When markets fail to allocate resources efficiently, it can be said that market failure has taken place. The causes of market failure are negative externalities, public good, monopoly power and assymetric information.

When consumers consume a good or service, they are only concern with their own benefit. Producers will also produce so as to maximize their profits. However, the consumption and production of this good can bring out the occurance of negative externalities. Negative externalities are defined as a third party spillover effect owing to the overconsumption or over production of a good for which there is not compensation to the 3rd party.

We can see from the diagram above that when left to the free market, consumer and producers will comsume up to the point of the free market equilibrium which is point D as at this point, the marginal private benefit (MPB) and marginal private cost (MSB) are equal to each other.

But with the existence of a negative externalities, there exist a divergence between the marginal private benefit and marginal social benefit were DF represents the per unit external cost (or the marginal external cost, MEC) that the negative externalities is putting out to society. In this case, the marginal external cost (MEC) cause the marginal private benefit curve to shift leftward/downward to reflect the lost of benefit to society owing to negative externalities. The new social optimal point will therefore be point E where the marginal social cost is equal to the marginal social benefit (MSC=MPB).

In the case of Beijing, the emission caused by the over usage of the vehicle is causing people to suffer health problems, congestion and gives rise to global warming. The cost of these effects to society is not borne by the consumer and producers. 3rd parties will have to use their own resources to cure the problem caused by the over usage/over consumption of cars in Beijing and this constitutes to a negative externaltiy.