the changes in crime levels. For example, the contact crime per 100 000 population between 2008/09 and 2011/12 was 1 405,3 and 1 232,5 per 100 000 population respectively. The change (deviation) in crime rate between 2008/09 and 2011/12 is 12,3%, indicating that contact crime per 100 000 has decreased by 12,3% during this period. The average annual change between 2008/09 and 2011/12 is 4,3% indicating, that contact crime per 100 000 population has on average decreased by 4,3% per year.
18. Crime and victimisation surveys, What is the role of crime and victimisation surveys? National Crime Council, http://www.crimecouncil.gov.ie/statistics_cri_victim.html (accessed 1 November 2013).
19. Beaty Naudé, Johan Prinsloo and Anastasios Ladikos, Experiences of crime in thirteen African countries: results from the International Crime Victim Survey, http://www.unicri.it/services/library_documentation/publications/icvs/publications/ICVS_13_African_countries.pdf (accessed 31 October 2013).
20. Ministry of Justice, The nature and design of the New Zealand national survey of crime victims, 2001, <http://www.justice.govt.nz/publications/publications-archived/2003/the-new-zealand-national-survey-of-crime-victims-2001-may-2003/1.-the-nature-and-design-of-the-new-zealand-national-survey-of-crime-victims-2001#1.3%20Limitations%20of%20surveys%20of%20crime%20victims> (accessed 22 November 2013).
21. Ibid, 20.
22. Peter Wetzels, Thomas Ohlemacher, Christian Pfeiffer and Rainer Strobl, Victimization surveys: recent developments and perspectives, KFN, *Forschungsberichte* 28, <http://www.wedit.kfn.de/versions/kfn/assets/fb28.pdf> (accessed 22 November 2013).
23. Ibid, 20.
24. Ibid.
25. Ibid.
26. Tipsheet – Improving response scales, Duke Initiative on Survey Methodology, 2013, <http://www.dism.ssri.duke.edu/pdfs/Tipsheet%20-%20Response%20Scales.pdf> (accessed 31 October 2013).
27. Medium Term Strategic Framework 2009-2014, Together doing more and better, A framework to guide

governments' programme electoral mandate (2009-2014), <http://www.info.gov.za/view/DownloadFileAction?id=103901> (accessed 31 October 2013).