Hire Purchase Controls and Replacement Cycles

The control of hire purchase by specifying, and altering, minimum terms has been subjected to numerous objections (1) since it was first recommended by Rolf Nugent (2). Some object to the administrative problems involved, and especially to the possibility of evasion; others direct attention to the discriminatory nature of the control and usually object to this on the grounds of equity; and yet others, notably Milton Friedman (3), include hire purchase controls in their general indictment of discretionary policy. With the exception of Friedman's objections — which are too wide and comprehensive to be considered here — the arguments developed against hire purchase controls are basically administrative or social in substance. Recently, however, a strictly economic critique of these controls has been developed. It is J. R. Cuthbertson's contention that hire purchase controls tend to lead to replacement cycles in the market for consumer durables (4). This is a fundamentally important contribution to the controversy, and its policy implications have not gone un-noticed by the press (5).

I. The Theoretical Model

The basic model involved may be formalised as follows. Let G = value of goods (cars in Cuthbertson's analysis) obtained on

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(1) For a convenient summary see BOARD OF GOVERNORS OF FEDERAL RESERVE SYSTEM, *Consumer Instalment Credit* (Washington, 1957), Part II, vol. 2.

(2) ROLF NUGENT, *Consumer Credit and Economic Stability* (New York, 1939).

(3) For example, Friedman suggests that a series of automatic stabilisers " plus a largely automatic monetary policy would yield a satisfactory degree of economic stability and that attempts to go beyond this are as likely to make matters worse as to make them better ". See his " Consumer Credit Control... ", in *Consumer Instalment Credit*, Part II, vol. 2, pp. 73-103. Also his *Program for Monetary Stability* (New York, 1960).

(4) J. R. CUTHBERTSON, " Hire Purchase Controls and Fluctuations in the Car Market ", *Economica* (May 1961), pp. 125-136.

(5) For example, the *Economist* (27th May, 1961, pp. 913-914) commented on it favourably and urged policy makers to consider its implications. It was even reported upon as far afield as New York; see *New York Times*, June 12, 1961 (City edition), p. 43, col. 3.

hire purchase; $D =$ the amount of deposit a customer is prepared to make; $I =$ amount of periodic instalment payment he is willing to undertake; $d =$ the proportion of the value of the goods required as a deposit; and $n =$ the number of periods the contract is to run. The maximum value of a car that the consumer can acquire is given by $G = \dfrac{nI}{1-d}$, provided that $D \geqq dG$, and where $1 > d > 0$. (Assume no finance charges). The debt incurred is $G(1-d)$, which is to be paid off in n instalments of I.

If this contract were incurred in period $t = 0$, then in period $t = n$ it would be completed with the payment of the final instalment. Assume that the consumer immediately exchanges the old car for a new one $\left(G' = \dfrac{n'I'}{1-d'}\right.$, it being assumed that the D' obtained from the trade-in is adequate to meet the required deposit of $d'G'$); a new debt of $G'(1-d')$, to be paid off in n' instalments of I', is incurred. It will be noted that the consumer, operating under the assumptions of this model, purchases a car in each of the following periods, $t = 0, n, n + n'$, etc. Accordingly any factor which causes a number of individuals to concentrate their purchases in one period $(t=0)$ will lead to a similar concentration in periods $n, n + n'$, etc. Hire purchase controls operate by encouraging (or discouraging) the consumers to make their purchases in the immediate future; that is, they cause a bunching of purchases. On the basis of the above model this would lead to further bunching in periods $n, n + n'$, etc. that is, to replacement cycles in the demand for cars. Thus runs Cuthbertson's argument (6).

It will be noted that there are three crucial assumptions involved, and each of these assumptions must be realised if the model is to prove realistic. First, it is assumed that all (or at least a substantial number of) customers take out contracts of the same length. Only if this assumption be valid will concentration of commencements in period $t = 0$ lead to a large concentration of debt completions in the same period, $t = n$. In the extreme case, if all consumers undertook contracts of different lengths there would be no concentration of repayments in one period and thus no repayment cycles.

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(6) Cuthbertson does not present his argument in these terms, but this is a formalisation of his models.

In support of the reasonableness of his assumption Cuthbertson presents the experience of " one large h.p. finance house " indicating that, when they are free to do so, about 25% of the customers tend to opt for a two year contract and about 50% for a two-three year one (7). Thus any restriction of maximum repayment period from three to two years is likely to cause a heavy concentration of two year contracts. The experience of this one company does tend to suggest that there would be a large proportion of consumers taking out contracts of roughly the same duration.

TABLE I

INDICES OF NUMBERS OF HIRE PURCHASE CONTRACTS COMMENCED

(1953 = 100)

Extent of Coverage	Types of Goods Covered	1953	1954	1955	1956	1957	1958	1959	1960
a. Cuthbertson's one finance house	All Vehicles [1]	100	142	225	248	370	422	538	568[4]
b. All H. P. contracts in U.K.	All Vehicles [2]	100	145	199	176	283[5]			
c. All H. P. contracts in U.K.	Passenger [3] Motor Cars	100	159	218	207	328	406	472	470

Notes:

   [1] " All Vehicles " as defined by Cuthbertson. It is not clearly stated exactly what types are included.
   [2] " All Vehicles " covers new and used passenger cars, new and used commercial vehicles and new and used motor cycles.
   [3] " Passenger Motor Cars " includes both new and used vehicles.
   [4] This index has been constructed on the basis of statistics for the first eleven months of the year.
   [5] This series could not be continued to 1960 because of inaccessibility of data.

Sources:

   a. CUTHBERTSON, *Op. cit.*, Table III, p. 136.
   b. Hire Purchase Information, Ltd.
   c. Hire Purchase Information, Ltd., as cited in CUTHBERTSON, Table I, p. 134.

But may we assume that this company is typical of the industry? The evidence, such as it is, suggests otherwise. Table I compares the growth of hire purchase contracts on " all vehicles " by this one firm with the expansion of hire purchase contracts of " all vehicles " and of new and used passenger cars in the U.K.

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(7) Cuthbertson, p. 135.

It will be noted that the firm in question has, with the exception of but one year, shown a more rapid expansion than the remainder of the industry. This may be explained by one of the following. First, possibly the firm's operations were concentrated in an area of the country which was growing more rapidly than the rest of the country with the result that, whilst this company's share of the total market was increasing, its share of the relevant market, the regional one, was unchanged. But this is not a very plausible hypothesis as most large finance houses in Britain are national and deal throughout the country.

An alternative might be that this firm expanded its share of the market by such internal means as having a more dynamic management (8) and offering the consumer a more attractive contract. The easiest way to do this is to push the terms to the maximum permitted by law and thereby to draw in the marginal customers (9). But it is just such a firm which is likely to have a larger proportion of its customers making use of the longer term — between two and three years — contracts. And any evidence drawn from such a firm will have a bias in exaggerating the extent of the concentration in the two-three year period. We recognise, accordingly, the like-lihood of some bunching of terminations but suggest that its magni-tude is rather less than the available evidence implies.

The second assumption upon which the model rests concerns the behaviour of the consumer with reference to his replacement policy. It is assumed that a consumer, as soon as he completes his contract in period $t = n$, immediately proceeds to a new contract (10). For if a concentration of purchases in period $t = 0$ did actually lead to a concentration of terminations in period $t = n$, — that is, if the first assumption is valid — there would still be no replacement

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(8) The 1950's was a period in which the finance houses suffered, by and large, a scarcity of funds as a result of the various controls on capital issues and bank advances. In such a situation a dynamic management which succeeded in obtaining a greater supply of funds (by means, say, of deposits) would tend to reap an advantage and be able to obtain an increasing share of the market without necessarily lowering terms.

(9) For a given desired G the higher is the n the lower is the appropriate I. Thus raising n permits those with a smaller I to enter into hire purchase contracts.

(10) Strictly speaking, the model would operate equally well if the lag between com-pletion of contract and commencement of a new one were constant for all consumers. In such a situation a concentration of commencements in period $t=0$ would lead to termi-nations in period $t=n$, and to new commitments in period $t=n+m$, where m is the appropriate lag.

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cycles generated if the consumers entered into new hire purchase contracts at varying intervals after n. The satisfactory working of the model requires both a concentration of terminations and a con-centration of renewals.

In support of this assumption that consumers would immediately tend to renew contracts Cuthbertson cites the Radcliffe Report to the effect that " the majority of consumers who use hire purchase credit get into the habit of making a steady weekly or monthly payment, a fresh purchase being made as soon as a former series is completed... " (11). This is a commonly expressed viewpoint, but it should not be subscribed to uncritically.

The Radcliffe Committee was set up in early 1957 and started meeting soon after. The evidence, both written and oral, that was submitted to it was based on the experiences of the respondents in the recent past, in the period, say, from 1952/3 to 1957. But this period, and indeed, the entire period of the '50's, was a particularly abnormal one from the viewpoint of hire purchase (12).

By and large, the 1950's was a period of abnormally strong demand for consumer durables; this was the result of a number of factors operating together. Very briefly, the post-war period was characterised by high and (reasonably) steady levels of income. In marked contrast to the period after World War I there was little unemployment; indeed, at times the economy was dangerously over-full. A state of full employment and buoyant incomes tends to lead to a great increase in the demand for consumer durables which have, it is generally recognised, an income elasticity of greater unity.

Of importance, possibly of greater importance, has been the change in attitudes and desires of the people. The development of greater social equality and opportunity, a long-run process that was undoubtedly accelerated by the War and post-war measures, meant that the standards and tastes of the bulk of the population under-went a definite change, from beer and tobacco to cars and televisions and better furniture. No longer were they content with, or resigned to an acceptance of, dull lives and drab homes (13).

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(11) Cited in CUTHBERTSON, p. 125.

(12) This view has been developed at greater length in my dissertation, " Hire Purchase in the United Kingdom, 1948-57 " (Cambridge University Library), pp. 54-63.

(13) The traditional market, among the middle and upper classes, was also very buoyant, basically due to the fact that normal replacement had not been possible during the war and postwar export drive. In addition, such social changes as a decline in the supply of domestic

Accordingly, this period was characterised by a strong demand for consumer durables, most of which had to be financed by hire purchase since the poor lack adequate liquid assets from which to make these costly purchases, and bank overdraft facilities are not normally open to them. When the consumer has a large list of goods he urgently desires it is not unreasonable to expect that he would buy item A on credit and, when he had paid his last instalment on that, to contract for good B, and so on. But once this big back-log in demand has been satisfied, once the consumer has acquired a reasonable battery of goods, his demand for them may be expected to be less avid and the necessity of making " a steady weekly or monthly payment " to acquire goods will lessen. As long as the consumer has a list of goods he urgently needs the behaviour pattern suggested by the Radcliffe Commission appears quite plausible, and even rational. But with the passage of time and the attendant acquisition of a more " normal " stock of goods one would expect a somewhat more flexible budget on the part of the consumer.

It must be emphasised that I am not arguing that, once a " normal " stock of goods is realised, the consumer will revert to his old (pre-war) pattern; there has been too fundamental a change in tastes and habits for this to occur. I am only suggesting that once the stock of goods is large enough the consumer will have greater flexibility in the use of his discretionary income, on occasion using it to acquire goods on hire purchase, on occasion using it, say, to take an extra holiday. To the extent the consumer develops any tendency towards a more flexible budget this will lessen the prospect of replacement cycles being generated as a result of hire purchase controls.

The third assumption involved in the model is also related to the replacement policy of the consumer. Even if we assume there is a strong concentration of terminations and that the consumers tend to renew their contracts immediately upon the completion of the old one, why must we assume that the " fresh purchase ", to use the phrase of the Radcliffe Report, is in the same commodity as before — in the framework of our discussion, cars — so that replacement cycles are set up in that industry? Is this the most

servants probably led to an increased demand for labour saving devices. But these groups, even when they do use hire purchase — which they do to a not insubstantial degree — are unlikely to operate on the pattern of continual debt. Accordingly, we have not specifically considered this group.

plausible assumption? Surely an individual who had purchased a car and paid for it in, say, 18 months is unlikely to immediately rush out and acquire a new one. He could use his newly freed I in a multiplicity of ways, or even save it. Even if we assume that the consumer has a compulsive tendency to acquire goods on hire purchase we cannot assume, with any validity, that he buys the same commodity every time. If the " fresh purchases " were spread over a number of different types of goods then there would be little opportunity for replacement cycles to be set up.

II. The Empirical Data

The case that hire purchase controls lead to replacement cycles is allegedly supported by the available statistical evidence. Mr. Cuthbertson plots indices of commencements and terminations of hire purchase contracts (of one large finance house) of " all vehicles " on the same chart, observes that " each line is almost a mirror reflection of the other ", argues that " there is no suggestion of any appreciable time lag " between terminations and new contract commencements, and concludes that the evidence indicates the generation of replacement cycles in the car market (14).

However, the statistical data, as presented and interpreted by Cuthbertson, are subject to rather serious question. First, the data are obtained from " one large h.p. finance house " and, as was stated above, there is reason to believe that this firm is not typical of the industry. How significant is the difference it is not possible to say.

Secondly, the statistics used refer to hire purchase contracts covering " all vehicles ", that is, the figures presumably include all contracts covering passenger cars, commercial vehicles and motor cycles. This introduces a serious complication since uniform terms controls were not always applied to all types of motor vehicles. For example, the reimposition of hire purchase controls in February, 1955 and the subsequent tightening of controls in July of the same year applied to passenger cars only, and not to commercial vehicles. The latter were only brought under the control order in February, 1956.

(14) CUTHBERTSON, p. 129.

But might there not be a short lag between terminations and commencements? We argued earlier (see note 10) that a lag could easily be introduced into the model provided that each consumer, or at least the majority of consumers, had lags of the same duration. If the consumer did tend to replace his car as soon as it was paid for we should at least, it might be argued, let him have a few months to look around and decide on the precise type of his purchase. We accordingly tested for correlation with a lagged response of commencements of one period (three months) and two periods (six months) respectively. Our results, as presented in Table III, show an absence of any significant correlation.

III. Conclusions

The conditions necessary for the generation of a hire purchase induced replacement cycle are: (a) a preponderance of contracts of the same length; (b) upon termination of contract 1 consumers immediately, or with the same time lag, enter into hire purchase contract 2; and (c) contract 2 is for the same commodity which was acquired by means of contract 1. Each of these conditions must be present in substantial degree for there to be any reasonable likelihood of replacement cycles being set up — for the probability of such cycles being generated is the product of the probabilities of each of the conditions being met. We have suggested that these conditions are unlikely to be realised, except in the most extreme circumstances, in sufficient degree to make the model useful. For example, if contract lengths were restricted to no more than one year there is little doubt but that this would be accompanied by a heavy concentration of terminations; that is, the first condition necessitated by the model would be realised. But it is just such a situation in which the second and, especially, the third conditions are unlikely to be realised. In such a situation replacement cycles would not be generated (16).

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(16) Let us assume that the possibility of one condition being met is independent of the possibility of any other condition being met, and that there is a 50% probability of each of the conditions being realised. (This is a rather higher probability than our analysis might lead us to expect, especially for the 3rd condition). In this situation the probability of replacement cycles being generated is only 12.5%.

The statistical evidence, after adjustment for trend and seasonality, supports our analysis and shows that there has been, to date, no noticeable tendency towards hire purchase induced replacement cycles in the car market.

We conclude, therefore, that the objection to the use of hire purchase controls on the grounds that they tend to lead to replacement cycles appears unwarranted.

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