

## A survey of transactions in motor cars

An enquiry for the Central Statistical Office was carried out in 1962 by the Government Social Survey to provide information for the national accounts on the sales and purchases of new and used cars and on the extent to which cars are bought for business purposes.<sup>(1)</sup> The enquiry was also designed to provide information for the Board of Trade on the part played by hire purchase in these transactions. The processing of the data from the enquiry was delayed owing to heavy pressure of work on the Social Survey but the results, now available, are of considerable interest even though they relate to transactions taking place mainly in 1961.

The enquiry was a relatively small, experimental one, with the object of finding out how practicable it was to get information on transactions in cars direct from car owners. Following specifications laid down by the Social Survey, details of selected cars were extracted by the local motor taxation offices from their licensing records at the same time as the annual sample census of motor vehicles was being taken for the Ministry of Transport. From this sample cars were selected which appeared to have been subject to a transaction in a pre-determined period. Cars which had been bought new were represented by those which were registered for the first time in the period, and cars which had changed hands were identified by comparing the names of applicants at different times for a licence for a particular car. A sub-sample of purchasers and sellers (other than dealers) was then interviewed. As there were more transactions in used cars than in new cars, a lower sampling fraction was used for purchasers and sellers of used cars than for purchasers of new cars.

The survey recorded transactions taking place mainly in the twelve-months to 30 September 1961, although, for reasons explained later, it included some transactions taking place between 1 January 1960, and 30 September 1960, and was probably not fully representative of transactions towards the end of the twelve months period 1 October 1960, to 30 September 1961.

Effective interviews were obtained with 391 purchasers of new cars, 704 purchasers of used cars, and 578 sellers of used cars. An important feature of the survey was that it proved possible to interview both the seller and the purchaser of 451 used cars which had changed

hands during the period of the survey and so get information on the margins received by dealers on the cars which had passed through their hands.

The first part of this article summarises the general results of the enquiry, the second part gives information on hire purchase and other credit transactions and the third part describes the method of carrying out the survey and discusses some of the points of methodological interest which were raised. A full report of the enquiry is available from the Social Survey.<sup>(2)</sup> In considering the results of the survey it must be borne in mind that they are subject to sampling errors.

### Part 1: General results

Allowing for the different sampling fractions for new and used cars, information from the survey suggests that, for every purchase of a new car in this period, there were about  $2\frac{1}{2}$  purchases of used cars. The average purchase price of a new car was £775 excluding hire purchase charges (purchase values were given for 381 out of the 391 new cars in the survey). This average is rather higher than the one implied by the estimates in the national accounts for the period (£740); the latter is consistent with information from the Board of Trade's enquiry into the motor trades, 1962. It is possible that the estimates from the survey and from the national accounts are not entirely comparable since some respondents to the survey may have included licensing or insurance charges in the purchase price, although they were asked to exclude them; the estimate from the national accounts excludes these charges. The average purchase price of a used car in the survey was £330 excluding hire purchase charges (purchase values were given for 698 out of the 704 purchases of used cars).

#### *Business purchases*

Of the 391 purchases of new cars recorded in the survey 206 or 53 per cent. were described as being bought partly or entirely for business purposes, and of the 704 purchases of used cars, 126 or 18 per cent. were similarly described. Not all of these purchases were claimed as an expenditure for business purposes or, if claimed, were accepted as such by Inland Revenue. The proportions stated to be accepted, in whole or in part, were 41 per cent. of new

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(1) A complementary enquiry into motor car ownership and use, carried out by the Social Survey for the Ministry of Transport, was described in the June 1963 issue of *Economic Trends*.

(2) *Motor Transactions Survey* by W. F. F. Kemsley, No. SS 723/1: The Social Survey, Atlantic House, Holborn Viaduct, London, E.C.1., price 15s. 0d.

cars and 9 per cent. of used cars. In estimating the proportions by value accepted by Inland Revenue a difficulty arises from the fact that a substantial number of purchasers who were allowed less than the whole cost of the car did not know the exact percentage allowed. For these the percentage has been assumed to be the same as the average by value for those who knew the proportion.

### Value of business purchases of new and used cars

TABLE 1

	New Cars		Used cars	
	£ thousand	Number of cases	£ thousand	Number of cases
<b>Amount accepted as business expense</b>				
Allowed 100 per cent .. .. .	76.3	90	10.9	18
Allowed less than 100%:				
Percentage given (66% average by value for new cars 53% average by value for used cars) .. .. .	20.5	34	5.6	23
Percentage not given (estimated at 66% of unallocated £25,205 for new cars, 53% of unallocated £10,250 for used cars) .. .. .	16.6	32	5.4	20
<b>Total .. .. .</b>	<b>113.4</b>	<b>156</b>	<b>21.9</b>	<b>61</b>
<b>Total value for all purchases, business and consumer ..</b>	<b>303.2</b>	<b>381</b>	<b>245.2</b>	<b>698</b>

Note. Purchase values include hire purchase charges.

Thus in the survey about 37 per cent. of the aggregate purchase value of new cars, and about 9 per cent. of the aggregate purchase value of used cars, was probably accepted by Inland Revenue as business expenditure. Between 1960 and 1964 the annual total of new registrations of cars increased by about a half and it seems likely that much of this growth in demand for new cars came from the personal sector, with a consequent decline in the proportion accepted by Inland Revenue as a business expense.

As shown in Table 2, business cars were generally of somewhat bigger engine capacity than purely private cars.

For example, 54 per cent. of business purchases of new cars were over 1,400 c.c. whereas the corresponding proportion for purely private purchases was only 38 per cent. Nevertheless, nearly 40 per cent. of business purchases of new cars were of 1,000 c.c. or less.

Purchasers who said that they had bought cars partly or entirely for business purposes were asked to state what kind of business or organisation this was. In considering an analysis of their replies it must be borne in mind that cars which were said to be bought partly or entirely for business use were not all accepted by Inland Revenue, in part or in whole, as a business expense.

### Business and private purchases analysed by engine capacity

TABLE 2

	New Cars				Used cars			
	Purchase accepted in part or whole as a business expense		Purchase purely private		Purchase accepted in part or whole as a business expense		Purchase purely private	
	Number	Per cent.	Number	Per cent.	Number	Per cent.	Number	Per cent.
<b>Engine capacity c.c.</b>								
1,000 and under .. .. .	61	38	111	49	13	21	202	31
Over 1,000 up to 1,400 .. .. .	13	8	31	13	13	21	204	32
" 1,400 " " 1,600 .. .. .	49	30	55	24	8	13	113	18
" 1,600 " " 1,800 .. .. .	13	8	15	7	3	5	26	4
" 1,800 .. .. .	26	16	16	7	25	40	97	15
<b>Total .. .. .</b>	<b>162</b>	<b>100</b>	<b>228</b>	<b>100</b>	<b>62</b>	<b>100</b>	<b>642</b>	<b>100</b>

**Industrial analysis of cars bought for business use**  
TABLE 3

	New cars		Used cars	
	Number	Per cent	Number	Per cent
<b>Industry</b>				
Agriculture, forestry and fishing	10	5	20	16
Manufacturing industry	44	21	12	10
Construction	11	5	22	17
Transport and communication	22	11	13	10
Distributive trades	48	23	16	13
Insurance, banking and finance	16	8	4	3
Professional and scientific services	25	12	20	16
Other	30	15	19	15
<b>Total</b>	<b>206</b>	<b>100</b>	<b>126</b>	<b>100</b>

Of the total of new cars bought for business purposes nearly a quarter were bought for the distributive trades, and about the same proportion for manufacturing industry. The most important industry or service groups for which used cars were bought were construction (that is builders), and the groups which include farmers (agriculture, forestry and fishing) and doctors (professional and scientific services).

*Transactions through dealers*

Over 90 per cent. of new cars and nearly three-quarters of used cars were bought from dealers. This is brought out in Table 4 below.

**Method of purchase**

TABLE 4

	New cars		Used cars	
	Number	Per Cent	Number	Per cent
From a dealer	360	92	518	74
Direct from manufacturer	15	4	—	—
Direct from a business firm, other than dealer or manufacturer	16	4	21	3
From a private individual	—	—	165	23
<b>Total</b>	<b>391</b>	<b>100</b>	<b>704</b>	<b>100</b>

The average purchase price of a used car bought from a dealer (£375) was about twice the average purchase price of a used car bought from a private individual (£185).

Table 5 shows that the average gross margin received by dealers on cars which were sold within three months of purchase was about £35, or ten per cent. of the dealer's selling price. The average margin fell off rapidly when cars were sold more than three months after purchase. These would include cars which dealers had difficulty in selling, but it is also possible that they included a few which were the subject of an unrecorded transaction taking place between the recorded sale to the dealer and the recorded purchase from the dealer. The effect of an unrecorded transaction would be to make the dealer's margin appear too low. For example, a recorded sale to a dealer at £200, followed by an unrecorded purchase from the dealer at £220, an unrecorded resale to a dealer at £180, and recorded purchase from that dealer at £200, would give a recorded margin on the car of zero whereas, in fact, two margins of £20 had been earned.

The average gross margin on the sale of used cars was a modest one, particularly when it is borne in mind that the margin would have to cover any repairs or servicing which dealers might have to carry out before selling the car. Dealers probably allowed quite generous prices on used cars which were traded in against new cars, the low margin on the sale of the used car being set against the higher margin on the sale of the new car. Table 6, in fact, shows that a substantial proportion of used cars were sold at a loss even where the purchase from the dealer was recorded as taking place soon after the sale to the dealer.

**Dealers' margins on used cars**

TABLE 5

	Number of used cars	Aggregate selling value to dealer	Purchase value from dealer <sup>(1)</sup>	Dealers' aggregate apparent margin	Margin as proportion of purchase value from dealer	Average margin
		£	£	£	per cent.	£
<b>Month of purchase from dealer</b>						
Identical with month of sale to dealer	142	40,406	45,307	4,901	10.8	35
1 month after sale to dealer	95	28,621	31,964	3,343	10.5	35
2-3 months after sale to dealer	54	17,280	19,124	1,844	9.6	34
4-6 months after sale to dealer	50	12,563	12,906	343	2.7	7

(<sup>1</sup>) Excluding hire purchase charges

## Distribution of dealers' margins on used cars

TABLE 6

Number of used cars

	Negative margin (£)			Zero Margin	Positive margin (£)				
	over 100	99-50	49-1		1-49	50-99	100-149	150-199	over 200
<b>Month of purchase from dealer</b>									
Identical with month of sale to dealer	2	5	20	29	47	22	10	4	3
1 month after sale to dealer ..	2	7	11	11	27	25	8	2	2
2-3 months after sale to dealer ..	1	5	6	2	23	11	2	2	2
4-6 months after sale to dealer ..	2	2	16	5	17	6	—	1	1

### Cars traded in

A previous car was traded in against about 60 per cent. of all the purchases (by number) of new cars and against just under 40 per cent. of all the purchases of used cars in the survey.

### Proportion of cars bought with a trade-in or after independent sale of previous car

TABLE 7

	Purchases			
	New cars		Used cars	
	Number	Per cent	Number	Per cent
Previous car traded in	242	62	263	37
Previous car sold independently ..	43	11	71	10
No previous car ..	106	27	370	53
<b>Total ..</b>	<b>391</b>	<b>100</b>	<b>704</b>	<b>100</b>

The average purchase value (excluding hire purchase charges) of a new car bought with a trade-in (£812) was higher than the average purchase value where there was no previous car traded in or sold independently (£676); the corresponding figures for used cars, £443 compared with £251, showed an even more marked difference. The trade-in accounted on average for 51 per cent. of the purchase value (excluding hire purchase charges) of a new car bought with a trade-in; the corresponding proportion for a used car was 44 per cent.

The general importance in the purchase of new and used cars of cars traded in or sold independently is shown in the following table from the survey.

### Aggregate value of cars bought and of previous cars traded-in or sold independently

TABLE 8

	New cars		Used cars	
	£ thousand	Per cent	£ thousand	Per cent
Aggregate value of purchases <sup>(1)</sup>	295.7	100	231.1	100
Aggregate value of previous cars traded in ..	98.5	33	50.7	22
Aggregate value of previous cars sold independently ..	11.5	4	9.7	4

<sup>(1)</sup>Excluding hire purchase charges.

## Part II: Hire purchase and other credit transactions

### Hire purchase transactions

Table 9 compares the number of used cars bought on hire purchase terms with the total purchases of used cars recorded in the survey. Hire purchase transactions accounted for about 40 per cent. of total purchases over the whole period. Proportions for the nine separate quarters do not vary greatly from this figure and the survey can probably be regarded as yielding a fairly accurate figure for this proportion in 1960/61. Nearly 1,350,000 used cars were recorded by H.P. Information Ltd., as being bought on hire purchase terms between 1 January 1960, and 30 September 1961, and it may be inferred from the survey that a further 2 million used cars changed hands without the assistance of hire purchase finance in this period. For 1962/63 the Finance Houses Association, following a questionnaire addressed to a number of motor dealers and distributors as described in the September 1963, issue of *Credit*, page 66, found that around 50 per cent. of used cars were bought on hire purchase terms.

The number of new car purchases reported in the survey was 391 of which 90 or 23 per cent. were on hire purchase terms. This agrees well with the proportion (21%) derived by comparing the number of new cars recorded by H.P. Information Ltd., as being the subject of new hire purchase contracts during the period January 1960, to September 1961, with the total new registrations of cars.

As is explained in Part III, separate tabulations by quarters are unlikely to be reliable indicators of the correct quarterly variation in the level of transactions, and the results of the survey quarter by quarter must be treated with caution. The number of transactions in new cars is in any case very small for a quarterly analysis, but in the case of used cars the rather higher proportion recorded as being bought on hire purchase terms in the first quarter of 1961 than in the previous quarters may be attributable to the relaxation in the statutory hire purchase controls which took place in January 1961. After being suspended in October 1958, these controls were re-introduced at the end of April 1960, when a minimum down-payment of 20 per cent. and a maximum repayment period of 24 months was stipulated for private cars. The maximum repayment period was extended to 36 months in January 1961.

## Hire purchase transactions compared with total purchases: used cars

TABLE 9

		Purchases in the sample		
		Total	On hire purchase	
		Number	Number	Percentage of total
1960	1st quarter .. ..	74	27	36
	2nd quarter .. ..	89	35	39
	3rd quarter .. ..	125	48	38
	4th quarter .. ..	89	30	34
1961	1st quarter .. ..	123	54	44
	2nd quarter .. ..	130	51	39
	3rd quarter .. ..	74	28	38
Total .. ..		704	273	39

All respondents who bought cars on hire purchase terms were asked the amount of the down payment, including any amount allowed on a used car, and what the cost of the car would have been had it been bought for cash. The distribution of down payments compared with cash prices is shown in Table 10 for those purchasers able to give both figures. It would have been interesting to compare the distribution of down payments before and after the introduction of the minimum down payment of 20 per cent. in April 1960, but the sample contained too few purchases in the earlier period and the table therefore covers the whole period January 1960, to September 1961. Purchasers are sub-divided in the table into those where a car was traded-in in part exchange for the fresh car, those where a car was reported as being sold at the time of the purchase of the fresh car but was not traded-in and those where no previous car was sold or traded-in. It will be seen that a high proportion of purchasers who traded-in cars were able to cover over one-third of the price as a down payment.

## Hire purchase: distribution of down payments as proportion of cash price

TABLE 10 Number of cars

	New cars			Used cars		
	Pre-vious car traded-in	Pre-vious car sold	No pre-vious car	Pre-vious car traded-in	Pre-vious car sold	No pre-vious car
<b>Down payment as percentage of cash price</b>						
Up to 20% ..	2	1	8	21	—	22
Over 20-25% ..	6	—	5	9	2	26
Over 25-33½% ..	7	2	5	25	4	23
Over 33½-50% ..	13	—	6	40	2	26
Over 50% ..	26	1	4	35	7	12
Total .. ..	54	4	28	130	15	109

The distribution of originally contracted lengths of hire purchase agreements was affected by the re-intro-

duction of a maximum repayment period of 24 months in April 1960, and its extension to 36 months in January 1961. Details are given in Table 11:

## Distribution of originally contracted lengths of hire-purchase agreements

TABLE 11 Number of cars

	New Cars		Used Cars	
	Contracts begun in			
	1960 May-Dec.	1961 Jan.-Sept.	1960 May-Dec.	1961 Jan.-Sept.
<b>Original contract length</b>				
12 months ..	3	7	10	16
18 " ..	1	2	9	9
24 " ..	6	15	70	49
30 " ..	—	1	3	23
36 " ..	2	43	5	35
Total .. ..	12	68	97	132

Note: The few cases (8) where the contracted length was not among the lengths specified above have been allocated to the nearest specified length.

The appearance of a few vehicles of more than 24 months in May-December 1960, when the maximum repayment period under the terms control orders was 24 months could be due to lapses of memory on the part of the informants.

Hire purchase contracts with intended lengths of 36 months have risen considerably as a proportion of the total since this survey. H.P. Information Ltd., began to analyse new contracts registered with it according to their intended length from April 1963. 36 month contracts accounted for between 54 to 64 per cent. of the monthly totals for new cars from April to December, 1963. This compares with a proportion in January-September 1961, as found in the survey, of around 60 per cent. In 1964, however, the H.P.I. proportions ranged between 60 and 74 per cent. in the individual months. For used cars H.P.I. recorded proportions between 25 and 40 per cent. in April-December 1963. The January-September 1961, figure from the survey was about 25 per cent. In 1964 the H.P.I. proportion varied between 39 and 50 per cent.

Table 11 analyses the lengths of agreement as originally intended when the transactions took place but there is evidence that a substantial proportion of hire purchase transactions relating to private cars are settled before the expiration of the original term, quite often by the purchaser changing the car for another one, when the trade-in value suffices to pay off the balance outstanding on the original agreement and a new agreement may be taken out to finance the purchase of the new vehicle. Some evidence of the wide-spread early settlement of hire purchase agreements is available from the survey. This arises because all of the 578 sellers of cars who were interviewed in the survey were asked whether they had originally bought the car on hire purchase terms and if so whether the original hire purchase agreement was varied in any way. Table 12 shows the distribution of lengths of these contracts, and, for each length, the number which were settled on time, early or late. Some of these contracts were started several years before the beginning of the survey and these figures cannot be taken

as representative of the pattern of contracts originating in any particular period; rather they represent the actual compared with the intended lengths of contracts relating to cars which happened to be sold in the period January 1960, to September 1961. The table does show, however, that a large proportion of hire purchase contracts for cars are settled before the expiration of the term originally envisaged. About one quarter of these cases were stated as being due to the acquisition of a fresh car or the trading-in of the original car, and among a further half of the cases, where informants merely said that 'all outstanding instalments had been paid off at one time, probably many had traded-in the original car.

### Comparison of actual with intended lengths of hire purchase contracts

TABLE 12 Number of contracts

	Intended length of contract					Total
	12 mths	18 mths	24 mths	30 mths	36 mths	
Terminated over 12 months early			14	4	25	43
Terminated 7 to 12 months early	5		17	1	6	29
Terminated up to 6 months early	6	1	18	2	1	28
Terminated on time .. .. .	20	14	41	0	2	77
Terminated late .. .. .					5	5
Total .. .. .	31	15	90	7	39	182

In drawing any precise conclusions from the table about early settlements it is necessary to bear in mind that the survey covered transactions in the period January 1960, to September 1961. Since the maximum permitted repayment terms for private cars, under hire purchase terms control, was 24 months until October 1958, the earliest expiry date on which a 3 year agreement could run its full term would be towards the end of the survey. This explains why few 36 month contracts which had run their full term were identified and why the 36 month contracts recorded in Table 12 are rather a small number compared with 24 month contracts. In the case of 24 month contracts, however, the survey might be expected to yield a more representative picture; these contracts are analysed in Table 13, according to the date when they were begun. Here again, some qualifications are apparent; two year contracts taken out in October 1959, 24 months before the end of the survey or subsequently, will have had no chance of appearing in the survey among completed contracts,\* and two year contracts taken out between January 1958, and September 1959, will have had a progressively smaller chance of appearing among completed contracts. On the other hand, in so far as the reason for early settlement of a contract is that the car is sold or exchanged for another car before the end of the contract term, those 24 month contracts which were begun more than 24 months before the beginning of the period covered by the survey will have had no chance of inclusion. In short, in relation to contracts started in the period, early settlements will be under-represented in the column 'in 1957 or earlier', and progressively over-represented in the later periods shown in Table 13.

### Analysis of 24 months hire purchase contracts

TABLE 13 Number of contracts originally taken out

	In 1957 or earlier	In 1958	In 1959	After 1959	Total
Terminated over 12 months early		1	5	8	14
Terminated 7 to 12 months early	1	5	10	1	17
Terminated up to 6 months early	2	11	5		18
Terminated on time .. .. .	17	21	3		41
Terminated late .. .. .					
Total .. .. .	20	38	23	9	90

Since April 1963, H.P.I. have been recording the actual compared with the originally intended length of each hire purchase contract for new and used cars and commercial vehicles reported to them as completed. Eventually it should be possible from this material, combined with that on intended length mentioned above, to analyse the contracts which were begun in a period according to their intended lengths and, for each intended length, to derive the distribution of early, on time and late settlements. By assuming some stability in the distribution of early, etc., settlements, and after adjusting this distribution so that it relates more nearly to values of transactions rather than numbers as recorded (since the pattern may differ as between large and small vehicles), it would be possible to predict how the outstanding debt generated by a given level of new hire purchase and other instalment credit would in fact run down, compared with the run down to be expected having regard only to the intended lengths of contracts. Meanwhile, some analysis of the intended and actual length of hire purchase vehicle contracts completed since April 1963, has appeared in the *Bank of England Bulletin* for March 1964, and in *Credit* for March and September 1964.

About 30 per cent. of new cars recorded in the survey as bought on hire purchase terms were described as being accepted in whole or in part by Inland Revenue as a business expense. In the case of used cars bought on hire purchase terms however only about 6 per cent. were so described. In both new and used cars the proportion of purchases on hire purchase terms described as accepted in whole or in part by Inland Revenue was lower than for purchasers on other than hire purchase terms. For new cars the proportion accepted in the latter category was about 45 per cent., and for used cars about 10 per cent.

#### Other forms of credit

Forms of credit other than hire purchase played only a small part in directly financing purchases of cars. About 6 per cent. of used cars were bought with the help of other forms of credit, most important being bank loans which made up over half of this figure. About 4 per cent. of new cars were financed by other forms of credit and here again bank loans were the most important source. However, the relatively small number of purchasers mentioning bank loans suggests that respondents took a rather circumscribed definition of this form of

loan, including only those where a specific arrangement had been made to finance the purchase of a car and probably not regarding drawings against previously agreed overdraft limits as falling into the category of loans for the purchase of a car.

### Part III : Survey procedure and methodology

A two-stage sample was designed by the Social Survey in which county boroughs and administrative counties, stratified geographically, formed the first stage. The areas were then selected with probability proportional to the number of private motor cars with licences current during the quarter ended 30 September 1961. A sample of just under 1,700 cars was then drawn at random from the selected areas. The procedure used to make this selection was determined by the fact that one of the purposes of the survey was to measure the margin between the selling and purchase price. The method of selection at the first stage was therefore designed to produce a sample of transactions involving cars which had changed hands.

There are no satisfactory records of transactions as such, and the sample was obtained by comparing the names of applicants at different times for a licence for a particular car. A selection of cars was first drawn from the motor taxation records, using interval sampling. The 12 months October 1960 to September 1961 was taken as the reference period, and the name of the last applicant for a licence in that period examined. This name was then compared with the last applicant for a licence in the period January to September 1960. If the names were different, both applicants were included in the sample; the first applicant was interviewed about his sale of the car and the second about his purchase of the same car. This sample also included cases where there was no applicant in the earlier period, but two or more different applicants in the reference period. There were also two supplementary samples. One was chosen from cases where there was one applicant for a licence in the 12 months October 1960 to September 1961 but none in the nine months January 1960 to September 1960; these were mostly new cars and the applicant was interviewed about his purchase. The second supplementary sample was drawn from cases where there was an applicant in the earlier period but none in the later period. Interviews with these applicants confirmed that most of the cars in question had been taken off the road.

Two kinds of interview schedule were used; one put to a vendor, that is the applicant for a licence in January to September 1960, and a second to a purchaser, that is an applicant in the 12 months October 1960 to September 1961. The questionnaire used for a vendor dealt with the following: the use to which the car had been put, i.e. whether for private purposes or for business; how much, if any, of the purchase value was accepted by Inland Revenue for a capital allowance; how the original purchase of the car had been financed; the date when the car was sold by the vendor and the price obtained for it. The schedule of questions put to a purchaser covered the following: the date of acquisition; the purpose for which the car was to be used; whether it was new or secondhand; the cost of the car when

acquired by the purchaser; how much of the cost, if any, was accepted by Inland Revenue for a capital allowance; how the purchase was financed, by whom, and details of any hire purchase agreement.

Altogether, the interview sample comprised 2,666 persons. The fieldwork was carried out between July and October 1962. The response was good, only 4 per cent. refused, but a substantial proportion (14.4 per cent.) could not be contacted in spite of several calls. Of this group, about two out of three had moved and could not be traced; not surprisingly, a disproportionate number of these occurred in the vendors sample. From details collected at the sampling stage the response rates were examined, by size of car and by year of first registration. For purchasers the highest response was received from those with the newest cars and from the owners of small or medium sized cars. For vendors the most significant difference was a relatively poor response from owners of cars only two or three years old. Most of these differences can be attributed to the varying degree of difficulty experienced in contacting informants. The main sample, that is, the one comprising both a vendor and a purchaser, covered about 900 cars and interviews were obtained with both vendor and purchaser in about half of the cases, thus providing information on the margin between the selling and purchase price of the same car.

Further details of the sample, of the fieldwork, with copies of the schedules, and extensive tabulations of the results will be found in the report issued by the Social Survey (footnote, page xi). Apart from the results, some of which have been described above, the survey has thrown up a number of points of methodological interest. These are dealt with in detail in the Social Survey report, but the most interesting points are summarized below.

The chief problem posed to the survey designer was that of measuring the margin between the selling and purchase price. In the absence of records about transactions in motor vehicles which could be used as a sampling frame, the sample was drawn up by making a comparison of the names of applicants for a licence at different times. In order to get a sample of transactions within the 12 months reference period, it was necessary to compare the owner's name on 30 September 1960 with the owner's name on 30 September 1961. In general the information available did not give the actual owners on these two dates, but they could be inferred from the last application for a licence within the 9 months ending 30 September 1960 and the 12 months ending 30 September 1961 respectively. More precisely, if the date of the last application in the 12 months ending September 1961 was Y then the argument requires that the car had not been sold by this applicant between Y and September 1961. A similar remark applies to the earlier period, namely that the applicant whose name last appears in the nine months January to September 1960 at time X should not have sold it by the end of September 1960. In practice, some transactions will have occurred between Y and end September 1961, and some between X and end September 1960. It is assumed, however, that such transactions will balance each other out, and that the sample obtained by this method basically refers to a twelve-month period. For this reason, separate tabula-

tions by quarters are unlikely to be reliable indicators of the correct variation in the level of transactions quarter by quarter. Some quarterly tabulations have, however, been included in the Social Survey report because of their possible value as relative information, e.g. the proportion of used cars acquired on hire purchase, as in Table 9 of Part II above.

Moreover, the data obtained from a vendor and purchaser about a particular car did not always refer to the same transaction. If a car was already taxed when it changed hands the new owner would not be picked up in the sample until he made an application for a licence. Indeed, if he sold the car within a short time he might not have needed to re-tax the car, and therefore he would not appear in the sample at all. Furthermore, a car could be in the dealer's hands for some time before being purchased. For these reasons there could be a considerable gap between the date of sale and the date of purchase, and in some cases this gap concealed a transaction unrecorded separately in the data secured by the survey. In 55 per cent. of cases the two dates were identical or within a month of each other, but in about 15 per cent. the interval was more than six months. As a consequence, some of the apparent margins became negative, particularly for the longer intervals.

In the course of this work the date of purchase given by one informant was compared with the date of sale given by the other informant, and with other information given on dates obtained during sampling. Many inconsistencies were found, and wherever possible corrections were made. Some indication of the fallibility of human memory is given by the extent of these corrections; in about one-sixth of the cases where both a vendor and

purchaser were interviewed adjustments of one year or more were made either to the date of sale or of purchase.

A third example of some methodological interest concerns the breakdown between the business and consumer sectors. An accurate determination is important in estimating the relative proportions of new cars going to the two sectors, and of the transference of secondhand cars from one to the other. The distinction was made on the basis of a question put to both vendors and purchasers as to whether any of the capital cost had been accepted by Inland Revenue for business purposes and, where applicable, what percentage was allowed. The answers were examined and compared with other data from the survey on whether the car was used for business and whether the informant's firm paid part or all of the cost. As a result, the information obtained from the first part of the question appeared to be reasonably sound, and it is possible to say with some confidence that about 40 per cent. of new cars were sold to the business sector. However, this includes cars acquired by self-employed persons partly for business and partly for private use. To improve the estimate and to take some account of the cost of the car involves apportioning the cost between the two sectors, and for this purpose the proportion allowed for tax purposes was the natural figure to take. But the latter was available in only about half the cases where the proportion allowed for tax was less than 100 per cent., since in the others the informant was unable to say what the percentage was. Some informants found the subject too involved and were confused as between the total proportion of the capital cost allowed and the proportion of the allowance given initially or in the current year.

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