



## A Parable

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All firms include a transport access cost element in their calculations; at least implicitly, Domino's pizza does it explicitly.

One could state the corporate goal of Domino's pizza as follows:

**TO DELIVER A PIZZA THAT IS ACCEPTABLE IN QUALITY, UN-DAMAGED AND STILL HOT, AT AN ACCEPTABLE PRICE, WITHIN A HALF HOUR OF ORDER.**

There are many transport elements embedded in this illustrative statement of an ostensible goal for Domino's. Delivery within a half hour is the one that we always focus on, but others are significant-"still hot" means special packaging in specially designed thermos bags, "undamaged" means protective

packaging as well. (Some of us are old enough to remember bringing home a cold, soggy pizza, most of it stuck to the roof of the box, and a little remembrance in the form of a round oil stain that was permanently embossed on the right front seat of the car.) With all of that it's still the delivery in half an hour that is central.

There are three ways in which we can look at this phenomenon that help explain the interactions between economic development, productivity and transportation mobility. There are messages for us in each of the approaches.

(1) If we think of a metro area of one million people, with the pizza eaters randomly distributed about, a Domino's staff analyst, probably hired away from the local metropolitan transportation planning organization, could look at the area, study

its transportation network, and determine that (say) 785 Domino's shops, if properly placed, could serve the entire community.

If the day after this analysis, the United States Congress announces that it is going to invest  $x$  millions in transportation infrastructure in Pizza City, then he might recalculate and find that only 710 establishments are now needed to serve the same population, saving the need to build and staff 75 establishments. The savings in investment in 75 establishments that are now unneeded is called productivity. That is, producing the same product, with 75 fewer buildings to build,  $x$  number of fewer employees, and  $y$  number of fewer delivery vehicles on the street is a saving that can be passed on to consumers as more pizza, or lower prices, or retained as higher wages or dividends to owners.

(2) If a Domino's employee knows that average speeds have improved by reductions in congestion, solutions to bottlenecks, etc., he can slow down, and avoid the tendency to make time when he can to make up for lost time in bottlenecks. This is clearly a safety improvement which makes a further major contribution to productivity. If there is no investment to decrease congestion is it the frustrated driver or the Congress who bears greater responsibility for higher accident rates? The driver of course is the one who is ultimately responsible for his behavior in traffic. (If Congress does not invest, it is ludicrous to solve the problem by legislation to blame the Domino's of the world and force them to change their marketing goals or service requirements that would be just codifying our lack of productivity.) (3) If, for example, it takes 1,000 pizza-eating households to sustain one Domino's establishment then the range of the service delivery area for each establishment, its "marketshed" will be the product of the frequency with which pizza eaters eat pizza, the average travel times on the street system, and the average densities at which people live. (If we could get all 1000 households to live in a single high-rise building then the Domino's could be in the basement and deliver by elevator (hope-

*1Domino's is just a convenient name, al- most any firm would do as well.*

fully within a half hour). But people don't and shouldn't live at densities designed to optimize pizza delivery or to optimize any other private, or public, service function.

Arguing that people should be organized in a way to make services "more efficient" may be appropriate to chickens or sheep but not to the American Public, or any Democratic society. "Efficiency" as seen by many is very different than productivity. It is not a very useful word in transportation. It would be most "efficient" if Domino's had one big truck and could organize all the orders from a given neighborhood for one delivery trip at one time. But what is efficiency for the supplier is not that of the household for whom efficiency is having the product where it wants it when it wants it. This is simply another replay of the age-old conflict between the mass approach versus the custom-tailored approach. As long as costs permit, societies, busi-

nesses and individuals will always prefer a demand-responsive, customer-tailored approach.

#### CLOSING

We can turn the subject around and consider the pizza restaurant whose clients come to it. They are just as affected by travel times as their competitor at Domino's. As travel times increase their market area shrinks as customers are discouraged from the trip, profits and productivity decline. Customers lose as they have one less shopping opportunity in an acceptable range, the business loses because it has fewer customers within an acceptable travel distance, and society loses because there is less choice, less opportunity and less competition in the marketplace.

If this seems mundane and irrelevant to "important public policy issues" we might consider the effect of multiplying the Domino's experience

by the Country's hundreds of thousands of establishments, which, perhaps not as explicitly as Domino's but just as validly, have their productivity affected by infrastructure change - the pizza sauce supplier to each Domino's for instance, or the supplier of blood plasma to the hospital next door. If we shift to the public arena we should consider that in technical terms the fire station or the ambulance service has the identical service goal as a Domino's, but with rather greater matters at stake. By making transportation travel times and costs an explicit part of their marketing structure, Domino's has provided us with a very useful example of how other firms function implicitly. Federal Express, UPS, the U.S. Post Office or any organization that makes an explicit delivery time commitment would be just as valid an example. America can learn a lot from Domino's pizza.