Traffic congestion

Traffic congestion is one of the major problems that many cities are facing. " There are three main components of the growth of traffic on urban roads which has taken place in recent years; an increased demand for personal travel into and through city centre areas; a growth in the number of goods vehicles on the roads; and a transfer of passengers from public transport to private car. " 1 Norwich is not an exception. In the centre of the city, the problem is more than obvious. " In response to the exhibitions in February of 1990, congestion was identified as the major problem facing Norwich followed by environmental issues and then parking.

The future is disturbing; " forecasts show that vehicle trips will rise by 55% in 2006. This growth in traffic is mainly due to greater wealth - more people buy cars, more of their income is spent on petrol and more people move out of the cities and further away from their jobs" 3. It is also noteworthy that " Norwich has an average speed during peak hours of 12. 5 mph which is only 1. 5 mph faster than in inner London. Norwich also has a high level of traffic accidents involving personal injuries.

Every year there are 4. 3 personal injury accidents per kilometre on major roads. In Ipswich, the comparable figure is 1. ". 4 In order to reduce traffic congestion in the centre of Norwich, the city council can adopt many different measures. Some of them are more effective and some require some changes in the area of Norwich before they can actually function while others can be put into effect immediately. However, they all aim to reduce the traffic congestion. The question that arises is which measures are the most appropriate for Norwich. The easiest solution to congestion, according to

laymen is to build new highways and add more lanes to existing ones. This notion is very superficial and can not be taken seriously into account.

Norwich is a town with many old buildings and a style that does not create a modern city. Most of the houses are private houses, not higher than three flours, with their own gardens. An attempt to build new highways would spoil the beauty of the town and would make it like an ordinary city without any speciality. In addition to that, " more roads simply encourage more people to use their cars, to live farther away from work and thus use more road space. " 5 Before examining the measures that can be adopted, the different types of costs that result from the operation of a road system must be identified.

Operating costs are the costs of running motor vehicles. (E. g. , fuel, tyres etc). Track costs comprise the costs of providing the road system (E. g. , maintenance, depreciation, and administration). Congestion costs are the costs that road users impose on other road users (E. g. , delay, and higher operating costs). Other intangible costs. These are losses imposed on the community by road users (E. g. , fumes, noise, and accident risk). Alternatively, costs may be arranged according to the persons or firms on whom they fall and by whom they are paid, either by a money payment or in some other way.

Such a classification however, raises the problem of the discrimination between private and social cost. " Social cost is the total cost resulting from any economic operation whether it is borne by the person or firm undertaking the operation or by other persons or firms in the community who suffer losses for which they are not compensated. Thus private cost may

occasionally be equal to social cost but only when there are no community costs as well. Private costs refer to those costs borne by the person undertaking the operation and public costs to the total costs of the operation. 6 The city council is following a series of co-ordinated policies covering all aspects of travel in the Norwich area. The focus of the strategy, which is called NATS(, " is to encourage people to depend less on their cars in the city by making alternative forms of transport more attractive. Making it less convenient to use cars for commuting by controlling long stay parking provision; and making streets safer by slowing traffic down in residential areas. The strategy builds on the existing high levels of cycling and walking and the success of park and ride.

It only promotes road improvements if there are safety and economic benefits and no significant environmental problems. " 7 According to statistics every weekday over half a million-vehicle trips are made in and around Norwich. Thirty per cent of these trips are concentrated into just hours, the rush hours, between 7: 30 and 9: 30 a. m. and 4: 30 and 6: 30 p. m. These are the hours when people go to and leave work. In order to reduce traffic congestion and allow for some increases in leisure and business trips for which there is no alternative, a reduction in trips to work by car will have to be achieved.

To do so the city council must have alternative solutions to offer. These are buses, cycling and walking. As far as buses are concerned, it is essential to improve local bus services by introducing bus priority measures such as bus lanes to help reduce delays to bus services and improve their reliability. It also must introduce simpler ticketing arrangements - particularly on journeys

that involve a change of bus or a change between bus and train. These measures will improve the travel by bus but they are not enough. Three more factors can be improved.

First, the capacity of each bus. To achieve this, new buses must replace the small one's that are in use. Second, the ticketing system needs to be changed. Instead of paying the ticket in the bus, passengers can buy their tickets before getting into the bus and just validate them when they get in. The advantage of this system is that makes the route faster. Passengers can get in the bus without queuing and validate their ticket without the interference of the driver. Inspectors would check at any time, by getting onto buses, that everybody has a ticket.

Heavy penalties for those who do not have tickets will be imposed. Finally the price of the ticket should be decreased, in order to be the cheapest mean of transport and attract more people. There are many cycling facilities that can be improved to make cycling more attractive. The most important issues that concern the cyclists are their safety when they cycle and the safety of their bike when they leave it unattended. The NATS aims to improve cycling facilities by continuing to develop a comprehensive network of on and off road routes.

Furthermore, it can create more parking places for bikes. Another measure that can be adopted is to close some roads to traffic during the shopping hours, or even pedestrianize them. Streets like St. Stephan Street (See Appendix 2) are very crowded especially during the shopping hours because most of the shops in Norwich are in that street. By not permitting entrance to

vehicles, it helps the pedestrians to walk without the fear of the cars. A measure that is already in use but needs to be completed is the park and ride measure. Park and ride is a system which enables journeys to be completed using a combination of private and public transport.

By providing convenient car parks on the edge of an urban area, with good public transport links to the city centre motorists can drive to these car parks and continue their journey by either bus or train. Park and ride schemes already operate in a number of English cities and towns including Cambridge, Oxford and Nottingham. " 8 When all the park and ride sites are constructed so that each area is served by one site this measure will help to reduce the traffic congestion in the city centre even more. The first purpose built terminal opened at the airport in 1994 and, together with the park and ride service from the Harford Livestock Market, on average the two services accommodate over 1000 cars a day which may have otherwise driven to the city centre". 9 However, a very effective and easily adopted measure is to specify an area in the city centre where the cars access will be selective. This can be done by allowing entrance to this specified area, the " ring", at even days to cars which last number is an even number and at odd days to cars which last number is an odd number.

With this measure, the traffic is reduced to half in the " ring". Penalties will be imposed to drivers who enter the " ring" when they are not allowed. An important advantage of this measure is that it can be put into effect immediately without special costs. (See Appendix 3 for proposed area) A variation of the previous measure is to allow entrance at the " ring" only to

buses and taxis and not at any private cars or motorbikes. The advantage of this variation is that reduces the traffic even more by excluding private cars.

Taxis can be allowed access to the " ring" to serve people who do not want to take the bus for some reason. A factor that causes traffic congestion is the commercial vehicles. " The congestion caused by the incidence of commercial vehicles in traffic flows can in economic terms, be viewed either as a user cost the additional costs to other vehicle operators caused by the presence of such a vehicle or as a capital cost the cost of the extra road space that would be required to accommodate the commercial vehicle traffic without altering costs in existing traffic.

Besides the important congestion implication commercial vehicles also figure large in the environmental or amenity cost aspects of traffic flows. " 10 Finally, the answer that economists have for auto congestion and pollution problems is road pricing. This system charges people for using roads based on what roads they use, what time of day and year they use those roads, and the degree to which pollution problems exists at the time they are using those roads. Sets prices at the levels that yield the optimal amounts of usage. Using bar codes and debit cards, a city can install bar code readers at different points around the city.

As any car goes by each point a certain amount is deducted from the driver's debit card account depending upon weather time of day and location. Inside the car, the driver has a meter that tells him how much he has been charged and how much remains in his debit card account. " 11 Many people would argue that this system allows the rich to drive more than it allows the poor.

The answer to those people by Lester Thurow is that in this case " each auto can be given a specified debit card balance every year and those who are willing to drive less can sell their unused balances to those that want to drive more. 12 Another policy that reduces traffic congestion is the tax on gasoline.

Gasoline is a complementary good to driving. An increase in the price of gasoline tends to reduce the quantity of driving demanded. Therefore, a gasoline tax reduces traffic congestion. It must be noted at this point, that the city council alone can not put into effect some of these measures without the approval of the Norfolk county council. The most appropriate measures for Norwich would be to complete the park and ride network, to improve local bus services, pedestrianize some streets and apply the measure of the " ring".

In addition to these measures, improvements can be made by having big screens in certain points of the city, which will provide information about traffic in the city centre. These are the most appropriate measures because they do not require many alterations to the city centre and they are the least expensive. If these measures are put into effect the traffic in the centre of Norwich will be reduced, there will be environmental benefits and the noise and accidents will be reduced.