

Direct flights or cheaper options

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Let's say one has to travel from Geneva to Montreal. He has to choose between (1) flying directly for 1100 CHF and (2) flying from Paris on a cheaper charter flight (800 CHF). If flying from Paris, he has to get there either by train (TGV for example) or plane (easyjet for example). Option (2) involves money saving, risks (loss of luggage, missed connections) and various hidden costs (time loss, stress, hassle, forgone cappuccinos) that depend on the individual. How much are these risks and hidden costs, let's call them Y, worth?

The individual will choose to fly directly if $Y > 300$ CHF. Y, which can be seen as an inconvenience cost, is individual specific; it depends on his level of risk aversion, income, as well as laziness. The purpose of this paper is to determine if the price differential (300 CHF) reflects the average individual's estimation of Y and also to determine what is more important in driving Y.

Using survey data on 36 students I calculated an average estimation of Y of 299 CHF, exactly the market outcome (OK one franc close).

Methodology

I obtained data from my own survey asking students:

If you had to fly from Geneva to Montreal, you could take a direct flight for 1100 CHF, or get to Paris and fly from there on a cheap charter. Would you fly from Paris if the total cost of getting there and flying was 400, 500, 600, 700, 800, 900, 1000 or 1050 CHF? I took the highest "yes", subtracted each answers from 1100 CHF, and computed the average to obtain my estimated Y.

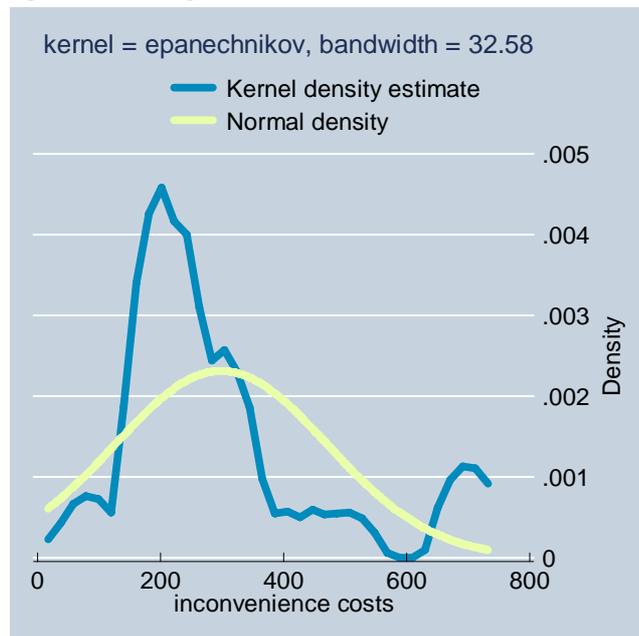
To measure income I asked each individual his monthly expenditure as income is not yet a clear measure of wealth for students. To measure risk aversion I asked students if they would rather invest in stocks or bonds (in normal financial times) (bonds=risk averse) and to measure laziness I ask them if when the phone rings in their family house, do they run and pick up or wait for someone else to do it (someone else=lazy). Here are the summary statistics and regression results.

Table 1 **Summary statistics**

Variable	Obs	Mean	s.d.	Min	Max
inconvenience cost	36	299	172	50	700
risk averse	36	0.52	0.50	0	1
lazy	36	0.44	0.50	0	1
monthly expenditure	34	1855	692	800	4000

People have indeed very different estimations of inconvenience costs, as shown by the high standard deviation and the epanechnikov kernel density estimate.

Figure 1 **Density estimate of inconvenience cost**



In order to determine what causes inconvenience costs estimation, I used a method called Ordinary Least Squares (OLS) regressing the individual's inconvenience cost on his monthly expenditure, and two dummies, one indicating whether she is lazy and one whether she is risk averse. Results are in table 2.

Table 2 **OLS regression**

risk averse	41.073
lazy	-150.793*
monthly expenditure	0.012
constant	335.105***

OLS coefficients. * means significant, the more stars, the better. Dependent variable is inconvenience cost. The R2 is 21%!

Being risk averse increases the inconvenience cost by 41 CHF. This means that risk averse persons are less as likely to travel through Paris at a given price, as suggested by theory. Being lazy decreases the inconvenience cost by 150 CHF, suggesting lazy people are more likely to travel through Paris at a given price. This is a very surprising result that contradicts theory. It may be due to an error-in-variable problem. An individual that spends 500 CHF more per month has a 6 CHF higher inconvenience cost, which is in accordance with theory, though too small an effect.

Conclusion

Markets are functioning; the estimated inconvenience cost is exactly the market outcome price difference. Nevertheless, more research needs to be done in order to determine what causes inconvenience costs estimation.