# The potential demand for carsharing from university students: an Italian case study.

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Excel interface for data collection for the detailed, face-to-face, computer-assisted interview.

The rows in *italics* are generated by the software based on the previous information on the mobility patterns and on assumptions and information about the regional fares:

Table 15 – Private car costs and benefits module

|  |  |  |
| --- | --- | --- |
| **If you own a car, please answer the following questions** | | |
| How much does your car cost? | *€* |  |
| After how many years do you think that the market value of your car be zero? | n° |  |
| How much do you pay as a road tax? | *€* |  |
| How much do you pay as insurance? | *€* |  |
| How much do you value the risk of uninsured theft or damage to your car? | *€* |  |
| How much do you pay for the annual ordinary and extraordinary maintenance? | *€* |  |
| How much would you pay annually for avoiding the nuisance of having to care about maintaining and refuelling your car? | *€* |  |
| What is the opportunity cost of your private garage? | *€* |  |
| How much do you pay weekly for parking? | *€* |  |
| How much time do you spend weekly to search for a parking place? | *min.* |  |
| How much would you pay for avoiding the nuisance of searching for 10 minutes for a parking place? | *€* |  |
| How much do you rate in monetary terms the pleasure of owning a car? | *€* |  |
| What is the sum that you would be willing to accept to give up your private car? | *€* |  |
| *Annual monetary expenses:* | *€* |  |
| *Annual depreciation costs:* | *€* |  |
| *Annual opportunity costs:* | *€* |  |
| *Net nonmonetary costs (excluding the cost for the time spent in the vehicle):* | *€* |  |
| *Total monetary and nonmonetary costs (excluding the cost for the time spent in the vehicle):* | *€* |  |

Table 16 – Motorcycle costs and benefits module

|  |  |  |
| --- | --- | --- |
| **If you own a motorcycle, please answer the following questions** | | |
| How much does your motorcycle cost? | € |  |
| After how many years do you think that the market value of your motorcycle be zero? | n° |  |
| How much do you pay as a road tax? | € |  |
| How much do you pay as insurance? | € |  |
| How much do you value the risk of uninsured theft or damage to your motorcycle? | € |  |
| How much do you pay for the annual ordinary and extraordinary maintenance? | € |  |
| How much would you pay annually for avoiding the nuisance of having to care about maintaining and refuelling your motorcycle? | € |  |
| How much do you rate in monetary terms the pleasure of owning a motorcycle? | € |  |
| What is the sum that you would be willing to accept to give up your private motorcycle? | € |  |
| *Annual monetary expenses:* | *€* |  |
| *Annual depreciation costs:* | *€* |  |
| *Annual opportunity costs:* | *€* |  |
| *Net nonmonetary costs (excluding the cost for the time spent in the vehicle):* | *€* |  |
| *Total monetary and nonmonetary costs (excluding the cost for the time spent in the vehicle):* | *€* |  |

Table 17 – Bicycle costs and benefits module

|  |  |  |
| --- | --- | --- |
| **If you own a bicycle, please answer the following questions** | | |
| How much does your bicycle cost? | € |  |
| After how many years do you think that the market value of your bicycle be zero? | n° |  |
| How much do you rate in monetary terms the pleasure of cycling? | € |  |
| How much do you rate in monetary terms the nuisance of cycling? | € |  |
| *Annual monetary expenses:* | *€* |  |
| *Annual depreciation costs:* | *€* |  |
| *Annual opportunity costs:* | *€* |  |
| *Net nonmonetary costs (excluding the cost for the time spent in the vehicle):* | *€* |  |
| *Total monetary and nonmonetary costs (excluding the cost for the time spent in the vehicle):* | *€* |  |

Table 18 – Bus costs and benefits module

|  |  |  |
| --- | --- | --- |
| **If you use the bus, please answer the following questions** | | |
| Do you buy single tickets? |  |  |
| Do you buy the 10 tickets card? |  |  |
| Do you buy the monthly pass? |  |  |
| Do you buy the annual pass? |  |  |
| *Total annual costs (excluding the cost for the time spent in the vehicle and the time to access\egress the bus):* | *€* |  |

Table 19 – Train costs and benefits module

|  |  |  |
| --- | --- | --- |
| **If you use the train, please answer the following questions** | | |
| Do you buy single tickets? |  |  |
| Do you buy the bi-weekly pass? |  |  |
| Do you buy the monthly pass? |  |  |
| Do you buy the annual pass? |  |  |
| *Total annual costs (excluding the cost for the time spent in the vehicle and the time to access\egress the train):* | *€* |  |

|  |  |  |
| --- | --- | --- |
| **If you use the taxi, please answer the following questions** | | |
| *Total annual costs (excluding the cost for the time spent in the vehicle):* | *€* |  |

Table 20 – Walking costs and benefits module

|  |  |  |
| --- | --- | --- |
| **If you walk to reach your work\non work destinations, please answer the following questions** | | |
| How much do you rate in monetary terms the pleasure of walking? | € |  |
| How much do you rate in monetary terms the nuisance of walking? | € |  |
| *Net nonmonetary costs (excluding the cost for the time spent in the vehicle):* | *€* |  |

Table 21 – Carsharing costs and benefits module

|  |  |  |
| --- | --- | --- |
| **If you use the Carsharing, please answer the following questions** | | |
| What is the annual membership fee | € |  |
| Carsharing fee per minute | € |  |
| (Round) Trips per year | n° |  |
| How many minutes do\would it take to you to reach a CS car? | n° |  |
| How much would you pay for avoiding the nuisance of searching for 10 minutes for a CS car? | € |  |
| How much would you pay annually for avoiding the nuisance of having to book a CS car? | € |  |
| How much would you pay annually for avoiding the risk of not finding a CS car available when you need it? | € |  |
| How much do you rate in monetary terms the satisfaction of being a CS user? | € |  |
| *Annual monetary expenses:* | *€* |  |
| *Net nonmonetary costs (excluding the cost for the time spent in the vehicle):* | *€* |  |
| *Total monetary and nonmonetary costs (excluding the cost for the time spent in the vehicle):* | *€* |  |

Table 22 – Overall travel costs and benefits module

|  |  |  |
| --- | --- | --- |
| **Overall total** | | |
| *Total annual monetary expenses:* | *€* |  |
| *Total annual depreciation costs:* | *€* |  |
| *Total annual opportunity costs:* | *€* |  |
| *Total net nonmonetary costs (excluding the cost for the time spent in the vehicle):* | *€* |  |
| *Overall total monetary and nonmonetary costs (excluding the cost for the time spent in the vehicle):* | *€* |  |

Table 23 – Assumed values of the triangularly distributed random variables (lower limit, upper limit, mode)\*

|  |  |  |
| --- | --- | --- |
|  | *unit* | T(min, max, mean) |
| **Private car** |  |  |
| Purchase cost (S2) | *€* | 1000, 22000, 6100 |
| N° of years before the market value goes to zero (S2) | n° | 1, 10, 5 |
| Road tax (S2) | *€* | 80, 360, 181 |
| Insurance cost (S2) | *€* | 250, 800, 515 |
| Monetary value of the risk of uninsured theft or damage (S2) | *€* | 0, 2500, 747 |
| Ordinary and extraordinary maintenance cost (S2) | *€* | 100, 1000, 322 |
| WTP for avoiding the nuisance of maintaining and refuelling your car (S3) | *€* | 0, 600, 202 |
| Opportunity cost of the private garage (S2) | *€* | 0, 1200, 213 |
| Weekly parking costs (S2) | *€* | 0, 10, 2 |
| Time spent to search for a parking place (S2) | *min.* | 0, 15, 3 |
| Monetary value of the pleasure of owning a car (S3) | *€* | 0, 7000, 1742 |
| **Motorcycle** |  |  |
| Purchase cost (S2) | € | 525, 1500, 1181 |
| N° of years before the market value goes to zero (S2) | n° | 2, 5, 4 |
| Road tax (S2) | € | 10, 35, 20 |
| Insurance cost (S2) | € | 56, 270, 174 |
| Monetary value of the risk of uninsured theft or damage (S2) | € | 0, 100, 56 |
| Ordinary and extraordinary maintenance cost (S2) | € | 50, 150, 95 |
| WTP for avoiding the nuisance of maintaining and refuelling the motorcycle (S3) | € | 0, 50, 24 |
| Monetary value of the pleasure of owning a motorcycle (S3) | € | 20, 750, 530 |
| **Bicycle** |  |  |
| Purchase cost (S2) | € | 10, 50, 37 |
| N° of years before the market value goes to zero | n° | 0, 2, 1 |
| Monetary value of the pleasure of owning a bicycle (S3) | € | 0, 10, 5 |
| **Walking** |  |  |
| Monetary value of the pleasure of walking (S3) | € | 10, 500, 209 |
| **Carsharing** |  |  |
| Membership fee | € | 20, 100, 50 |
| Minutes needed to reach a CS car | n° | 5, 10, 8 |
| WTP for avoiding the nuisance of having to book a CS car (S3) | € | 20, 100, 61 |
| WTP for avoiding the risk of not finding a CS car available when you need it (S3) | € | 30, 300, 111 |
| Monetary value of the ideological satisfaction of being a CS user (S3) | € | 0, 300, 114 |

\*Annual values unless otherwise stated.

S2 = derived from Survey 2, the 50 direct in-depth interviews

S3 = = derived from Survey 3, the 213 specific contingent valuation interviews.

Table 24 – Estimated individual probability of using CS

|  |
| --- |
| 69%, 13%, 65%, 69%, 83%, 64%, 60%, 24%, 46%, 79%, 41%, 15%, 52%, 18%, 31%, 41%, 77%, 1%, 70%, 79%, 1%, 98%, 61%, 8%, 72%, 58%, 90%, 55%, 56%, 37%, 63%, 19%, 64%, 56%, 61%, 54%, 87%, 100%, 23%, 68%, 91%, 76%, 74%, 85%, 88%, 71%, 15%, 77%, 69%, 60%, 84%, 74%, 80%, 97%, 25%, 83%, 18%, 77%, 34%, 98%, 66%, 16%, 80%, 54%, 16%, 71%, 4%, 78%, 59%, 74%, 69%, 72%, 69%, 88%, 65%, 57%, 94%, 100%, 85%, 3%, 87%, 77%, 83%, 51%, 66%, 78%, 77%, 45%, 65%, 56%, 22%, 3%, 64%, 67%, 85%, 91%, 0%, 59%, 66%, 38%, 64%, 47%, 6%, 92%, 88%, 27%, 31%, 75%, 24%, 85%, 84%, 53%, 73%, 59%, 55%, 14%, 68%, 52%, 20%, 20%, 55%, 80%, 57%, 61%, 90%, 71%, 99%, 76%, 97%, 92%, 19%, 75%, 35%, 60%, 73%, 84%, 38%, 76%, 78%, 74%, 79%, 5%, 70%, 19%, 17%, 20%, 69%, 38%, 88%, 60%, 52%, 62%, 67%, 90%, 57%, 58%, 73%, 17%, 56%, 51%, 100%, 41%, 62%, 0%, 38%, 45%, 87%, 48%, 60%, 64%, 76%, 71%, 83%, 67%, 42%, 67%, 63%, 66%, 42%, 17%, 67%, 38%, 58%; average = 58.2% |