The purpose of this study is to define in substantial detail the conditions under which monopoly production by a single firm is a desirable form of market organization. The theory of natural monopoly, should be considered as a part of a larger theory of "market organization" or "industrial organization." In the theory of industrial organization the concept of a "market" and of a "firm" in a market are fundamental. Although it will be assumed that the reader is familiar with the way in which these terms are used in economic theory, a brief discussion of each will help to lay the groundwork for the results that follow. The market will refer to any collection of buyers and sellers and to the outputs that are produced and sold. A market is a competitive market if there are a large number of sellers and no seller is able to influence the market price by a unilateral change in output. Consequently, in a competitive market there is no strategic interaction among sellers. None of them can increase their profits by taking account of the behavior of other sellers.