

# 9 Fares

## Introduction

9.1. The revenue earned by Ulsterbus and Citybus in the year to March 1988 can be broken down as in Tables 9.1 and 9.2. These revenues produced an operating profit for Ulsterbus of £1.41 million and an operating loss for Citybus of £2.33 million.

TABLE 9.1 **Ulsterbus revenue, 1987/88**  
£'000

<i>Source</i>	<i>Revenue</i>	<i>%</i>
Tickets sold on buses	15,926	50.0
Tickets sold in offices monthly	2330.7	
weekly	1630.5	
Pupils' sessional tickets	9,664	30.3
Concession fares recovery OAPs	8212.6	
children	2,149	6.8
Private hire and tours	2,514	7.9
Parcels, newspapers and miscellaneous	375	1.2
Total	31,845	100.0

*Source:* Ulsterbus.

TABLE 9.2 **Citybus revenue, 1987/88**  
£'000

<i>Source</i>	<i>Revenue</i>	<i>%</i>
Cash fares	4,185	37.8
Multi-journey tickets	2,213	20.0
Concessionary multi-journey tickets	1,761	15.9
Pupils' sessional tickets	4454.0	
Concession fares recovery	2,018	18.2
Private hire	3483.2	
Advertising revenue	95	0.9
Total*	11,065	100.0

*Source:* Citybus.

\*Citybus revenue has increased significantly in the second half of 1988/89 (see paragraph 9.51).

9.2. The Ulsterbus and Citybus fares structures, and hence many of the issues that arise in the context of fares in the two companies, differ radically. The companies are considered here, therefore, largely separately.

## A. ULSTERBUS

### Fares structure

9.3. Prior to the formation of Ulsterbus in 1967, the former Ulster Transport Authority was subject to strict statutory control of its fares structure. The last determination of the Authority's fares by the Transport Tribunal was published in 1963 and determined an overall mileage-related fares scale which was applied by the Authority throughout Northern Ireland. Ulsterbus, which is not

subject to such control of its fares, has maintained a uniform fares structure throughout the Province. This structure is derived from the 1963 scale, which has been simplified to improve efficiency of fares collection and modified. The current mileage scale is at Appendix 9.1.

9.4. The major modification Ulsterbus has made to the scale is to increase the distance taper, whereby the fare per mile falls as journey distance increases. It was decided to increase the taper in 1968/69 and this has been done in subsequent fares increases. Such a taper is a normal feature of many transport undertakings and reflects the fact that operating costs per mile taper off on longer-distance and express services due to the greater efficiency and operating speed of such services. Ulsterbus told us that the taper also reflected some consideration of 'what the market will bear' passengers travelling longer distances tend to do so relatively infrequently and might be more easily deterred by a given percentage fares increase. Thus, fares increases for longer-distance journeys have been restricted. It can be calculated from Appendix 9.1 that the adult single fare per mile on Ulsterbus now ranges from 33 pence for a one-mile journey, to 11 pence for a ten-mile journey and to 4 pence for a 125-mile journey.

9.5. Return tickets are available for journeys in excess of about eight miles, offering discounts on two single tickets from 5 per cent at eight miles to 11 per cent at 80 miles and 13 per cent at 140 miles. Weekly tickets allow ten journeys within eight days of purchase and offer a discount on ten singles of 2 per cent at three miles and 15 per cent at eight miles. Over 34 miles, however, it would be cheaper to buy the Freedom of Northern Ireland Ticket which offers unlimited travel on Ulsterbus scheduled services for £17 (seven days) or £6.50 (one day).<sup>1</sup> Monthly tickets, which can only be purchased in Ulsterbus offices, are valid for as many return journeys within a month as there are days in the month of purchase. They are priced at four times the weekly ticket price. The weekly and monthly season tickets do not offer unlimited travel, although monthly tickets would allow seven return journeys each week as compared with the weekly ticket's five.

9.6. In accordance with the DOE (NI)'s policy for concessionary fares, men and women aged 65 or over and children under 16 can obtain half-price single and return tickets. They can also obtain weekly or monthly tickets at 10 or 40 times the concessionary single fare, or 5 or 20 times the concessionary return fare for journeys over about eight miles. The full amount of concessionary discount thus given to such passengers is reimbursed to Ulsterbus by the DOE (NI). Some third parties, including Age Concern and the trades unions, have argued that the concessionary fares for pensioners on Ulsterbus and Citybus are less generous than elsewhere in the United Kingdom, especially as there is no cheap off-peak fare and female pensioners aged between 60 and 65 receive no concession.

9.7. Ulsterbus told us that it saw town services as quite distinct from rural and inter-urban services for fares purposes. The general mileage scale does not therefore apply in all towns. Ulsterbus determines fares in each town on the basis of local operating characteristics and in the cases of ten towns or cities has decided that a flat fare for travel within the town or city should apply. Most significantly this applies in Londonderry, where the flat fare is currently 35 pence. The Western Area Manager expressed concern, however, that further increases in the Londonderry flat fare, even if in line with inflation, could seriously deter short-distance bus travel and said that a two-zone fares structure might be required for the city. Other Ulsterbus flat fares vary in relation to town size. All Ulsterbus flat fares are cash-only fares and so do not create fares evasion problems such as those faced by Citybus with its multi-journey ticket (see paragraphs 9.48 and 9.49).

9.8. Other special features exist within the Ulsterbus fares structure. In addition to the ten towns with flat fares, 12 have a special Town Service Scale applied to fares in the town. Such a feature can be expected to apply to town minibuses services. Special fares, which reflect consideration of route costs and demand, also apply to a few particular services such as the university link and airport services. Further variations from the mileage scale exist around Belfast, where many Ulsterbus fares have been constrained by the Citybus flat fare (see paragraphs 9.57 to 9.61).

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<sup>1</sup> From Easter 1989, the Freedom of Northern Ireland Ticket includes unlimited travel on Citybus services.

9.9. Ulsterbus offers some promotional and off-peak fares but there is no generally available off-peak fare. It is up to Area and Depot Managers to explore market opportunities, for example by offering cheap day returns for off-peak travel. In 1987 the company offered 'Buzzer' tickets, which were valid for travel on buses arriving in Belfast after 9.30 am, for a trial period but the majority of local managers did not consider the offer to be successful. No formal evaluation of the experiment was considered necessary before it was discontinued. Some depots did believe the 'Buzzer' offer to be successful and have been allowed to continue with full-week offers. In general, Ulsterbus does not see any scope for peak/off-peak differential pricing shifting enough traffic into the off-peak periods to lead to savings of buses and duties.

9.10. Apart from where the above special features apply, Ulsterbus does not vary its fares by locality or route. This implies acceptance of cross-subsidisation of its more unprofitable routes by its more profitable ones. Furthermore, Ulsterbus told us that any price discrimination as between localities or routes would be a politically sensitive issue in Northern Ireland and probably unacceptable. The Government, in the person of its Northern Ireland Minister, recently reaffirmed that cross-subsidised, unprofitable routes which fill a social need should not be discontinued.

9.11. The fares which result from the above structure are compared annually by Ulsterbus with the fares of a representative selection of other bus operators on the mainland and in the Republic of Ireland. The most recent comparisons with ten such operators, completed in January and November 1988, showed Ulsterbus continuing to have a high minimum fare, but also a longer distance over which this minimum fare applies (0.9 miles compared with a typical 0.5 miles). For distances from two to eight miles, Ulsterbus single fares are lower than those of most operators. Beyond 15 miles, over which relatively few bus journeys are made, most other operators charge lower single fares than Ulsterbus but a number of them do not offer discounted returns. A report commissioned by Ulsterbus and Citybus and submitted to us by the Bus and Coach Council confirmed these findings. It also showed that the fares increases of Ulsterbus (and Citybus) in the 1980s had been lower than those of most sectors of the British bus industry.

### **Process for setting fares**

9.12. The starting point for the annual fares review process is the Board's determination of an overall target percentage increase in revenue to correspond with overall trends in corporate costs and with perceived levels of inflation. Proposals are then prepared covering the rate of increase in fares required to meet this target and also the consequent amended mileage scale. These proposals are usually agreed, possibly with some minor amendments to take account of local concerns raised by Area Managers.

9.13. The agreed rate of increase is applied across the range of fares outlined above, but variations arise through the incorporation of general policy considerations, such as the development of a distance taper, and through the effects of 'rounding'. It is not possible to increase fares by fractions of a penny and Ulsterbus prefers to increase fares to values corresponding to silver currency to simplify fares collection and change-giving and minimise delays to one-person-operated buses. Thus, a given percentage increase in fares may only be applied 'approximately' at each point on the scale. Ulsterbus attempts to prevent inequity by checking that the fare at each individual point on the scale is not consistently 'rounded' in the same direction.

9.14. In deciding on the rate of increase in fares required to produce a given increase in revenue, Ulsterbus told us that it allowed a small amount, most recently about one-half of a percentage point, for 'passenger resistance'. Thus, the percentage increase in fares slightly exceeded the required percentage increase in revenue. Ulsterbus has observed such a relationship between fares revisions and subsequent revenue increases over many years, but has not specifically collected any evidence on elasticities of demand. It is aware of academic studies on the elasticity of demand for bus travel elsewhere.

9.15. 'Passenger resistance' is an accepted elasticity measure of the proportion by which the additional revenue produced by a fares increase falls short of the revenue which would be generated if demand did not change in response to the increase. An international survey<sup>1</sup> of research into the factors affecting demand for public transport concluded that the average price elasticity of demand for bus travel was about -0.3 (ie that a 10 per cent fares increase would cause a 3 per cent fall in demand). The overall price elasticity of demand for Ulsterbus services could be expected to have been observed as low, however, given that real increases in fares have only been small (see Appendix 9.2) and that large segments of the demand are highly 'captive' most schoolchildren and commuters have few, if any, alternatives to Ulsterbus.

### **Peak/off-peak differential pricing**

9.16. The above evidence, of the absolute value of the price elasticity of demand being significantly less than one, suggests that real increases in fares could significantly increase Ulsterbus revenue. It might, however, be more appropriate to price differentially across different segments of demand. Ulsterbus has done this in introducing a distance taper into its fares structure having estimated that the demand for longer-distance journeys is more elastic than that for shorter ones.

9.17. Price elasticity of demand is also likely to vary as between peak and off-peak. The study mentioned in paragraph 9.15 found the price elasticity of demand for peak travel lay between -0.1 and -0.3, while that for off-peak travel could typically be up to -0.7. Such studies are useful general indicators of the differences between peak and off-peak elasticities but are not necessarily applicable to Northern Ireland. For example, elasticities, particularly in the off-peak, could be higher where significant competition is faced. Studies aimed at identifying the elasticities faced by Ulsterbus could consider such factors and should indicate whether a combination of lower off-peak fares and slightly higher peak fares could increase revenue and/or allow a reduction in costs through a shift of some traffic from the peak to the off-peak. Experiments along these lines would have the benefit, if evaluated formally in a way that the 'Buzzer' scheme was not, of providing evidence as to the actual demand elasticities faced by Ulsterbus. Further evidence might be generated by some forms of market research.

9.18. Market research conducted for Ulsterbus and Citybus in September 1988 did not suggest major passenger discontent with Ulsterbus fares 60 per cent of respondents said fares offered good value for money and only 25 per cent said they were poor value for money. A number of third parties who submitted evidence to us, however, supported the introduction of more peak/ off-peak differential pricing. The companies expressed some interest in such pricing, particularly for Belfast. They noted the success of the travelcards available in London which, at a low price, allow unlimited travel after 9.30 am. They also expressed interest in possibly offering, as marketing initiatives, a one-day travelcard to pensioners, allowing unlimited travel after 9.30 am, and special offers to students.

9.19. Apart from London Transport, bus operators which practise some peak/off-peak differential pricing include Yorkshire Rider, South Yorkshire, National Welsh, Cardiff Bus and some other deregulated operators in the United Kingdom. Indeed, in making their recent annual comparison of fares (see paragraphs 9.11 and 9.37) the companies noted that there had been an increase in the number of bus operators in mainland cities offering cheaper fares at off-peak times.

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<sup>1</sup> The Demand for Public Transport, Transport and Road Research Laboratory, 1980.

## Relationship of fares to costs

9.20. Our terms of reference ask us to consider the relationship of fares to cost structures. This is relevant to, amongst other things, the question of peak/off-peak differential pricing. Paragraph 9.12 explained that Ulsterbus attempts to maintain a relationship between total costs and total revenue through its fares increases. It is useful to examine, in more detail, the make-up of these costs and to compare them, on a per mile basis, to fares. Each year the companies break down their direct operating costs as between staff, mileage and vehicle costs. These are presented, together with vehicle depreciation, in Table 9.3, the final two columns of which show estimated peak and off-peak marginal costs on a per mile basis. These marginal costs are the incremental costs which arise as a result of serving peak demand and off-peak demand.

TABLE 9.3 **Ulsterbus costs per mile, 1987/88**

<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
<i>Category</i>	<i>Operating costs</i>	<i>Per mile marginal cost, peak</i>	<i>Per mile marginal cost, off-peak</i>
Staff costs	11,609,669	0.55	0.25
Mileage costs	1,840,035	0.07	0.07
Vehicle costs	8,445,665	0.40	0.18
Vehicle depreciation	<u>3,188,237</u>	<u>0.19</u>	<u>-</u>
Total	25,083,606	1.21	0.50

Source: MMC based on Ulsterbus information.

9.21. Table 9.3 excludes overheads (some £5 million) and income such as capital grants and interest receivable, which are included in the costs shown in Table 4.11. It would not be right to include overheads in estimates of the marginal cost of peak or off-peak travel as the number of passengers travelling could rise or fall significantly without affecting overhead costs. The size of the vehicle fleet is determined by peak demand and so we have assumed that vehicle depreciation costs should be included in column 3 and not column 4. Alternative assumptions would slightly reduce the size of the peak/off-peak differential in marginal costs. If off-peak services are being run at the required frequency with empty seats then the marginal costs of carrying additional off-peak passengers are zero. Beyond the range of these conditions, some staff, vehicle and mileage-related costs are incurred.

9.22. The marginal costs in Table 9.3, particularly those in the staff and vehicle cost categories, are estimates based on information provided by Ulsterbus. Account was taken of the estimated split of total bus mileage as between peak and off-peak times. Some, but not all, off-peak services can be provided within the staff complement required to provide peak services and so some marginal staff costs are incurred in the off-peak. Mileage-related costs, of fuel for example, do not vary significantly as between the peak and off-peak. Vehicle costs include maintenance and cleaning costs, the totals of which are also increased by running off-peak services. Overall, Table 9.3 shows that peak marginal costs exceed off-peak and thus that differential fares, as between the peak and off-peak, would relate the fares structure of Ulsterbus more closely to its costs structure.

9.23. The costs per bus mile derived above cannot readily be turned into costs per passenger mile because Ulsterbus does not collect information on its average loading per bus mile. Some insight into average loading is obtained by comparing average passenger revenue per bus mile (derived from the revenue figures in Table 9.1) with the fares per mile implicit in Appendix 9.1. Average passenger revenue per bus mile is about £1.11. Ulsterbus told us that 90 per cent of its revenue was earned from points on the mileage scale up to ten miles, within which range the fare per mile varies from 33 pence for one-mile journeys to 10 pence for ten-mile return journeys. It seems likely that the average fare per mile lies in this range and thus that the average passenger load of a bus over its whole journey is low, probably in single figures. Ulsterbus said this indicated that it already offered the benefit to the public of a higher quality of service in relation to demand in the off-peak than in the peak, thus passing on the benefit of lower off-peak costs.

## **Competition**

9.24. Competition has had very little impact on Ulsterbus fares for stage carriage services. There is little direct competition in Northern Ireland between bus and rail services. Ulsterbus said that it had never distorted its fares specifically to react to rail competition. The company competes with the Black Taxis in Londonderry and on the Shore Road to Newtownabbey to the North of Belfast and with other taxis apparently providing stage carriage services in a few other areas. Ulsterbus told us that this competition had been a slight restraining factor on the Londonderry flat fare.

9.25. There is also limited competition with private bus operators. Ulsterbus told us that private operators could apply for licences for stage carriage services or for private/contract hire work. In the past, the policy of the DOE (NI) had been to grant new applicants licences only if they could show that their vehicle was required to meet a regular commitment, such as a timetabled stage service or a contract service for a factory or school. Successful applicants were allowed to perform casual (ie non-contract) private hire work within the residual availability of the vehicle. Following the deregulation of express and tour operators in Great Britain in 1980, however, the DOE (NI) relaxed its policy towards private hire and allowed licences to be issued for vehicles to be used solely in casual private hire. This has led to substantially increased competition in this area. In determining an application, however, the DOE (NI) is required to take account of existing licence-holders providing similar services. Thus, if Ulsterbus demonstrates that it already provides an adequate service and that the granting of a new licence would damage its business, then the licence may be refused.

9.26. If a private operator believes it has identified a 'gap' in the stage carriage services offered by Ulsterbus, it can apply for a licence to operate such a service with some prospect of success. Ulsterbus thus faces at least some potential competition, although only a few such licences have been granted. (The DOE (NI) told us that it had received 14 applications in the period 1986 to 1988 nine licences had been granted, one application had been withdrawn and one was still to be dealt with.) Ulsterbus would be told of an application and if it were to apply to fill the 'gap' at the same time then the two applications would be considered competitively. Ulsterbus told us, however, that the DOE (NI)'s policy towards Ulsterbus and Citybus being the principal providers of stage carriage services, and its acceptance of their ability to cross-subsidise less profitable routes, had not changed. The licensing process is favourable to Ulsterbus and Citybus indeed, the Portadown Chamber of Commerce complained to us that it made it nearly impossible for others to begin to compete on equal terms. The process was recently clarified orally to Ulsterbus by the DOE (NI) after some difficulties had arisen.

## **Pricing of school transport**

9.27. In the academic year 1987/88 Ulsterbus was responsible for the transportation to and from school, on behalf of Education and Library Boards (ELBs), of 51,262 children eligible for free bus passes from the ELBs. Payment by ELBs for these passes provides some 30 per cent of Ulsterbus revenue and so pricing of the passes is important. Before 1967 the Ulster Transport Authority priced each schoolchild's pass individually according to the mileage scale for fares. This involved considerable administrative effort and so in 1967 the average price per pupil, to become known as the 'basic head rate', was computed. In subsequent years this basic head rate was increased by the average rate of fares increase for Ulsterbus and multiplied by the number of pupils carried to arrive at the amount payable to Ulsterbus.

9.28. To the extent that the average journey length of schoolchildren has increased, as it did following the introduction of parental choice of schools in the late 1970s, the above change has operated against Ulsterbus as increases to the basic head rate have not recognised such changes. Partly for this reason, Ulsterbus carryings for the ELBs were revalued on the basis of actual 1987/88 journeys and fares, showing that the true head rate was £196.71 as opposed to the £179.99 of the basic head rate. Payments for school transport have recently been recosted on the basis of these calculations and discussions with the ELBs.

9.29. Concessionary fares recovery does not apply to children travelling on Ulsterbus school buses with bus passes. The head rate continues to be calculated on the basis of the concessionary fare but no concessionary fares recovery is made. (This is not the case for Citybus.) If concessionary fares recovery was paid in respect of school passes, such that the DOE (NI) was no longer effectively given a 50 per cent discount, then Ulsterbus revenue would increase by nearly £10 million (see Table 9.1), about a 30 per cent increase. The DOE (NI) has told Ulsterbus that it is not inclined to extend concessionary fares recovery to school passes for use on Ulsterbus services.

9.30. In respect of school buses which have had to run significantly below capacity, and on which the ELBs were not able to restore an adequate loading by modifying their pattern of demand within the school year (for example, by varying school opening hours), until now the ELBs have had to make extra payment. The extra payments to be made were totalled and divided by the total number of pupils carried by Ulsterbus to give an 'underutilised head rate' to add to the basic head rate. In 1987/88 the underutilised head rate was £13.16, making a total of £193.15 payable for each pupil carried for the ELBs. The recent costing review abolished the underutilised rate, about which the ELBs had become concerned. This change will offset most of the gain to Ulsterbus (and the loss to the ELBs) from recalculating the head rate.

9.31. Another result of this change will be that the ELBs will have no incentive to arrange routes and times for schoolchildren's journeys in such a way as to maximise bus utilisation. For example, by staggering school starting times it is possible to use the same bus for two different journeys or for one bus, on one journey, to be made relatively fully-utilised by virtue of carrying pupils to two schools. Under the new system, if demand from one school falls such that a bus becomes underutilised, or rises such that an underutilised 'assist' bus is required, then the ELBs will have no incentive to help overcome the underutilisation as charges to them will not increase. Under the old system, the ELBs would have been faced with increased underutilisation charges and could weigh these costs against any benefits.

9.32. Under the new arrangements Ulsterbus is able to decline a request to run a wholly new school service, or one involving a significant change of route or time, without extra payment if to do so would cause it some difficulty or loss. The new arrangements also protect the company's interests by way of guarantees from the ELBs that Ulsterbus (or Flexibus) can take part in any tendering processes which they conduct and that they will not systematically put parts of the network operated by Ulsterbus out to tender. Ulsterbus is similarly committed to the existing network and so could not easily withdraw from services which became underutilised due to the school population changing (although having minibuses may give it the scope to deal with some such cases). Thus, the abolition of the underutilised rate implies the loss of one method by which prices can be more closely related to costs (and, in particular, costs at the important times of peak demand) in certain cases.

## **B. CITYBUS**

### **Fares structure**

9.33. Prior to 1970 Belfast Corporation Transport Undertaking operated a conventional mileage-related fares structure. In 1970, to facilitate conversion to one-person operation of buses, it introduced a simplified system with pre-purchased tokens. Passengers paid either one or two tokens, according to the distance to be travelled, into self-service machines. Payment of one token covered a journey of three stages (ie 1½ to 2 miles). Tokens cost 6d or a cash fare of 7d could be paid on the bus.

9.34. Citybus was made responsible for Belfast bus services in 1973 and raised fares in line with inflation until 1978. By then it had become apparent that fares evasion had reached serious levels, either in the form of paying one token and 'overriding' or paying no token at all. Citybus introduced the flat fare in April 1978, after extensive research of continental systems and the purchase of ticket canceller equipment. Passengers could purchase multi-journey tickets in advance, at £1.20 for an eight-journey ticket. Children and pensioners could purchase half-price multi-journey tickets, the difference being paid to Citybus by the DOE (NI). Cash fares paid on the bus cost 20 pence, on which no concession was available. Two fares had to be paid for 'cross-city' journeys, even if made

on one bus, except that a limited 'free' transfer was made available to reach inner city destinations within approximately one mile of the city centre. This system persists today, but the fares have risen to £3.20 for an eight-journey ticket (40 pence per journey) and 50 pence for a cash fare.

9.35. The advantages of the flat fare and ticket system were seen to be:

- (a) abolition of handling, counting, packing and recycling of tokens (2.5 tons per week);
- (b) abolition of fares evasion by overriding;
- (c) price reduction on longer-distance journeys, including from new suburban developments, encouraging use of buses rather than cars;
- (d) acceleration of fares collection due to simplicity of system;
- (e) competitive pressure imposed on the Black Taxis by the price ceiling; and
- (f) reduction of cash carried on bus by drivers and, thereafter, risk of robberies.

9.36. There are no promotional fares available on Citybus services in general. A promotional offer was introduced whereby a cash flat fare of 25 pence, some 15 pence lower than the normal multi-journey ticket fare (and 25 pence lower than the normal cash fare), applied to all Citybus services on the six Saturdays before Christmas 1988. On six routes monitored, traffic rose by about a quarter in the morning peak and by a smaller proportion over a more prolonged period in the afternoon and evening. Citybus told us that it was considering other possible promotional fares.

9.37. The fares which result from this structure are compared annually by Citybus with those of operators on the mainland. It is extremely difficult, however, to make meaningful comparisons between the flat fare and the graduated fares scale generally applied by other operators. The latest (November 1988) comparison shows that the Citybus flat fare equates with the average fare in the 11 mainland cities studied at about 2½ miles journey distance. Citybus believed that the average Citybus passenger travelled in excess of three miles for this fare, but had no firm data on this.

9.38. A flat fare system gives less scope for adjustment of the fares structure than a graduated fares scale such as that of Ulsterbus. Indeed, in practice there is even less scope for the adjustment of fares levels, due to 'rounding' constraints the multi-journey flat fare has only ever been increased by multiples of 10 pence, and the cash fare by multiples of 5 pence (see Table 9.4). Fares are increased when and by how much considered necessary given the trends in costs and inflation. No explicit consideration is taken of 'passenger resistance'. Citybus told us that increases had been constrained by the fact that a higher flat fare may both deter more short-distance travellers and give the Black Taxis greater scope to undercut the bus fare, especially for shorter journeys. Thus, the cash flat fare has risen only four times in the 1980s, as shown in Table 9.4.

TABLE 9.4 Citybus fares increases

<i>Date of increase</i>	<i>Eight-journey tickets</i>	<i>Cash fare</i>	<i>Fares index</i>	<i>Retail Price Index</i>
10.3.80	20.0% to £1.80	-	100.0	100.0
16.2.81	16.6% to £2.10	16.6% to 35p	116.6	111.9
29.3.82	9.5% to £2.30	14.3% to 40p	129.4	121.5
1983	-	-	129.4	127.1
2.4.84	8.7% to £2.50	-	136.5	133.4
1.7.85	12.0% to £2.80	-	144.0	141.5
1.9.86	-	12.5% to 45p	147.8	146.6
6.7.87	7.1% to £3.00	-	152.3	152.4
4.7.88	6.6% to £3.20	11.1% to 50p	165.1	159.7

*Source:* Citybus.

## Flat fare and alternative systems

9.39. The main argument against the flat fare system is that it makes short journeys expensive and deters short-distance travellers who would pay less if the fare was not an averaged flat fare. On the other hand, it encourages longer-distance journeys, which form the majority of Citybus journeys due to the distribution of large housing estates on the Belfast periphery. However, a survey of international studies (see paragraph 9.15) concluded that, at a given average fare level, a more price-discriminating system will tend to attract greater patronage and greater revenue than a flat fare system. The simplicity of a flat fare system does produce a number of operational advantages (see paragraph 9.35), however, which may lead to counterbalancing cost savings.

9.40. The flat fare does not relate an individual passenger's fare to any measure of costs. Fares per mile on Citybus vary inversely with the distance travelled, which is generally up to 4½ miles but, exceptionally, can be up to 9 miles. Citybus said, however, that on peak-time buses almost all its passengers travelled all the way to or from the city centre and that few made shorter journeys within the suburbs. It suggested, therefore, that the principle of dividing the total cost of operating a journey evenly over all passengers using a bus at its peak loading point was applicable and sensible in Belfast and justified the flat fare principle. Citybus has the same lack, however, of peak/off-peak differential pricing as Ulsterbus. The equivalent totals for Citybus to those in columns 3 and 4 of Table 9.3 were estimated to be £2.14 and £0.84.

9.41. The elasticity arguments in favour of peak/off-peak differential pricing (see paragraphs 9.16 to 9.19) also apply to Citybus. The off-peak price elasticity of demand may be higher for Citybus than Ulsterbus services due to the keenly-priced competition faced on a number of routes from the Black Taxis.

9.42. A number of third parties expressed opposition to the Citybus fares system. The Belfast Chamber of Trade, Belfast Civic Trust and the General Consumer Council for Northern Ireland (the Consumer Council) would all prefer a zonal fares system to the flat fare, largely because of the latter's penalisation or deterrence of short-distance travellers. Third parties, such as the Consumer Council, Belfast Chamber of Trade and the trades unions, also called, for example, for more peak/off-peak price differentiation and for fares evasion to be tackled through an improved ticketing system and an enhanced set of legislative powers. The market research referred to in paragraph 9.18 also revealed discontent with Citybus fares. The flat fare was considered expensive for short journeys and 'transfer' or cross-city journeys beyond the free transfer zone it was said to discourage such journeys, particularly short shopping journeys (which would tend to be made at off-peak times).

9.43. Citybus told us that it was not necessarily committed to preserving the current flat fare structure indefinitely. It had considered alternative fares systems but its efforts had been concentrated on making the flat fare system work as well as possible. It told us that a review would be undertaken now that the company had a new Managing Director.

9.44. There are a number of alternatives to the flat fare system. Firstly, there is a graduated mileage-related system, as used by Ulsterbus. Such a system would obviously be more flexible and to an extent relate fares more closely to costs but it would cause certain advantages (notably (b) to (f) at paragraph 9.35) of the flat fare to be lost. Other alternatives were considered by Halcrow Fox (HFA) in that firm's recent study of transport in Belfast.<sup>1</sup> HFA said there were three main options. One was a 'fine' zonal fares system, which would be similar, in terms of advantages and disadvantages, to a pure mileage-related system. A second alternative would be to have a series of flat fares, as in Hong Kong, varying by route and depending on factors such as service type (eg local or express) or route length. Such a system would differ radically from the 'universal' systems always used by Ulsterbus and Citybus; the companies said that there were political reasons for not varying fares geographically.

9.45. The final alternative, which HFA recommended, was a 'coarse' zonal fares system. A number of third parties have expressed support for this recommendation (see paragraph 9.42). HFA said that such a system, with zones usually 3 to 5 kilometres across, was found in a wide range of cities and used as a basis for a national ticketing system in both Belgium and the Netherlands. HFA recommended that Citybus should use a two- (ie inner and outer) or three-zone system, incrementing the fare whenever a zone boundary was crossed. This system is fairly simple and has the advantage of charging more for longer distances, thereby probably attracting more revenue at a given average fare level than a flat fare system, though less revenue than a more finely-graduated system (see paragraph 9.39). In its response to the HFA report, Citybus said that a zonal system would not work at present in Belfast because of fares evasion, particularly by way of overriding.

### **Fares evasion**

9.46. Fares evasion is a serious problem for Citybus. Management have, on a number of occasions, produced evidence of the number of evaders being between 10 and 14 per cent of its total passengers. There are some links between the flat fare system and fares evasion. It has been noted that the flat fare may increase the incentive for short-distance travellers to evade their fares. The system of free transfer within a central zone also increases the scope for fares evasion. Passengers are allowed to transfer between buses and complete their journeys within a central zone with a radius of about one mile without extra payment. Fares evaders travel beyond this zone, however, often having boarded a bus improperly as a transfer passenger.

9.47. Citybus also said that there were three fundamental elements in most flat fare systems, which were common in continental Europe. These elements were:

- (a) a cash fare for a single journey;
- (b) a cheaper method of 'bulk purchase'-this worked either through a discount offered on multi-journey tickets or through the offer of 'unlimited' travel with travel-cards; and
- (c) a penalty fare, much higher than the cash fare, enforceable on any passenger caught travelling without having paid by either method (a) or (b).

Citybus told us that it had required element (c) in its flat fare system when it was introduced but the necessary legislation had still not been forthcoming some ten years later. This had allowed fares evasion to become established under the new system just as it had been under the old token system. Citybus said, therefore, that the flat fare was really only a problem in the fares evasion context because of the absence of a penalty fare, and this it viewed as part of the legislative shortcomings which continued to undermine the control of fares evasion in Belfast (see paragraph 2.52).

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<sup>1</sup> Halcrow Fox and Associates: A Review of Transportation Strategy for Belfast (1986-2001).

9.48. Apart from such legislative shortcomings the main factor to which Citybus ascribed the fares evasion problem was its ticketing system. It distinguished two types of fares evasion the non-payment of a fare and overriding and noted that control of both types used to rest with bus conductors. Drivers of one-person buses can only effectively control the former type. Citybus drivers have not even had this control with respect to most passengers as non-cash fare passengers have had to 'cancel' their own multi-journey tickets. Tickets are cancelled by inserting them into a machine which prints a 'cancellation' on one side of the ticket (tickets are eight-sided, being square with two faces).

9.49. This ticketing system has given scope for a number of the fares evasion methods currently practised in Belfast. Some forged or dummy tickets have been used. More often tickets have been coated with some substance which can later be removed along with the imprint left by the cancelling machine. Frequently, eight-journey tickets are stamped many more than eight times. Fares evasion also takes the form of adults improperly using concessionary multi-journey tickets, thus evading half their fare.<sup>1</sup> A study by Citybus inspectors in September 1987 showed the breakdown of fares evaders in a typical week, as proportions of total passengers checked, as in Table 9.5.

TABLE 9.5 **Pattern of fares evasion on Citybus, September 1987**

<i>Type of evasion</i>	<i>Proportion of total passengers %</i>
Overriding	0.40
Concession abuse	2.14
Ticket defects	2.94
No ticket	<u>4.77</u>
	<u>10.25</u>
Adults	6.9
Juveniles	3.0
Pensioners	<u>0.3</u>
	10.2

*Source:* Citybus.

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It is likely that a significant number of the passengers who produced no ticket did, in fact, possess tickets with defects (such as more than eight stampings).

9.50. In the latest pay round, Citybus secured union agreement for drivers to resume responsibility for every passenger's payment. In November 1988 the cancelling machines were turned around so that passengers could no longer insert their own tickets but must give them to the driver for checking and cancellation, thus reducing the scope for fares evasion.

9.51. This change, together with a period of intensive ticket-checking by inspectors and a major publicity campaign, have already had a significant effect on fares evasion. A February 1989 survey showed that the levels of evasion highlighted by Table 9.5 had been almost eradicated; nearly all remaining evasion was by way of overriding on the central zone free transfer facility. This has resulted in significant increases in Citybus revenue and substantial savings by the DOE (NI) of concessionary fares recovery. Citybus estimated that the full-year net effect on its revenue would be an increase of about 15 per cent, or some £1.6 million. Nevertheless, Citybus has been continuing to press for legislative backing (see paragraph 2.52) which it sees as the key to tackling the fares evasion problem and essential if it is to correct the perceived disadvantages of its flat fare system.

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<sup>1</sup> This form of fares evasion costs Citybus nothing as the DOE (NI) pays the other half of the fare.

9.52. The other major possibility to be considered is replacement of the ticketing equipment. The current equipment is now ten years old and Citybus is prepared to consider a replacement. There are now a number of far more advanced ticketing systems available. These include tickets with magnetic strips for the storage of information so that the validity of a ticket for the journey to be made can be checked, special offers can be more easily accommodated and useful management information can be retrieved from the system. (The lack of the last feature is a further serious drawback of the current system.) Further advances in ticketing include stored-value, 'phonecard-type' tickets and even 'rechargeable' stored-value tickets. Citybus hopes that, by the time it is ready to buy a new system, stored-value ticket systems will have been successfully implemented in a number of places. Such systems have now started to undergo trials on the mainland and Citybus has these under observation.

9.53. Citybus stressed that even with a new ticketing system it would still need the increased powers which only legislation could grant in order to tackle fares evasion effectively. The company wished to continue to make progress with other remedial measures before introducing a replacement ticketing system. The replacement option was thus seen as a long-term one.

### **Competition**

9.54. Much of paragraphs 9.24 to 9.26 applies equally to Citybus. The largest element of competition faced in Belfast is from the Black Taxis. Citybus estimated that the average fare paid by users of the Black Taxis, allowing for a proportion of children and pensioners travelling at reduced fares, was about 30 pence. It told us that this competition had constrained its fares increases, particularly increases in the cash fare, and that the only responses it could make were minor ones. The total revenue loss to the company in 1987/88 attributable to competition from the Black Taxis is estimated at some £3 million.

### **Pricing of school transport**

9.55. Schoolchildren are not as significant or distinct a part of demand for Citybus as they are for Ulsterbus. They extend the peak demand of commuters for Citybus services. Many Belfast schoolchildren do not receive free bus passes as they tend to live closer to their schools than children in areas served by Ulsterbus. Such passes for use on Citybus were introduced in 1978, some four years after the introduction of concessionary fares recovery, and some 3,957 pupils received passes for travel on Citybus in 1987/88. The price per pass paid by the ELB is the total price of all the concessionary multi-journey tickets that the child would require for travel to school in the year. In respect of each pass purchased, concessionary fares recovery is then charged to the DOE (NI) in the normal way that is, as if all the concessionary multi-journey tickets had actually been purchased.

9.56. Citybus provides some bus services specifically for taking children to and from school. Before 1987 payment on these buses was expected to be by way of pre-purchased concessionary multi-journey ticket. These services were identified, however, as particularly prone to fares evasion and since March 1987 all passengers must pay a new cash fare of 15 pence. Concessionary fares recovery is paid by the DOE (NI) in respect of this fare, which does not apply on regular service buses.

## **C. ULSTERBUS/CITYBUS INTERACTION**

9.57. The Belfast periphery, where Ulsterbus and Citybus operations meet, is an area with fares 'anomalies'. Belfast City services used to be operated by the Corporation but its monopoly area was strictly defined. On the Ulsterbus routes into Belfast there was, and is, competition near the boundary of this area between Ulsterbus, operating from its first stop outside the boundary and the Corporation/Citybus, operating from the last stop inside the boundary. On such routes, therefore, Ulsterbus used to attempt to match its fare from the periphery to the Corporation's two-token fare (see paragraph 9.33).

9.58. When the current flat fare system was introduced by Citybus in 1978 the flat fare itself lay between the previous one-token and two-token fares. Ulsterbus therefore felt the need to hold periphery fares even further below the mileage scale. Ulsterbus said that it now tried to keep such fares close to the Citybus cash flat fare as it perceived a need to present, together with Citybus, a fair overall package to the travelling public. The Ulsterbus fare from the Abbey shopping centre to the city centre (a journey of over four miles), for example, is only 50 pence. Thus, the Citybus flat fare system does cause some problems for Ulsterbus.

9.59. Particular problems exist in the Newtownabbey area, where the Ulster Transport Authority allowed Belfast Corporation to extend its routes into new housing estates. As the estates grew and others were added, these extended routes met the long-standing Authority route for a number of successful services along the Shore Road to Belfast. Thus, passengers from these estates can now travel up to twice the normal maximum Citybus distance for the Citybus flat fare of 40 pence (multi-journey ticket) or 50 pence (cash) while the Ulsterbus fare from essentially the same place is 75 pence. This fare, and a number of other Ulsterbus fares in the area, are in fact below what they should be (according to the mileage scale). The fare from Ballyduff or Mossley to the city centre, for example, is 75 pence for journeys of some seven miles. The longest Citybus route extends over nine miles to Roughfort but the Ulsterbus fare for the equivalent journey to the city centre is only 83 pence.

9.60. The bus companies told us that there had been substantial revenue loss from Ulsterbus services in the Newtownabbey area and that substantial service cuts had had to be made. They said there was no doubt that causes of the traffic loss included the progressive extensions of Citybus routes and services and the activities of the Black Taxis. They also said there was no doubt that the operation by Citybus of the unusually long routes at the flat fare had contributed to that company's operating losses.

9.61. Ulsterbus said that such serious problems of Ulsterbus/Citybus interaction, in respect both of fares and of the companies' operating areas, remained to be dealt with. It said this had not been possible, despite the two companies being under the same overall management, primarily because the Citybus fares evasion problem must be dealt with before any long-term decisions on fares structure or a revised operating pattern could be contemplated. It also said, however, that it had started to consider an integrated Ulsterbus/Citybus fares structure for the whole Greater Belfast area. The companies had hoped to introduce this within a year but hoped now to introduce it once anti-fares evasion legislation was in place. It was also hoped that the opening of the joint depot at Monkstown early in 1990 (see paragraph 7.43) would be an opportunity for a complete replanning of services between Belfast and the Newtownabbey area.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Process for setting fares**

9.62. The bus companies determine fares increases with the objective of matching revenue increases to projected increases in costs. Our recommendation at paragraph 4.26 is that fares should be set in relation to a financial target.

### **Demand elasticity and peak/off-peak price differentiation**

9.63. Ulsterbus and Citybus have no formal estimates of the elasticities of demand for their services. Such data would help them make better decisions not only on fares but also, for example, on frequency of services and marketing. Data could be generated by the proper evaluation of experiments. In addition, Wayfarer will allow more detailed examination of the effects on demand of changes in fares and services.

9.64. Neither Ulsterbus nor Citybus practises general peak/off-peak price differentiation. We were surprised to learn that the only company-wide offer made by Ulsterbus, the 'Buzzer' ticket, was discontinued without formal evaluation. Many bus and other transport operators elsewhere offer

off-peak fares and available evidence suggests that the price elasticities of demand for bus travel do vary as between the peak and off-peak. Thus, differential pricing could bring about a net increase in revenue. A number of consumer groups would welcome such differential pricing. It would also relate fares more closely to costs and could reduce total costs by shifting passengers from peak to off-peak, since it is the number of peak passengers which determines the size of the vehicle fleet.

9.65. We note that Citybus has recently experimented with cheap fares on Saturdays. The companies told us that, as part of their new 'market-led' approach, they expected to conduct more such experiments and to evaluate them more formally. We note that the companies have expressed interest in the pensioner market as one in which differential pricing may bring commercial benefits.

9.66. We recommend that Ulsterbus and Citybus should:

- (a) evaluate the effects of pricing experiments carefully in order to estimate the elasticities of demand for their services;
- (b) practise more peak/off-peak differential pricing with respect to particular market segments, such as pensioners, where this may bring commercial benefits; and
- (c) experiment with and evaluate more general peak/off-peak differential pricing;

and we recommend that Ulsterbus should:

- (d) evaluate the possibility of allowing unlimited travel with weekly and monthly season tickets.

### **Relationship of fares to costs**

9.67. Ulsterbus and, to a lesser extent, Citybus attempt to maintain a relationship between total costs and revenue by way of their fares increases. There are a number of elements of the relationship between individual fares and costs. Ulsterbus fares increase with the distance travelled and thus, to an extent, with costs. Moreover, fares per mile on Ulsterbus fall as distance travelled increases, further refining the relationship between fares and costs. The Citybus flat fare does not increase with the distance travelled.

9.68. The main way in which the companies do not relate fares to costs is in their lack of peak/off-peak differential pricing, which we have dealt with above (see paragraphs 9.63 to 9.66).

### **Competition**

9.69. The main competition to the companies comes from the Black Taxis (see paragraphs 2.28 to 2.33 and 2.70). Apart from this the companies face little competition. The processes by which other potential bus operators may obtain licences are weighted in favour of Ulsterbus and Citybus. This is consistent with the DOE (NI)'s acceptance that the companies should continue to cross-subsidise their less profitable routes. The processes by which other operators may obtain licences are also, however, less than totally clear. We recommend that the DOE (NI) should clarify the licensing process for the benefit of potential operators.

### **Pricing of school transport**

9.70. Demand from schoolchildren yields over one-third of Ulsterbus revenue and dominates its thinking on the pattern of services at peak times of the day. Most pupils carried by Ulsterbus are paid for by ELBs. Until recently the arrangements for payment by the ELBs included extra payment in respect of underutilised buses, and thus gave the ELBs an incentive to arrange school travel in a manner that made economical use of buses. This facility, however, has been dispensed with under a new agreement, with the consequent loss of one method by which prices can be more closely related to costs (and, in particular, costs at the important times of peak demand). The new agreement with

the ELBs introduces some features which protect the company's interests and allows the company to levy extra payments if new demands from the ELBs imply increased costs. The agreement applies to the existing overall network.

### **Citybus flat fare**

9.71. Citybus operates a flat fare system. It seems to be unpopular and makes short journeys expensive. It also creates anomalies with Ulsterbus fares. On the other hand it is simple to operate and attractive to longer-distance passengers. There are a number of possible alternative systems, each with advantages and disadvantages. Many parties, including the consultants who conducted the recent Review of Transportation Strategy for Belfast, favour a coarse, two-zone system. Citybus has said this would not work, at present, in Belfast owing to fares evasion problems. It is important that action is taken on both the fares system and fares evasion and so we make separate recommendations on these two subjects.

9.72. We recommend that Citybus should conduct a study to determine whether it should relate fares in some way to distance travelled. The study should determine, for example, whether two or more fares might be appropriate and whether a new system might include peak/ off-peak differential pricing.

9.73. The interaction of the different fares systems of Ulsterbus and Citybus causes a number of problems around Belfast, particularly in the Newtownabbey area where the distance that can be travelled on Citybus at the flat fare is greater than average. The companies told us that there were a variety of reasons, particularly the fares evasion problem in Belfast, why their joint management had not yet tackled these problems. They also told us, however, that they had started to consider an integrated Ulsterbus/Citybus fares structure for the Greater Belfast area. They hoped to introduce it once legislation which would enable them to institute an effective penalty fare scheme was in place (see paragraph 9.75).

9.74. We recommend that the companies should introduce an integrated fares structure for the Greater Belfast area once legislation which would enable them to institute an effective penalty fare scheme is in place. Such integration should complement that of Ulsterbus and Citybus services in Greater Belfast (see paragraph 10.89).

### **Fares evasion**

9.75. Citybus has suffered from a severe fares evasion problem, costing it about 15 per cent of its revenue. At the end of 1988 it introduced new arrangements to meet this problem, with considerable success, which has also brought the DOE (NI) savings of concessionary fares recovery. The company believes strongly that it also needs a penalty fare, preferably backed up by the removal of some inconsistencies in the PSV regulations and by police powers to arrest defaulters. Having dealt with fares evasion, it would then feel able to address the perceived disadvantages of its flat fare system. Legislation providing for a penalty fare has been promised by the DOE (NI) for many years. We believe that it is very important that such legislation should be passed as soon as possible.

9.76. A new ticketing system is recognised as an option by Citybus, albeit a long-term one. The company hopes to introduce a new system, possibly based on stored-value tickets, once it has seen similar systems in successful operation elsewhere.