INDOT Research

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THE DEVELOPMENT OF A HIGHWAY TORT LIABILITY RISK MANAGEMENT SYSTEM FOR THE INDIANA DEPARTMENT OF TRANSPORTATION

Introduction

With the loss of states' sovereign immunity in the 1970's, many states, including Indiana, are experiencing increased frequency and expenditure for highway-related tort liability cases. Each year, the State of Indiana investigates and settles hundreds of highway-related tort cases involving several millions of dollars in taxpayers' money. There is a need to monitor and assess the frequency and financial impacts of such claims and to examine how the growth of highway tort claims could be reduced.

This study aimed at reviewing existing highway tort liability risk management practices in other states for possible applicability to the Indiana Department of Transportation (INDOT), developing a framework for managing highway tort liability risks in the state, and determining the inputs and respective impacts of various levels of risk management. Data on highway tort liability frequency and dollar amounts for various claim types in Indiana were collected from the Attorney General's Office. Efforts were also made to obtain and review the circumstances and outcomes of past highway-related tort cases against the state.

A questionnaire survey was carried out to document and evaluate the current state of risk management practice at state departments of transportation. In developing an analytical framework for risk management program evaluation, the study traced the typical paths of INDOT-related claims from inception (filing by claimant) to settlement, developed probability trees representing these paths, and estimated settlement amounts arising from expected outcomes along each claim path. Various levels of risk management practice were established with the implicit assumption that increasing risk management efforts (such as personnel strength) translates to higher risk management effectiveness. To establish the break-even points for various levels of risk management, a decision theoretic approach was utilized on the basis of expected claim settlement expenditures on one hand and expected resource costs on the other. The cost-effectiveness of implementing various levels of risk management was thus estimated.

The study concluded with a set of recommendations to guide INDOT in establishing an office for highway tort liability risk management in an incremental and evolutionary manner in a bid to reduce the frequency of incidents that typically lead to common claims. Specific recommendations were also made for reducing the number of common claims filed against the state as a result of various field operations. Finally, the study proposed various ways to increase coordination and cooperation among various divisions at INDOT, as well as the Attorney General's Office, for more effective monitoring and management of highway-related tort liability cases in Indiana.

Findings

Using data from the Indiana Attorney General's Office, it was found that the common claims represent a relatively small percentage of the total settlement cost of highway related tort litigation but represent a significant part of investigation costs, as they constitute nearly half of the total annual number of filed claims.

In Indiana, the Attorney General's Office, not INDOT, is responsible for payments to settle any tort claims arising from the use of highway infrastructure.

From the questionnaire survey, it was found that unlike most other states, INDOT does not have an office or program explicitly set up for risk management. Furthermore, the study determined that a systematic decision theoretic approach can be followed in the assessment of various levels of a risk management program. The developed methodology is useful not only in evaluating the cost-effectiveness of the program, but also in the development of appropriate management strategies that can affect the number of claims and various probabilities associated with a claim sequence as well as the monetary values of settlements. On the basis of recent experience with INDOT-related tort cases and their settlements, the study found that an explicit and incremental risk management program at INDOT can be economically justified.

Implementation

Personnel from INDOT's Legal Division, and the Indiana Attorney General's Office worked with the research team and the Study Advisory Committee (SAC) regarding implementation issues and are expected to play lead roles in the implementation process. Other divisions expected to play significant roles in the study implementation are the Operations Support Division, Safety Management Unit of INDOT's Program Development Division, Contracts and Construction Division, Design Division, and the Systems Technology Division.

The initial effort towards implementing a risk management program should focus on strengthening existing links between the Attorney General's Office and INDOT. Implementation can be carried out in phases. Implementation of pre-emptive risk management involves taking actions to minimize occurrence of tort liability incidents. This can be done using legal and administrative procedures (such as promoting laws that reduce the State's exposure to highway tort liability, and reducing claim filing deadline periods), improving communication within INDOT divisions (through regular risk management seminars, for instance), and also between INDOT and road users (through the use of the media). Also, implementation of pre-emptive highway tort risk management can also be enhanced by increased levels of law enforcement (through policies and regulations, driver education, and higher penalties). Furthermore, continuation of INDOT innovations in design and materials, as well as construction and maintenance work zone improvements, can help reduce the frequency of highway incidents that could lead to tort liability.

Implementation of palliative risk management would involve actions that are typically carried out in the post-accident phase place in an effort to minimize its consequences. From the legal and administrative perspective, implementation can be achieved by enhancing the current database maintained by INDOT's Legal Division for the purpose of reliable forecasting of future tort claims. Also, engineering designs, and maintenance and operational procedures that are identified as inadequate should be addressed promptly to reduce the number of incidents that may ultimately lead to tort liability lawsuits. Design and maintenance decisions based on budgetary or other economic constraints are generally seen as discretionary in nature and consequently are generally immune from tort suits. However, as demonstrated in past cases, a transportation agency that argues that its failure to remedy a defective design due to funding priorities can be held liable if it presents no evidence on planning, ordering of priorities, or limitations on available funding. In this regard, the current development of safety and congestion management systems for INDOT and the on-going refinement of the already developed

pavement and maintenance management systems, are critical for risk management implementation because by providing evidence on planning and programming of investments, such programs will subsequently reduce the exposure of the state to tort.

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