Who Is Afraid of Commuter Ride-Hailing Apps? Tech Meets Matatu, and Why Nairobi Does Not Need State-Run Public Transport

By David Ndii

Technology platforms have become disruptors in unexpected places. They have over the years disrupted the music distribution business, the book trade, and even the hospitality industry, but none has been as turbulent as Uber's disruption of public transportation.

A couple of days ago, the commuter ride-hailing app services Little Shuttle and SWVL announced that they were suspending their operations. Little Shuttle and Little Cab ride-hailing apps are products of technology company Craft Silicon. SWVL is an Egyptian start-up that has invested in the country to do this specific business. Launched seven months ago, SWVL is reported to have 150 buses serving 100 routes, and has raised Sh1.5 billion from investors to expand its operations.

The National Transport and Safety Authority (NTSA) subsequently issued a statement giving its reasons for the suspensions. The agency explained that the two companies had obtained the "wrong" licence—known as a Tour Service Licence (TSL)—which it deemed to be a violation of Passenger Service Vehicle (PSV) regulations. NTSA also accused the operators of failing to register their vehicles with the authority as required by Section 26 of the Transport and Safety Act No. 33 of 2012. "The two companies have never contacted the Authority to show any intention to operate as commuter service providers”, the NTSA avers.

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Section 26 of the Transport and Safety Act, the provision that NTSA claims has been violated, states that “[a] person shall not operate a motor vehicle whose tare weight exceeds three thousand and forty-eight kilogrammes for the carriage of goods or passengers for hire or reward unless the vehicle is licensed by the Authority in accordance with this Part and in such manner as the Cabinet Secretary may prescribe. Violating the provisions, i.e., operating a commercial vehicle without a prescribed licence is a criminal offence that can attract a fine of Ksh. 300,000 or imprisonment for a term of five years.”

The other ground for suspension is that the two operators have violated PSV regulations. To be licensed under these regulations, the operator is required to be a corporate body which may be a company, a cooperative society (SACCO) or other collective registered under the Societies Act, and have a minimum of 30 vehicles owned by the operator or under a franchise arrangement with the owners.

Regulation 7 (f) requires passengers to be “issued with receipts for fares paid, and as from 1st July 2014, operate a cashless fare system.” Another regulation requires “a transport safety management system based on ISO3900.” Obviously, these regulations are not enforced—and therein lies the paradox. The shuttle services that the NTSA has suspended were the closest thing to compliance with the spirit of these regulations that we have seen since the collapse of the Kenya Bus Service (KBS) franchise several years ago. It is in fact not apparent from my reading of these regulations that Little Shuttle and SWVL have violated these regulations in any substantive way.

The NTSA is disingenuous. Investors do not determine for themselves what licences they need. They go to the government and say, look, I want to run a business of the following nature, what do I need? The government then makes the determination and advises the investor accordingly. In the statement announcing the suspension of operations, Little Shuttle’s Chief Executive Officer disclosed that they were operating on the basis of a national Transport Licensing Board (TLB) licence—also issued by the NTSA—which does not restrict them to specific routes. Someone at the NTSA must have determined that a national TLB licence is what they required. Moreover, if it was deemed that there was no suitable licence, the Transport and Safety Act gives the Cabinet Secretary the power to “exempt any person or class of persons or any motor vehicle or class of motor vehicles from all or any of the provisions of this Act.” The NTSA could have advised the investors to apply for exemption.

In his statement, the Little Shuttle CEO alludes to cartels: “I am not sure if the decision to stop us was from the authorities or they were under pressure from the public transport cartels.” There is a whole range of actors that this could apply to, either working independently or in concert. There are the investors, that is, the vehicle owners, the crew who operate the vehicles and control the revenue, route cartels who control access to particular routes and the police extortion racket. The industry has also been associated with money-laundering syndicates. As one of the biggest cash businesses around, it is as close to the ideal laundromat as you can get.

A key challenge that *bona fide* investors in the *matatu* industry face is that they are hostage to crew and route cartels. Precisely because PSVs do not issue receipts as required by law, the owners have no way of keeping tabs on revenue. Moreover, even if they could do so, they would still be compelled to give the crew leeway to pay bribes. Students of economics may recognise this as a principal-agent problem.

The principal-agent problem arises in contractual relationships where the principal (the vehicle owner) cannot observe whether poor performance by the agent (the crew) is because of external factors (e.g. poor market conditions) or lack of effort or dishonesty on the part of the agent. We say that the interests of the principal (maximum effort by the agent) and the incentives of the agent (maximum income for least effort) are not compatible.

To mitigate this problem the industry has come up with a fixed daily revenue target, which in essence changes the contract between the owner and crew from a wage to a vehicle lease. In economic theory, we call this the incentive-compatible contract. An incentive-compatible contract seeks to motivate the parties to achieve mutually beneficial outcomes. This particular incentive-compatible contract has an extremely high social cost.

Because the crew gets to keep the revenue above the daily target, they are motivated to maximise the number of passengers, and this they do at the expense of road and passenger safety. The cashless system the government sought to enforce would have gone some way towards resolving this problem, which is probably partly why it was resisted—not to mention the resistance by those others with vested interests in a cash business, notably the money-laundering syndicates and the police extortion cartel.

The ride-hailing apps portend a more robust solution to this problem; because of the ubiquity of mobile payments, they can easily combine revenue tracking and cashless payments. And since the revenue is tracked electronically, this makes it possible to enter into a wage contract between the owner and the crew. Crew on a wage contract have no incentive to compromise safety in order to maximise revenue.

That said, it is not evident that the commuter ride-hailing services are an immediate threat to the *matatu* industry. The two suspended services appear to be more of an alternative to personal cars than direct competitors for *matatus*. This can only be a good thing in terms of reducing congestion on the roads. Still, the development has caused sufficient concern somewhere, perhaps because the reputation of the disruption caused to the conventional taxi industry precedes Little Shuttle and SWVL. But it is also the case that sometimes these regulatory hurdles are extortion rackets that are intended to extract bribes or a share of the business.

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There is another vested-interest candidate—the government itself. It is now one and a half years since the government hastily painted some red lines on some of Nairobi's thoroughfares and declared the lanes thus demarcated dedicated Bus Rapid Transit (BRT) lanes. The red paint has since faded. It is said that the buses are being assembled in South Africa, after local samples failed to make the grade. But other than the now faded lines, there is no evidence of actual BRT infrastructure being built. A BRT system is a metro light rail on the cheap but it also costs. The first phase of the Dar es Salaam system covering 21 kilometres took three years to build at a cost of $140 million (Sh14 billion) while the second phase covering another 19 kilometres will cost $160 million (Sh16 billion).

Nairobi is one of several African cities that do not have municipal public transport. For all their notoriety, *matatus*, *dala dala* and *tro tros* manage to move the cities quite efficiently. They are accessible, responsive, affordable, flexible as well as colourful and entertaining. A number of surveys conducted in Nairobi over the last decade or so indicate that public transport—predominantly *matatus*—accounts for between 50 and 55 per cent of commutes in the city; 40 per cent of commuters walk, while between 8 and 12 per cent use private cars.

By way of comparison, London's elaborate public transport system comprising of buses covers 35 per cent of the commutes. The iconic underground moves 10 per cent. For all the congestion hullabaloo, a recent paper titled *Commuting in Urban Kenya: Unpacking Travel Demands in Large and Small Kenyan Cities,* published in the academic journal *Sustainability*, observes that average commuting journeys in Nairobi are comparable to those of major cities in the United States such as New York and Los Angeles.

This data is telling us that Nairobi is none the worse for lack of a municipal public transport system. Municipal systems are hugely expensive to build and to run, requiring operational subsidies. At £17.6 billion (Sh2.3 trillion) and counting, CrossRail—London's new train system which has been under construction since 2009—is billed as the most expensive public infrastructure project in Europe. As observed, the Dar es Salaam BRT has already cost $300 million (Sh30 billion) and is nowhere near solving the city's congestion problem.

There is, in fact, a parallel between what the commuter ride-hailing apps are trying to do and the story of mobile telephony in Africa. The phenomenal growth of mobile telephony in Africa is, to a large extent, a leapfrogging of the largely non-existent landline telephony. The same applies to the innovations around mobile telephony, notably mobile money, reflecting the poor reach of financial services referred to nowadays as financial exclusion. Mobile telephony systems and services are estimated to account for close to 9 per cent of Africa's GDP, only marginally below manufacturing at 10 per cent, which is remarkable for a sector that is only two decades old.

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Like landline telephony, public urban transport systems are characterised by rigidity. Customers must go to the bus or train and follow fixed routes and timetables, just as in the old days when we used to have to go—sometimes for miles—to reach a telephone. To send money urgently, you went to the Post Office to send a telegraphic money order which was physically delivered to the recipient who in turn physically went to cash it at the Post Office.

The disruptive power of ride-hailing apps is what the Little Shuttle CEO refers to in his memo as "supply and demand software technology." In plain English, this is about using customer ride request data—how many customers want to travel, when and where—to provide services that are responsive to demand in terms of capacity, routes, scheduling and pricing. But this is not entirely new; one of the reasons why *matatus* eclipsed scheduled bus services is precisely because they were more responsive.

As observed, between 8 and 12 per cent of Nairobi's estimated three million commuters use private vehicles This works out to something in the order of 300,000 commuters and, assuming two people per car, 150,000 vehicles that spend eight hours or more hogging parking spaces—Sh150 billion worth of idle capital, over and above fuel, pollution and congestion costs.

Nairobi's public transport imperative is to put more of these people on *matatus* and this seems to be precisely what the suspended ride-hailing services had set out to do. A smart government would be doing its best to make commuting by private vehicles costly. How so? For starters, the Nairobi County government needs to go back to a time tariff for street parking. Leaving a private car in a street parking all day should be extremely punitive. I would propose a rate of Sh100 per hour. We may also want to think about applying congestion charges on the city's main arteries: Mombasa Road, Waiyaki Way, Thika Road, Jogoo Road, Ngong Road and Langata Road.

Assuming that each of the minibuses serves 40 commuters who would otherwise travel in private cars, we are talking of each bus displacing 20 private vehicles on the road. If only 20 per cent of driving commuters take to these services, we are talking of replacing 30,000 cars with only 1,500 minibuses. This would certainly have a discernible impact on de-congesting the roads. And the less congested the roads become, the faster the trips, the more attractive using public transportation becomes, and the more profitable the entire industry becomes. Far from fighting them, both the government and the *matatu* industry should be embracing the commuter ride-hailing apps.

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