

Road Test Pass Rates and New Drivers' At-Fault Collision Incidents

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- Background
 - Road Tests in Saskatchewan
 - History of the Research Problem
- Hypothesis
- Data & Methodology
- Results

Road Tests in Saskatchewan

- SGI administers road tests in 50 communities across the Saskatchewan.
- Class 5 road test consists of a 20 minute in-car examination.
- The format of the test is consistent across the province.

History of the Research Problem

- Since 2007, the pass rate has declined.
 - 58 per cent in 2007
 - 48 per cent in 2013
- The decline in pass rates has been most prominent in urban centres.

Hypothesis

- H_0 : Drivers who require more than one attempt to pass a Class 5 road test have an increased risk of collision.

Data & Methodology

- Population of Saskatchewan drivers who attempted a Class 5 road test between Sep. 1, 2005 to Aug. 31, 2014.
- Independent Variables:
 - Number of Attempts
 - Age
 - Sex
- Dependent Variable:
 - Number of days between a driver's first at-fault collision and the date they passed their road test

Modeling Results: Relationship between First At-Fault Collision and Number of Attempts

Variable	DF	B	SE	X ²	P	Hazard Ratio	Confidence Interval	
							LL	UL
1 Attempt							<i>Reference</i>	
2 Attempts	1	0.065	0.012	27.564	≤ .0001	1.07	1.04	1.09
3+ Attempts	1	0.136	0.015	87.119	≤ .0001	1.15	1.10	1.16



Statistically significant
increase of risk



Modeling Results: Relationship between First At-Fault Collision and Number of Attempts

	Variable	B	SE	X ²	P	Hazard Ratio
Attempt(s)	1			Reference		
	2	0.039	0.012	9.699	≤ 0.01	1.039
	3+	0.110	0.014	58.579	≤ .0001	1.116
Sex	Male			Reference		
	Female	-0.193	0.011	317.582	≤ .0001	0.825
Population	> 30,000			Reference		
	< 30,000	-0.147	0.018	66.769	≤ .0001	0.863
	> 5,000	-0.418	0.015	787.342	≤ .0001	0.659
	< 5,000	-0.584	0.015	1594.607	≤ .0001	0.558
Age	16-19			Reference		
	20-24	-0.319	0.020	245.329	≤ .0001	0.727
	25-54	-0.728	0.016	1999.140	≤ .0001	0.483
	55+	-0.829	0.103	65.008	≤ .0001	0.437

Results

- Socio-demographic characteristics are statistically significant; however, the hazard ratio for number of attempts decreases.
 - Two attempts decreases to 1.039 from 1.07.
 - Three or more attempts decreases to 1.12 from 1.15.
- Drivers from rural areas who require three or more attempts have a lower collision risk than urban individuals
 - HR for individuals from test centres with less than < 5,000 residents is 0.56.
- Age and gender continue to be significant (as would be expected).

Policy Changes

- Introducing a driver training intervention after second attempt
- Expanding SGI's 'Driver Improvement Program' to account for multiple road test attempts
- Small adjustments to driver examination centres and the road test format to reduce anxiety.
- Expanding SGI's use of 'Driver Practice Logs'

Questions?