IMPACTS OF TOURIST CONSUMPTION FUNCTIONS

William B. Beyers

I

This paper reports certain findings about the magnitude, spatial distribution, and structural impact of some tourist expenditures. The data used in making these analyses are based on studies conducted for the National Park Service in Mt. Rainier and Olympic National Parks.

The analyses presented make use of input-output models in order to define the structural impacts of these tourist expenditures. Factors to be considered include: (1) regional import propensities due to consumption by tourists, (2) regional income multipliers associated with tourist consumption expenditures, (3) the structural distribution of tourist expenditures as compared to average personal consumption expenditures functions, (4) the spatial distribution of tourist expenditures, and (5) problems of employment and income related to the seasonality of tourist expenditures. The examination of these factors will provide a background for a few remarks about the role of tourist expenditures in promoting employment and income growth in certain rural areas.

II

Personal consumption expenditures accounts usually are presented in input-output models as a single vector. However, there is no reason why these accounts cannot be disaggregated into "sectors," reflecting the average consumption expenditures required for various types of behavior. This concept was applied in a study of the expenditures made by visitors to two National Parks.

1The National Park Service is acknowledged gratefully for providing the financial support to conduct this research. The author would also like to thank Dr. Geoffrey J. D. Hewings, Dr. Morgan D. Thomas, and Mr. Dean Louder for their helpful comments on this paper.

2The author is Assistant Professor, Department of Geography, University of Washington.


Parks: Mt. Rainier and Olympic National Parks. Essentially, we tried to isolate that component of total personal consumption expenditures which was attributable to the process of visiting these two Parks.

These expenditures were derived from a mail survey of a sample of Park visitors. The methodology used to derive tourist consumption functions from these basic questionnaire data is described in detail elsewhere.

The original study treated each Park as a separate statistical problem. Statistical tests made on the independently derived expenditures vectors indicated no significant differences between the vectors. Thus, they were combined by the use of appropriate control totals, and are expressed as single vectors. Table 1 presents these data, and also provides as a standard of comparison average Washington and U.S. personal consumption expenditure vectors.

Each entry in Table 1 represents the share per dollar of expenditure demanded from each producing sector named at the left of the table. For example, retail and wholesale trade services required 14.831 cents of each dollar spent in Washington State by Park visitors.

Columns 1 and 3 of Table 1 are based on survey data, and on two assumptions with respect to personal consumption functions. It was necessary to allocate expenditures reported in the survey to a producing region. To make this allocation, it was assumed that Washington residents personal consumption expenditures pattern is equal to the U.S. average personal consumption expenditures pattern. The average U.S. personal consumption expenditures pattern is shown as column 4 of Table 1, and the regionally produced component of the U.S. consumption pattern is described in column 2 of Table 1. Imports to Washington for sale to Washington residents were assumed to be the difference between these two vectors. One restriction was imposed: if the Washington consumption coefficient exceeded the national coefficient, the Washington coefficient was assumed to be correct, and the national coefficient was set equal to the Washington coefficient.

It was also assumed that the share of each dollar of tourist expenditure made in Washington on the output of any sector had a region-of-origin composition equal to the average personal consumption expenditures vectors defined under the first assumption.

Thus, columns 1 and 3 of Table 1 were derived by applying these allocative assumptions to the survey expenditures data. Column 3 of Table 1 also includes some preparation, travel, and post-trip expenditures made by non-Washington residents outside of the State of Washington as part of their trips.

---

5Beyers, op. cit.; also see Marion Clawson & Jack L. Knetsch, Economics of Outdoor Recreation, published for Resources for the Future by The Johns Hopkins Press (Baltimore, 1966), Ch. 12, for the definition of a similar methodology.

6Beyers, op. cit., Appendix A.

7ibid., Appendix C.