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Introduction

The theory of periodic trade in peasant regions was significantly advanced in 1962 with the appearance of a seminal paper by Stine. He discussed mobile retailing in the same terms as fixed-store retailing, using concepts drawn from central place theory (Stine, 1962. Central place theory derives from Christaller, 1966 and Losch, 1954). Some recent papers have extended and criticized Stine's formulation (Hay, 1971; Webber and Symanski, 1973); in addition, Skinner's notable analysis of the pre-revolutionary Chinese marketing system (1964, 1965) Smith's extensive study of the marketing system of Highland Guatemala (1972a and b) and Crissman's detailed investigation of the marketing system in Taiwan (1973) have provided excellent empirical studies using the same basic theoretical framework. This article is intended to clarify and supplement some of the conceptual issues raised by previous authors with respect to mobile retailers, by more firmly embedding the model of periodic trade in the general socio-political development of the region. I will first discuss the general conditions for mobility in retailing, then describe three basic stages in the development of periodic trading systems, and finally present a more detailed model of the demand for and the supply of one type of mobile retailer, the long-distance peddler, in an early stage of regional development.[1]

Models of Mobile Retailing

In this section I will summarize in some detail the factors influencing mobility in retailing, as these concepts will form the basis

of a model of itinerantism in retail transactions. I will use the
term mobile vendor to denote many types of sellers, including rela-
tively heavily capitalized itinerant marketers who trade out from a
central place to various marketplaces and set up fixed stalls in each
place; long-distance itinerant peddlers who go out from central places
to sell door-to-door among dispersed rural homesteads without market-
places; itinerant street peddlers with fixed routes in urban neigh-
borhoods relatively distant from fixed sources of similar goods; and
street peddlers with minimal stocks who may sell in the marketplace
itself, i.e., adjacent to fixed sources of similar goods, as well as
in the surrounding streets. Implicit in the list just presented is
a ranking in amount of capitalization, as the long-distance market
traders usually have many times the stock of the street peddlers.
Goods involved range from drygoods and hardware for long distance
peddlers to prepared food, tobacco and notions for the street and
market peddlers.

The Cost of Goods

I begin with the abstract notion that a consumer will purchase
goods from the vendor who offers them at the least cost. The empirical
value of such a statement will rest on the definition of least cost,
which is commonly taken to have three components: the price of goods
at the place of the vendor's stock, the cost of transporting the goods
from the vendor's stock to the consumer's home, and the cost of trans-
porting the consumer from his home to the vendor's place and back
again (Webber and Symanski, 1973). Consumer transport includes the

direct cost of the price of the voyage and the indirect cost of the value of the activities foregone at home while on the purchasing trip. Examples of the latter that are easy to measure because they are monetary, are wages to field-hands for farmers who leave the farm, or wages to baby-sitters for mothers who leave the home. Examples of costs that are difficult to measure because they are non-monetary are the loss in satisfaction of not doing a piece of work in the style or time one prefers because of an interruption for a shopping trip; or the risk of unpleasant things happening if one crosses an ethnic boundary while on the trip. For example, an Indian farmer in Mesoamerica who goes to a Mestizo town, or an Indian or black ghetto-dweller in the United States who goes to a white shopping center, both risk potential harassment from all sorts of people including the police. Note that these latter sorts of costs can be equated with sums of money in an imprecise and variable way, although it would be a mistake to presume that the cost is cognized as monetary. Thus while one may not walk through a hostile neighborhood in order to buy a $30 commodity for $30, one may decide to run the risk of harassment if the good is obtainable for $5.

Implicit in the notion of costs is that the cost of any trip can be shared among various goods. For the consumer, the more goods one buys per trip, the cheaper the total real cost of each item. This is true only up to a point after which costs will rise again as special fees and trouble arise due to the large quantities. For the seller, economies of scale may permit prices at the consumer's door to be lower than those obtainable by the consumer himself. Trade discounts

or lower unit transport costs due to larger bulk would permit such economies. The higher the consumer's opportunity costs for time at home, or the larger the differential between transport costs for the trader and the consumer, the larger the probability that the trader's goods will have a cheaper final cost.

The Attractiveness of a Good

The consumability of a good offered for sale by a retailer is not simply a function of its physical characteristics but must include its environment as well. A good is more attractive if it is made available at the precise place and time it is needed by a consumer. In addition the conditions of payment are an intrinsic part of all transactions of goods. In many cases the merchandise is not purchasable if particular selling arrangements, especially credit, are not available.

Just as the physical characteristics of a good are not completely sufficient to insure its sale, the actual need on the part of the consumer for a good is not in itself sufficient to insure a purchase. Consumers obviously need the cash or the means of payment, which is not merely a function of present wealth and income but is also a function of an estimate of future income. In addition I assume that people have a notion of an "acceptable price" for things, which is continually undergoing re-evaluation in response to changing market conditions. My point in introducing all these details is that a consumer's notion of the acceptable price for a commodity is tied to a particular place, time, and condition of payment. Any commodity can be a "good deal"

at very different retail prices if each price is in the context of a different bundle of consumability attributes. I will argue below that it is the fact that more than one price is acceptable for different bundles of retail services that allows itinerant vendors to operate in the context of fixed stores.

A Model of Mobile Retailing

The concepts just put forward can be combined to form a model of mobile retailing that will be consistent with previous efforts but will specifically include mention of town peddlers and long-distance marketless itinerant peddlers. The basic element is the maximum range of the consumers' demand for a good, which refers to the largest distance a consumer will travel to obtain a unit of the merchandise from a vendor. This range is constructed from the model of demand given in Figure 1. Assume all consumers have identical demand curves and that their consumption of the good is purely a function of its price. The real price of a good to a consumer, however, is a function of its price at the center and the cost of transporting it from the center to the consumer's home (Figure 1a). An item which costs p at the center costs p + td at a distance d from the center, where t is the transport rate. Thus consumers with identical potential demands and opportunity costs purchase decreasing amounts of the same merchandise with increasing distance from the central point of offer, until sales (observed demand) drop to zero at some distance from the center. Since population density is related in a determinate way to distance from the center, the total quantity demanded can be expressed in units of

distance from the central point of supply, holding price at the center constant. Figure 1b shows this relation rotated around the center to form the spatial demand cone (Berry, 1967:Chapter 3).

Given the spatial demand cone, another important concept can be defined: the minimum threshold range of the trading firm. This refers to the volume of sales, corresponding to a definite spatial area, which create the minimum income necessary for the firm selling a particular good to come into full-time existence. The size of the threshold range is determined by the opportunity cost of the trader's time and money as well as by the demand density in the area. Thus the threshold range and the maximum demand range are both expressable in terms of area, and are directly comparable. As is common in all such discussions, time is held constant.

Stine's important contribution was to point out that the relationship between the maximum and minimum range establishes the necessary conditions for periodism. If the maximum demand range is smaller than the minimum firm threshold range, then the firm cannot be fixed, full-time, and survive. But if the firm becomes mobile it increases its consumer population by relocating the point at which it offers goods, which in effect increases the maximum range of the goods it offers. With respect to Figure 2, in condition A the firm must visit seven demand areas to survive, while in condition B the firm must relocate only three times, and in C the firm is able to remain fixed. Note that the consumer's willingness to travel has not changed--the radius of each local demand area can remain the same. But the families in each place may buy more goods in each successive condition; more

families may settle in each place; the trading firm's costs may decline; or its notion of an acceptable minimum income may decrease; any of these changes can influence the mobility of firms. Thus Stine's model describes the conditions for the existence of trading firms who are able to stay in business full-time by offering part-time services to more than one local demand area.

Periodicity of Demand

Mobility is related to the periodicity of demand for merchandise. The need for different goods varies with time: for example the period for food is short, either daily or weekly; while the demand cycle for clothing is seasonal; and that for durables such as tools and utensils is annual or longer. In all cases, since fixed stores are usually open for most of the time (usually closing only overnight) little constraint is placed on the consumers' purchasing schedule. In periodic marketing goods are not available in a place for a good part of the time, causing the demand to be "saved up" during periods when the vendors are absent. This retaining and condensing of the ongoing process of economic demand into a periodic process of need satisfaction is referred to by Stine in the phrase: "The consumer, by submitting the discipline of time is able to escape the discipline of space" (1962:70). From the point of view of the vendor, it is his relative monopoly which allows him to "enforce" this discipline and so achieve a high sales income per day. The potential demand for goods per time-unit (defined as the quantity of goods that would be bought if they were offered continuously) is condensed into an actual

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sales period of a fraction of the time. This allows the seller to do
something else--either travel to another selling area or go into
another occupation in the remaining time.

Thus both part-time and full-time periodic traders are explain-
able as attempts to keep income above a threshold per time-unit. Rev-
enue is increased by the condensation of economic exchange into shorter
time periods. The ability to condense sales is usually due to monop-
olistic competition, while the impetus for periodism is a function of
low demand densities, as well be shown below.

Mobile Retailing in the Demand Area of Fixed Stores

There are various conditions under which mobile retailers can
coexist with fixed stores. These can be summarized as conditions of
different goods and different demands.

1. Different Goods. If the mobile retailer offers services that
fixed stores do not offer, he is in effect changing the nature of the
goods he is selling. It is common in cities for peddlers to go door-
to-door in ghetto areas, offering things for sale that are commonly
offered in stores within commuting distance (cf. Caplovits, 1967). The
difference is that the peddlers offer credit to people to whom the stores
deny it. Such credit costs extra, since the default rate is presum-
ably higher, and thus the final price is frequently higher from ped-
dlers than from fixed stores. In addition peddlers can personalize
the goods by "preselecting" them to match the already-known tastes of
the consumer. Here the higher price is due to the increased labor-
per-unit of the commodity instead of to a higher credit risk. This

latter sort of peddler is commonly found in wealthy neighborhoods that are adjacent to very poor ones, where the poor neighborhoods define the very low opportunity cost of labor necessary to insure a supply of urban peddlers.

2. Different Demands. Some consumers will always be found in special demand circumstances, where their schedule of wants is changed from its normal condition. For example, in times of sickness in the family, the opportunity cost of time spent away from the household (i.e., away from the patient) rises above the normal opportunity cost of such time. What this does is revise one's expectations of the value of goods to where the convenience of having goods delivered to the house (i.e., the saving in time spent away from the house) outweighs the additional monetary cost of such deliveries. In addition, the normal distribution of buying practices insures that some households will exist in a neighborhood where the members will value the delivery to the house of goods more than the additional price, and buy from peddlers. In modern societies, this function is taken over by catalog selling, and the cost is not so much an increased price as a delay in the time between the purchase decision and the delivery of the goods and a loss in the precision of choice, since decisions must be made from printed descriptions of goods rather than from actual observation. Still, the niche exists in modern cities for itinerant peddlers, since retail vegetable trucks are observable from time to time.

In summary, periodic retailing is a viable economic response to varying conditions of demand and opportunity costs. Hay rightfully cautions, however, that "the existence of periodic marketing is a

necessary, but not sufficient condition for the existence of <u>periodic</u>
<u>markets</u>. . .it is one step further still to <u>periodic</u> <u>market</u> <u>systems</u>"
(1971:401). The concepts mentioned above do not explicity explain
the grouping of traders in market places, although Stine mistakenly
claimed they did. Webber & Symanski give some of the logical condi-
tions for agglomeration, but their treatment suffers for ignoring the
evolution of economic functions in a region.

In the next section I will discuss periodic retailing in the con-
text of the economiç development of the area, to illustrate its im-
portance in a middle stage of the development of market systems. Fol-
lowing that I describe a less abstract model of the demand for goods
and the supply of traders in such a stage of regional development.

Stages in the Development of Periodic Trading Systems

It is important to distinguish three periods in the development
of regional systems of exchange: (1) an uncentralized stage, (2) a
centralized stage without rural market places and (3) a centralized
stage with rural market places. The lack of attention paid by previous
discussions of the topic to these distinctions has weakened the em-
pirical validity of their results. For example, Stine formulated a
model of trading applicable to independent mobile trading firms, but
mistakenly claimed it described firms grouped in periodic market
places. Webber and Symanski theorized about firms agglomerating in
periodic market places in a rural hinterland, but completely neglected
to consider the effects of the prior existence of a central town in
such a region.

I should note that the evolutionary sequence implied by the stages is neither ubiquitious nor unidirectional, as the stages are conceived of as functional rather than genetic relationships. Thus while the usual sequence in general economic history is that itinerantism precedes fixed establishments, given the proper conditions the reverse sequence may be observed. Benedict (1972), for example, describes fixed specialists in some Turkish towns reverting to itinerantism as demand for their services decreased because of the vigorous development of competing market centers in the region. Benedict is noteworthy precisely because he presents the exception that proves the rule, however.

(1) The first stage is of multiple communities in dyadic, or reciprocal, exchange. It would be most typical of tribal societies, and is represented by Malinowski's ethnography of the Kula ring and its allied exchange systems (1922), or the Highland New Guinea salt trade as described by Godelier (1972). A limited intercommunity exchange is certainly important in such societies, and some individuals may spend so much time at it to merit the description of (part-time) specialists, but the relative absence of economic and political differentiation between communities and the extreme costliness (including the potential loss of life) of transport limits the scope for exchange.

(2) The second stage exists when the region develops a central place which services and controls certain economic and political functions. The stage is defined by the existence of two types of economic community: rural farm villages and a central manufacturing distributing town. The town is the source, through manufacture or import,

of non-farm goods that are considered essential by the farm population. The region itself is not isolated, but is an appendage of a larger system. This stage is descriptive of regions in present-day underdeveloped societies. The town also consumes a significant quantity of farm goods, and provides the location and skilled services necessary for arbitraging differences in farm production. Therefore a true functional integration exists in the region. Intercommunity exchange (between farming villages) occurs within the town and also in the far hinterlands through the services of traveling specialists based in the center, since the costs of transportation for farmers is too high and the demand density in the far areas too low to support fixed supply firms or even periodic market places. This is a key stage in the development of the region because the traders are capable of stimulating farm demand for untraditional goods as well as the farm supply of consumables for the town.

(3) The third stage evolves out of the second when some of the rural villages become the sites of periodic markets. This occurs as a consequence of increases in demand intensity and decreases in the costs of transportation for farmers, relative to the opportunity costs of farm-work not done while they are traveling.

There seem to have been two main lines of development for such multi-level systems of central places. One type is described in G.W. Skinner's study of the Chinese rural marketing system (1964, 1965). Here periodic markets form the structure of an integrated system of differentiated central places which serve to redistribute goods produced in specialist areas to each other. Goods produced in local

areas are redistributed throughout the system, passing to and through higher level markets (in larger communities) and having the capability of eventually reaching final consumption in other local farming communities. This sort of system integrates the region by facilitating the development of economic specialization, with the attendant increases in productivity that specialization implies. The key elements are that the income deriving from the central places' advantageous positions with respect to the flow of goods are reinvested in the same political-economic system they are derived from, and that goods are exchanged horizontally (between communities of similar functional level in the hierarchy) through vertical flows (passing through higher level markets). Thus a small farming village can feel free to specialize in tomatoes since it will obtain its staple grain from another small agricultural village. This allows each village to increase its production through specialization while the systematic reinvestment of profits allows increased production through economic development: i.e., the investment of profits in communications systems or in the construction of differently-scaled economic activities such as manufacture, facilitates political integration in the region, which then increases the investments, all in a complex feedback system. This seems to have been the pattern of development in the industrial countries (cf Berry, 1967).

The second line of development consists of the same multi-leveled hierarchical structure and differentiation of economic function as the first, but with vastly different consequences for the development of the region. Here the central places serve as conduits for the upwards

flow of farm goods and the downwards flow of manufactured and imported goods, but not for the <u>downwards</u> flow of farm goods. It is in this sense that a local market for horizontal exchange of farm goods will be an isolated system. Thus villages cannot specialize too heavily in any non-subsistence population, since the farm goods that they do not produce will not be forthcoming from the market system. In addition, the entire regional system is an appendage to a larger national or international system. The key element here is that the lack of independence allows the investment of profits from trade in other national or international systems. This alienation of wealth impedes the development of subsidiary support systems of education, communications and transportation which would facilitate economic development in the original region. In addition, the dominance of import-export channels permits the introduction of manufactured items from more developed places which are cheaper and better than locally manufactured products. This could, of course, be a description of a beneficial sort of economic differentiation of function, if the benefits of investment returned to the originating system. But, for example, when part of the profits from trade in India were invested in the British educational system, the resulting increase in the productivity of British workingmen served only to further develop the British economy, and make British goods even more competitive. The continued introduction of these goods into India then served only to further squelch any local development. This sort of market structure has been termed "dendritic" by Johnson (1970) and is well described for Guatemala by Smith (1972a, 1972b).

In the following discussion I am concerned with the second stage of development where the rural communities are serviced by traveling traders from a central place instead of local periodic markets. It may be understood as a miniature version of the dendritic type of system, since the central town is usually a hinterland outpost of the national economic system. This stage is the least described in the literature, is best fitted by Stine's sort of formulation and is the one I am most familiar with. It is crucial to the future development of the region, since the itinerant peddlers facilitate the continued advancement of the frontier (cf. Neumark 1957 for example, for a description of the pivotal role of peddlers along the South African frontier).

When economic differentiation develops to the point where a central place exists, any discussion of commercial trade must take the effects of the central town into account. The main effect is that a "halo" of monopolization of sales by the town's grouped traders exists, based on the attractiveness of the agglomeration of sellers noted by Webber and Symanski (pp. 221-225), and the decrease in demand that occurs with the increase in distance from the center. Thus the maximum range for goods is "stretched" close to the center by the association of that good with other attractions that the center possesses (or the cost of transporting the good to the buyer's home can be seen as being spread across many goods on a multiple-objective trip, thus making the real cost of the good at any distance cheaper than if the good were purchased alone). (cf, also, Parr and Denike, 1970:977).

This sort of centralized region can be visualized as a series of concentric demand zones surrounding the central town, as in Figure 3. Here the central zone (A) possesses the largest demand density due to the positive association of population density and commercialization with closeness to the center and the negative association of transport efficiency with centrality. Since the sellers located in the city offer, in effect, all of the services of the town in addition to their own wares, the population of this zone will buy and sell only at the center. The ideal minimum range of a lightly-capitalized trading firm will be relatively small due to the dense demand, while the maximum range coincides with the size of the zone itself, by definition, since all or most purchases occur in the center. Here the competition from heavily-capitalized fixed stores increases the firm's real minimum range to the point where it is not possible to trade in this zone at all.

The second zone (B) is defined by the interaction of several parameters: population density and commercialization, which decrease, and transport costs, which increase as distance from the center increases; the degree of monopolization of supply that the mobile firm possesses at any distance; and its threshold income. Population density, commercialization, and transport costs can be combined into a parameter of economic demand per unit area (Figure 4). This falls with distance from the center, meaning that the minimum range of a trading firm increases while the maximum range decreases. The traveling sellers' increased monopolization of supply can also serve to increase the maximum range and decrease his minimum range. All of

these factors interact to produce a daily income, which is the significant variable from the peddlers' point of view. Zone B, the zone of viable commerce for periodic traders, is defined as the distance from the center where the daily income is above the threshold. Zone C is a hinterland where demand is too weak and transport too difficult to support even itinerants. Historically the zones expand outwards from the center, radiating across the landscape as the region develops economically, although as noted by Benedict (1972) this trend can be complicated by the development of competing centers.

Itinerant peddlers are thus interstitial operators, coordinating and uniting center with hinterland. As the region develops, commercialization, density, and transport advance outward from the center, and the middle zone of viable long-distance peddling radiates across the landscape. The appearance of the new role of market-trade allows the itinerants the choice of settling down as fixed store-keepers in an old selling location; converting to periodic marketers in the old areas; or continuing as itinerant peddlers in the new frontier zone. Thus the success of the frontier operators in joining new areas to an old society brings changed conditions under which they must mutate or migrate.

It is interesting to note that some frontier itinerants may continue peddling on the borders of developed local-systems. Here the costs will be highest for border consumers, and the same factors as make town peddling viable can operate to make rural peddling possible. Peddlers who buy farm goods as well as sell urban goods can even integrate disparate local-systems. They may be thought of as heavy

grease which allows ill-meshed local-system "gears" to smoothly interact. Thus such peddlers can again be seen as facilitating the eventual development of an integrated system which inexorably eliminates their economic niche.

Given this basic characterization of the region, the determinants of the demand for goods and of the supply of goods (or "supply of suppliers") can be investigated.

The Demand for Goods

Commercialization of the rural families varies inversely with distance from the center. Those families close to the town consume relatively little of their own production, and produce relatively little of their total consumption. At the other extreme, families in the most distant zones are almost completely subsistence oriented, and have little use or demand for a wide range of purchased goods. In the middle, in the zone of viable periodic trading, are families who produce their basic subsistence food and some additional farm goods for sale (either animals such as poultry or pigs, or specialty crops such as coffee or tobacco) but who purchase items like cloth, clothing, hardware, pots and pans, and other manufactured goods of obvious utility. In the early temporal stages of the establishment of this sort of economic zone in an area the list of items demanded by farm households would be small; however the progression from subsistence-independence to market-dependence seems to have been ubiquitous and inexorable (reversed only in times of disaster when the market structure breaks down).

The total demand for manufactured goods is thus linked to the degree of dependence on the market of the consuming family and its wealth. As Stine pointed out, inelastic demand would tend to create larger maximum ranges and elastic demand smaller ones. But the demand for the sorts of goods the periodic trader would supply in this type of environment has, I believe, some special characteristics.

Demand is almost certainly income-elastic, both seasonally and in the long run. The hungry, pre-harvest season is usually a time of minimal purchases limited to goods of absolute necessity. The post-harvest season is then the time of expanded demand for goods. The quantity of goods sold per week or month is not constant throughout the year but is a function of the agricultural cycle. Over the long run, with increasing transport effeciency and commercialization of the region, money incomes will rise and with the total quantity of goods purchased per unit area.[2]

While the income-elasticity of demand is elastic over annual and longer periods, the price-elasticity of demand probably varies in elasticity as the real income of the consumers changes. For poor consumers, there is reason to believe that their demand for clothing and hardware would be price-inelastic. Consider a family which has a small quantity of income to dispose of in each time period but a large number of needs--a poor family. Each expenditure must be allocated to the need that is most pressing at that time, so the household "juggles" its purchases, spending capital on items only when their possession is absolutely necessary, and ignoring other needs which, while real, are not as vitally important at that time. Thus, if the household

has to choose between buying shoes for one member, a shirt for another, and food for supper, assuming equal costs for each, the item most cognitively pressing will be bought and the others put off until another time. If the person lacking a shirt must present himself in a situation requiring the dignity of proper clothing, his need may outweigh the family's need for supper that day. If this model is true, then the actual price at the time of purchase would count for relatively less than the absolute need for the object. The family is a prisoner to its own poverty, paradoxically paying more for goods because of its inability to delay purchases until more favorable terms are available. This condition has been described for the urban poor in a book titled "The Poor Pay More" (Caplovits, 1967), and seems likely to exist for poor rural peasantry as well.

The demand for goods by farm families is related (in a dependent way) to the long run economic development of the area and to the annual agricultural cycle, and in a circular way to the periodicity with which goods are offered for sale. Assume that the economic demand at any time is a function of the household's real need for goods and its possession of disposable income (since the lack of cash savings is customary among peasants). Assume also that the real need for goods is relatively constant throughout the year, but that income is tied to the agricultural cycle. (In actuality the demand for some goods, like clothing, is a function of the ceremonial cycle, which in turn is dependent on the agricultural cycle.) For simplicity assume that income is derived from one basic crop harvested once a year. Then the economic demand, or quantity of goods that would be bought if they

were offered for sale, can be diagramed as in Figure 5. There are
three curves there: disposable income (the dotted line), real need
(the horizontal), and economic demand (the solid line). Note that
purchases in excess of need exist in times of higher income to make
up for purchases below need in bad times. Thus demand is high in the
good, post harvest seasons and low in the bad, pre-harvest seasons.

If goods are offered discontinuously on some regular schedule,
then the sales that would occur if satisfactory goods were offered
are chartered by the continuous line and shaded areas in Figure 6,
where they are distinguished from potential sales (demand) which are
drawn by a dotted line. At t1, the trading firm has completed a
period of selling and actual and potential sales are near zero. In
the period between t1 and t2 demand (potential sales) increases
steadily, rising above the level of sales that would occur if goods
were offered continuously, to make up for the period when goods will
not be offered (just as the potential sales rise above real need to
make up for the time when lack of income prevents them from reaching
that level). In between t1 and t2 the firm enters and leaves several
other villages and returns home in order to replenish supplies and
and rest. At t2 the trading firm locates in the village again and
offers merchandise for sale. Actual sales may be less than the maxi-
mum in the first few days because the farm households are not con-
stantly in possession of cash. They must activate exchanges, call in
debts, and do the things necessary to obtain the cash when the trader
arrives on the scene. The trader himself is not in a position to sell

efficiently in the first few days as he must unpack, set up in the
new place, and care for his animals. In a short time sales reach the
potential level, assuming the stock presented is acceptable in quality
and quantity (which may not be the case near the end of the trip), and
then rapidly decline. It is clear here how the periodicity of supply
increases the sales per day by concentrating a longer time-span of
real demand into a short time-span of actual purchases. This is an
inconvenience for consumers, who must save and plan ahead, or delay
a purchase, in response to the vendor's periodism. The only way the
seller can enforce this "discipline," (cf. Stine, 1962) is through
possession of a relative monopoly on sales. Consumers wait for him
to arrive because he is the only one who will arive.[3]

The basic determinant of an itinerant vendor's trip length is a
complex function of the time it takes to travel from the central town
to the rural selling area; the time it takes to exhaust demand in the
average consuming community; the time it takes to travel between in-
dependent consumer settlements; and the period beyond which the vendor
will want to remain away from his customers (because of the danger of
competing traders entering the route and establishing a niche for
themselves). Travel difficulties which are seasonal in areas of dirt
trails and wet-dry climates, can shorten or prolong a standard trip
length. In Southern Mexico, for example, traders report traveling
in mud so deep that it reaches their horse's bellies. In these situ-
ations the difficulty of doing every simple task, such as cooking
meals or catching animals who have been pastured for the night is

magnified immensely, and consequently trips are longer and fewer trips are taken. The relation between the sizes of the maximum and minimum ranges can also affect the duration of the trip. Similar ranges make for fewer moves between periods of selling, which allow shorter trips to be taken, since fewer days are spent in travel. The degree of monopolization of supply that the firm has in each location is important as a determinant of the real maximum range for that firm's goods in that location (as distinct from the hypothetical maximum range at that point which would obtain if the goods were so perfect as to satisfy all demand completely). The more a firm can monopolize sales in a village, the more sales it achieves there and the fewer villages it must visit to achieve its desired income. The cost of traveling affects the decision as to the duration of the trip, when compared with the income attainable at any place. Increased sales income or decreased costs allow the firm to decrease the average trip length while keeping total income constant.

The mobile firm will try to manipulate its trip length so as to achieve high daily sales on each trip. This assumes that increases in capitalization are not too limiting a factor, so that the length-of-trip is a strategic-economic variable (for itinerant peddlers in areas without motor roads, the main item of invested capital is the pack animal, since most goods can be obtained on credit. cf. Plattner, n.d.a.). The firm will prefer to visit rural villages as infrequently as possible, other things being equal, so that the sales that occur represent the longest possible period of demand. Two factors militate

against infrequent visits, however: (1) the existence of competing
sellers in the region implies that the longer a village is left in a
state of high demand the greater is the likelihood that another seller
will visit there and establish an economic niche. Peddler's routes
are highly personalized because of the large amount of specific knowl-
edge required to trade in a peasant area, but the possibility exists
that competing traders will visit new villages along their traditional
routes. (2) In the stage of regional economic development we are con-
sidering the potential demand for non-farm goods by hinterland peasants
is low and weak--implying that if not stimulated by periodic sales it
will not remain asymptotic at a high level but will actually decline
with time. Thus, if a family consumes 100 units of goods from a ped-
dler who visits them 8 times a year, they may consume only 70 units
if he were to visit twice a year. Increases in daily sales attribut-
able to the collapsing of longer periods of demand into shorter periods
of sales must be traded off against decreases in the total quantity
of goods sold per year at that place.

The Supply of Traders

In the previous section the focus was on the demand for goods.
This section deals with the determinants of the minimum ranges of
itinerant trading firms. I assume that central locations gives an
overwhelming advantage to town-based mobile traders over rural-based
traders, since the wholesale supply points are all in the town (cf.
Plattner, n.d.a.; Smith, 1972a). Thus the socio-economic structure
of the town defines the alternative opportunities open to trading

firms, and ultimately the size of their minimum acceptable incomes. Traditional towns in peasant regions have special characteristics in their occupational structures connected with recruitment of labor into specialized trades (cf. Sjoberg, 1955). In general, there are four methods of training personnel: (1) the family can educate its children (or other kinsmen) into its specialization. Thus children rarely confront the decision of which occupation to enter, since one is learned through the natural process of family socialization. (2) Individual specialists can contract independently for apprentices who they frequently take into their households as quasi-adopted children. (3) Specialized schools can provide the training. And (4) the occupations themselves can train people as adults while providing an income (this is similar to an apprenticeship program, but for independently housed adults). The last two methods are used in more developed countries, the first by tribal communities, and the second is mainly associated with peasant societies.

The distinction I want to draw is between the household-centered and the extra-household centered modes of training (i.e., between the first two and the second two types). Household-based training procedures impede the flow of labor between occupations, in effect demanding that only those who begin training as juveniles can learn enough to be adult practitioners. Since special skills and knowledge are needed in most occupations which yield more than subsistence incomes, those without training and without capital must work at extremely low-paid unskilled jobs such as servant, field-hand or construction laborer.

This means that the person who is unable to practice the occupation that he is specialized in, usually because of a loss of working capital, will be forced to work at an unskilled job which pays far less than he is capable of earning. In technical terms the market for labor is not finely arbitraged and there is much disguised unemployment, people working at low paying unskilled jobs who are capable of working at high-paying skilled occupations (cf. Robinson, 1936).

In addition the investment of capital in an occupation is frequently tied to the investment of labor. Since banks, post-office savings programs, etc. do not provide a widely available range of services in peasant societies, the opportunities to invest capital (independently of one's labor) are limited. Money lending, at high rates of interest, is always available, but in the absence of a developed and available system of courts and legal services the potential lender must rely upon his personal qualities or personal relationship with the debtor to recover the debt. But not everyone has the prestige, political power, or physical aspect to insure payment. Thus moneylending is not a universally available means of investing capital. In fact, the most usual means of capital investment is in land or in one's occupation.

In sum, the attractions of any particular occupation are that (1) the alternatives are usually extremely low paid, and (2) the occupation offers a means to achieve a return on one's own capital. With respect to trade, it means that traders will work for seemingly low incomes because they are not qualified for skilled alternatives and the unskilled ones are even lower paid. These factors combine to

decrease minimum ranges, which serves to increase the extent of the ring of viable periodic trading territory surrounding the town. Thus it is interesting to note that the occupational structure of the town creates conditions which increase the town's sphere of hegemony over the region--although at first the two variables may seem unrelated.

Conclusion

A model of itinerant retailing in an underdeveloped region without rural periodic markets has been presented. This stage of regional development is important as it sets the background for the future development of complex periodic market systems. Stine's concepts of maximum and minimum ranges are used, but the model is placed firmly in a description of the level of regional economic development. Hay's suggestion of the importance of temporal periodicity, and Webber and Symanski's demonstration of the economic power of agglomerated sellers, are developed in this context. Economic development is seen as radiating from a central trading-manufacturing-importing-exporting town, and itinerant peddlers are described as functioning in a middle zone of development in the region--far enough from the town so that consumers prefer to deal with itinerants rather than traveling to the center themselves, but not so far that consumers are extremely subsistence oriented and do not demand their goods.

The essential features of the demand and supply of such peddlers' services are that:

1) Demand is near zero close to the center, due to competition from already established, heavily capitalized fixed stores. Demand rises in a zone far enough from the center such that transport costs

deter farmers from making the trip. Beyond this zone demand may fall below the firm's threshold, if the region extends to a hinterland of low enough density of demand and high enough costs of transport.

2) Within the zone of viable trading activity, Stine's central-place ideas about maximum and minimum ranges are applicable.

3) The juggling of household resources by poor people serves to extend or increase the maximum range of goods.

4) The occupational structure of pre-industrial towns serves to keep the minimum range of the firm relatively small.

5) Periodic trading is best analyzed as an attempt to convert a monopolistic hold over supply into a concentration of the periodism of demand, which is equivalent to the supply firm to an increase in the density of demand.

NOTES

1. My own empirical familiarity with periodic trading systems is
   based on 20 months of field work in a community of itinerant
   cloth peddlers in a small central town in Southeastern Mexico,
   and some less intensive observations of the periodic marketing
   systems of the Oaxaca valley in Mexico (for two months) and mid-
   western highland Guatemala (for ten months). This paper sup-
   plements previous articles in which I interpreted a particular
   sample of peddlers' economic behavior (Plattner, n.d.a.) and
   described a computer simulation game of itinerant peddling
   (Plattner, n.d.b.).

2. Note that this says nothing about real income, wealth, or satis-
   faction. My impression for the area of Mexico that I have
   studied is that the quality of life deteriorated for some groups
   and probably became better for others as they became more tied
   into the complex national social structure. The difference is
   in the particular niche each community is able to exploit in the
   expanded economy. Those who can capture some sort of trade or
   who exploit new opportunities for obtaining farmland can do well.
   Cancian, 1972 gives a good example of agricultural innovation in
   this area.

3. Or, he may be the only one who will sell on credit, or provide
   special services such as consignment buying and carrying items
   into the town for repair, etc.

Figure 1. Price, Demand, and Distance from a Central Point
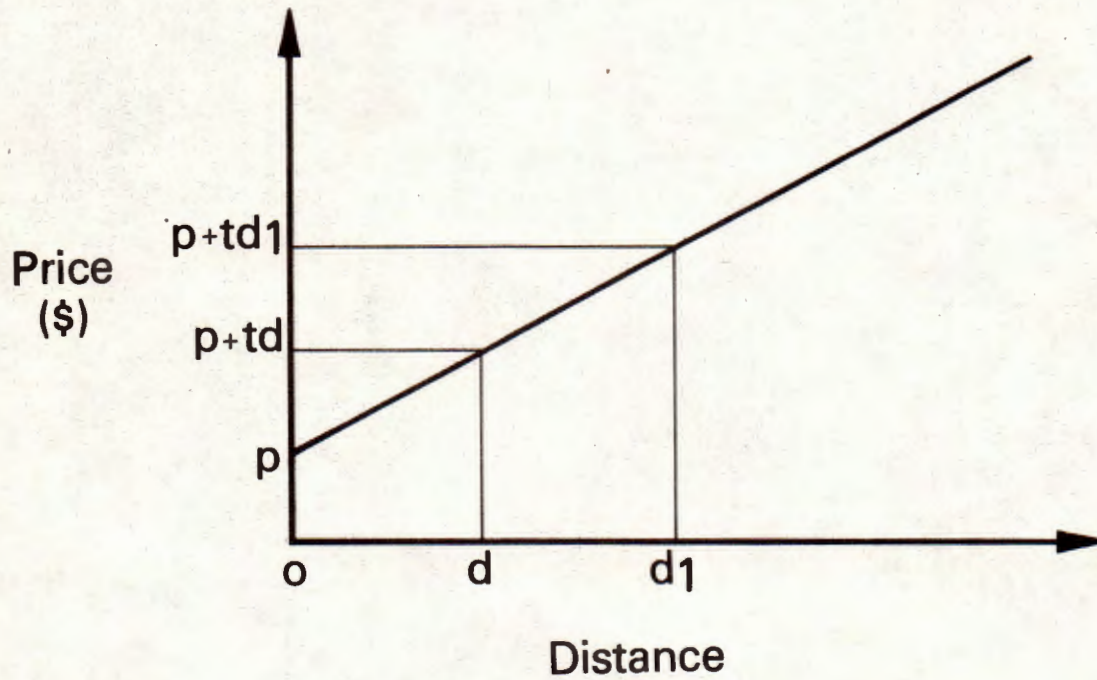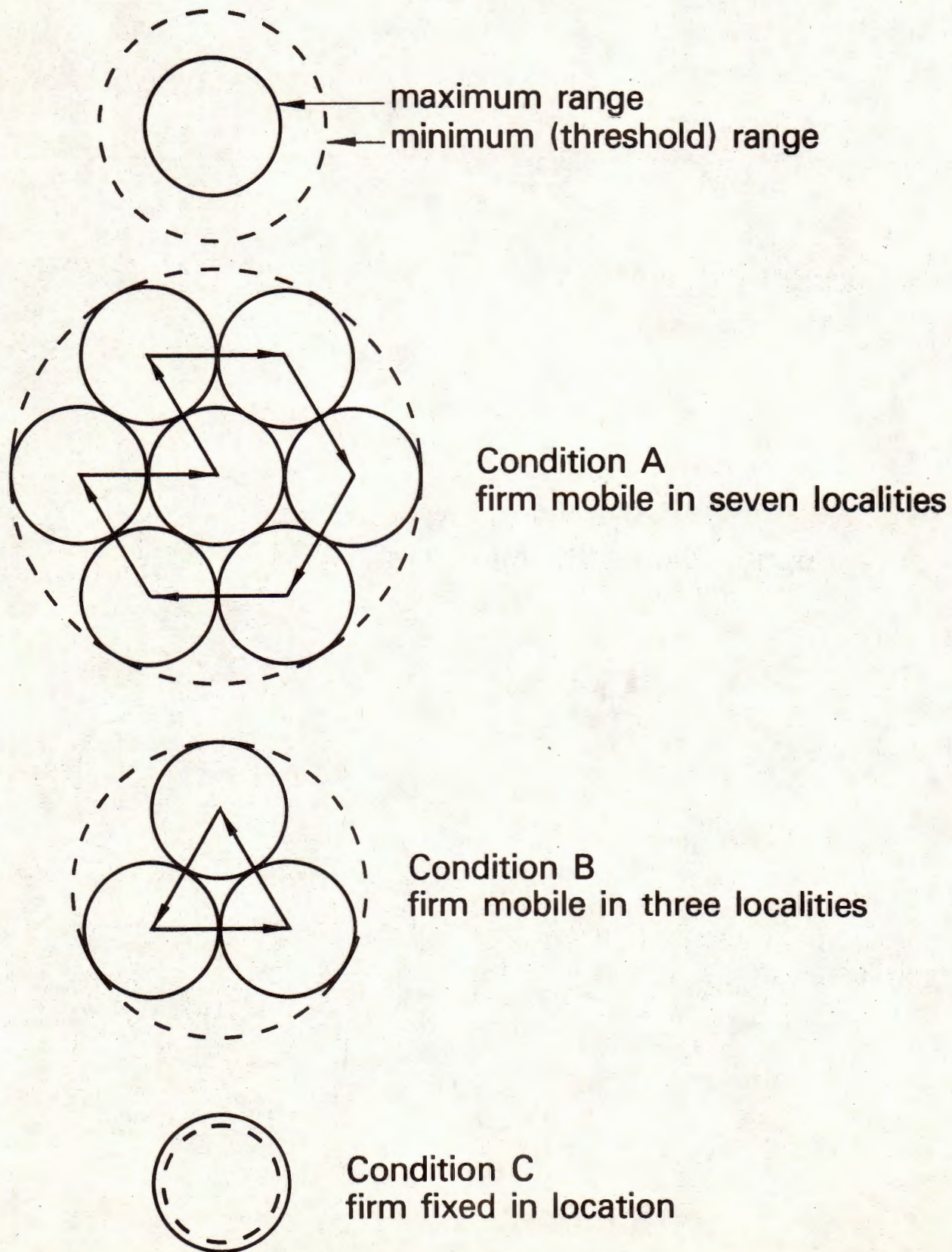

1a. Price as a function of distance.
(t = transport rate)
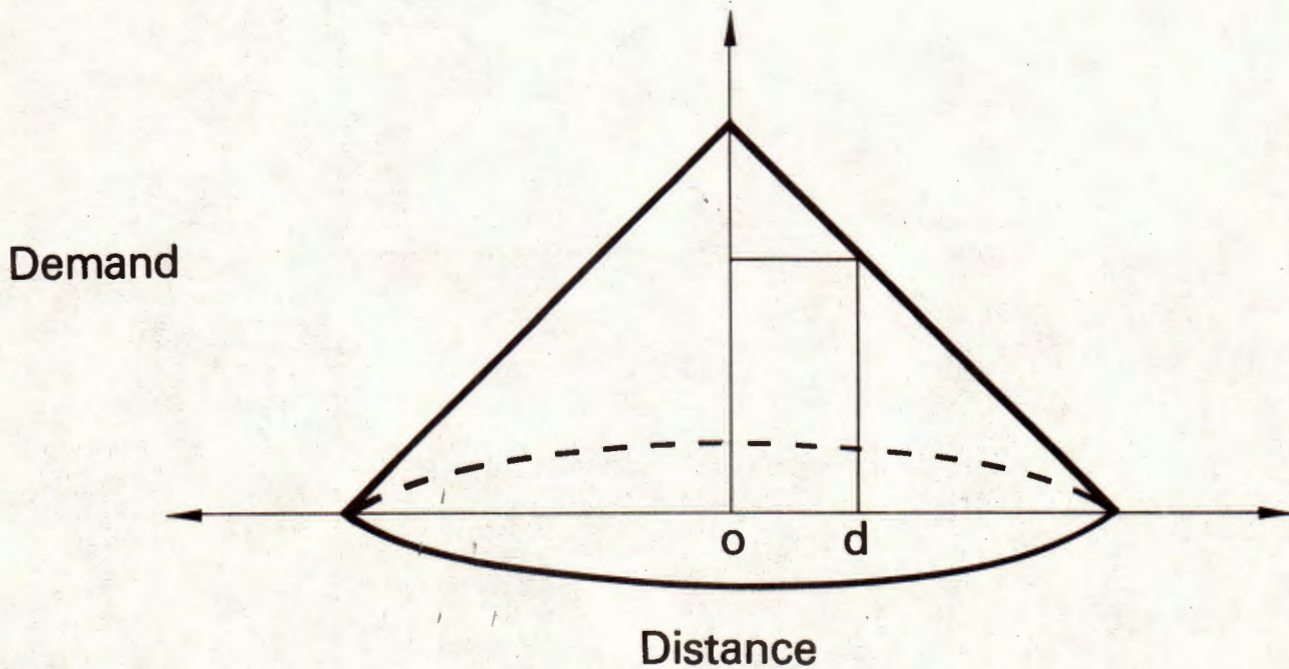
1b. Demand as a function of distance: the spatial demand cone.

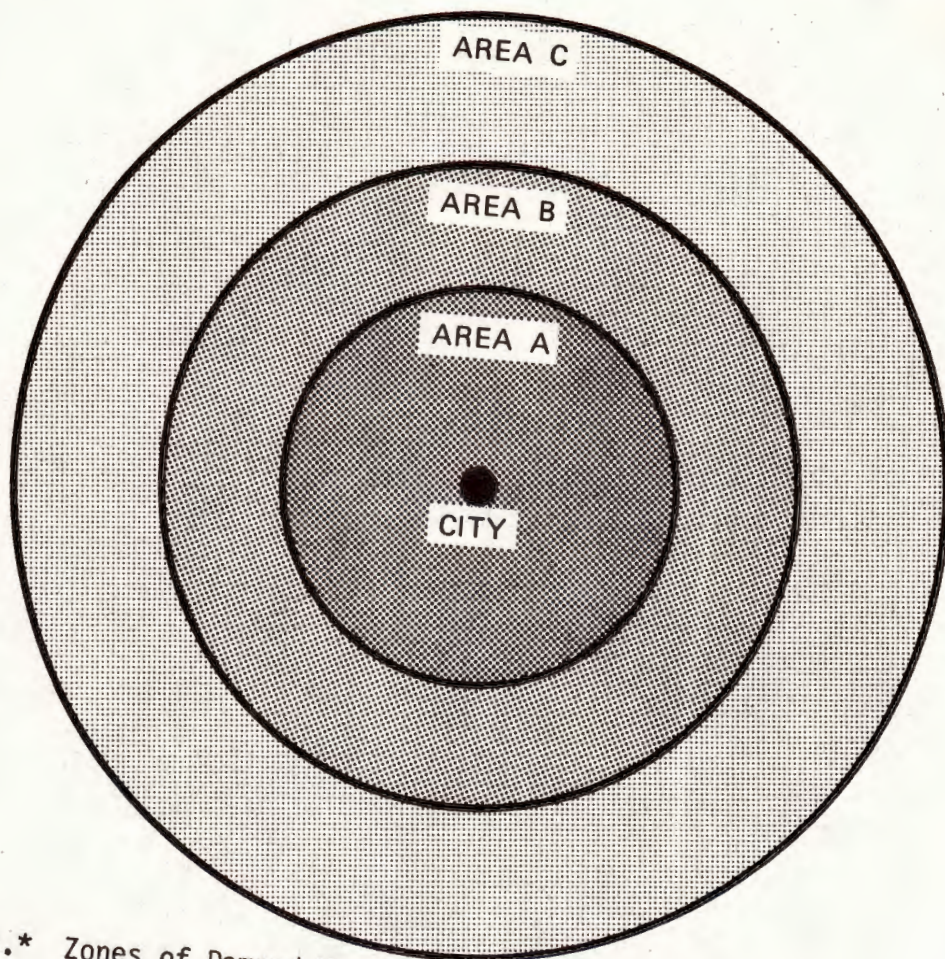# Figure 2. Maximum and Minimum Ranges and Mobility of a Firm

maximum range
minimum (threshold) range

Condition A
firm mobile in seven localities

Condition B
firm mobile in three localities

Condition C
firm fixed in location

Figure 3.* Zones of Demand Density in an Underdeveloped Region
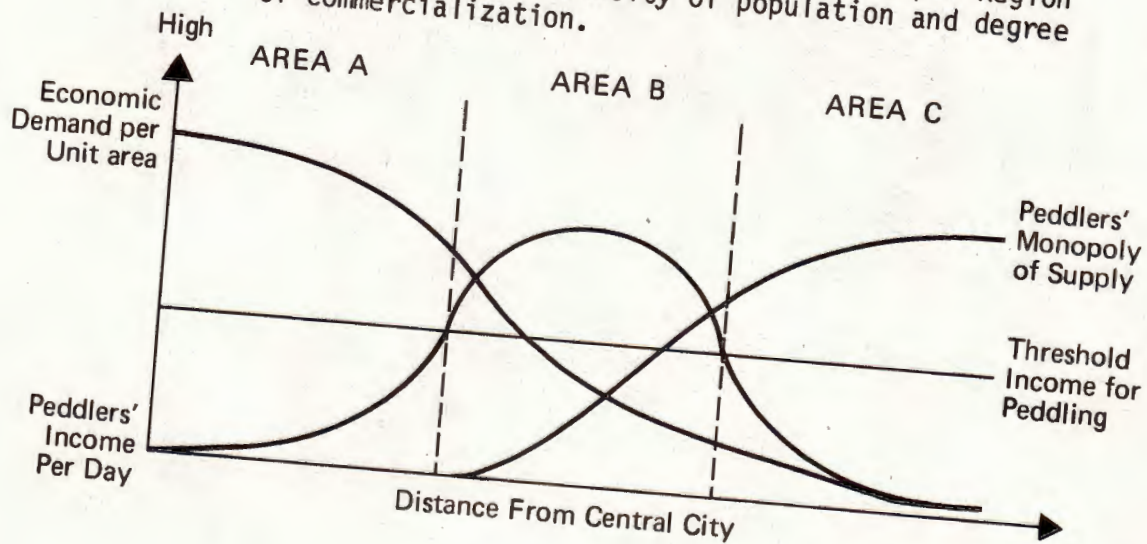*Shading indicates density of population and degree
of commercialization.

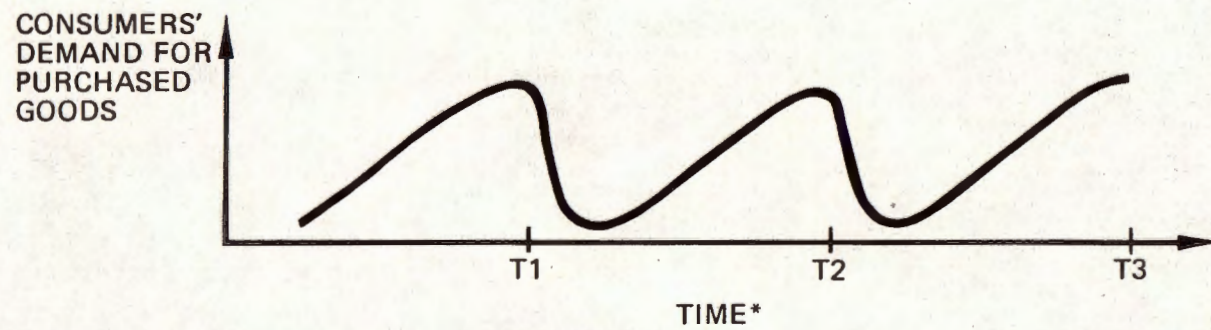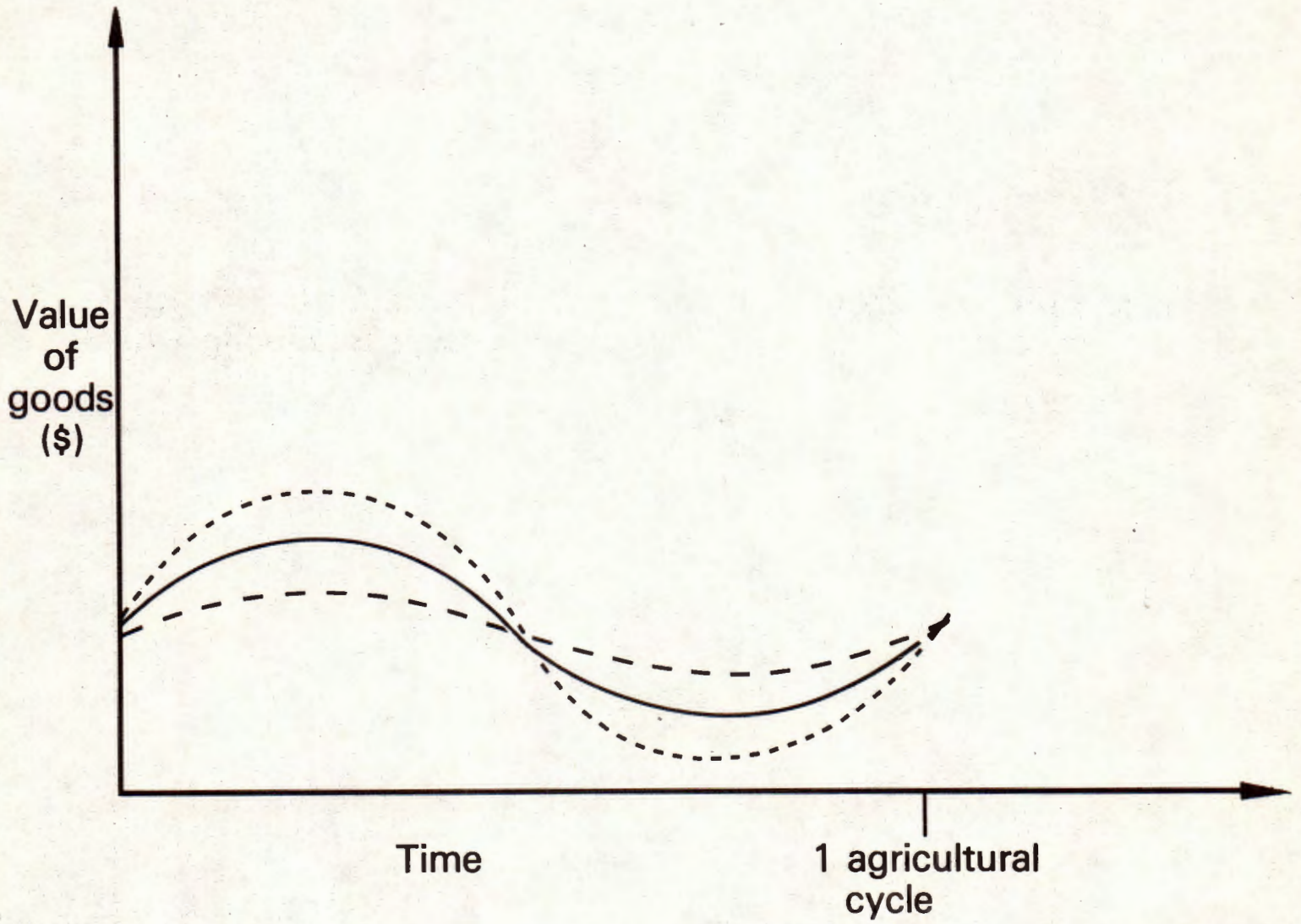Figure 4. Income of Itinerant Peddlers and Distance from Central Town

CONSUMERS' DEMAND FOR PURCHASED GOODS

TIME*

T1   T2   T3

*T1,T2,T3, denote successive arrivals of the peddler.
Figure 4. Consumers' Demand for Purchased Goods as a Function of the Peddler's Arrival Time.

Figure 5. Annual variation in Income, Needs, and Purchases in an Agricultural Village.

- - - - Income
——— Purchases (Observed Demand)
— — Real Needs

Figure 6. Demand for Goods and Actual Sales in One Place
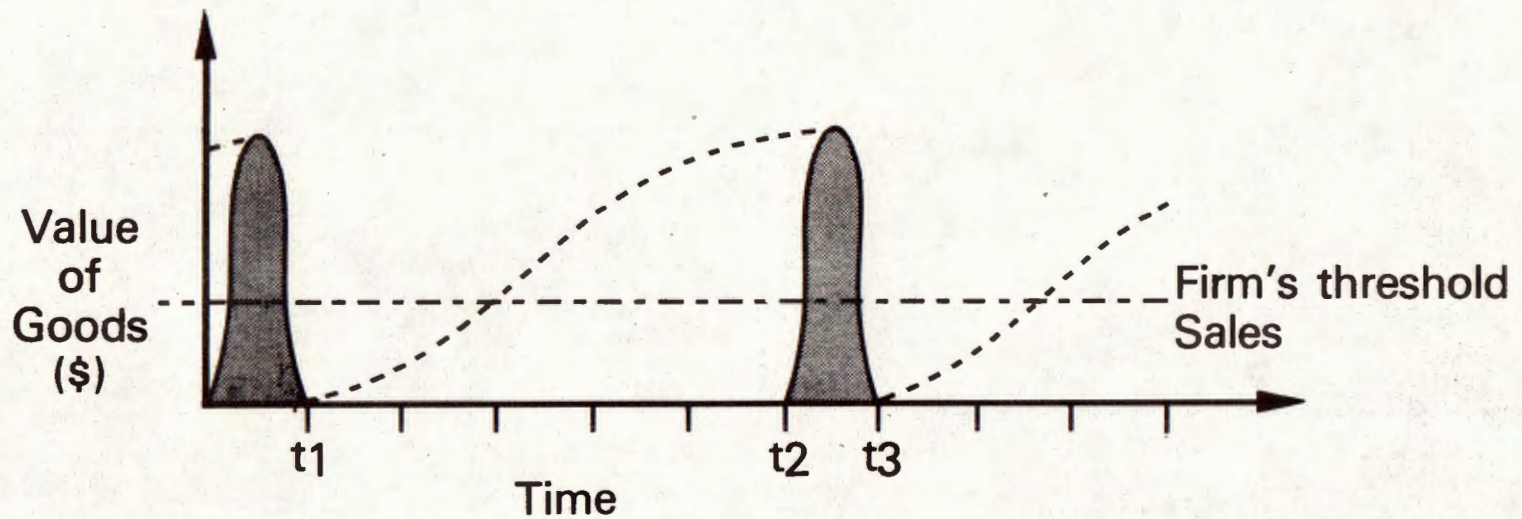
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