

DEMAND FUNCTIONS DERIVED FROM THE SMAC AND MODIFIED SMAC TYPE OF UTILITY-FUNCTIONS*

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1. *Introduction*

The analogy between production-behaviour analysis and consumer behaviour analysis is well-known. Utility or satisfaction that is given rise to by the consumption of commodities may be regarded as an output which is at the basis of the formation of the preference-index or the ordinal utility function. This analogy suggests that some of the production-functions that are usually used and are found to be useful in production-function-analysis may be used or tried out as some plausible-forms of utility-functions and demand-functions could be derived from them. It need not be added that whereas production-functions have to be unique in form the ordinal utility-function need not be unique in form. Any monotonically increasing-function of a utility-function in a given form leads to the same demand-functions as the utility-function in the "original" form.** Linear and quadratic utility-functions with counterparts of linear and quadratic production-functions have been considered. Log-linear or Cobb-Douglas type of production-functions where the returns to scale coefficient is not necessarily equal to unity have also been considered but have not been gone into in detail. SMAC ⁽¹⁾ type of utility-functions (to include production-functions with proportional elasticities of substitution also ⁽²⁾) whose counterpart in production-function-analysis has been recently found to be useful in production-function-analysis and which includes Cobb-Douglas type of production-function as a particular case, have not been considered at all. In this note an attempt is made to cover the two latter cases and also to consider the resulting demand-functions. Since the Cobb-Douglas type of

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** There is nothing sacrosanct about the 'original' form.