

Summary

The crime detection (or clearance) rate is one measure of the ability of the police to solve crimes. In the Netherlands the detection rate has declined over the past decades and is now one of the lowest in Europe. This has given rise to a discussion about the effectiveness and efficiency of the Dutch police, but to a discussion about the usefulness of the detection rate as a reliable statistical measure of police crime investigation activity as well. The country's current policy is more offender-oriented, focussed to a greater extent on cracking down on offenders than on clearing up crimes. Although there is a tendency to dismiss the detection rate as unreliable and unnecessary, policy makers clearly also feel the need to know how many crimes have been solved.

The main aim of this report is to investigate whether the detection rate is a useful measure of police effectiveness, i.e. is it a valid and reliable measure and what possible alternative measures exist. In addition, the comparability of detection rates between countries is investigated.

Definition and research method

The detection rate is defined as the number of crimes solved, i.e. crimes where at least one suspect is found, divided by the total number of recorded crimes. There are large differences between detection rates across offence types. For some offence types (e.g. driving under influence, drug offences), the case is cleared up immediately because the offender is caught in the act. The detection rate here is 100%. Also, the detection rate is generally higher for violent crime than for property crime because victims are more likely to give the police some information about the offender(s).

The present study first investigates the validity of the detection rate as a possible measure of the ability of the police to solve crimes. What can the detection rate tell us and what other possible alternatives exist? The reliability of the detection rate is subsequently investigated in two indirect ways. Firstly, the two data sources which can be used to calculate the detection rate, the police statistics from the Dutch Central Bureau of Statistics (CBS) and the Police Record System (HKS), are analysed in depth. Secondly, the detection rate is compared with the alternative measures identified in the validity analysis.

The international comparability of detection rates is investigated by means of a questionnaire sent to nine European countries. Two international sources, the International Crime Victim Survey (ICVS) and the European Sourcebook of Crime and Criminal Justice Statistics, provide additional empirical data.

Validity of the detection rate

When looking at the validity of the detection rate as a measure of the success of police crime investigation activity, the question arises whether an investigation

can be considered successful if an offender is caught but not punished (because the case is dismissed or the offender found not guilty). Whether policy is offence-oriented or offender-oriented also plays a role. Offender-oriented policy attaches great importance to catching and prosecuting repeat offenders for at least some (not necessarily *all*) of their crimes.

The likelihood of an offender being caught and punished for an individual crime is important because it influences offender decision making and readiness to commit crime in the future, but it is important for the victim (satisfaction and compensation) as well. The detection rate is a viable way to measure the probability that an offender will be caught only for more serious types of offences. It cannot be used for victimless offences (where the detection rate is per definition 100%) or for the less serious offences, many of which go unrecorded, because this would result in an overestimation of the probability of an offender being caught. The detection rate can be used, however, to show differences between police regions or changes over time provided definitions and crime reporting stay constant across regions and over time.

The detection rate is not a good measure of the probability that an offender will be punished. The case might be dismissed by the prosecution or the offender found not guilty. Besides, the counting unit is now different (number of offenders and number of crimes).

The probability of being caught and punished for at least one offence during a certain period of time is important when dealing with repeat offenders. This applies in general when policy is more offender-oriented than offence-oriented. The detection rate is not a good measure here. The 'offender rate', the number of offenders divided by the number of recorded crimes, is one possible alternative. The number of offenders referred for prosecution is another possibility. Again, not all offenders are punished. Information about punishment practice can be found by looking at the number of punishments imposed compared to the total number of offenders at the police level, or the number of punishments imposed divided by the number of recorded crimes (the 'punishment rate'). It should be noted, however, that the punishment rate is a measure not only of police activity, but of court activity as well.

The detection rate and the other measures tell something about the effectiveness of police crime investigation activity. In practice, however, they are also used in discussions about police efficiency and productivity. Wrongly so for various reasons, the most important being that the detection rate does not take the resources of the police into consideration.

The conclusion on the validity issue is: the usefulness of the detection rate as a measure of success of the crime investigation activity of the police is very limited. Other measures, such as the offender rate and the punishment rate, should also be used, particularly when policy favours an offender-oriented approach.

Empirical findings

The reliability of the detection rate is analysed using 1999 data from the two main sources of police data, the CBS police statistics and the HKS data. Because some data are lacking, 7 of the 25 police regions were left out of the analysis.

The number of recorded and solved crimes in the two sources differ considerably, resulting in different detection rates. One reason for this disparity stems from the different way serious traffic offences are handled by the two sources. After correcting for these traffic offences, the number of recorded crimes seems to be the same in both sources. The number of solved crimes, however, is still different, especially at the level of the individual police regions. The reasons behind these differences are unclear. Possible factors are the use of different definitions or incomplete linking between solved and recorded crimes.

Further analysis identified factors that influence the reliability of the detection rate based on HKS data. The findings show that incomplete linking can occur in two ways: sometimes a solved crime is not linked to an existing recorded crime and sometimes a solved crime cannot be linked because the crime has not been recorded. Looking at the quantitative consequences of incomplete linking and trying to correct for this in the CBS data, the estimated detection rate was about 18% (instead of the 14.5% estimated by CBS for 1999).

Analyses using the CBS and HKS data strongly suggest that the reliability of the detection rate is very low. It is not reliable enough for measuring the ability of the police to solve crimes. It is not even suitable for comparisons between police regions. For the detection rate to be a useful measure, issues like differences in definitions, incorrect recording and incomplete linking need to be solved.

Another empirical analysis compares three different measures: detection rate, offender rate and punishment rate. CBS data for the period 1999 - 2001 are used in this analysis. In 2001, the overall detection rate was 16%, with a lower (9%) rate for property crime and a considerably higher (45%) rate for violent crime. Taking all crimes into consideration, there was a drop in detection rates, offender rates and punishment rates in the period 1996 - 2001. Looking at the various offence types, however, the situation is less homogeneous and depends on the offence type.

In comparing the different measures across police regions, a fairly strong correlation was found between detection rate and offender rate, especially for property crime. The correlation was weaker between detection rate and punishment rate. The weakest correlation was observed between offender rate and punishment rate. Total recorded crime and the number of police personnel were included in the analyses. This yielded the following results: 1) 1% more recorded crime is linked to a 0.7% lower detection rate and a 0.6% lower offender rate; 2) 1% more police is linked to a 0.7% higher detection rate and to a 0.6%

higher offender rate. Finally, the effects of the detection rate and offender rate on the punishment rate were investigated across offender types. The relation is not very strong, except for property crime. The detection rate has a greater effect than the offender rate for most offence types.

International comparability

The detection rate in the Netherlands is lower than in any of the comparison countries. There is a striking difference between the Netherlands and Germany in particular. What factors explain these differences? Besides the ability of the police to solve crimes, there must be other contributing factors (external factors, differences in the organisation of the criminal justice systems and differences in definitions, counting methods and crime recording practices). All these factors are investigated in the Netherlands, Germany, England & Wales, France, Scotland, Sweden, Finland, Poland and Portugal.

Two external factors affect the detection rate. One is the percentage of crimes reported by victims to the police. In general, the higher the reporting percentage, the higher the proportion of cases that are difficult to solve, which could mean a lower detection rate. The other external factor is the distribution of the offence types. A higher proportion of violent crime (where it is easier to find an offender) could result in a higher detection rate.

If there is an obligation for the police to refer all cases to the prosecution service and if the prosecution service has limited power to dismiss cases, there could be a tendency not to record all crimes, especially those for which the police do not expect to find a suspect. This could have a positive effect on the detection rate. A negative effect on the detection rate (especially for property crime) could be expected if the prosecution has considerable discretionary power. Here the police, under the prosecutorial guidelines, do not necessarily try to make offenders confess all their crimes.

There are also some differences in definitions and counting methods that affect the detection rate, e.g. whether a crime is deemed solved when an offender is found or when an arrest has been made. Also, it makes a difference whether crimes recorded by other agencies (e.g. fiscal crimes) are incorporated into the detection rate. The counting units used could be another important factor.

A high correlation was found between the expected influence of the above mentioned factors and the actual detection rates. This suggests that the detection rates between countries cannot be properly compared unless these factors are taken into account.

The punishment rates of the countries investigated show much less variation than the detection rates. The punishment rate of the Netherlands, the country with the lowest detection rate by far, approaches the overall average for the comparison countries. This may well be an indication of the effects of the offender-oriented approach on the detection rate.

Main findings

At present, due to police crime recording practices and other statistical artefacts, the reliability of the detection rate as a measure of police crime-solving ability is insufficient. If these deficiencies are repaired, the detection rate will be a useful measure in the future, provided it is used in combination with the two other measures mentioned in this report, the offender rate and the punishment rate. All three measures have advantages and disadvantages. Good results can be obtained only by using them together. The detection rate (and the other measures) can be used to measure police effectiveness only, not efficiency or productivity. International comparisons will always be problematic, due mainly to major differences in the organisation of the criminal justice systems.