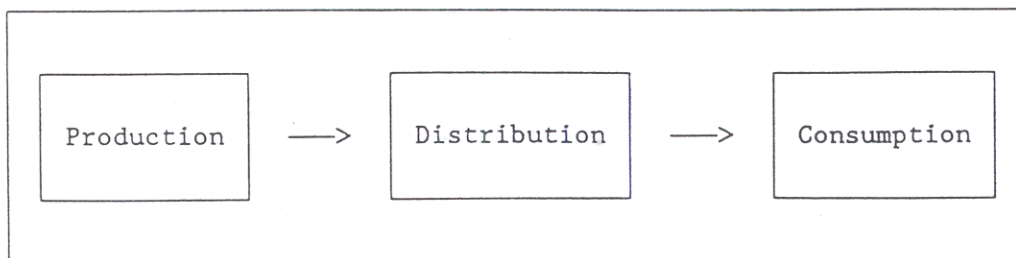
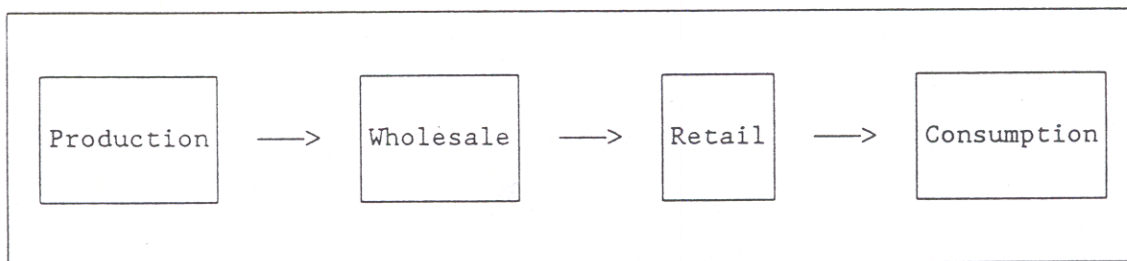


Fig. 1. Abstract Representation of Distribution Function



While the above representation provides a useful starting point, its application to any actual distribution system requires a number of modifications. In the first place performance of the distribution function in most societies has led to the emergence and evolution (including in some cases demise) of specialized institutions that perform various aspects of this distribution function. At the most aggregate level, one can begin to capture this process by separating the distribution function into its two main components: namely the wholesale function and the retail function. Including this consideration leads to a simple modification of the scheme which is presented in Fig. 2.

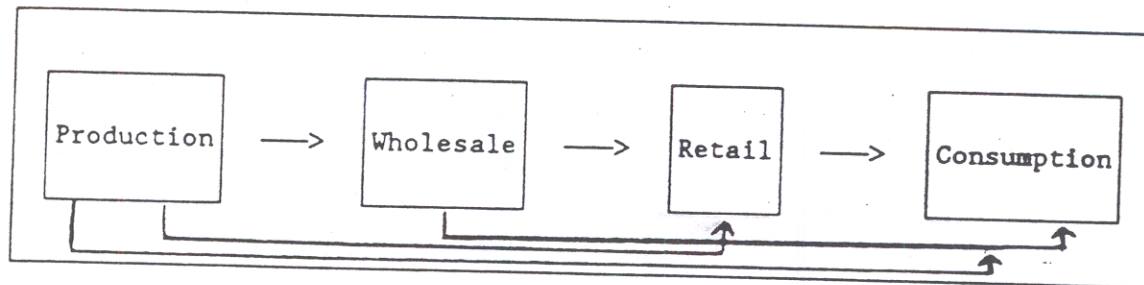
Fig. 2. Main Separation of Distribution Function



Implicit in the above representation is a sequential process in the performance of each function. Nevertheless, in practice, one observes

institutional forms¹ in the performance of the distribution function that alter the prototype sequence depicted in Fig. 2. For instance, manufacturers can distribute their products directly to retailers by internalizing the wholesaling function, which is an example of (forward) vertical integration. Retailers also can, of course, internalize the wholesaling function which is an example of (backward) vertical integration. Depicting various possible outcomes, not all of which need be realized in a particular system, leads to Fig. 3.

Fig. 3. Potential Sequences in the Performance of the Distribution Function



2. Two Essential Characteristics of Retail Systems

Our relatively simple abstract world has now become considerably more complex as a result of the existence of different institutional forms in which the distribution function can be performed. Moreover, the discussion, thus far, ignores two essential characteristics of distribution systems that have been analyzed in the context of retailing, Betancourt and Gautschi (1992b), but which are equally applicable to wholesaling and other interactions among firms, as we shall demonstrate below.

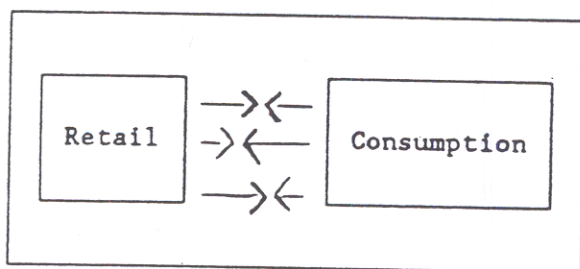
One fundamental characteristic of retail enterprises is that they deliver

¹Incidentally, an institution is any restriction or constraint on the behavior of agents, whether of a formal or an informal nature, Nabli and Nugent (1989, ch 1). Hence, the performance of functions in any particular sequence generates an institutional form.

between the retail sector and the consumption sector can be captured by assuming that the distribution services provided by any given retailer play the role of fixed inputs into the purchase activities of consumers. In a household production framework cost minimizing consumers will view increases (decreases) in the levels of distribution services provided by retailers as decreasing (increasing) the costs of attaining any given level of satisfaction, including the optimal level.

Schematically, this second fundamental characteristic of retail markets is depicted in Fig. 5, which is a modification of Fig. 4.

Fig. 5. The Role of Cost Shifting in the Performance of the Distribution Function



Once this possibility is allowed for, a number of different organizational forms become possible in carrying out the distribution function between retailers and consumers.⁵ That is, some agents will specialize in providing different combinations, or bundles, of distribution services and items transferred between the two sectors, which is why the connections are depicted with arrows of different lengths in the diagram.

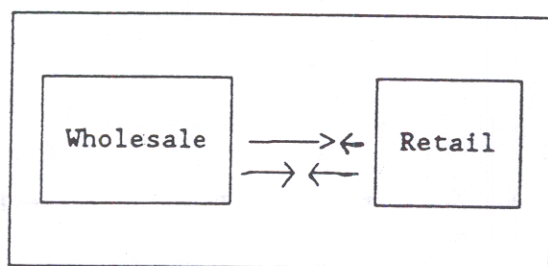
⁵Incidentally, the number of these forms is limited by the existence of jointness in supply in the provision of some distribution services. For instance, increasing the level of information through advertising that includes store hours also increases assurance of product delivery at the desired time.

Second, the evaluation of competition in retail markets requires taking into account the role of distribution services. Adopting a framework introduced by Bliss (1988), it is shown that competition in retail markets can but need not be beneficial to consumers in that it will lower retail prices but it may also lower the levels of distribution services provided. On the other hand, when one assumes that prices are given, increased competition always increases welfare by increasing the levels of distribution services.

4. Extensions to Other Subsystems

In the above discussion, the argument has been framed in terms of the retail system. Hence, the question arises as to what extent similar considerations are applicable to the rest of the distribution sector. The answer is that the same considerations apply with minor modifications. To illustrate, we consider the interactions between the wholesale and the retail sector which are again represented schematically in Fig. 6.

Fig. 6. Performance of the Distribution Function Between Wholesalers and Retailers



In Fig. 6, we have two rather than four mechanisms of interactions between the two sectors in order to stress that some of the distribution services that are important in this context may differ from the previous context. Nevertheless, the nature of the interaction as well as most of the relevant distribution