VIAS
institute

Factors associated with an increased risk for traffic reoffending in Belgium

Determining traffic reoffending based on the Belgian Central Criminal Registry

Federal Public Service
Mobility and Transport

Factors associated with an increased risk for traffic reoffending in Belgium

Determining traffic reoffending based on the Belgian Central Criminal Registry

Summary

Objective

The objective of the present study was to analyse the population of recidivist traffic offenders based on the data of the Belgian Central Criminal Registry. In 2017, Vias institute published the first profile of recidivist traffic offenders using the data from the Mammouth at Central Hosting (MaCH) database. The use of this database was prone to important limitations and therefore another database was used in this study. The data of this study were collected in an earlier phase by the National Institute of Criminalistics and Criminology (NICC). The research questions in this study were: which profiles of recidivist traffic offenders can be determined based on the Central Criminal Registry; and, what factors are linked to traffic recidivism?

Method

The data in this report relate to 92,412 drivers and 961,134 traffic offences, which makes this report the largest in quantity to date about recidivist traffic offenders in Belgium. The data originate from the Central Criminal Registry of all drivers convicted in 1995 for traffic offences. The data consists of their prior convictions, since 01/01/1901, together with their recidivism convictions until the date of the data extraction (November 2013) or the moment when they passed away. The applied codes in the Central Criminal Registry are the bases for the categorisation of nine types of traffic offences to determine various profiles of offenders. In addition, Cox regression was used to study factors related to recidivism of these nine categories of traffic offences.

An important limitation, with regard to the data obtained from the Central Criminal Registry, is that only data from the convicted traffic offenders can be used. In other words, the data do not provide insights about all drivers who violated the traffic rules. Thus, only the observed offences and the offences registered to the criminal record are available in this study.

Results

From all the drivers who were convicted in 1995, about seven out of ten (68%; n = 92,412) were convicted of traffic offences. In the follow-up period from 1995 until November 2013, 52,301 people (57%) were reconvicted. Most importantly, about eight out of ten (79%; n = 4,.381) people were reconvicted of traffic offences. The time between the conviction in 1995 and reconviction in the follow-up period is quite short: recidivism rate is about 48% after two years. On the one hand, it is important to note that drivers who were initially convicted of driving while their drivers' licences were revoked, reoffend the fastest in comparison to the other traffic offences. On the other hand, drivers, who are the least inclined to reoffend, are those who were initially convicted of unspecified traffic offences and those convicted of a hit-and-run crash. The time between a reconviction is the lowest for drivers, who initially convicted of unspecified traffic offences and convictions for Driving While Intoxicated (DWI). An overview is presented in the Table below.

Type of offences	Recidivism within follow-up period	Time until reoffending (days)	Recidivism after one year	Recidivism after five years	Recidivism after ten years
All traffic offences	56,6%	786	32,4%	70,7%	87,7%
Traffic (unspecified)	52,4%	878	30,2%	68,3%	86,5%
Driving While Intoxicated	60,4%	861	29,2%	70,9%	87,9%
Infringements concerning compulsory insurance	75,6%	546	39,6%	79,1%	92,0%
Infringements concerning registration of the vehicle	77,1%	508	41,9%	78,6%	91,9%
Driving without a licence	72,5%	601	38,4%	75,7%	90,5%
Infringements concerning the roadworthiness inspection	76,0%	537	39,9%	78,2%	92,1%
Driving while the driver's licence is revoked	85,5%	302	55,0%	87,0%	95,8%
Hit-and-run accident	56,3%	764	31,7%	71,5%	87,5%
Other traffic offences	67,1%	646	40,6%	75,5%	90,6%

Note: most favourable numbers are displayed in green, most unfavourable numbers are displayed in red.

Among the offenders, the large share is men (84%); this result stands out. Men are more likely than women to be recidivists (61% and 36%, respectively). Convicted drivers are – on average – 26 years old at their first conviction, in 1995 they are – on average – 33 years old and they are 35 years old when they are reconvicted. Within the group of drivers convicted of driving while their licence was suspended, men reoffend most often. Females reoffend most often when they were convicted of other traffic offences in 1995. The recidivism percentages for both men and women are the lowest in the groups of unspecified traffic offences and hit-and-run crashes. An overview is presented in the table below.

Type of offences	Recidivism among men	Recidivism among women
All traffic offences	60,6%	36,2%
Traffic (unspecified)	56,8%	32,9%
Driving While Intoxicated	61,5%	43,8%
Infringements concerning compulsory insurance	77,8%	58,3%
Infringements concerning registration of the vehicle	78,6%	62,1%
Driving without a licence	75,3%	49,9%
Infringements concerning the roadworthiness inspection	77,9%	58,7%
Driving while the driver's licence is revoked	86,9%	63,5%
Hit-and-run crash	59,7%	35,6%
Other traffic offences	67,2%	67,9%

Note: most favourable numbers are displayed in green, most unfavourable numbers are displayed in red.

We have determined the factors associated with recidivism based on analysis using a Cox regression. Most importantly we observed that men are 1.8 times more likely to reoffend than females. With regard to the penalty we observed that a prison sentence more often leads to recidivism in comparison to paying a fine (1.6 times more likely), a suspended penalty leads more often to recidivism with a factor 1.3. Last, behaviour in the past is a predictor of future behaviour as it came to light that having one prior conviction increases the chances of recidivism 1.06 times. Thus, in case of 10 prior convictions, the risk increases by a factor 10.6.

Conclusion and recommendations

Based on the data in this report, several characteristics of recidivist traffic offenders appear to be related to various types of traffic offences. These characteristics were not solely based on the offender's demographics, but also on the imposed penalty and the factors associated with an increased risk of recidivism. The data also allow the determination of the risk factors of recidivism for various traffic offences and the factors that need to be addressed to reduce recidivism to a minimum.

An important finding concerns the finding that when someone is convicted to a prison sentence: this person is 1.6 times more likely to reoffend than when he receives a fine as penalty. It needs to be noted that a prison sentence is most likely to be imposed for severe traffic offences and for repeat offenders. The factors related to an imposed risk on reoffending are static factors that cannot be altered (e.g., gender, age, number of prior convictions). The factors do allow to identify the target groups for various types of traffic offences. The data show that the target groups are somewhat different per type of traffic offence.

Based on the results, it is recommended to conduct research on the criminal careers of recidivist traffic offenders. As we have a preliminary idea about the profiles of recidivist traffic offenders and knowing that various penalties do not restrain them to commit new crimes, it should be studied what offences are committed and what corresponding penalties are imposed to determine how criminal careers can be halted.

A second important recommendation is to make various judicial databases (e.g., the MaCH and Central Criminal Registry) more accessible for scientific research. The Belgian research on recidivism slightly increases over time (Robert, Pauwels, Van der Laenen, Maes, & Vermeulen, 2015), but to get a more complete picture of traffic recidivism the databases should be more easily accessible. Lastly, recently Vias institute studied the expected effects of demerit point systems and other measures against recidivism in traffic (Silverans, Nieuwkamp, & Van den Berghe, 2018); the most important conclusion to tackle traffic recidivism is that the chance of getting caught should be increased, even doubled on the short term. It is therefore important to continuously invest in effective and efficient enforcement.