

would be necessary to support the television system in the absence of advertising, if the same volume and types of programmes were to be supplied.¹ In this event direct payments for programmes would have to be made by consumers to television stations under a pay television system, or to the Government under a government-subsidised system. It then follows that the benefit received by any given consumer under the present system is equivalent to what he would have to pay for the programmes viewed in the absence of advertising; and the cost to the consumer would be what he pays for advertising, which is included in the prices of the advertised goods and services he purchases.

In so far as the purchases of advertised goods and services by families at different income levels are not proportional to the volume of their television viewing, discrepancies inevitably develop between benefits received and costs paid. This creates a redistribution of income between income groups. When the benefits received by a family exceed the costs paid a net positive subsidy arises, whereas when the costs exceed the benefits a net negative subsidy exists.²

Three sets of equations have been constructed to measure: (1) the net subsidy to a family with a given income for a given product group (equations (1.11) and (1.12)) and a total net subsidy for all product groups (equation (1.21)); (2) the level of income at which a net subsidy becomes zero (the break-even point) for a given product (equation (2.11)); and (3) an aggregate net subsidy to families in a given income bracket for a given product and also for all product groups (equations (3.11) and (3.21)).

A net annual subsidy received or paid (s_i) by a family with a given income (Y) for a given product is the difference between the value of television programmes viewed by the family that are sponsored by advertisers of the product and the amount of advertising expenditures included in the expenditures of the family on that product. Thus,

$$s_i = Ch_i - a_i E_i \quad (i = 1, 2, 3, \dots, n) \quad (1.11)$$

setting $h_i = \alpha_i (H)$, and $E_i = f_i (Y)$; where, $H = g(Y)$ and $\alpha_i = \frac{A_i}{\sum A_i}$

$$\text{Then, } s_i = C\{\alpha_i g(Y)\} - a_i f_i (Y) \quad (1.12)$$

¹ In the case of pay television, costs may vary somewhat, depending on the type of system adopted. If a wired system is used, there will be additional cable charges; and if an over-the-air system is used with a meter that enables the operator to charge differential rates for different programmes there will also be additional costs of providing and maintaining a black box. It is entirely possible, however, that a system can operate with a meter that is similar to that which is being used by electric power companies in measuring power consumption. Under such a system additional costs of meter reading and billing would be nominal. The costs of operating a totally government-sponsored system can be lowered by as much as 10% because of savings in selling costs.

² An advertising subsidy is sometimes regarded as the difference between the value of the benefits received and the actual costs paid by a consumer, such as subscription fees for magazines and newspapers. See, for example, W. B. Reddaway, "The Economics of Newspapers," *Economic Journal*, June 1963, pp. 201-18.