ENR-21806 Environmental Economics In Practice 2013-2014

Assignment Week 1

Exercise 1: Transport

Suppose you are a student from Los Angeles, California, who has just swapped study roles with a Dutch friend. So now here you are in Wageningen for two years of study, while your friend's gone to live with your parents in LA.

Now you are living in _____ (fill in your current address) and you need to make a decision of what transportation modes to use for getting to classes at the Leeuwenborch (5x/week) and a weekly visit to Amsterdam (to visit museums :).

In this exercise we will look at your and your friend's travel costs, including the externalities.

Question 1a

Compare the capital and operating costs (time and money) for each of these modes of transport, for both activities (use google maps to calculate distance). You can mix modes, i.e., ride a bike to the train station. List (paid or unpaid) externality costs using 20EUR or $25/ton CO2e. (Make sure that you check to see if externalities are ALREADY included in prices.)

1) Foot
2) New bike that you can sell for 50% price in two years.
3) New petrol car (Fiat 500) that you can sell for 75% price in two years.
4) Bus or train
Hints: It will be easier to use a spreadsheet to get costs per week/trip/km. Use current prices but assume prices rise by 3 percent in year two. The opportunity cost of your time is EUR10 per hour when you cannot multi-task (e.g., read) and half that when you can. Also list "occasional" costs (e.g., car maintenance) that you should expect.

Give URLs for all price information. If you CANNOT find a price, then make one up – but be sure to give a good justification for your guess.

Your answers should look like this:

	Foot	Bike	Car	Train/Bus
Purchase price				
Operating costs (use/km/week) *Use SEVERAL lines for all items...(time, petrol, etc.)*				
Total operating year 1				
Total operating year 2				
Sale price				
TOTAL cost				
Average cost per week				

Question b

Now do the same for your friend in LA – for all four modes – using your address at 1029 Wallace Ridge Beverly Hills, CA 90210 and her daily visits to UCLA and weekly visit to Venice Beach. Parking is free at home but you need a permit at UCLA and need to pay at the Beach. Use US dollars but translate the average cost per week into EUR.

Question c

Explain in one paragraph why you would choose one mode (or mix) over another, for both destinations in both locations.Make sure that you discuss the importance of priced (e.g., fuel) vs unpriced (e.g., time or carbon) activities.

Notes on answers (that varied all over the place):

1) Most of you did well on this assignment. Average grades of 7 reflect the fact that some did not answer the question (rather than answering wrong, which was hard).
2) It's hard to know how to allocate the car expense (to school) if you decide to use the car for A'dam or Venice. The car is then a sunk cost, which changes the accounting. That said, do NOT charge for the car TWICE!
3) Some people remarked on the difficulty of biking uphill (LA) or the savings from walking instead of going to the gym -- these are good details to add...
4) Many people could not find (or were too lazy) to look up buses to UCLA. It's the bus/metro, not big blue bus.
5) When I asked "check to see if externalities are included in the price" then I wanted you to (a) notice the difference in petrol prices between NL and US and (b) think of the impact of petrol taxes, which exist in both countries. Almost nobody did this :(
6) There was a BIG range in bike and shoe prices; that range may have changed decisions!

Many of you did a good job in displaying your data and calculations; others did not. It's better to use many small steps instead of LONG formulas in spreadsheets (a) for me to see what you do and (b) so you don't make mistakes.