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The Microeconomics of Traffic

By Konstantin Sonin

For the past two weeks, Muscovites -- including the Spartak football club racing to get to its Champions League match on Nov. 1 -- have been stuck in traffic jams. The discussion that arose as a result focused on purely technical factors -- new roads, overpasses, packed parking lots, and so on.

Such infrastructure solutions give politicians the opportunity to sidle up to the pork barrel come budget time, but the real solution doesn't seem to lie here at all. U.S. economist and political scientist Anthony Downs -- according to www.AnthonyDowns.com, the "world's greatest authority" on real estate and urban affairs -- recently introduced the empirical law that infrastructure solutions do not help reduce time spent in traffic. Instead, he proposed charging people to use roads. Like any experimental rule, Downs' law is the subject of constant controversy, but the logic still holds firm: People make decisions on how to get to work or to the theater -- either every day or on a one-off basis -- depending in part on road quality and the number of traffic tie-ups. If a newly built overpass reduces time spent in gridlock, then car owners who used to ride the metro now have a new incentive to go into town by car, while those who do not own a car will wonder whether it is not actually worth buying one. As a result, the traffic bottleneck returns.

For an economist, a traffic jam is like a very egalitarian tax, as it snares both CEOs of major companies -- who lose tens of thousands of rubles per hour -- and gypsy cab drivers, who lose about 400 rubles per hour. For noted linguists on their way to lectures, a traffic jam incurs about 300 rubles in personal losses, but at a cost of about 10,000 rubles to society as a whole, while for rich heiresses on their way to fashionable stores, it means a 10,000 ruble personal loss, but only a 10 ruble loss for society. In the same way, the endless lines in the Soviet Union were a progressive tax on human capital -- for a professor or a conservatory soloist the losses incurred by spending an hour standing in line were significantly higher than for a worker or communal farm laborer. Like most progressive taxes, traffic jams are highly inconvenient for the minority who bear the brunt -- all of those senior executives and high-ranking officials -- and at least a sense of Pyrrhic victory for the majority.

Society could be the winner if traffic pricing were differentiated -- for example, if people could pay at least a portion of the tax openly by declaring their actual losses. This was the aim behind introducing the Congestion Charge, a tax levied on drivers at peak traffic hours in central London. It's also why Singapore and Hong Kong charge for using certain lanes on the roads. (It is not, however, the same as toll roads in the United States, where, as a rule, the money collected is used to finance construction of new roads.) In the United States, large cities have introduced systems to get people living in the suburbs to carpool. In the morning, special lanes are designated for these cars.

Here in Moscow we could, for example, introduce "paid lanes" on Volgogradsky and Leningradsky prospekts at rush hour, and have traffic police collect 200 rubles per car to use them. This system would need almost no control. It doesn't really matter where the collected money goes. What is important is that people who put a high price on their time (CEOs, for example, or those running late for a date) have the opportunity to show that they really do value it.

Yet the idea that traffic jams are a progressive tax also suggests that a market solution -- such as paid lanes, for example -- while economically effective is unlikely to be particularly popular.

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