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Resale Price Maintenance and Consumer
Welfare: A Graphical Note

Thomas S. Ulen

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Resale Price Maintenance and Consumer Welfare:
A Graphical Note

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invaluable assistance in preparing this research.

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Abstract

The relationship between resale price maintenance and consumer welfare is explored using the graphical tools of consumer choice theory. Even if it is assumed that resale price maintenance is introduced for a pro-competitive end--e.g., manufacturers wish to induce retailers to undertake non-price intrabrand competition, it is shown that the effects on consumer welfare are ambiguous.

No one knows quite what to do about resale price maintenance. The courts and the legislatures have swung from a flat rejection of the practice before World War I to its active encouragement in the 1930s and back to complete proscription in the 1970s. Although economists did not come to consider resale price maintenance till rather late in the game, they have also found it difficult to speak with one voice on the practice. There have been passionate defenses of the welfare-enhancing aspects of resale price maintenance and equally passionate denunciations, with neither side commanding a consensus.

This note is an attempt to offer a route out of this thicket of contradictory opinions. But rather than an endorsement of either the welfare-enhancing or welfare-reducing views of resale price maintenance, this route offers a compromise verdict: the effects of resale price maintenance on consumer welfare are ambiguous. To derive this result I make use of the standard indifference curve analysis of consumer choice. I apply that tool to the most favorable theory of the welfare-enhancing aspects of resale price maintenance, namely, the retailer service theory. Briefly stated, that theory argues that manufacturers impose a minimum resale price on distributors in order to encourage distributors to undertake non-price intrabrand competition, especially in the provision of product quality information. Without the contractual specification of a minimum resale price, distributors will be reluctant to provide consumers with product quality information. Each will leave that task to other distributors of the same product in the hope of reaping the benefits of information dissemination without

incurring the costs. In those circumstances there will be an under-provision of product quality information, relative to the social optimum. The introduction of resale price maintenance will induce distributors to increase the amount of product quality information offered.

I show that this increase in product quality information does not necessarily increase consumer welfare. The reason for this is straightforward: resale price maintenance simultaneously lowers the price of product quality information and raises the price of the physical product. It is, therefore, not possible to predict whether this change in the relative price of product and information makes the consumer better off, in the economist's usual sense.

I find, then, that there is no a priori way to resolve the disputes about the effects of resale price maintenance on consumer welfare. The practice may increase welfare in one market and reduce it in another. Only an appeal to the facts in each situation will prove a reliable guide to predicting the relationship between consumer welfare and minimum resale price.

I proceed by first reviewing the Supreme Court's uncertainties and changes of heart about resale price maintenance. These are offered as evidence of the proposition that the law does not know quite what to do about resale price maintenance. Next I briefly review the economic theoretical literature in order to show that economists, too, are not of one mind on this topic. I then justify this practical and theoretical confusion by a graphical analysis of the retailer service theory and offer some concluding remarks.

II.

The ambiguous judicial sentiment toward resale price maintenance may be seen in the Supreme Court's holdings. The Court first spoke on the practice in Dr. Miles Medical Co. v. John D. Park & Sons Co., 220 U.S. 373 (1911). That action was for damages claimed by a drug manufacturer, Dr. Miles, from a wholesaler, John D. Park & Sons Co. Park had procured the manufacturer's drugs by inducing other wholesalers and retailers, who had signed resale price maintenance agreements with Dr. Miles, to sell to him below the minimum price. The Court, in holding that Miles' original agreements violated the Sherman Act, seemed to formulate a per se rule against resale price maintenance.

However, eight years later the Court retreated in United States v. Colgate & Co., 250 U.S. 300 (1919). In that case the majority ruled that it did not violate the Sherman Act for a manufacturer to announce a policy of refusing to deal with retailers who did not comply with his stipulated minimum retail price and to terminate sales to retailers who had not maintained support of the manufacturer's resale price maintenance program. The Court perceived that the practice of asking retailers to adhere to a minimum price could, in the absence of collusion among retailers or manufacturers, entail cost-efficiencies for a manufacturer and that the Court would not interpose itself where this reasonable basis for resale price maintenance existed.

This rule of reason was very sharply restricted forty years later in the Parke, Davis decision.¹ There it was held that agreements between a manufacturer and wholesalers which threatened to terminate

supplies to wholesalers who dealt with non-complying retailers were illegal:

"When the manufacturer's actions, as here, go beyond mere announcement of his policy and the simple refusal to deal, and he employs other means which effect adherence to his resale prices...he has put together a combination in violation of the Sherman Act."²

The Court felt that it was on different ground from that traversed in the Colgate decision, a difference summarized by the word "agreement." The Colgate decision involved a refusal to deal with noncomplying resellers, a refusal not flowing from a prior agreement. Parke, Davis implied that the knowing agreement between a manufacturer and others to terminate if certain conditions in the future were not fulfilled constituted a "contract, combination, or conspiracy" in restraint of trade. This may seem a disingenuous rationale for the Court to have invoked in order to distinguish the two decisions, but an alternative explanation for the seeming vacuity of the Court's grounds for reversal is that it no more understood the competitive effects of resale price maintenance in 1960 than it had in 1911 or 1919. Where arguments on substance were lacking, those on shadow would have to serve.³

III.

Economic theorizing on resale price maintenance reflects the same confusion which has plagued the courts and legislatures.⁴ Two leading theoretical explanations of the practice are the retailer-cartel and manufacturer-cartel theories. In the first, resale price maintenance is seen as having been imposed on manufacturers by colluding retailers. The retailers thus stifle intrabrand competition and jointly maximize

their profits by securing a minimum resale price above the competitive price, which price manufacturers would prefer. In the manufacturer cartel theory, resale price maintenance is seen as a means of aiding colluding manufacturers to realize joint-maximum profits. The agreements remove a manufacturer's incentive to shade the price at which the cartel sells to retailers because the price cut cannot be passed on to the final consumer: the lower price given to the retailer would not evoke a concomitant increase in quantity sold since the retailer cannot cut his price to lure customers away from loyal cartel members, and the manufacturer would simply lose profits. Both of these theories see resale price maintenance as anti-competitive and, therefore, as tending to reduce consumer welfare. However, there are reasons for believing that neither of these theories offers a persuasive explanation of resale price maintenance.⁵

A third theory--the retailer service theory--suggests that resale price maintenance agreements are a means by which manufacturers induce retailers to engage in non-price intrabrand competition.⁶

The principal means of competition fostered by these agreements is pre-sale or point-of-sale services, e.g., the use of specialized display rooms, sales personnel highly knowledgeable about product features, and product demonstration, collectively called "point-of-sale services." The contractual specification of a minimum resale price internalizes, for the retailer, the external benefits provided by his point-of-sale services.⁷ Without such a specification each retailer would attempt to increase his sales and profits by lowering his output price and allowing either another retailer or the consumer to incur the costs of acquiring

product quality information. Under those circumstances very few retailers would provide consumers with information. This result is inefficient if retailers are the lowest cost providers of pre-sale services.

Under resale price maintenance, intrabrand price competition among retailers is constrained. But this in itself does not necessarily mean that the practice is anti-competitive. When price competition is forestalled, retailers will resort to non-price competition in order to increase sales and profits. They may, for example, expand pre-sale services to consumers up to the point where the marginal cost of the last unit of services provided equals the marginal revenue obtained from those services. Excess profits may be dissipated by non-price competition, and, if so, the manufacturer's desired level of point-of-sale service will be established. Retailers should receive no more than a competitive return on their assets.

Just as the previous two theories suggested the anti-competitive aspects of resale price maintenance, the retailer service theory maintains that the practice is consistent with competitive practices and will, therefore, increase consumer welfare. Although the conditions under which this increase will occur have not received much attention,⁸ it has nevertheless been asserted that, since the previous two theories are untenable and the retailer service theory is at least economically plausible, resale price maintenance necessarily increases consumer welfare. I attempt to show in what follows that, even when one accepts the retailer service theory, the effect of resale price maintenance on consumer welfare is uncertain.

Consider a commodity which consumers purchase relatively infrequently and which is sophisticated in the sense that there are numerous aspects of the good over which consumers have differing tastes, e.g., durability, compatibility with other commodities, maintenance requirements, and technical capabilities.⁹ Such commodities are often sold through specialty outlets. Consumers or retailers must expend resources on acquiring information about such a commodity, and, therefore, some relative price prevails between the physical commodity and information about that product's quality. This situation is pictured in figure 1. Along the horizontal axis are measured units of product quality information or point-of-sale services. These units are labeled POSS.¹⁰ Units of the physical commodity are measured along the vertical axis and labeled Q. We may assume that the typical consumer has a well-defined preference ordering over all possible combinations of the physical product and product quality information and that, therefore, the usual convex indifference curves may be defined over these two aspects of the commodity. A budget constraint, AB, reflects the consumer's income and the relative price between physical product and product quality information. If there were no constraints on the provision of point-of-sale services by any retailer, e.g., if all retailers were able to internalize the benefits of the product quality information they distribute, then the typical consumer would maximize his utility subject to his budget constraint by purchasing bundle R, which contains Q_R and $POSS_R$ units of physical product and product quality information.

But this optimum cannot usually be achieved. This is because, as the retailer service theory argues, retailers cannot economically

internalize the benefits of product quality information. In the most extreme case, pictured in figure 2, retailers will offer no point-of-sales services at all so that the typical consumer will, in the absence of alternative supplies of information, have to make do with a corner solution at point A. His utility is lower than it would be if retailers could be persuaded to offer even a small amount of product quality information. Suppose this maximum amount which retailers could economically offer was POSS. The consumer would be better off than he was when no information was available, as indicated by his movement to a higher indifference curve at point S, but still not as well off as he would be if there were no constraint on the retailer's offer of point-of-sale services.

It should also be noted that, where retailers are unable to internalize information's benefits even though they are more efficient providers of information than are consumers, the analysis above suggests the circumstances under which consumers may undertake to provide their own information. Consider figure 3. There I assume the initial situation to be like that in figure 2: retailers offer no point-of-sale services and consumers maximize their utility by reaching indifference curve U_0 at point A. In figure 3 the possibility that consumers may provide their own information arises from the presence of budget line AC. Combinations there represent physical product and consumer-provided product quality information. Because consumers are less efficient than are retailers at providing information, AC reflects the fact that the relative price of product quality information is greater when consumers provide their own information. It is possible that the consumer will

maximize utility along a higher indifference curve, U_1 , at point T along budget line AC. In that case all information is being self-provided with the consumer turning to the retailer only for the physical product. Note finally that as in the previous case depicted in figure 2, the consumer is, at T in figure 3, still not as well off as he was in the unconstrained case of figure 1.

Now we may see how the information of resale price maintenance affects consumer welfare. The key feature of the plan is that by raising the resale price and specifying that that price is a minimum, the manufacturer induces retailers to substitute non-price intrabrand competition for price competition. In terms of the diagrams above the important point is that resale price maintenance alters the budget constraint by simultaneously raising the price of the physical product and lowering the price of retailer-provided product quality information. In figure 4 the original budget constraint facing the consumer, AB, pivots upon the introduction of resale price maintenance to GH.¹¹

And what is the effect on consumer welfare? That depends. Figure 5 summarizes the three possibilities: that the consumer's welfare increases, is left unchanged, and is lowered by the introduction of resale price maintenance. Assume that initially the consumer's budget constraint is AB and that, because of the difficulties in internalizing the benefits of information, retailers are offering a maximum of only $\overline{\text{POSS}}$ by way of product quality information. The typical consumer reaches his highest attainable indifference curve at point α on indifference curve U_0 . He consumes Q_0 units of the physical product and $\overline{\text{POSS}}$ of point-of-sale services.

The situation in which resale price maintenance unambiguously increases consumer welfare is shown along budget line CD. There has been a small increase in the physical product price relative to the decrease in the price of product quality information. The consumer is able to reach a higher indifference curve, U_1 , at point β , where he consumes Q_1 units of physical product and $POSS_1$ units of point-of-sale services.

A second possibility is that the introduction of resale price maintenance leaves consumer welfare unchanged. This occurs along the new budget constraint EF. This is just tangent to the original indifference curve, U_0 , at point γ so that the consumer now consumes Q_2 units of the physical product and $POSS_2$ units of the point-of-sale services. Although the combination of the two aspects of the commodity has altered, the consumer is still at the same utility level.

Lastly, there is the possibility that consumer welfare is reduced by the introduction of resale price maintenance. This arises along budget constraint GB in figure 5, where there has been a large increase in physical product price relative to the lowering of the price of product quality information. The highest attainable combination now places the consumer on a lower indifference curve, U_{-1} , at point δ where he consumes Q_3 units of physical product and $POSS_3$ units of product quality information.

It is not possible, a priori, to predict which of these three results follows the introduction of resale price maintenance for any given commodity. An investigator must look to the particular facts in each case. Additional complications may arise in the course of

determining the effects on consumer welfare of a minimum resale price. I have assumed a particular preference ordering, but it might be that a different distribution over consumers of tastes for product quality information and physical product would affect the predicted results of the introduction of resale price maintenance. The results might also be altered by the presence of a wide dispersion of costs among the retailers who agree with one manufacturer to maintain a minimum retail price. Finally, the behavior of rival manufacturers of a similar product, when combined with all the influences noted above, will be an important determinant of the impact on consumers of resale price maintenance by one manufacturer.

IV.

It has been shown here, using a graphical analysis of consumer choice, that the effects on consumer welfare of resale price maintenance are ambiguous. Depending on the circumstances, the practice can make consumers better off, worse off, or leave their state of well-being unchanged. The source of the ambiguity is that resale price maintenance simultaneously raises the price of the physical product and lowers the price of retailer-supplied product quality information.

This result serves in part to explain the notable lack of consensus among courts, legislatures, and economists regarding resale price maintenance. The current state of affairs is that fair trade laws are proscribed and individual manufacturers' schemes to maintain a minimum resale price are frowned upon as being anti-competitive and, by implication, detrimental to consumer welfare. The analysis pursued here suggests that public policy toward resale price maintenance should be

more circumspect: the practice should be, without further empirical work in a wide variety of cases, neither encouraged nor forbidden. Instead, each individual case will have to withstand careful scrutiny to determine the particular effects on consumer welfare. A more general conclusion on resale price maintenance must wait until future research acquaints us with some more systematic relationship between resale price maintenance, consumer welfare, and various product and market characteristics.

Footnotes

¹362 U.S. 29 (1960).

²Ibid., at 44.

³In a parallel set of cases, U.S. v. General Electric, 272 U.S. 476 (1926), and Simpson v. Union Oil Co., 337 U.S. 13 (1964), the Supreme Court first condoned and then disallowed resale price maintenance affected through a consignment arrangement. In Dr. Miles the Court had invoked the common law rule against restraints on alienation in resolving the issue of whether there was a common law right on the part of a manufacturer to impose a minimum retail price on his goods. The manufacturer, it had been argued, had parted with his title to his goods and with that title had relinquished his right to dictate the terms of sale of his retailers. Although the Court did not rely on the doctrine against unreasonable restraints on alienation in its holding in Dr. Miles, cautious manufacturers may have noted that the Court raised the issue and might return to it later. Thus, some manufacturers, like General Electric, affected resale price maintenance, not through purchase agreements with its retailers, but rather by utilizing a consignment system which made all retailers GE's agents. GE thus distinguished its resale price maintenance scheme from that of Dr. Miles and forestalled a complaint that the scheme violated the ancient rule against restraints on alienation. The Supreme Court agreed in U.S. v. General Electric that the consignment plan was not a violation of the Sherman Act. However, in Simpson v. Union Oil Co., 337 U.S. 13 (1964), the Supreme Court reversed itself, just as it had overturned Colgate in Parke, Davis. Union Oil's consignment system to its retailers served

to maintain a minimum retail price and was, by virtue of its size and an element of coercion, held to be anticompetitive. The Court's reasoning in Simpson reveals the same lack of focus as had Parke, Davis.

⁴A sampling of these opposing views is contained in the following: Robert H. Bork, "Resale Price Maintenance and Consumer Welfare," 77 Yale Law Journal 950 (1968); Ward S. Bowman, "Prerequisites and Effects of Resale Price Maintenance," 22 University of Chicago Law Review 825 (1955); William S. Comanor, "Vertical Territorial and Customer Restrictions: White Motor and Its Aftermath," 81 Harvard Law Review 1419 (1968); Marvin Frankel, "The Effect of Fair Trade: Fact and Fiction in the Statistical Findings," 28 Journal of Business 182 (1955); John R. Gould and Basil Yamey, "Professor Bork on Vertical Price-Fixing," 76 Yale Law Journal 722 (1967); A. P. Hourilian and J. M. Markham, The Effects of Resale Price Maintenance Repeal: The Case Study of Rhode Island, Marketing Science Institute, 1974; Lester G. Telser, "Why Should Manufacturers Want Fair Trade?" 3 Journal of Law and Economics 86 (1960); Frederick R. Warren-Boulton, Vertical Control of Markets, Cambridge: Ballinger, 1978; and Basil S. Yamey, ed., Resale Price Maintenance, Chicago, Aldine, 1966; L. A. Engman, "Case for Repealing 'Fair Trade'," 7 Antitrust Law and Economics Review 79 (1975); R. A. Givens and L. P. Worsinger, "Vertical Restraints After Repeal of Fair Trade," 45 Fordham Law Review 1093 (1977); and William L. Holahan, "A Theoretical Analysis of Resale Price Maintenance," 21 Journal of Economic Theory 411 (1979).

⁵For a summary of the criticisms of both the retailer-cartel and manufacturer-cartel theories see Robert H. Bork, The Antitrust Paradox,

New York: Basic Books, 1978, p. 290 ff. For a recent, equally elegant, discussion of these same issues, see Holahan, op. cit., n. 4.

⁶See Telser, op. cit., n. 4. Similar issues were raised somewhat earlier in Ward Bowman, "Resale Price Maintenance: A Monopoly Problem," 25 J. Bus. 141 (1952) and in Bowman, op. cit., n. 4.

⁷In the remainder of this note I refer to all of the retailer-supplied services under the expression "product quality information."

⁸An exception is Robert H. Bork, op. cit., supra, n. 4. In what follows we should not discuss the effects of resale price maintenance on inter-brand competition.

⁹See Michael E. Porter, "Consumer Behavior, Retailer Power and Market Performance in Consumer Goods Industries," Review of Economics and Statistics 56 (1974).

¹⁰We are concerned here with product quality information as provided by retailers in the form of point-of-sale services. In the spirit of the retailer service theory, we assume that retailers can, ideally, provide this information more cheaply than consumers can provide it for themselves. Thus, all combinations along the budget line AB in figure 1 are least-cost combinations between physical product and retailer-provided product quality information. Combinations between physical product and consumer-provided product quality information would lie below AB.

¹¹Figure 4 also has new budget line DB, reflecting an increase in the relative price of the physical product. Budget line GH accomplishes much the same thing as does DB with some increased ease of exposition. The substance of the analysis is not altered under either GH or DB since both reflect the essential point noted here, viz., that resale price

maintenance alters the relative price of physical product and product quality information.

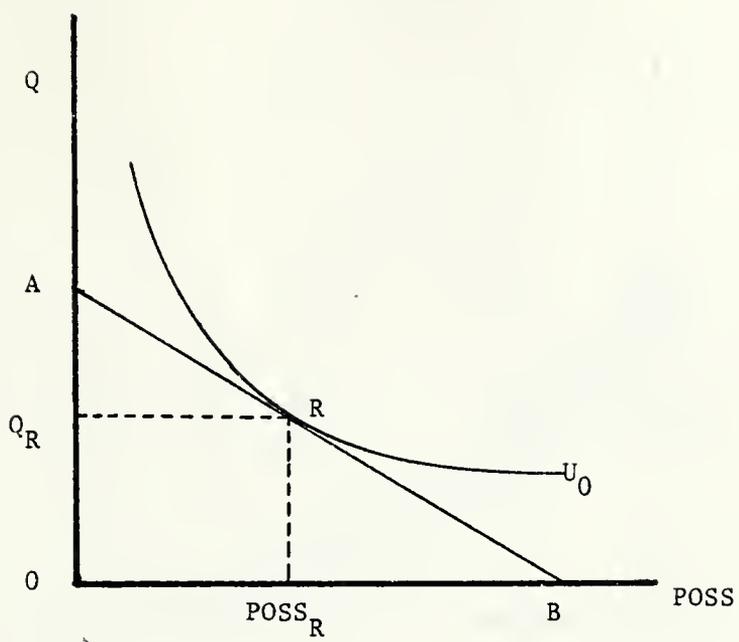


Figure 1

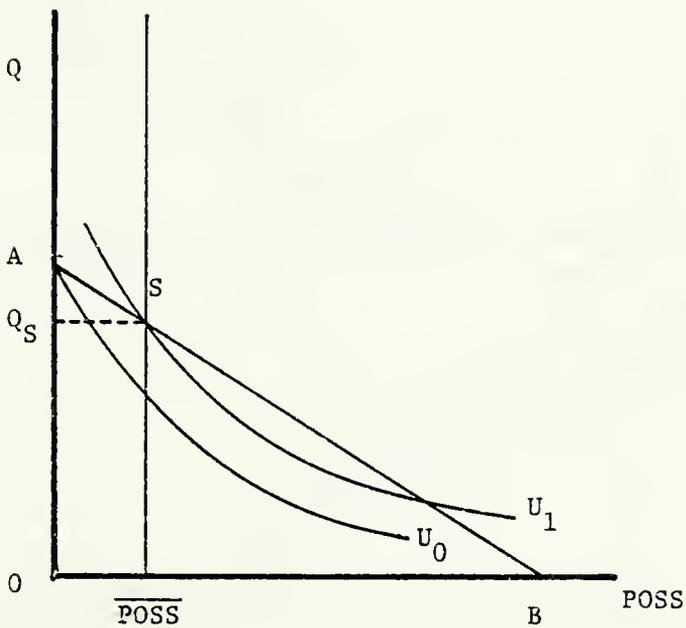


Figure 2

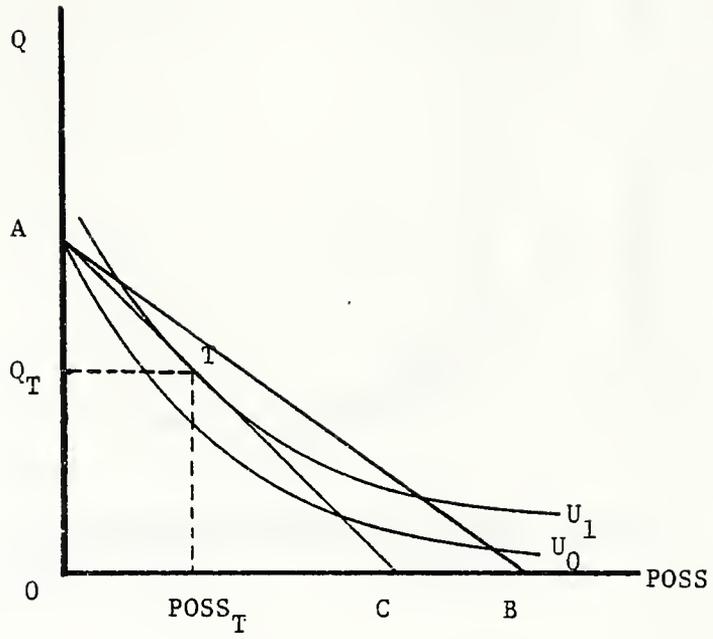


Figure 3

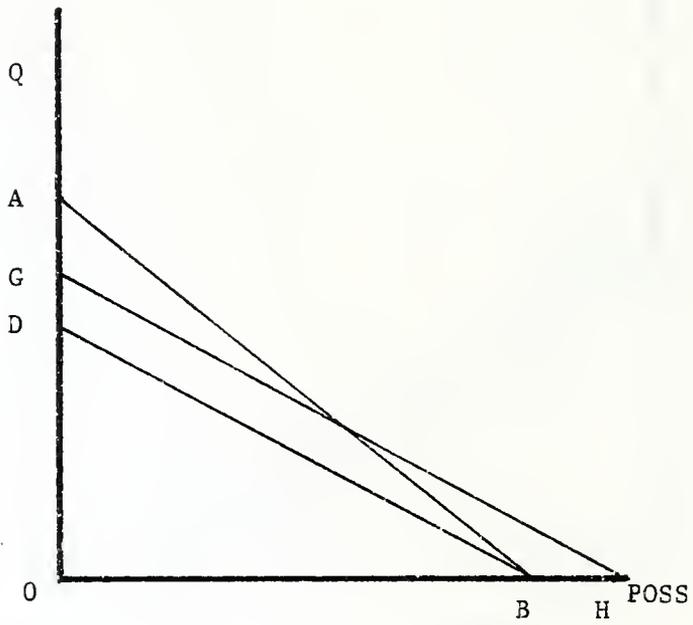
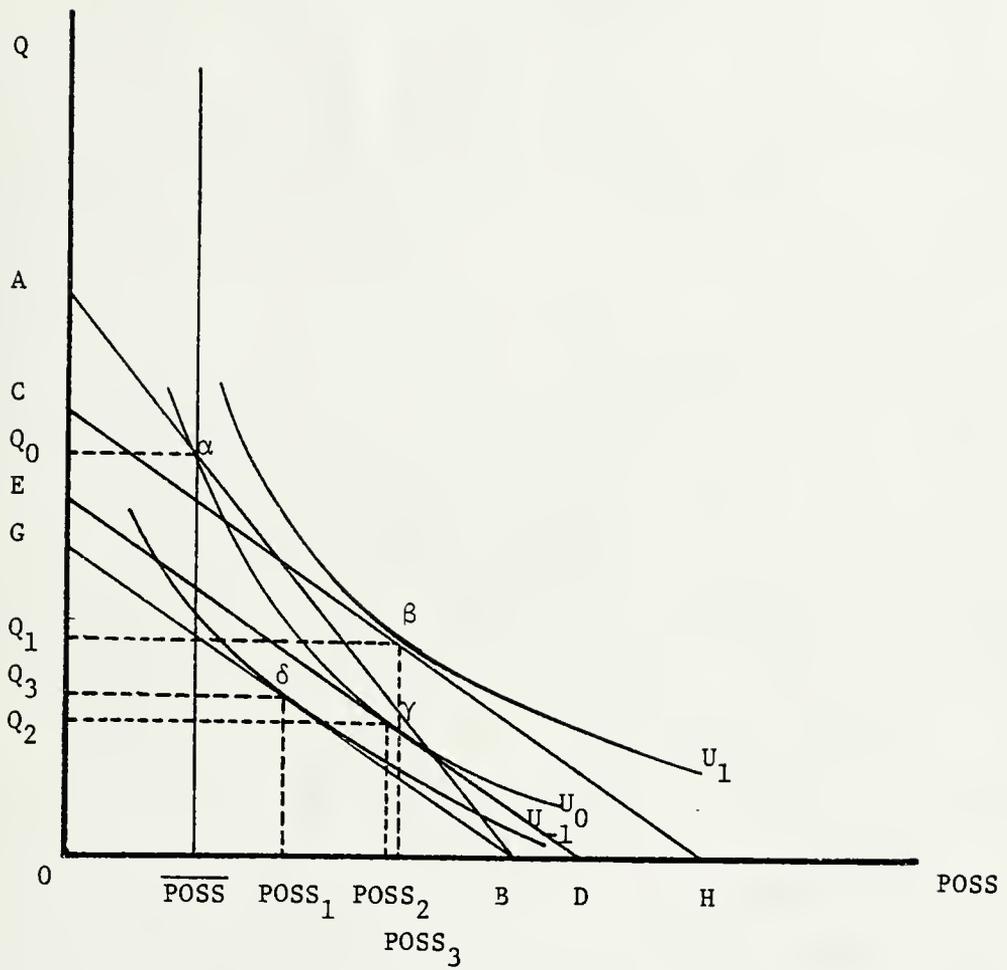


Figure 4



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