A review of international road transport database files with risk exposure data

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OBJECTIVE: Critical review of international databases (IDF) which include risk exposure data (RED) to assess the possibility of its integration in EU CARE accident database.

KEY ASPECTS INVESTIGATED: Procedures for data collection; analysis and registration; availability of data; data quality; overall assessment of the potential for international comparisons.

METHOD: Analysis of existing surveys sent to international databases file administrators; personal interviews with international database provider representatives; comparison of selected available risk exposure figures by country and by year.

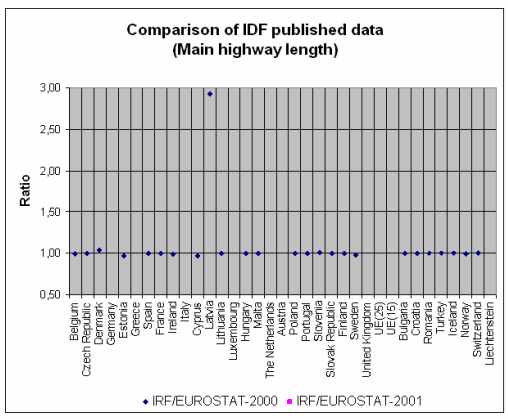
RISK EXPOSURE DATA CONSIDERED: Road length; Vehicle kilometres; Person kilometres; Vehicle fleet; Population.

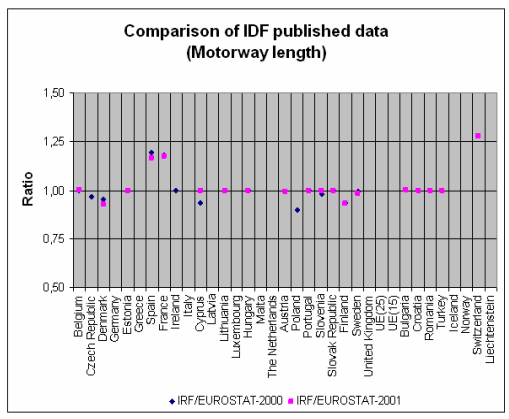
MAIN RESULTS:

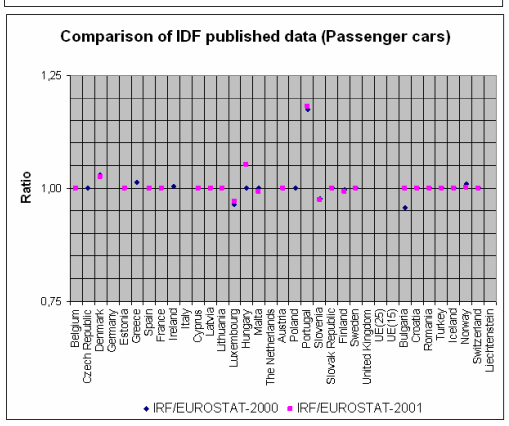
- Exposure data available in each IDF are in a much more aggregate form than the RED collected at national level.
- The more disaggregate national exposure data are not exploited within the context of IDF.
- Some IDF use common definitions (common questionnaire EUROSTAT-ECMT-UNECE). However, data availability in different IDF does not always imply comparability. Differences in definitions may exist as regards some disaggregated basic variables.
- Important RED are not collected in some IDF: fuel sales and the number of active driving licenses. Not all relevant disaggregated secondary variables are collected by all countries (two wheeled vehicles).
- Significant differences are observed among IDF in the published figures for each exposure measure; these differences are more important for the more "sophisticated" exposure measures (i.e. vehicle and passenger kilometres).
- Differences in values are partly due to the different national sources and definitions used; they may also reflect different objectives for each IDF; another reason may concern insufficient data quality control within each IDF.

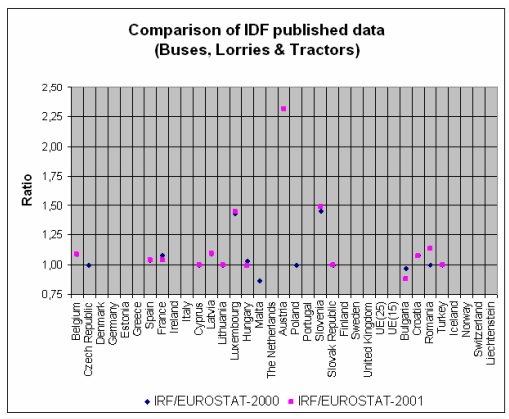
RISK FACTOR		INTERNATIONAL DATA FILE (IDF)				
		EUROSTAT	ECMT	UNECE	IRTAD	IRF
Accidents per inhabitant					■	
Accidents per vehicle×km	General				■	■
	I/O build-up area				■	
	Road class				■	
Fatalities per inhabitant	General	■	■	■	■	
	Age group	■		■	■	
	Age group and sex	■		■		
Fatalities per vehicle			■		■	
Fatalities per road user by type			■		■	
Fatalities per vehicle×km	General				■	■
	I/O build-up area				■	
	By road class				■	
Injuries per inhabitants	General	■			■	
	Age group	■			■	
	Age group and sex	■				
Injuries per lecensed driver						
Injuries per vehicle					■	
Injuries per vehicle×km	General				■	
	I/O build-up area				■	■
	By road class				■	

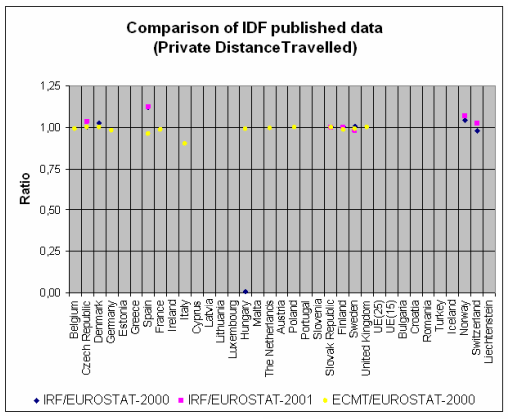
Comparison of EUROSTAT, IRF, ECMT and IRTAD data (2000, 2001)

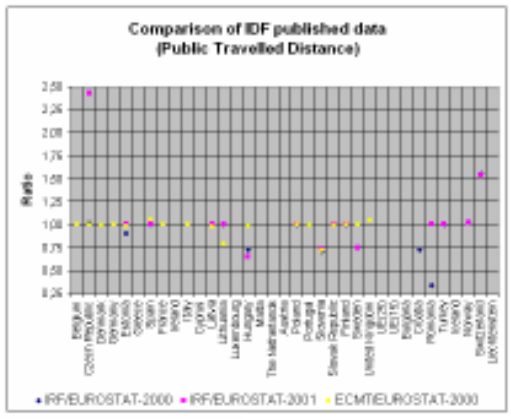


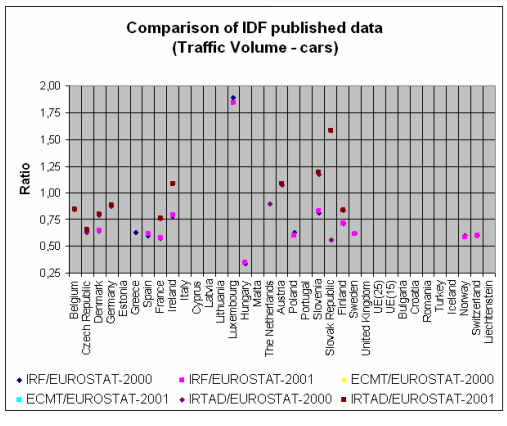












CONCLUSIONS

- IDF are useful and accessible aggregate data sources, resulting from several decades of data collection efforts.
- The fact that there are various IDF for RED at European level is positive for the road accident statistics users, because they can choose from a variety of information. The objectives and scope of these data files, and the quantity and quality of available data in each IDF, differ among the various data providers, making them to function complementarily in most of the cases.
- Caution is required from data users, to optimally use the available information in reliable road safety analyses.

DATABASES ANALYSED:

EUROSTAT (http://epp.eurostat.cec.eu.int)
The ECMT (www.cemt.org)
UNECE (www.unece.org)
IRTAD (http://www.bast.de/htdocs/fachthemen/irtad)
IRF (www.irfnet.org)

Transport
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