CHAPTER ONE

WHY PANELS FOR TRANSPORTATION PLANNING?

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Abstract: In recent years, we have witnessed a significant change in our approach to transportation planning. Emphasis has shifted from adding infrastructure to accommodate increased demand for travel to demand management, more sensitive land uses and multi-modal choices. Household structure and travel needs are also undergoing rapid change. Old planning data and approaches are no longer reliable, and new methods must be instituted. Panels and panel data provide an important tool for policy-makers and for those charged with infrastructure investments. This chapter discusses the factors which call for a new approach to planning, and shows why panels are appropriate tools for decision-making.

INTRODUCTION

Transit officials, distressed at the loss of ridership to illegal vans and gypsy cabs call for strong legislation to stop these services.

A member of the City Council believes that putting tolls on several bridges is essential to meet a number of environmental issues but will not go public with his beliefs.

These two transportation issues in New York City illustrate how complex planning, at all levels, will be in coming decades. Both issues indicate that traditional sources of supply -- our existing highway and fixed-route public transit systems -- no longer meet the travel needs of our changing and growing populations. Both issues also indicate that traditional forms of information or extrapolations from traditional models of travel behavior are no longer sufficient for informed policy and decision-making.

In the United States, the formal instruments of change in the planning process have been two extremely powerful pieces of legislation: the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), and the Clean Air Act Amendments of 1990 (CAA). Both arose from input from a variety of groups concerned with the environment, efficiency
and economy in system operation, technological innovation in transportation, and quality of life. ISTEA, through its carefully constructed planning mandates, attempts to ensure that the needs of transportation systems users, as well as the needs of those who are impacted by these systems, will be met. CAAA provides the critical environmental constraints within which these new transportation initiatives will take place.

The inferences drawn from these pieces of legislation, and from the public sentiments which led to them, are that: single-occupant vehicle use must decrease, especially for the work trip; transit use must be encouraged; and our transportation systems must be more efficiently managed. It remains to be seen if we can plan as well for our evolving systems as we planned for the infrastructure already in place. Just as the planning process and the coda for data collection came from that burst of development so, too, must new decision-making tools be established to meet new means and methods of travel. We will see later in this chapter that a more dynamic method of collecting travel information -- the use of panels -- will be an important tool for planning in the new environment.

Whether we plan for supply increases or impose stringent fiscal and air quality constraints as prime inputs, the planning process itself will be the same as it has always been: delineation of regional goals and objectives and programming of projects in a fixed-time horizon. What must change is the emphasis on supply, or operations, to an orientation more sensitive to the travel demands of the new transportation consumer. Meeting the needs of the consumer will require complex information to establish correct goals and objectives and to test alternative solutions to planning needs.

While origin-destination surveys and travel diaries helped us to understand simple mode choice decisions and levels of demand for travel, this information will not be adequate to test travel levels and choices when users are confronted with new road pricing schemes, an array of public transit choices, and intelligent transportation system (ITS) implants in their vehicles. Further, as both user and non-user groups will evaluate new transportation investments, it will be essential to measure their response to those investments and to use those responses in the planning process.

This chapter examines the genesis of new planning needs and the constraints under which planning will take place in the next decade. It begins with a discussion of early planning models and the types of data that satisfied their needs. Then, it looks at the new planning process, the emerging focus on the customer, and the need for more sophisticated data collection and analysis.