MNL3.7 – ASC e combinação de Variáveis binárias sobre o rendimento mensal do agregado per capita

- RC1: Variável binária para rendimentos liquidos mensais do agregado em Euros per capita <=250€/pessoa/mês
- RC2: Variável binária para rendimentos liquidos mensais do agregado em Euros per capita >250 & <=500€/pessoa/mês
- *RC3a: Variável binária para rendimentos liquidos mensais do agregado em Euros per capita >500€/pessoa/mês (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,RC1,RC2$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 04, 2012 at 07:10:42PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  6     |
| Log likelihood function       -120391.4     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.52355     |
|   Finite Sample: AIC =          2.52356     |
| Info. Criterion: BIC =          2.52504     |
| Info. Criterion:HQIC =          2.52401     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .02509  .02506 |
| Chi-squared[10]          =   6195.98162     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP    |   -4.29045944       .07247292   -59.201   .0000
 BP_RC11 |    1.80525663       .08084470    22.330   .0000
 BP_RC21 |    1.13098242       .07811476    14.478   .0000
 A_B     |   -1.93097504       .02367390   -81.566   .0000
 B_RC12  |    1.51568988       .02843734    53.299   .0000
```

B_RC22	.82785527	.02644432	31.306	.0000
A_BO	-3.78170851	.05644681	-66.996	.0000
BO_RC13	1.94544343	.06248315	31.135	.0000
BO_RC23	.93764288	.06176866	15.180	.0000
A_M	-3.36488551	.04609084	-73.006	.0000
M_RC14	1.84679267	.05170612	35.717	.0000
M_RC24	1.30048288	.04931114	26.373	.0000
A_P	-2.23793124	.02713509	-82.474	.0000
P_RC15	1.35550916	.03276538	41.370	.0000
P_RC25	.66979953	.03060855	21.883	.0000

MNL3.11 – ASC e combinação de variáveis binárias sobre a categoria dos rendimentos mensais do agregado familiar

- R1: Variável binária para rendimento liquido do agregado familiar em euros 0-500€
- R2: Variável binária para rendimento liquido do agregado familiar em euros 501-1000€
- R3: Variável binária para rendimento liquido do agregado familiar em euros 1001-1500€
- R4: Variável binária para rendimento liquido do agregado familiar em euros 1501-2000€
- R5: Variável binária para rendimento liquido do agregado familiar em euros >2000€ (excluída)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,R1,R2,R3,R4$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 04, 2012 at 07:19:21PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  5     |
| Log likelihood function       -119596.3     |
| Number of parameters                 25     |
| Info. Criterion: AIC =          2.50710     |
|   Finite Sample: AIC =          2.50710     |
| Info. Criterion: BIC =          2.50958     |
| Info. Criterion:HQIC =          2.50785     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .03153  .03148 |
| Chi-squared[20]          =   7786.23184     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -4.23459490       .07549409   -56.092   .0000
 BP_R11   |    2.32018028       .09408312    24.661   .0000
 BP_R21   |    1.36321334       .08211223    16.602   .0000
 BP_R31   |    1.04860362       .08715588    12.031   .0000
 BP_R41   |     .42834917       .10994683     3.896   .0001
 A_B      |   -2.00603136       .02619811   -76.572   .0000
```

B_R12	2.19145327	.03778673	57.995	.0000
B_R22	1.19754352	.02945657	40.655	.0000
B_R32	.83627797	.03168877	26.390	.0000
B_R42	.50486759	.03806217	13.264	.0000
A_BO	-3.37374562	.04956488	-68.067	.0000
BO_R13	1.60954931	.07228946	22.265	.0000
BO_R23	1.00107313	.05578612	17.945	.0000
BO_R33	.59139630	.06122514	9.659	.0000
BO_R43	.14130031	.07820966	1.807	.0708
A_M	-3.11559266	.04377491	-71.173	.0000
M_R14	1.97225242	.05993257	32.908	.0000
M_R24	1.37296665	.04786879	28.682	.0000
M_R34	.86715801	.05200774	16.674	.0000
M_R44	.46662113	.06340210	7.360	.0000
A_P	-2.36712361	.03081292	-76.822	.0000
P_R15	2.30573929	.04225070	54.573	.0000
P_R25	1.07796195	.03475933	31.012	.0000
P_R35	.64830974	.03800951	17.057	.0000
P_R45	.32731954	.04644092	7.048	.0000

MNL3.16 – ASC e combinação de variáveis binárias sobre o escalão etário

- Id1: Variável binária para o escalão etário 1:0-9 anos (excluída)
- Id2: Variável binária para o escalão etário 2:10-19 anos
- Id3: Variável binária para o escalão etário 3:20-34 anos
- Id4: Variável binária para o escalão etário 4:35-64 anos
- *Id5: Variável binária para o escalão etário 5:+65 anos*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,Id2,Id3,Id4,Id5$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 04, 2012 at 07:27:11PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  6     |
| Log likelihood function       -117695.1     |
| Number of parameters                 25     |
| Info. Criterion: AIC =          2.46725     |
|   Finite Sample: AIC =          2.46725     |
| Info. Criterion: BIC =          2.46973     |
| Info. Criterion:HQIC =          2.46801     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .04692  .04687 |
| Chi-squared[20]          =  11588.62680     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -4.62497281       .15505789   -29.827   .0000
 BP_ID21  |    2.86005178       .15919888    17.965   .0000
 BP_ID31  |     .78104102       .16332620     4.782   .0000
 BP_ID41  |    1.15031702       .15963981     7.206   .0000
 BP_ID51  |    2.24045008       .17038151    13.150   .0000
 A_B      |   -2.10306097       .04631925   -45.404   .0000
 B_ID22   |    2.23958389       .05001642    44.777   .0000
```

B_ID32	.51852694	.04969666	10.434	.0000
B_ID42	.78179234	.04848871	16.123	.0000
B_ID52	1.87854921	.05561262	33.779	.0000
A_BO	-2.65553217	.05962957	-44.534	.0000
BO_ID23	1.59150600	.06555285	24.278	.0000
BO_ID33	-.76589833	.07280147	-10.520	.0000
BO_ID43	-.68944580	.06948025	-9.923	.0000
BO_ID53	-.54335132	.11952264	-4.546	.0000
A_M	-3.51845535	.09004134	-39.076	.0000
M_ID24	1.79488949	.09676654	18.549	.0000
M_ID34	1.48500698	.09265099	16.028	.0000
M_ID44	1.34815547	.09235945	14.597	.0000
M_ID54	1.45859368	.10875877	13.411	.0000
A_P	-1.64121673	.03792421	-43.276	.0000
P_ID25	1.07659509	.04430608	24.299	.0000
P_ID35	-.50407744	.04432719	-11.372	.0000
P_ID45	-.04098054	.04140654	-.990	.3223
P_ID55	1.17213821	.05031341	23.297	.0000

MNL3.29 – ASC e combinação de Variáveis binárias sobre o número de automóveis disponíveis diariamente per capita

- NC0: Variável binária Automóveis ligeiros disponiveis per capita = 0
- NC1: Variável binária Automóveis ligeiros disponiveis per capita >0 & <=0,25
- NC2: Variável binária Automóveis ligeiros disponiveis per capita >0,25 & <=0,5
- NC3: Variável binária Automóveis ligeiros disponiveis per capita >0,5 & <=0,75
- *NC4a: Variável binária Automóveis ligeiros disponiveis per capita >0,75 (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC0,NC1,NC2,NC3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 04, 2012 at 07:07:29PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  8     |
| Log likelihood function       -110636.3     |
| Number of parameters                 25     |
| Info. Criterion: AIC =          2.31931     |
|   Finite Sample: AIC =          2.31931     |
| Info. Criterion: BIC =          2.32179     |
| Info. Criterion:HQIC =          2.32007     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .10408  .10404 |
| Chi-squared[20]          =  25706.13248     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -7.08310816       .57759246   -12.263   .0000
 BP_NC01  |    5.66657392       .57849037     9.795   .0000
 BP_NC11  |    3.92573454       .57934902     6.776   .0000
 BP_NC21  |    3.19850491       .57932894     5.521   .0000
 BP_NC31  |    1.87693159       .59749173     3.141   .0017
 A_B      |   -3.61737226       .10342334   -34.976   .0000
```

B_NC02	4.25124902	.10491199	40.522	.0000
B_NC12	2.53773307	.10499232	24.171	.0000
B_NC22	1.85649113	.10474854	17.723	.0000
B_NC32	1.01302367	.11201798	9.043	.0000
A_BO	-4.57080254	.16524753	-27.660	.0000
BO_NC03	3.32510674	.16796907	19.796	.0000
BO_NC13	2.23962004	.16805627	13.327	.0000
BO_NC23	1.20798822	.16886514	7.154	.0000
BO_NC33	.49377498	.18695734	2.641	.0083
A_M	-4.19273641	.13710667	-30.580	.0000
M_NC04	3.75011532	.13898320	26.983	.0000
M_NC14	2.07853517	.13988556	14.859	.0000
M_NC24	1.39419989	.13965370	9.983	.0000
M_NC34	.47238379	.15552781	3.037	.0024
A_P	-3.03422598	.07806199	-38.869	.0000
P_NC05	3.28159251	.08034013	40.846	.0000
P_NC15	1.39405527	.08126577	17.154	.0000
P_NC25	.77196909	.08076379	9.558	.0000
P_NC35	-.17740850	.09687999	-1.831	.0671

MNL3.49 – ASC e combinação de Variáveis binárias sobre o rendimento familiar mensal e o nível de instrução (Excepto R5 e In4)

- R1: Variável binária para rendimento liquido do agregado familiar em euros 0-500€
- R2: Variável binária para rendimento liquido do agregado familiar em euros 501-1000€
- R3: Variável binária para rendimento liquido do agregado familiar em euros 1001-1500€
- R4: Variável binária para rendimento liquido do agregado familiar em euros 1501-2000€
- *R5: Variável binária para rendimento liquido do agregado familiar em euros >2000€ (excluída)*

- In1: Variável binária para o nível de instrução 1 - Analfabetol
- In2: Variável binária para o nível de instrução 2 - Básico
- In3: Variável binária para o nível de instrução 3 - Secundário
- *In4: Variável binária para o nível de instrução 4 – Superior (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,R1,R2,R3,R4,IN1,IN2,IN3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 04, 2012 at 07:34:05PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  8     |
| Log likelihood function       -117991.2     |
| Number of parameters                 40     |
| Info. Criterion: AIC =          2.47377     |
|   Finite Sample: AIC =          2.47377     |
| Info. Criterion: BIC =          2.47774     |
| Info. Criterion:HQIC =          2.47498     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  **********  .04452  .04444 |
| Chi-squared[35]          =  10996.35221     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
```

A_BP	-5.72964150	.18299865	-31.310	.0000
BP_R11	2.06026223	.09542559	21.590	.0000
BP_R21	1.08847488	.08325595	13.074	.0000
BP_R31	.83733883	.08778556	9.538	.0000
BP_R41	.31226463	.11022924	2.833	.0046
BP_IN11	1.25851577	.20427556	6.161	.0000
BP_IN21	1.87943823	.17791275	10.564	.0000
BP_IN31	1.51179812	.18490653	8.176	.0000
A_B	-2.70279960	.04523335	-59.752	.0000
B_R12	2.05136613	.03868416	53.029	.0000
B_R22	1.03343717	.03029533	34.112	.0000
B_R32	.70544778	.03218618	21.918	.0000
B_R42	.43130252	.03834502	11.248	.0000
B_IN12	.34328320	.05897024	5.821	.0000
B_IN22	.92884559	.04334959	21.427	.0000
B_IN32	.81757311	.04667829	17.515	.0000
A_BO	-5.88205732	.22079204	-26.641	.0000
BO_R13	1.18776403	.07312521	16.243	.0000
BO_R23	.60447689	.05655944	10.687	.0000
BO_R33	.30440844	.06180235	4.926	.0000
BO_R43	-.00746172	.07871816	-.095	.9245
BO_IN13	2.82761155	.22976011	12.307	.0000
BO_IN23	3.06220100	.22026186	13.903	.0000
BO_IN33	1.85462569	.22859167	8.113	.0000
A_M	-6.54749571	.27932151	-23.441	.0000
M_R14	1.56382043	.06071273	25.758	.0000
M_R24	.96028925	.04855965	19.775	.0000
M_R34	.56330989	.05260217	10.709	.0000
M_R44	.30672976	.06405871	4.788	.0000
M_IN14	3.23302203	.28594741	11.306	.0000
M_IN24	4.02936574	.27843872	14.471	.0000
M_IN34	2.81145728	.28236712	9.957	.0000
A_P	-2.80140251	.04950322	-56.590	.0000
P_R15	2.15618076	.04337419	49.711	.0000
P_R25	.92595657	.03583142	25.842	.0000
P_R35	.53734404	.03860677	13.918	.0000
P_R45	.26988723	.04667180	5.783	.0000
P_IN15	.38718432	.06315752	6.130	.0000
P_IN25	.65858922	.04764967	13.821	.0000
P_IN35	.35096169	.05308975	6.611	.0000

MNL3.51 – ASC e combinação de variáveis binárias sobre o escalão etário e o nível de instrução (excepto ID1 e In4).

- *Id1: Variável binária para o escalão etário 1:0-9 anos (excluída)*
- Id2: Variável binária para o escalão etário 2:10-19 anos
- Id3: Variável binária para o escalão etário 3:20-34 anos
- Id4: Variável binária para o escalão etário 4:35-64 anos
- Id5: Variável binária para o escalão etário 5:+65 anos

- In1: Variável binária para o nível de instrução 1 - Analfabetol
- In2: Variável binária para o nível de instrução 2 - Básico
- In3: Variável binária para o nível de instrução 3 - Secundário
- *In4: Variável binária para o nível de instrução 4 – Superior (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,ID2,ID3,ID4,ID5,IN1,IN2,IN3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 04, 2012 at 07:40:24PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  8     |
| Log likelihood function       -115546.4     |
| Number of parameters                 40     |
| Info. Criterion: AIC =          2.42253     |
|   Finite Sample: AIC =          2.42253     |
| Info. Criterion: BIC =          2.42650     |
| Info. Criterion:HQIC =          2.42374     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .06432  .06424 |
| Chi-squared[35]          =  15886.01864     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
```

A_BP	-6.94111271	.24990119	-27.775	.0000
BP_ID21	3.34840570	.18189698	18.408	.0000
BP_ID31	1.46922933	.18569269	7.912	.0000
BP_ID41	1.70677771	.18077581	9.441	.0000
BP_ID51	2.62918835	.18210155	14.438	.0000
BP_IN11	2.52863231	.21446793	11.790	.0000
BP_IN21	1.93776026	.17723006	10.934	.0000
BP_IN31	1.38529857	.18533916	7.474	.0000
A_B	-3.34828780	.07098894	-47.166	.0000
B_ID22	2.49343745	.06064605	41.115	.0000
B_ID32	.90668891	.06058521	14.966	.0000
B_ID42	1.09823728	.05883057	18.668	.0000
B_ID52	2.09934439	.06187966	33.926	.0000
B_IN12	1.36840060	.06748298	20.278	.0000
B_IN22	1.05356146	.04264712	24.704	.0000
B_IN32	.77668705	.04680730	16.593	.0000
A_BO	-5.57228656	.23640393	-23.571	.0000
BO_ID23	1.98214164	.09128323	21.714	.0000
BO_ID33	-.09813133	.09673157	-1.014	.3104
BO_ID43	-.25306127	.09275698	-2.728	.0064
BO_ID53	-.26329604	.12877393	-2.045	.0409
BO_IN13	3.03777338	.24084712	12.613	.0000
BO_IN23	2.72900525	.22029747	12.388	.0000
BO_IN33	1.33363704	.22919966	5.819	.0000
A_M	-8.35439671	.29757536	-28.075	.0000
M_ID24	2.35927995	.11248552	20.974	.0000
M_ID34	2.34681086	.10894527	21.541	.0000
M_ID44	1.95778497	.10766357	18.184	.0000
M_ID54	1.86571426	.11668909	15.989	.0000
M_IN14	5.03723988	.28968817	17.388	.0000
M_IN24	4.48395364	.27810021	16.124	.0000
M_IN34	2.94059209	.28223115	10.419	.0000
A_P	-2.44983419	.06723304	-36.438	.0000
P_ID25	1.15093893	.05444828	21.138	.0000
P_ID35	-.30212323	.05486946	-5.506	.0000
P_ID45	.07623525	.05160070	1.477	.1396
P_ID55	1.23413649	.05628980	21.925	.0000
P_IN15	.80068668	.07133276	11.225	.0000
P_IN25	.81907361	.04670020	17.539	.0000
P_IN35	.42042498	.05315093	7.910	.0000

MNL3.70 – ASC e combinação de variáveis binárias da razão entre número de lugares pagos sobre o número total de estacionamentos (excepto PO1).

- PO1: Variável binária razão estacionamentos Pagos/Oferta total de estacionamentos na zona de atracção <=0,25 (excluída)
- PO2: Variável binária razão estacionamentos Pagos/Oferta total de estacionamentos na zona de atracção >0,25 & <=0,5
- PO3: Variável binária razão estacionamentos Pagos/Oferta total de estacionamentos na zona de atracção >0,5

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,PO2,PO3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 04, 2012 at 07:47:59PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            18823     |
| Iterations completed                  6     |
| Log likelihood function       -23476.14     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.49600     |
|   Finite Sample: AIC =          2.49600     |
| Info. Criterion: BIC =          2.50225     |
| Info. Criterion:HQIC =          2.49805     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -23922.0417  .01864  .01848 |
| Chi-squared[10]          =    891.81043     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP     |   -2.94174615       .08766115   -33.558    .0000
 BP_PO21  |     .82365446       .10715397     7.687    .0000
 BP_PO31  |    1.02014942       .11294656     9.032    .0000
 A_B      |    -.75512094       .03471138   -21.754    .0000
 B_PO22   |     .81370516       .04468794    18.209    .0000
```

B_PO32	1.20616356	.04759296	25.343	.0000
A_BO	-3.91048336	.14005705	-27.921	.0000
BO_PO23	-.28366577	.21691166	-1.308	.1910
BO_PO33	-.94674172	.32186485	-2.941	.0033
A_M	-4.14815501	.15740220	-26.354	.0000
M_PO24	.57719447	.19918803	2.898	.0038
M_PO34	.51959535	.22318908	2.328	.0199
A_P	-.84961178	.03586236	-23.691	.0000
P_PO25	.83399931	.04591135	18.165	.0000
P_PO35	.85349026	.05078325	16.807	.0000

MNL3.71 – ASC e combinação de variáveis binárias da razão entre a oferta de lugares de estacionamentos e o total de viagens extrapoladas (excepto OV4).

- OV1: Variável binária razão Oferta total de estacionamentos/procura total de Viagens para zona de atracção <=0,075
- OV2: Variável binária razão Oferta total de estacionamentos/procura total de Viagens para zona de atracção >0,075 & <=0,1
- OV3: Variável binária razão Oferta total de estacionamentos/procura total de Viagens para zona de atracção >0,1 & <=0,15
- *OV4: Variável binária razão Oferta total de estacionamentos/procura total de Viagens para zona de atracção >0,15 (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,OV1,OV2,OV3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 04, 2012 at 07:52:14PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            18823     |
| Iterations completed                  6     |
| Log likelihood function       -23186.49     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          2.46576     |
|   Finite Sample: AIC =          2.46576     |
| Info. Criterion: BIC =          2.47409     |
| Info. Criterion:HQIC =          2.46849     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -23922.0417  .03075  .03054 |
| Chi-squared[15]          =   1471.10187     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP    |   -3.14003395       .11014163   -28.509   .0000
 BP_OV11 |    1.18026036       .12588659     9.376   .0000
 BP_OV21 |     .91342091       .13402311     6.815   .0000
```

BP_OV31	.95623239	.16421332	5.823	.0000
A_B	-.92361492	.04207967	-21.949	.0000
B_OV12	1.32800863	.05035775	26.371	.0000
B_OV22	.91334086	.05396555	16.925	.0000
B_OV32	.52711848	.07419126	7.105	.0000
A_BO	-3.78771875	.15074977	-25.126	.0000
BO_OV13	-.43316668	.23331185	-1.857	.0634
BO_OV23	-1.12096900	.31656979	-3.541	.0004
BO_OV33	-.31567564	.33931709	-.930	.3522
A_M	-4.29854438	.19375321	-22.186	.0000
M_OV14	.67236605	.23503322	2.861	.0042
M_OV24	.83224045	.23725511	3.508	.0005
M_OV34	.19514998	.36048703	.541	.5883
A_P	-1.08412290	.04462473	-24.294	.0000
P_OV15	1.03135513	.05416720	19.040	.0000
P_OV25	.72118192	.05809950	12.413	.0000
P_OV35	1.59584902	.06627939	24.078	.0000

MNL3.72 – ASC e combinação de variáveis binárias do número de automóveis ligeiros à disposição diária do agregado per capita (excepto NC4a) e licença de condução (Lc).

- NC0: Variável binária Automóveis ligeiros disponiveis per capita = 0
- NC1: Variável binária Automóveis ligeiros disponiveis per capita >0 & <=0,25
- NC2: Variável binária Automóveis ligeiros disponiveis per capita >0,25 & <=0,5
- NC3: Variável binária Automóveis ligeiros disponiveis per capita >0,5 & <=0,75
- *NC4a: Variável binária Automóveis ligeiros disponiveis per capita >0,75 (excluída)*

- Lc: Variável binária sobre a existência de licença de condução (S=1, N=0)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC0,NC1,NC2,NC3,Lc$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 00:09:16AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  8     |
| Log likelihood function       -103828.9     |
| Number of parameters                 30     |
| Info. Criterion: AIC =          2.17674     |
|   Finite Sample: AIC =          2.17674     |
| Info. Criterion: BIC =          2.17972     |
| Info. Criterion:HQIC =          2.17765     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .15921  .15916 |
| Chi-squared[25]           =  39320.99352    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -5.13341446       .57935620    -8.861   .0000
 BP_NC01  |    4.49110489       .57969001     7.747   .0000
 BP_NC11  |    2.81962261       .58052326     4.857   .0000
 BP_NC21  |    2.33160353       .58027378     4.018   .0001
```

BP_NC31	1.29889552	.59825294	2.171	.0299
BP_LC1	-2.24021118	.05780535	-38.754	.0000
A_B	-1.86905060	.10574635	-17.675	.0000
B_NC02	3.23479331	.10644575	30.389	.0000
B_NC12	1.58512284	.10665353	14.862	.0000
B_NC22	1.12116567	.10619098	10.558	.0000
B_NC32	.53299351	.11362813	4.691	.0000
B_LC2	-1.96960171	.02170804	-90.731	.0000
A_BO	-2.78467870	.16909971	-16.468	.0000
BO_NC03	2.27932003	.17044990	13.372	.0000
BO_NC13	1.25876008	.17044500	7.385	.0000
BO_NC23	.44866718	.17077735	2.627	.0086
BO_NC33	-.00388168	.18846364	-.021	.9836
BO_LC3	-2.01902386	.04270389	-47.280	.0000
A_M	-3.03708172	.13962809	-21.751	.0000
M_NC04	3.15750014	.13998744	22.556	.0000
M_NC14	1.53022410	.14088262	10.862	.0000
M_NC24	.98998312	.14033169	7.055	.0000
M_NC34	.22352356	.15599209	1.433	.1519
M_LC4	-1.25110720	.02919388	-42.855	.0000
A_P	-1.42001299	.08158585	-17.405	.0000
P_NC05	2.36713227	.08235936	28.742	.0000
P_NC15	.53943399	.08342199	6.466	.0000
P_NC25	.11906435	.08252772	1.443	.1491
P_NC35	-.59776225	.09845533	-6.071	.0000
P_LC5	-1.79854880	.02505450	-71.785	.0000

MNL3.73 – ASC e combinação de variáveis binárias do número de automóveis ligeiros à disposição diária do agregado per capita (excepto NC4a), licença de condução (Lc) e sexo.

- NC0: Variável binária Automóveis ligeiros disponiveis per capita = 0
- NC1: Variável binária Automóveis ligeiros disponiveis per capita >0 & <=0,25
- NC2: Variável binária Automóveis ligeiros disponiveis per capita >0,25 & <=0,5
- NC3: Variável binária Automóveis ligeiros disponiveis per capita >0,5 & <=0,75
- *NC4a: Variável binária Automóveis ligeiros disponiveis per capita >0,75 (excluída)*

- Lc: Variável binária sobre a existência de licença de condução (S=1, N=0)

- Sx: Variável binária sobre o sexo do Inquirido (M=0;F=1)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC0,NC1,NC2,NC3,SX,LC$
+--------------------------------------------+
| Discrete choice and multinomial logit models|
+--------------------------------------------+
Normal exit from iterations. Exit status=0.
+--------------------------------------------+
| Discrete choice (multinomial logit) model  |
| Maximum Likelihood Estimates               |
| Model estimated: Jan 05, 2012 at 00:17:25AM.|
| Dependent variable               Choice    |
| Weighting variable                 None    |
| Number of observations            95426    |
| Iterations completed                  8    |
| Log likelihood function       -103063.5    |
| Number of parameters                 35    |
| Info. Criterion: AIC =          2.16081    |
|   Finite Sample: AIC =          2.16081    |
| Info. Criterion: BIC =          2.16428    |
| Info. Criterion:HQIC =          2.16186    |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .16541  .16534 |
| Chi-squared[30]          =  40851.70360    |
| Prob [ chi squared > value ] =   .00000    |
| Response data are given as ind. choice.    |
| Number of obs.= 95426, skipped   0 bad obs. |
+--------------------------------------------+

+--------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).     |
|       Constants only => P(i,j) uses ASCs   |
|         only. N(j)/N if fixed choice set.  |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.     |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+--------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP    |   -5.54574604       .58065992    -9.551    .0000
```

BP_NC01	4.56227098	.57975495	7.869	.0000
BP_NC11	2.88451754	.58057801	4.968	.0000
BP_NC21	2.37011403	.58031148	4.084	.0000
BP_NC31	1.33571210	.59827695	2.233	.0256
BP_SX1	.54369773	.04751082	11.444	.0000
BP_LC1	-2.11749675	.05873513	-36.052	.0000
A_B	-2.19470456	.10701288	-20.509	.0000
B_NC02	3.29235826	.10658121	30.891	.0000
B_NC12	1.63736294	.10676685	15.336	.0000
B_NC22	1.15221497	.10627888	10.841	.0000
B_NC32	.56114979	.11370738	4.935	.0000
B_SX2	.43615676	.02069328	21.077	.0000
B_LC2	-1.87114585	.02215276	-84.466	.0000
A_BO	-2.56379498	.17062052	-15.026	.0000
BO_NC03	2.23625438	.17054739	13.112	.0000
BO_NC13	1.21875650	.17053834	7.147	.0000
BO_NC23	.42609369	.17083018	2.494	.0126
BO_NC33	-.02729909	.18855137	-.145	.8849
BO_SX3	-.33883940	.03645157	-9.296	.0000
BO_LC3	-2.09494558	.04349843	-48.161	.0000
A_M	-2.67937848	.14069290	-19.044	.0000
M_NC04	3.08514648	.14011191	22.019	.0000
M_NC14	1.46429182	.14101197	10.384	.0000
M_NC24	.95165515	.14042727	6.777	.0000
M_NC34	.19100167	.15612529	1.223	.2212
M_SX4	-.57688872	.02953022	-19.536	.0000
M_LC4	-1.37820274	.03000611	-45.931	.0000
A_P	-1.62107475	.08349648	-19.415	.0000
P_NC05	2.40398287	.08247626	29.148	.0000
P_NC15	.57262379	.08351283	6.857	.0000
P_NC25	.13876315	.08258562	1.680	.0929
P_NC35	-.58067835	.09849108	-5.896	.0000
P_SX5	.27595087	.02351964	11.733	.0000
P_LC5	-1.73607773	.02558248	-67.862	.0000

MNL3.74 – ASC e combinação de variáveis continuas iniciais da razão entre número de lugares pagos sobre o número total de estacionamentos (PO) e da razão entre a oferta de lugares de estacionamentos e o total de viagens extrapoladas (OV)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,PO,OV$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 00:24:17AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            18823     |
| Iterations completed                  6     |
| Log likelihood function       -23440.58     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.49223     |
|   Finite Sample: AIC =          2.49223     |
| Info. Criterion: BIC =          2.49848     |
| Info. Criterion:HQIC =          2.49428     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -23922.0417  .02013  .01997 |
| Chi-squared[10]           =    962.92245     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP     |   -1.87779653       .20078926    -9.352   .0000
 BP_PO1   |     .48503518       .18790583     2.581   .0098
 BP_OV1   |   -6.60896915      1.40229633    -4.713   .0000
 A_B      |     .42186127       .08854339     4.764   .0000
 B_PO2    |     .62604077       .08465773     7.395   .0000
 B_OV2    |   -8.01797459       .60567609   -13.238   .0000
 A_BO     |   -3.44750506       .47242942    -7.297   .0000
 BO_PO3   |   -1.64584708       .56986840    -2.888   .0039
 BO_OV3   |   -2.13019143      2.93613707     -.726   .4681
 A_M      |   -3.18079362       .39150457    -8.125   .0000
 M_PO4    |    -.01381551       .38339992     -.036   .9713
 M_OV4    |   -5.97202344      2.67783878    -2.230   .0257
```

A_P	.30570544	.09088443	3.364	.0008
P_PO5	.09827478	.08955433	1.097	.2725
P_OV5	-6.19092992	.60601535	-10.216	.0000

MNL3.76 – ASC e variáveis binárias de combinações entre a razão entre número de lugares pagos sobre o número total de estacionamentos e da razão entre a oferta de lugares de estacionamentos e o total de viagens extrapoladas (excepto P41)

P13 Variável binária OV1=1 & PO3=1
P12 Variável binária OV1=1 & PO2=1
P22 Variável binária OV2=1 & PO2=1
P21 Variável binária OV2=1 & PO2=1
P33 Variável binária OV3=1 & PO3=1
P32 Variável binária OV3=1 & PO2=1
P31 Variável binária OV3=1 & PO1=1
P41 Variável binária OV4=1 & PO1=1 (excluída)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,P13,P12,P22,P21,P33,P32,P31$
Maximum of   100 iterations. Exit iterations with status=1.

--------------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -22962.51526
Estimation based on N =  18823, K =  40
Inf.Cr.AIC  =  46005.0 AIC/N =    2.444
Model estimated: Jul 15, 2012, 16:09:33
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0401 .0397
Chi-squared[35]           =   1919.05287
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped76603 obs
--------+-----------------------------------------------------------------------
        |                   Standard            Prob.      95% Confidence
   MTRP |  Coefficient        Error       z    |z|>Z*         Interval
--------+-----------------------------------------------------------------------
    A_BP|   -3.14003***       .11014   -28.51   .0000    -3.35591  -2.92416
 BP_P131|    1.20089***       .13239     9.07   .0000      .94141   1.46036
 BP_P121|    1.13571***       .15516     7.32   .0000      .83160   1.43983
 BP_P221|     .99089***       .13454     7.36   .0000      .72718   1.25459
 BP_P211|    -.81760          .59316    -1.38   .1681    -1.98016    .34496
 BP_P331|    1.53060***       .31280     4.89   .0000      .91751   2.14368
 BP_P321|     .73517**        .30984     2.37   .0177      .12790   1.34244
 BP_P311|     .89755***       .18756     4.79   .0000      .52995   1.26515
     A_B|    -.92361***       .04208   -21.95   .0000    -1.00609   -.84114
  B_P132|    1.40441***       .05356    26.22   .0000     1.29944   1.50939
  B_P122|    1.14647***       .06576    17.43   .0000     1.01759   1.27536
  B_P222|     .93785***       .05485    17.10   .0000      .83034   1.04536
  B_P212|     .62096***       .12946     4.80   .0000      .36722    .87470
  B_P332|     .36400*         .20262     1.80   .0724     -.03314    .76113
  B_P322|     .48640***       .13953     3.49   .0005      .21293    .75987
  B_P312|     .56251***       .08460     6.65   .0000      .39669    .72832
    A_BO|   -3.78772***       .15075   -25.13   .0000    -4.08318  -3.49225
 BO_P133|   -1.02311***       .32671    -3.13   .0017    -1.66344   -.38278
 BO_P123|     .22525          .27229      .83   .4081     -.30843    .75894
 BO_P223|   -1.02759***       .31666    -3.25   .0012    -1.64823   -.40695
 BO_P213|   -100.896      .4138D+21      .00 1.0000 **********  **********
 BO_P333|   -100.232      .6197D+21      .00 1.0000 **********  **********
```

BO_P323	.20420	.52884	.39	.6994	-.83230	1.24070
BO_P313	-.38005	.40963	-.93	.3535	-1.18291	.42280
A_M	-4.29854***	.19375	-22.19	.0000	-4.67829	-3.91880
M_P134	.71638***	.25022	2.86	.0042	.22596	1.20680
M_P124	.57356*	.31270	1.83	.0666	-.03932	1.18644
M_P224	.74693***	.24475	3.05	.0023	.26723	1.22663
M_P214	1.43952***	.39373	3.66	.0003	.66783	2.21121
M_P334	-99.3193	.6197D+21	.00	1.0000	**********	**********
M_P324	1.12049**	.45951	2.44	.0148	.21986	2.02112
M_P314	-.20570	.48965	-.42	.6744	-1.16539	.75399
A_P	-1.08412***	.04462	-24.29	.0000	-1.17159	-.99666
P_P135	.91367***	.05894	15.50	.0000	.79814	1.02920
P_P125	1.24010***	.06800	18.24	.0000	1.10683	1.37336
P_P225	.78558***	.05878	13.36	.0000	.67037	.90078
P_P215	-.41677**	.19218	-2.17	.0301	-.79344	-.04011
P_P335	2.56248***	.13977	18.33	.0000	2.28854	2.83641
P_P325	2.10827***	.10691	19.72	.0000	1.89873	2.31781
P_P315	.96938***	.08176	11.86	.0000	.80913	1.12963

Note: nnnnn.D-xx or D+xx => multiply by 10 to -xx or +xx.
Note: ***, **, * ==> Significance at 1%, 5%, 10% level.

MNL3.69b –
- ASC
- Variáveis binárias do escalão etário (excepto Id1)
- Variáveis binárias do nível de instrução (excepto In4)
- Variável binária Sexo (Sexo)
- Variável binária de disponibilidade de Licença de condução (Lc)
- Variáveis binárias para os escalões do rendimento liquido mensal do agregado (excepto R5)
- Variável binária para o número de automóveis disponíveis diariamente no agregado per capita (excepto NC4a).

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC0,NC1,NC2,NC3,R1,R2,R3,R4,SX,ID2,ID3,ID4,ID5,IN1,IN2,IN3,LC$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 00:53:28AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  9     |
| Log likelihood function       -98871.92     |
| Number of parameters                 90     |
| Info. Criterion: AIC =          2.07411     |
|   Finite Sample: AIC =          2.07411     |
| Info. Criterion: BIC =          2.08304     |
| Info. Criterion:HQIC =          2.07682     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .19935  .19920 |
| Chi-squared[85]          =  49234.89916     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP    |   -8.42639125       .62741658   -13.430   .0000
 BP_NC01 |    4.42145160       .58095647     7.611   .0000
 BP_NC11 |    2.67334975       .58167854     4.596   .0000
 BP_NC21 |    2.27561764       .58096390     3.917   .0001
 BP_NC31 |    1.28034502       .59894726     2.138   .0325
```

BP_R11	.31383021	.10874157	2.886	.0039
BP_R21	.28946755	.08954479	3.233	.0012
BP_R31	.39793448	.09189775	4.330	.0000
BP_R41	.16266377	.11307515	1.439	.1503
BP_SX1	.58564315	.04892207	11.971	.0000
BP_ID21	2.88856823	.17382509	16.618	.0000
BP_ID31	2.01240810	.17928665	11.225	.0000
BP_ID41	2.19102624	.17377540	12.608	.0000
BP_ID51	2.36339331	.18113163	13.048	.0000
BP_IN11	.27415936	.21977283	1.247	.2122
BP_IN21	.51043411	.18287944	2.791	.0053
BP_IN31	.78421967	.18858421	4.158	.0000
BP_LC1	-2.09483334	.06683256	-31.345	.0000
A_B	-3.80190103	.12854849	-29.576	.0000
B_NC02	3.28932246	.10804294	30.445	.0000
B_NC12	1.63627985	.10809623	15.137	.0000
B_NC22	1.20889292	.10712930	11.284	.0000
B_NC32	.62323014	.11467454	5.435	.0000
B_R12	.33318070	.04907666	6.789	.0000
B_R22	.26516010	.03574001	7.419	.0000
B_R32	.27914674	.03684681	7.576	.0000
B_R42	.27590091	.04299262	6.417	.0000
B_SX2	.41480960	.02189554	18.945	.0000
B_ID22	2.11828360	.06061365	34.947	.0000
B_ID32	1.55415980	.06234280	24.929	.0000
B_ID42	1.70344851	.05999449	28.393	.0000
B_ID52	1.93141580	.06702992	28.814	.0000
B_IN12	-.71129079	.07631120	-9.321	.0000
B_IN22	-.28955783	.04968946	-5.827	.0000
B_IN32	.24238855	.05237177	4.628	.0000
B_LC2	-2.07284538	.02758707	-75.138	.0000
A_BO	-5.10065049	.28431542	-17.940	.0000
BO_NC03	2.03405996	.17382809	11.702	.0000
BO_NC13	.79059448	.17355386	4.555	.0000
BO_NC23	.14791377	.17296444	.855	.3925
BO_NC33	-.25599384	.19075952	-1.342	.1796
BO_R13	.25323927	.08424204	3.006	.0026
BO_R23	.11630561	.06245641	1.862	.0626
BO_R33	.04000323	.06582612	.608	.5434
BO_R43	-.09296800	.08176817	-1.137	.2556
BO_SX3	-.15737799	.03758886	-4.187	.0000
BO_ID23	1.79464624	.08742174	20.529	.0000
BO_ID33	.63199780	.09685475	6.525	.0000
BO_ID43	.41554746	.09221647	4.506	.0000
BO_ID53	-.33242384	.13170835	-2.524	.0116
BO_IN13	1.72618910	.24247036	7.119	.0000
BO_IN23	1.76909480	.22313321	7.928	.0000
BO_IN33	1.00364924	.23056597	4.353	.0000
BO_LC3	-1.47114960	.05437683	-27.055	.0000
A_M	-7.78032886	.32653809	-23.827	.0000
M_NC04	2.64909259	.14272826	18.560	.0000
M_NC14	1.20233274	.14302571	8.406	.0000
M_NC24	.71893421	.14210119	5.059	.0000
M_NC34	.13949762	.15771344	.885	.3764
M_R14	-.01416471	.06983422	-.203	.8393
M_R24	.10223856	.05297450	1.930	.0536
M_R34	.04203445	.05586442	.752	.4518
M_R44	.08909712	.06664182	1.337	.1812
M_SX4	-.75622462	.03164270	-23.899	.0000
M_ID24	1.98149760	.10980739	18.045	.0000
M_ID34	3.11165699	.10772237	28.886	.0000

M_ID44	2.66496642	.10633289	25.062	.0000
M_ID54	1.83016194	.11945308	15.321	.0000
M_IN14	3.24158921	.29203609	11.100	.0000
M_IN24	3.32347630	.27944313	11.893	.0000
M_IN34	2.47362494	.28317787	8.735	.0000
M_LC4	-1.88137894	.03606599	-52.165	.0000
A_P	-1.98144973	.10662110	-18.584	.0000
P_NC05	2.40212451	.08486591	28.305	.0000
P_NC15	.66903869	.08554761	7.821	.0000
P_NC25	.24874517	.08382810	2.967	.0030
P_NC35	-.47283402	.09944415	-4.755	.0000
P_R15	.38532253	.05310134	7.256	.0000
P_R25	.13941251	.04059555	3.434	.0006
P_R35	.11077947	.04226326	2.621	.0088
P_R45	.11532075	.04987403	2.312	.0208
P_SX5	.24834491	.02452078	10.128	.0000
P_ID25	.90488984	.05565145	16.260	.0000
P_ID35	.41859924	.05849723	7.156	.0000
P_ID45	.75640524	.05461522	13.850	.0000
P_ID55	1.03821794	.06320088	16.427	.0000
P_IN15	-1.02104963	.07908287	-12.911	.0000
P_IN25	-.44344410	.05374742	-8.251	.0000
P_IN35	-.04880980	.05785946	-.844	.3989
P_LC5	-1.92724525	.03148213	-61.217	.0000

MNL3.81 – ASC e combinação de Variáveis binárias sobre distância mais curta entre centróides (pedonal com vel 3,6km/h) (DX1<=1,0km; DX2>1 e <=2,0km) e variável continua para distância mais curta entre centróides (pedonal com vel 3,6km/h) (D2)

- D2: Variável continua distância mais curta em Km entre os centróides ajustados das zonas de Geração e de Atracção (pares >=50 viagens) excepto para o modo Walk em que d2=tp/60*3,6km/h
- dx1: Variável binária para distâncias mais curtas D2<=1,0km
- dx2: Variável binária para distâncias mais curtas D2>1,0km e <=2,0km

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,D2,DX1,DX2$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 01:11:55AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                 30     |
| Log likelihood function       -98686.99     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          2.06877     |
|   Finite Sample: AIC =          2.06877     |
| Info. Criterion: BIC =          2.07075     |
| Info. Criterion:HQIC =          2.06937     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .20085  .20081 |
| Chi-squared[15]           =  49604.74936    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -3.52778573       .04778155   -73.832   .0000
 BP_D21   |     .05691655       .00651509     8.736   .0000
 BP_DX11  |    -.70587704      1.00848137     -.700   .4840
 BP_DX21  |     .52136149       .08265051     6.308   .0000
 A_B      |   -1.01373456       .01980055   -51.197   .0000
 B_D22    |    -.00783751       .00301880    -2.596   .0094
```

B_DX12	.00818400	.23902544	.034	.9727
B_DX22	-.10487161	.03703437	-2.832	.0046
A_BO	-2.76908945	.03835097	-72.204	.0000
BO_D23	.01991607	.00560464	3.553	.0004
BO_DX13	-30.8798705	.247552D+07	.000	1.0000
BO_DX23	-.64612941	.09655673	-6.692	.0000
A_M	-1.74550452	.03165982	-55.133	.0000
M_D24	-.06348617	.00522099	-12.160	.0000
M_DX14	-31.2726585	.186491D+07	.000	1.0000
M_DX24	-.48409006	.06093383	-7.945	.0000
A_P	1.13513765	.12454472	9.114	.0000
P_D25	-1.38576991	.04049775	-34.218	.0000
P_DX15	4.44233555	.15605555	28.466	.0000
P_DX25	1.36292914	.06827013	19.964	.0000

MNL3.82 – ASC e combinação de Variáveis binárias sobre distância mais curta entre centróides (pedonal com vel 3,6km/h) (DX1<=1,0km; DX2>1 e <=2,0km)

- dx1: Variável binária para distâncias mais curtas D2<=1,0km
- dx2: Variável binária para distâncias mais curtas D2>1,0km e <=2,0km

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,DX1,DX2$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 01:15:29AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                 30     |
| Log likelihood function       -99964.85     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.09544     |
|   Finite Sample: AIC =          2.09544     |
| Info. Criterion: BIC =          2.09693     |
| Info. Criterion:HQIC =          2.09590     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .19050  .19047 |
| Chi-squared[10]           =  47049.04475    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -3.17516567       .02245558  -141.398    .0000
 BP_DX11  |   -1.01448907      1.00779748    -1.007    .3141
 BP_DX21  |     .26441637       .07652918     3.455    .0006
 A_B      |   -1.05983198       .00886546  -119.546    .0000
 B_DX12   |     .04823107       .23853046      .202    .8398
 B_DX22   |    -.07192941       .03481112    -2.066    .0388
 A_BO     |   -2.64944666       .01750283  -151.372    .0000
 BO_DX13  |   -30.9934544     .248709D+07      .000   1.0000
 BO_DX23  |    -.73232200       .09334211    -7.846    .0000
```

A_M	-2.10486256	.01364556	-154.253	.0000
M_DX14	-30.9715758	.187364D+07	.000	1.0000
M_DX24	-.23115731	.05761652	-4.012	.0001
A_P	-4.07871125	.03485641	-117.015	.0000
P_DX15	8.62682997	.12855697	67.105	.0000
P_DX25	4.32916565	.04130846	104.801	.0000

MNL3.83 – ASC e combinação de Variáveis binárias sobre distância mais curta entre centróides (pedonal com vel 3,6km/h) (DX1<=1,0km; DX2>1 e <=2,0km; DX3 >2 e <=5,0km)

- dx1: Variável binária para distâncias mais curtas D2<=1,0km
- dx2: Variável binária para distâncias mais curtas D2>1,0km e <=2,0km
- dx3: Variável binária para distâncias mais curtas D2>2,0km e <=5,0km

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,DX1,DX2,DX3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 01:19:31AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                 30     |
| Log likelihood function       -99498.82     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          2.08578     |
|   Finite Sample: AIC =          2.08578     |
| Info. Criterion: BIC =          2.08776     |
| Info. Criterion:HQIC =          2.08638     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .19427  .19424 |
| Chi-squared[15]           =  47981.09084    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -3.13249878       .02958903  -105.867    .0000
 BP_DX11  |   -1.05715596      1.00798166    -1.049    .2943
 BP_DX21  |     .22174949       .07891750     2.810    .0050
 BP_DX31  |    -.09807042       .04544128    -2.158    .0309
 A_B      |   -1.07725710       .01200079   -89.766    .0000
 B_DX12   |     .06565619       .23866755      .275    .7832
 B_DX22   |    -.05450429       .03573844    -1.525    .1272
 B_DX32   |     .03855874       .01780633     2.165    .0304
 A_BO     |   -2.63365743       .02336683  -112.709    .0000
```

BO_DX13	-31.0092437	.248709D+07	.000	1.0000
BO_DX23	-.74811123	.09461717	-7.907	.0000
BO_DX33	-.03566280	.03527017	-1.011	.3120
A_M	-2.23312893	.01943917	-114.878	.0000
M_DX14	-30.8433095	.187364D+07	.000	1.0000
M_DX24	-.10289094	.05925659	-1.736	.0825
M_DX34	.26702253	.02731699	9.775	.0000
A_P	-6.01119401	.12231908	-49.144	.0000
P_DX15	10.5593127	.17399392	60.688	.0000
P_DX25	6.26164841	.12431161	50.371	.0000
P_DX35	2.65393494	.12769453	20.783	.0000

MNL3.84 – ASC e combinação de Variáveis binárias sobre distância mais curta entre centróides (pedonal com vel 3,6km/h) (DX1<=1,0km; DX2>1 e <=2,0km; DX3 >2 e <=5,0km) e variável continua para distância mais curta entre centróides (pedonal com vel 3,6km/h) (D2)

- D2: Variável continua distância mais curta em Km entre os centróides ajustados das zonas de Geração e de Atracção (pares >=50 viagens) excepto para o modo Walk em que d2=tp/60*3,6km/h
- dx1: Variável binária para distâncias mais curtas D2<=1,0km
- dx2: Variável binária para distâncias mais curtas D2>1,0km e <=2,0km
- dx3: Variável binária para distâncias mais curtas D2>2,0km e <=5,0km

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,D2,DX1,DX2,DX3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 01:24:42AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                 30     |
| Log likelihood function       -98602.94     |
| Number of parameters                 25     |
| Info. Criterion: AIC =          2.06711     |
|   Finite Sample: AIC =          2.06711     |
| Info. Criterion: BIC =          2.06959     |
| Info. Criterion:HQIC =          2.06786     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .20153  .20149 |
| Chi-squared[20]          =  49772.86713     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP     |   -3.81223512       .07728167   -49.329    .0000
 BP_D21   |     .08315143       .00834304     9.967    .0000
 BP_DX11  |    -.44267986      1.01006475     -.438    .6612
 BP_DX21  |     .76069497       .09749609     7.802    .0000
 BP_DX31  |     .28221004       .06132047     4.602    .0000
```

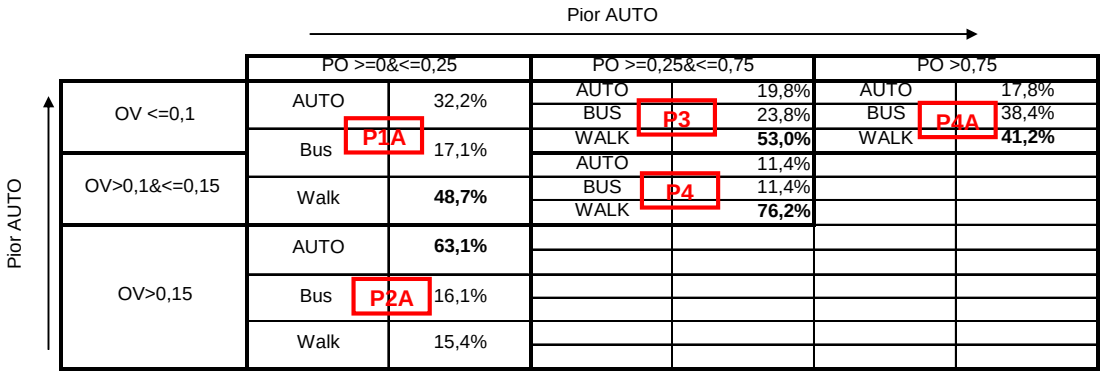
A_B	-1.02619719	.03563466	-28.798	.0000
B_D22	-.00656076	.00431789	-1.519	.1287
B_DX12	.01973506	.24056706	.082	.9346
B_DX22	-.09447728	.04434708	-2.130	.0331
B_DX32	.01094944	.02540726	.431	.6665
A_BO	-2.87812484	.06596535	-43.631	.0000
BO_D23	.03083471	.00767461	4.018	.0001
BO_DX13	-30.7724621	.246667D+07	.000	1.0000
BO_DX23	-.55579350	.10641528	-5.223	.0000
BO_DX33	.09824333	.04906639	2.002	.0453
A_M	-1.76886981	.06164442	-28.695	.0000
M_D24	-.06105845	.00785153	-7.777	.0000
M_DX14	-31.2433720	.185831D+07	.000	1.0000
M_DX24	-.46409213	.07456631	-6.224	.0000
M_DX34	.02001004	.04108018	.487	.6262
A_P	4.36962344	.29490390	14.817	.0000
P_D25	-1.69583679	.04795347	-35.364	.0000
P_DX15	1.44879834	.28908982	5.012	.0000
P_DX25	-1.36934671	.22768909	-6.014	.0000
P_DX35	-2.41814691	.18544619	-13.040	.0000

MNL3.87 –
- ASC
- Combinação de Variáveis binárias sobre razão entre Oferta de Esatcionamento pago/Total de oferta de estacionamentos (PO) e entre a Oferta total de estacionamento/Procura Total extrapolada (OV)
  - P1A: PO1 e (OV1 ou OV2)
  - P2A: PO1 e (OV3 ou OV4) (excluído por ser o o mais favorável ao AUTO)
  - P3: (PO2 ou PO3) e OV1
  - P4: (PO2 ou PO3) e OV2
  - P4A: PO4 e OV1

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,P1A,P3,P4,P4A$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Oct 28, 2011 at 11:18:28AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations             3931     |
| Iterations completed                 30     |
| Log likelihood function       -4333.509     |
| Number of parameters                 25     |
| Info. Criterion: AIC =          2.21751     |
|   Finite Sample: AIC =          2.21759     |
| Info. Criterion: BIC =          2.25742     |
| Info. Criterion:HQIC =          2.23167     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only   -4641.1148  .06628  .06509 |
| Chi-squared[20]          =    615.21214     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 32269, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -2.97407078       .27400403   -10.854   .0000
 BP_P1A1  |   -1.18481231      1.04436737    -1.134   .2566
 BP_P31   |     .99391070       .32067967     3.099   .0019
 BP_P41   |     .51733500       .66104687      .783   .4339
```

BP_P4A1	.68641133	.34040365	2.016	.0438
A_B	-1.36463286	.13392292	-10.190	.0000
B_P1A2	.73211031	.25094245	2.917	.0035
B_P32	1.54863651	.15525293	9.975	.0000
B_P42	1.36463286	.27400403	4.980	.0000
B_P4A2	2.13202227	.15310111	13.926	.0000
A_BO	-4.51451582	.58050234	-7.777	.0000
BO_P1A3	1.04877991	.92336773	1.136	.2560
BO_P33	-.08060403	.82078213	-.098	.9218
BO_P43	-28.5753245	.259020D+07	.000	1.0000
BO_P4A3	-1.06898049	1.15790430	-.923	.3559
A_M	-3.82136864	.41269396	-9.260	.0000
M_P1A4	-.33751445	1.08900932	-.310	.7566
M_P34	-.08060403	.58339521	-.138	.8901
M_P44	-28.3302020	.162028D+07	.000	1.0000
M_P4A4	.54045742	.52352240	1.032	.3019
A_P	-1.40843549	.13629016	-10.334	.0000
P_P1A5	1.82426338	.21097224	8.647	.0000
P_P35	2.39304546	.15231505	15.711	.0000
P_P45	3.30840854	.22675965	14.590	.0000
P_P4A5	2.24656145	.15479155	14.513	.0000

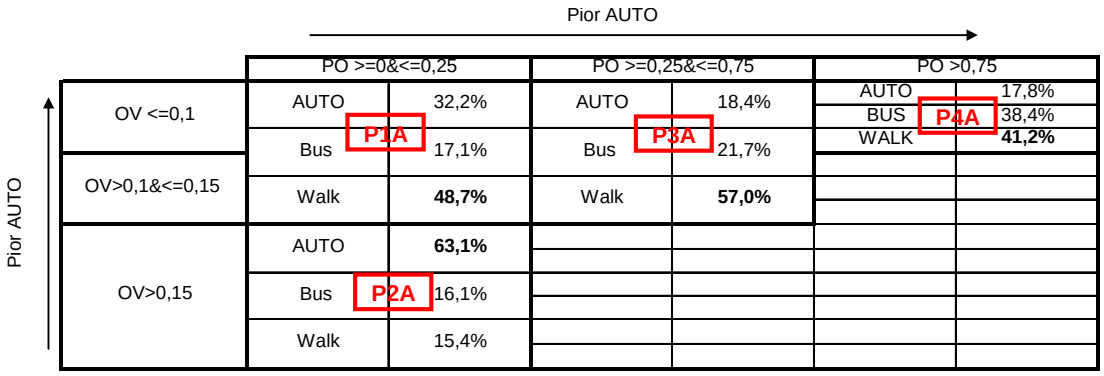


MNL3.88 –
- ASC
- Combinação de Variáveis binárias sobre razão entre Oferta de Esatcionamento pago/Total de oferta de estacionamentos (PO) e entre a Oferta total de estacionamento/Procura Total extrapolada (OV)
  - P1A: PO1 e (OV1 ou OV2)
  - P2A: PO1 e (OV3 ou OV4) (excluído por ser o o mais favorável ao AUTO)
  - P3A: (PO2 ou PO3) e (OV1 ou OV2)
  - P4A: PO4 e OV1

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,P1A,P3A,P4A$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Oct 28, 2011 at 10:48:39AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations             3931     |
| Iterations completed                  8     |
| Log likelihood function       -4364.411     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          2.23068     |
|   Finite Sample: AIC =          2.23074     |
| Info. Criterion: BIC =          2.26262     |
| Info. Criterion:HQIC =          2.24201     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only   -4641.1148  .05962  .05866 |
| Chi-squared[15]          =    553.40771     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 32269, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -2.97407078       .27400403   -10.854   .0000
 BP_P1A1  |   -1.18481231      1.04436737    -1.134   .2566
 BP_P3A1  |     .95312544       .31751776     3.002   .0027
 BP_P4A1  |     .68641133       .34040365     2.016   .0438
 A_B      |   -1.36463286       .13392292   -10.190   .0000
```

B_P1A2	.73211031	.25094245	2.917	.0035
B_P3A2	1.53075974	.15329194	9.986	.0000
B_P4A2	2.13202227	.15310111	13.926	.0000
A_BO	-4.51451582	.58050234	-7.777	.0000
BO_P1A3	1.04877991	.92336773	1.136	.2560
BO_P3A3	-.19200686	.82056587	-.234	.8150
BO_P4A3	-1.06898049	1.15790430	-.923	.3559
A_M	-3.82136864	.41269396	-9.260	.0000
M_P1A4	-.33751445	1.08900932	-.310	.7566
M_P3A4	-.19200686	.58309092	-.329	.7419
M_P4A4	.54045742	.52352240	1.032	.3019
A_P	-1.40843549	.13629016	-10.334	.0000
P_P1A5	1.82426338	.21097224	8.647	.0000
P_P3A5	2.53964325	.15019612	16.909	.0000
P_P4A5	2.24656145	.15479155	14.513	.0000



MNL3.89 – ASC e combinação de variáveis binárias do motivo da viagem (excepto Lz).

- Rg:Variável binária para viagens de Regresso a casa
- Tr: Variável binária para viagens para trabalho
- Es: Variável binária para viagens para a escola
- *Lz: Variável binária para viagens em lazer (exluída)*
- CS: Variável binária para viagens para compras/serviços

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,RG,TR,ES,CS$
Normal exit:   6 iterations. Status=0, F=    120967.6

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -120967.59595
Estimation based on N =  95426, K =  25
Inf.Cr.AIC  = 241985.2 AIC/N =    2.536
Model estimated: Jul 14, 2012, 16:10:40
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0204 .0204
Chi-squared[20]           =   5043.54730
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.84686***       .08279   -46.46  .0000    -4.00913  -3.68459
  BP_RG1|     .72706***       .08792     8.27  .0000      .55473    .89939
  BP_TR1|     .39122***       .09719     4.03  .0001      .20073    .58172
  BP_ES1|    1.96359***       .09841    19.95  .0000     1.77070   2.15648
  BP_CS1|     .35576***       .12485     2.85  .0044      .11106    .60046
     A_B|   -1.42188***       .02715   -52.37  .0000    -1.47509  -1.36867
   B_RG2|     .35409***       .02970    11.92  .0000      .29589    .41230
   B_TR2|     .10719***       .03334     3.21  .0013      .04184    .17255
   B_ES2|    1.46036***       .03835    38.08  .0000     1.38521   1.53552
   B_CS2|     .24516***       .04281     5.73  .0000      .16125    .32907
    A_BO|   -3.93082***       .08627   -45.56  .0000    -4.09991  -3.76174
  BO_RG3|    1.22872***       .08962    13.71  .0000     1.05307   1.40438
  BO_TR3|     .97031***       .09515    10.20  .0000      .78383   1.15680
  BO_ES3|    2.87929***       .09426    30.54  .0000     2.69454   3.06405
  BO_CS3|     .08788         .14053      .63  .5317     -.18756    .36331
     A_M|   -2.54453***       .04436   -57.36  .0000    -2.63148  -2.45758
   M_RG4|     .41256***       .04814     8.57  .0000      .31821    .50692
   M_TR4|     .80950***       .04997    16.20  .0000      .71156    .90744
   M_ES4|    -.48774***       .10047    -4.85  .0000     -.68465   -.29082
   M_CS4|    -.10778          .07674    -1.40  .1602     -.25819    .04263
     A_P|   -1.47680***       .02776   -53.20  .0000    -1.53121  -1.42239
   P_RG5|    -.04198          .03126    -1.34  .1792     -.10324    .01928
   P_TR5|    -.45924***       .03741   -12.28  .0000     -.53257   -.38592
   P_ES5|     .81239***       .04325    18.78  .0000      .72762    .89715
   P_CS5|     .14258***       .04482     3.18  .0015      .05472    .23043
--------+------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
```

MNL3.89a – ASC e combinação de variáveis binárias do motivo da viagem mas com o motiva da viagem anterior nas viagens para casa (excepto Tr).

- *Tr2: Variável binária para viagens para o trabalho (com motivo da viagem anterior nas viagens para casa) (excluída)*
- Es2: Variável binária para viagens para a Escola (com motivo da viagem anterior nas viagens para casa)
- Lz2: Variável binária para viagens para Lazer (com motivo da viagem anterior nas viagens para casa)
- CS2: Variável binária para viagens para Compras/Serviços (com motivo da viagem anterior nas viagens para casa)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,ES2,LZ2,CS2$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 01:48:34AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            87654     |
| Iterations completed                  6     |
| Log likelihood function       -110106.8     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          2.51276     |
|   Finite Sample: AIC =          2.51276     |
| Info. Criterion: BIC =          2.51490     |
| Info. Criterion:HQIC =          2.51342     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .04524  .04520 |
| Chi-squared[15]          =  10434.93083     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped7772 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP    |   -3.39808777       .03656388   -92.936   .0000
 BP_ES21 |    1.63541897       .05279110    30.979   .0000
 BP_LZ21 |    -.44199686       .07136107    -6.194   .0000
```

BP_CS21	.01460466	.07477814	.195	.8452
A_B	-1.29294443	.01417254	-91.229	.0000
B_ES22	1.45039640	.02438529	59.478	.0000
B_LZ22	-.14125553	.02472731	-5.713	.0000
B_CS22	.16744500	.02776291	6.031	.0000
A_BO	-2.91826830	.02904990	-100.457	.0000
BO_ES23	1.97964467	.03998930	49.504	.0000
BO_LZ23	-1.12945568	.07380920	-15.302	.0000
BO_CS23	-.91485113	.08622723	-10.610	.0000
A_M	-1.68455793	.01662561	-101.323	.0000
M_ES24	-1.22749548	.06629495	-18.516	.0000
M_LZ24	-.81917205	.03635393	-22.533	.0000
M_CS24	-.93815781	.04836438	-19.398	.0000
A_P	-1.88642101	.01812631	-104.071	.0000
P_ES25	1.37722215	.02990450	46.054	.0000
P_LZ25	.40989207	.02744955	14.933	.0000
P_CS25	.57151821	.03143580	18.180	.0000

MNL3.90 – ASC e combinação de variáveis binárias velocidade comercial equivalente em Bus

- V21 - velocidade comercial equivalente em Bus <= 10km/h (excluída por ser teoricamente a mais favorável ao AUTO)
- V22 - velocidade comercial equivalente em Bus >10 e <= 20km/h
- V23 - velocidade comercial equivalente em Bus > 20km/h

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,V22,V23$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 01:51:15AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            89305     |
| Iterations completed                  9     |
| Log likelihood function       -106839.0     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.39301     |
|   Finite Sample: AIC =          2.39301     |
| Info. Criterion: BIC =          2.39459     |
| Info. Criterion:HQIC =          2.39349     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .07633  .07630 |
| Chi-squared[10]           =  17658.21118    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped6121 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP     |   -2.88673590       .03257397   -88.621    .0000
 BP_V221  |    -.43769650       .04679312    -9.354    .0000
 BP_V231  |     .04698832       .06518540      .721    .4710
 A_B      |    -.81638074       .01352083   -60.379    .0000
 B_V222   |    -.23050510       .01826788   -12.618    .0000
 B_V232   |    -.52735401       .03214968   -16.403    .0000
 A_BO     |   -2.87078342       .03232890   -88.799    .0000
 BO_V223  |     .22468311       .04046180     5.553    .0000
```

BO_V233	.31494574	.05906570	5.332	.0000
A_M	-2.30062568	.02480569	-92.746	.0000
M_V224	.12058259	.03164476	3.811	.0001
M_V234	.14494806	.04807395	3.015	.0026
A_P	-.49452142	.01216242	-40.660	.0000
P_V225	-4.27682996	.06940290	-61.623	.0000
P_V235	-5.31714779	.24320255	-21.863	.0000

MNL3.90a – ASC e combinação de variáveis binárias velocidade comercial equivalente em Bus

- V21 - velocidade comercial equivalente em Bus <= 10km/h (excluída por ser teoricamente a mais favorável ao AUTO)
- V22 - velocidade comercial equivalente em Bus >10 e <= 20km/h
- *V23 - velocidade comercial equivalente em Bus > 20km/h (excluída por ser teoricamente conseguida nas zonas com maior uso do AUTO)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1
];Rh2=ONE,V21,V22$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 06, 2012 at 03:30:26PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            89305     |
| Iterations completed                  9     |
| Log likelihood function       -106839.0     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.39301     |
|   Finite Sample: AIC =          2.39301     |
| Info. Criterion: BIC =          2.39459     |
| Info. Criterion:HQIC =          2.39349     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .07633  .07630 |
| Chi-squared[10]          =  17658.21118     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped6121 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -2.83974758       .05646303   -50.294    .0000
 BP_V211  |    -.04698832       .06518540     -.721    .4710
 BP_V221  |    -.48468482       .06570088    -7.377    .0000
 A_B      |   -1.34373475       .02916829   -46.068    .0000
 B_V212   |     .52735401       .03214968    16.403    .0000
 B_V222   |     .29684891       .03164951     9.379    .0000
 A_BO     |   -2.55583768       .04943277   -51.703    .0000
```

BO_V213	-.31494574	.05906570	-5.332	.0000
BO_V223	-.09026263	.05509627	-1.638	.1014
A_M	-2.15567762	.04117988	-52.348	.0000
M_V214	-.14494806	.04807395	-3.015	.0026
M_V224	-.02436547	.04562731	-.534	.5933
A_P	-5.81166921	.24289824	-23.926	.0000
P_V215	5.31714779	.24320255	21.863	.0000
P_V225	1.04031783	.25232596	4.123	.0000

MNL3.91 – ASC e combinação de variáveis binárias razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO (TBA)

- TB1 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO <=1
- TB2 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >1 e <=1.5
- TB3 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >1.5 e <=2
-TB4 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >2 (excluído por ser o teoricamente mais favorável ao AUTO)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,TB1,TB2,TB3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 01:54:41AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            89305     |
| Iterations completed                  5     |
| Log likelihood function       -114751.4     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          2.57032     |
|   Finite Sample: AIC =          2.57032     |
| Info. Criterion: BIC =          2.57243     |
| Info. Criterion:HQIC =          2.57097     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .00793  .00788 |
| Chi-squared[15]          =   1833.42073     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped6121 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP    |   -3.38019923       .05794200   -58.338   .0000
 BP_TB11 |     .92704128       .11138875     8.323   .0000
 BP_TB21 |     .45152413       .06623487     6.817   .0000
 BP_TB31 |     .18142331       .06832365     2.655   .0079
```

A_B	-1.59658977	.02561397	-62.333	.0000
B_TB12	1.06524442	.05091595	20.922	.0000
B_TB22	.74429679	.02882543	25.821	.0000
B_TB32	.64485428	.02899335	22.241	.0000
A_BO	-2.59262774	.03984503	-65.068	.0000
BO_TB13	-.65903790	.14430174	-4.567	.0000
BO_TB23	-.20178310	.04994590	-4.040	.0001
BO_TB33	-.06799166	.04872701	-1.395	.1629
A_M	-2.08564999	.03162596	-65.947	.0000
M_TB14	.12820402	.08242081	1.555	.1198
M_TB24	-.20928141	.03963760	-5.280	.0000
M_TB34	-.15008623	.03914551	-3.834	.0001
A_P	-1.67309265	.02644711	-63.262	.0000
P_TB15	1.25355043	.05006804	25.037	.0000
P_TB25	.33231525	.03084600	10.773	.0000
P_TB35	-.04367808	.03220207	-1.356	.1750

MNL3.92 – ASC e combinação de variáveis numero total de viagens diárias e modo utilizado è igual ao da 1ª viagem do dia (se não for a 1ª viagem)

- nV: ntotalviag Número total de viagens de cada individuo por dia
- M1b: Variável binária modo utilizado è igual ao da 1ª viagem do dia (se não for a 1ª viagem)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,nV,M1B$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 00:17:03PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            65796     |
| Iterations completed                  6     |
| Log likelihood function       -78067.45     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.37347     |
|   Finite Sample: AIC =          2.37347     |
| Info. Criterion: BIC =          2.37554     |
| Info. Criterion:HQIC =          2.37411     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -81790.1222  .04551  .04547 |
| Chi-squared[10]          =   7445.35355     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP     |      .17803685       .09425074     1.889    .0589
 BP_NV1   |    -.60384624       .02223427   -27.158    .0000
 BP_M1B1  |   -1.63711428       .06342692   -25.811    .0000
 A_B      |    1.27640223       .04171748    30.596    .0000
 B_NV2    |    -.46369285       .00773029   -59.984    .0000
 B_M1B2   |    -.85040790       .03094810   -27.479    .0000
 A_BO     |    -.41737016       .08609095    -4.848    .0000
 BO_NV3   |    -.51775257       .01696358   -30.521    .0000
 BO_M1B3  |    -.63913506       .06499559    -9.834    .0000
 A_M      |   -1.99744535       .06419313   -31.116    .0000
```

M_NV4	-.05704567	.00824094	-6.922	.0000
M_M1B4	.08123842	.05385045	1.509	.1314
A_P	.11861709	.04363875	2.718	.0066
P_NV5	-.21985764	.00739897	-29.715	.0000
P_M1B5	-.91606376	.03250484	-28.182	.0000

MNL3.93 – ASC e combinação de variáveis numero total de viagens diárias e modo utilizado è igual ao da viagem anterior (se não for a 1ª viagem)

- nV: ntotalviag Número total de viagens de cada individuo por dia
- MVb: Variável binária modo utilizado è igual ao da viagem anterior (se não for a 1ª viagem)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,nV,MVB$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 00:19:44PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            65796     |
| Iterations completed                  7     |
| Log likelihood function       -78138.56     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.37563     |
|   Finite Sample: AIC =          2.37563     |
| Info. Criterion: BIC =          2.37771     |
| Info. Criterion:HQIC =          2.37627     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -81790.1222  .04465  .04460 |
| Chi-squared[10]          =   7303.11504     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP     |     .29135422       .09098154     3.202   .0014
 BP_NV1   |    -.57363154       .02197606   -26.103   .0000
 BP_MVB1  |   -1.86360914       .06321059   -29.483   .0000
 A_B      |    1.28673415       .04271435    30.124   .0000
 B_NV2    |    -.45007087       .00763949   -58.914   .0000
 B_MVB2   |    -.88939447       .03372763   -26.370   .0000
 A_BO     |    -.37331847       .08670049    -4.306   .0000
 BO_NV3   |    -.50902045       .01682342   -30.257   .0000
 BO_MVB3  |    -.70478254       .06887216   -10.233   .0000
 A_M      |   -2.05353391       .07185036   -28.581   .0000
```

M_NV4	-.05771563	.00823428	-7.009	.0000
M_MVB4	.14204846	.06396621	2.221	.0264
A_P	.01293453	.04578722	.282	.7776
P_NV5	-.20512886	.00727240	-28.206	.0000
P_MVB5	-.81921210	.03692561	-22.185	.0000

MNL3.94 – ASC e combinação de variáveis modo utilizado è igual ao da viagem anterior (se não for a 1ª viagem) e modo utilizado è igual ao da 1ª viagem do dia (se não for a 1ª viagem)

- M1b: Variável binária modo utilizado è igual ao da 1ª viagem do dia (se não for a 1ª viagem)
- MVb: Variável binária modo utilizado è igual ao da viagem anterior (se não for a 1ª viagem)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,M1B,MVB$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 00:23:58PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            65796     |
| Iterations completed                  6     |
| Log likelihood function       -81007.06     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.46283     |
|   Finite Sample: AIC =          2.46283     |
| Info. Criterion: BIC =          2.46490     |
| Info. Criterion:HQIC =          2.46347     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -81790.1222  .00957  .00953 |
| Chi-squared[10]          =   1566.12371     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP     |   -1.86909274       .05457984   -34.245   .0000
 BP_M1B1  |    -.31861155       .09478384    -3.361   .0008
 BP_MVB1  |   -1.49257425       .09484629   -15.737   .0000
 A_B      |    -.46700746       .03130143   -14.920   .0000
 B_M1B2   |    -.24861563       .04054281    -6.132   .0000
 B_MVB2   |    -.60546758       .04435660   -13.650   .0000
 A_BO     |   -2.37166759       .06631416   -35.764   .0000
 BO_M1B3  |    -.03655534       .08799014     -.415   .6778
 BO_MVB3  |    -.56281318       .09376825    -6.002   .0000
 A_M      |   -2.32515041       .06363055   -36.541   .0000
```

M_M1B4	.04557519	.06770083	.673	.5008
M_MVB4	.11672730	.08059599	1.448	.1475
A_P	-.76214781	.03482466	-21.885	.0000
P_M1B5	-.64100685	.04302422	-14.899	.0000
P_MVB5	-.29600119	.04938781	-5.993	.0000

MNL3.95 – ASC e combinação de variáveis numero total de viagens diárias, modo utilizado è igual ao da viagem anterior (se não for a 1ª viagem) e modo utilizado è igual ao da 1ª viagem do dia (se não for a 1ª viagem)

- nV: ntotalviag Número total de viagens de cada individuo por dia
- M1b: Variável binária modo utilizado è igual ao da 1ª viagem do dia (se não for a 1ª viagem)
- MVb: Variável binária modo utilizado è igual ao da viagem anterior (se não for a 1ª viagem)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,nV,M1B,MVB$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 05, 2012 at 00:39:24PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            65796     |
| Iterations completed                  7     |
| Log likelihood function       -77935.56     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          2.36961     |
|   Finite Sample: AIC =          2.36961     |
| Info. Criterion: BIC =          2.37238     |
| Info. Criterion:HQIC =          2.37047     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -81790.1222  .04713  .04707 |
| Chi-squared[15]          =   7709.11452     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP    |     .42300865       .09267682     4.564   .0000
 BP_NV1  |    -.58074615       .02201152   -26.384   .0000
 BP_M1B1 |    -.52269449       .11217135    -4.660   .0000
 BP_MVB1 |   -1.47334357       .11189917   -13.167   .0000
 A_B     |    1.43586669       .04444177    32.309   .0000
 B_NV2   |    -.46032160       .00773649   -59.500   .0000
 B_M1B2  |    -.55518906       .04437392   -12.512   .0000
 B_MVB2  |    -.47684063       .04822857    -9.887   .0000
```

A_BO	-.26406848	.08959925	-2.947	.0032
BO_NV3	-.51546106	.01696552	-30.383	.0000
BO_M1B3	-.36306664	.09941905	-3.652	.0003
BO_MVB3	-.44699985	.10526146	-4.247	.0000
A_M	-2.05639873	.07478945	-27.496	.0000
M_NV4	-.05728619	.00824811	-6.945	.0000
M_M1B4	.01367578	.06610055	.207	.8361
M_MVB4	.12987905	.07845758	1.655	.0978
A_P	.21763380	.04731800	4.599	.0000
P_NV5	-.21923589	.00742300	-29.535	.0000
P_M1B5	-.79246490	.04368518	-18.140	.0000
P_MVB5	-.23090227	.04988936	-4.628	.0000

MNL3.96 – ASC e combinação de variáveis binárias modo utilizado na 1ª viagem do dia (se não for a 1ª viagem)

- M11: Variável binária modo da 1ª viagem do dia for Walk+BUS (se não for a 1ª viagem)
- M12: Variável binária modo da 1ª viagem do dia for BUS (se não for a 1ª viagem)
- M13: Variável binária modo da 1ª viagem do dia for Outro BUS (se não for a 1ª viagem)
- M14: Variável binária modo da 1ª viagem do dia for MOTO (se não for a 1ª viagem)
- M15: Variável binária modo da 1ª viagem do dia for Walk (se não for a 1ª viagem)
- M16: Variável binária modo da 1ª viagem do dia for Auto (se não for a 1ª viagem)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,M11,M12,M13,M14,M15,M16$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Hessian is not definite at current values.
Switching to BFGS (gradient based) method.
(Not a failure. Just looking for a better algorithm.)
Line search does not improve fn. Exit iterations. Status=3
Check derivatives (with ;OUTPUT=3). This may be a solution
if several iterations have been computed, not if only one.
  Error   806: (The log likelihood is flat at the current estimates.)
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 06, 2012 at 05:27:13PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                 11     |
| Log likelihood function       -376351.2     |
| Number of parameters                 35     |
| Info. Criterion: AIC =          7.88855     |
|   Finite Sample: AIC =          7.88855     |
| Info. Criterion: BIC =          7.89202     |
| Info. Criterion:HQIC =          7.88960     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  *********** ******* ******* |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP    |   -2.37980145       .88307640    -2.695   .0070
```

BP_M111	-.294362D+10	......(Fixed Parameter).......			
BP_M121	1.72431213	.00725361	237.718	.0000	
BP_M131	-.737099D+07	......(Fixed Parameter).......			
BP_M141	-3703.45408	......(Fixed Parameter).......			
BP_M151	-1.11822242	......(Fixed Parameter).......			
BP_M161	-2.65280775	......(Fixed Parameter).......			
A_B	-.47941555	.46400069	-1.033	.3015	
B_M112	.393998D+10	......(Fixed Parameter).......			
B_M122	2.75706622	1.00003568	2.757	.0058	
B_M132	-.627864D+07	......(Fixed Parameter).......			
B_M142	-4764.22656	......(Fixed Parameter).......			
B_M152	-.82928551	......(Fixed Parameter).......			
B_M162	-3.13938437	......(Fixed Parameter).......			
A_BO	-1.59911468	......(Fixed Parameter).......			
BO_M113	-.194444D+10	......(Fixed Parameter).......			
BO_M123	-1.86060448	.01293842	-143.805	.0000	
BO_M133	-.100604D+08	.12519569	********	.0000	
BO_M143	-2832.41329	......(Fixed Parameter).......			
BO_M153	-2.01686865	......(Fixed Parameter).......			
BO_M163	-3.83722268	......(Fixed Parameter).......			
A_M	-.73373311	46.4940239	-.016	.9874	
M_M114	.164703D+09	......(Fixed Parameter).......			
M_M124	-1.36797514	......(Fixed Parameter).......			
M_M134	-723920.710	......(Fixed Parameter).......			
M_M144	-5540.33695	......(Fixed Parameter).......			
M_M154	-4.05371776	......(Fixed Parameter).......			
M_M164	-4.44168200	......(Fixed Parameter).......			
A_P	-1.54383068	......(Fixed Parameter).......			
P_M115	.310476D+10	......(Fixed Parameter).......			
P_M125	.36048486	......(Fixed Parameter).......			
P_M135	-987423.352	......(Fixed Parameter).......			
P_M145	-1504.33903	......(Fixed Parameter).......			
P_M155	3.03038913	......(Fixed Parameter).......			
P_M165	-3.04931156	......(Fixed Parameter).......			

MNL3.97 – ASC e combinação de variáveis binárias modo utilizado na 1ª viagem do dia (se não for a 1ª viagem) e distância mais curta

- M11: Variável binária modo da 1ª viagem do dia for Walk+BUS (se não for a 1ª viagem)
- M12: Variável binária modo da 1ª viagem do dia for BUS (se não for a 1ª viagem)
- M13: Variável binária modo da 1ª viagem do dia for Outro BUS (se não for a 1ª viagem)
- M14: Variável binária modo da 1ª viagem do dia for MOTO (se não for a 1ª viagem)
- M15: Variável binária modo da 1ª viagem do dia for Walk (se não for a 1ª viagem)
- M16: Variável binária modo da 1ª viagem do dia for Auto (se não for a 1ª viagem)

- D2: Variável continua distância mais curta em Km entre os centróides ajustados das zonas de Geração e de Atracção (pares >=50 viagens) excepto para o modo Walk em que d2=tp/60*3,6km/h

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,M11,M12,M13,M14,M15,M16,D2$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Hessian is not definite at current values.
Switching to BFGS (gradient based) method.
(Not a failure. Just looking for a better algorithm.)
Line search does not improve fn. Exit iterations. Status=3
Check derivatives (with ;OUTPUT=3). This may be a solution
if several iterations have been computed, not if only one.
  Error   806: (The log likelihood is flat at the current estimates.)
Function=  .12348936960D+06, at entry,  .37542009217D+06 at exit
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 06, 2012 at 06:11:14PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  2     |
| Log likelihood function       -375420.1     |
| Number of parameters                 40     |
| Info. Criterion: AIC =          7.86914     |
|   Finite Sample: AIC =          7.86914     |
| Info. Criterion: BIC =          7.87310     |
| Info. Criterion:HQIC =          7.87034     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ********** ******* ******* |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
```

```
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -2.92732800      1.00000000    -2.927   .0034
 BP_M111  |   -.288208D+10   ......(Fixed Parameter).......
 BP_M121  |    2.35677611    ......(Fixed Parameter).......
 BP_M131  |   -.738747D+07   ......(Fixed Parameter).......
 BP_M141  |   -3739.48959    ......(Fixed Parameter).......
 BP_M151  |    1.12927366    ......(Fixed Parameter).......
 BP_M161  |   -2.74560318    ......(Fixed Parameter).......
 BP_D21   |     .02781969    ......(Fixed Parameter).......
 A_B      |    -.75737447    ......(Fixed Parameter).......
 B_M112   |    .388702D+10   ......(Fixed Parameter).......
 B_M122   |    2.37328622    ......(Fixed Parameter).......
 B_M132   |   -.626714D+07   ......(Fixed Parameter).......
 B_M142   |   -4751.75593    ......(Fixed Parameter).......
 B_M152   |     .63695772    ......(Fixed Parameter).......
 B_M162   |   -2.55889795    ......(Fixed Parameter).......
 B_D22    |     .01105132    ......(Fixed Parameter).......
 A_BO     |   -2.37334185    ......(Fixed Parameter).......
 BO_M113  |   -.189454D+10   ......(Fixed Parameter).......
 BO_M123  |   -1.88499292    ......(Fixed Parameter).......
 BO_M133  |   -.100473D+08     1.00000000  ********   .0000
 BO_M143  |   -2835.43069    ......(Fixed Parameter).......
 BO_M153  |   -1.92270670    ......(Fixed Parameter).......
 BO_M163  |   -2.73448480    ......(Fixed Parameter).......
 BO_D23   |     .05922252    ......(Fixed Parameter).......
 A_M      |   -1.76052347    ......(Fixed Parameter).......
 M_M114   |    .904863D+08   ......(Fixed Parameter).......
 M_M124   |   -1.39135610    ......(Fixed Parameter).......
 M_M134   |   -804313.458    ......(Fixed Parameter).......
 M_M144   |   -5540.13411    ......(Fixed Parameter).......
 M_M154   |   -2.99074839    ......(Fixed Parameter).......
 M_M164   |   -2.62715936    ......(Fixed Parameter).......
 M_D24    |     .02751396    ......(Fixed Parameter).......
 A_P      |    1.31197669    ......(Fixed Parameter).......
 P_M115   |    .693477D+09   ......(Fixed Parameter).......
 P_M125   |    1.03119819    ......(Fixed Parameter).......
 P_M135   |   -.369716D+07     18.0504941  ********   .0000
 P_M145   |   -2203.33661    ......(Fixed Parameter).......
 P_M155   |   -1.77002622    ......(Fixed Parameter).......
 P_M165   |   -1.93836849    ......(Fixed Parameter).......
 P_D25    |    -.70573440    ......(Fixed Parameter).......
```

MNL3.98 – ASC e combinação de variáveis binárias modo utilizado na 1ª viagem do dia (se não for a 1ª viagem) e distância mais curta

- M11: Variável binária modo da 1ª viagem do dia for Walk+BUS (se não for a 1ª viagem)
- M12: Variável binária modo da 1ª viagem do dia for BUS (se não for a 1ª viagem)
- M13: Variável binária modo da 1ª viagem do dia for Outro BUS (se não for a 1ª viagem)
- M14: Variável binária modo da 1ª viagem do dia for MOTO (se não for a 1ª viagem)
- M15: Variável binária modo da 1ª viagem do dia for Walk (se não for a 1ª viagem)
- M16: Variável binária modo da 1ª viagem do dia for Auto (se não for a 1ª viagem)

- D2: Variável continua distância mais curta em Km entre os centróides ajustados das zonas de Geração e de Atracção (pares >=50 viagens) excepto para o modo Walk em que d2=tp/60*3,6km/h
- dx1: Variável binária para distâncias mais curtas D2<=1,0km
- dx2: Variável binária para distâncias mais curtas D2>1,0km e <=2,0km
- dx3: Variável binária para distâncias mais curtas D2>2,0km e <=5,0km
- *dx4: Variável binária para distâncias mais curtas D2>5,0km (Excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,M11,M12,M13,M14,M15,M16,D2,DX1,DX2,DX3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Hessian is not definite at current values.
Switching to BFGS (gradient based) method.
(Not a failure. Just looking for a better algorithm.)
Line search does not improve fn. Exit iterations. Status=3
Check derivatives (with ;OUTPUT=3). This may be a solution
if several iterations have been computed, not if only one.
  Error   806: (The log likelihood is flat at the current estimates.)
Function=  .12348936960D+06, at entry,  .57224851957D+06 at exit
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 06, 2012 at 06:15:47PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  1     |
| Log likelihood function       -572248.5     |
| Number of parameters                 55     |
| Info. Criterion: AIC =         11.99471     |
|   Finite Sample: AIC =         11.99471     |
| Info. Criterion: BIC =         12.00016     |
| Info. Criterion:HQIC =         11.99637     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ********** ******* ******* |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
```

```
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP    |   -3.30549829      1.00000000    -3.305   .0009
 BP_M111 |   -.286326D+10   .....(Fixed Parameter).......
 BP_M121 |    2.30613246    .....(Fixed Parameter).......
 BP_M131 |   -.741176D+07   .....(Fixed Parameter).......
 BP_M141 |   -3735.65217    .....(Fixed Parameter).......
 BP_M151 |     .23085441    .....(Fixed Parameter).......
 BP_M161 |   -2.72546472    .....(Fixed Parameter).......
 BP_D21  |     .06797846    .....(Fixed Parameter).......
 BP_DX11 |    134.511112    .....(Fixed Parameter).......
 BP_DX21 |     .30854537    .....(Fixed Parameter).......
 BP_DX31 |     .21049969      1.00000000      .210   .8333
 A_B     |    -.72182149    .....(Fixed Parameter).......
 B_M112  |    .384912D+10   .....(Fixed Parameter).......
 B_M122  |    2.31173785    .....(Fixed Parameter).......
 B_M132  |   -.626026D+07   .....(Fixed Parameter).......
 B_M142  |   -4746.51321    .....(Fixed Parameter).......
 B_M152  |    -.09413091    .....(Fixed Parameter).......
 B_M162  |   -2.57312092    .....(Fixed Parameter).......
 B_D22   |    -.00590943    .....(Fixed Parameter).......
 B_DX12  |   -1.21472407    .....(Fixed Parameter).......
 B_DX22  |    -.30450319    .....(Fixed Parameter).......
 B_DX32  |     .03688987    .....(Fixed Parameter).......
 A_BO    |   -2.31974982    .....(Fixed Parameter).......
 BO_M113 |   -.188443D+10   .....(Fixed Parameter).......
 BO_M123 |   -1.93978092    .....(Fixed Parameter).......
 BO_M133 |   -.100384D+08   .....(Fixed Parameter).......
 BO_M143 |   -2829.17162    .....(Fixed Parameter).......
 BO_M153 |    -.72822460    .....(Fixed Parameter).......
 BO_M163 |   -2.74157722    .....(Fixed Parameter).......
 BO_D23  |     .00723072    .....(Fixed Parameter).......
 BO_DX13 |    27.3212803    .....(Fixed Parameter).......
 BO_DX23 |   -1.09441513    .....(Fixed Parameter).......
 BO_DX33 |     .05946389    .....(Fixed Parameter).......
 A_M     |   -1.57053693    .....(Fixed Parameter).......
 M_M114  |    .902422D+08   .....(Fixed Parameter).......
 M_M124  |   -1.42512024      117.962610     -.012   .9904
 M_M134  |   -788072.067    .....(Fixed Parameter).......
 M_M144  |   -5535.54689    .....(Fixed Parameter).......
 M_M154  |    -.92533513    .....(Fixed Parameter).......
 M_M164  |   -2.65693008    .....(Fixed Parameter).......
 M_D24   |    -.06927301    .....(Fixed Parameter).......
 M_DX14  |    4.93494771    .....(Fixed Parameter).......
 M_DX24  |    -.91923087    .....(Fixed Parameter).......
 M_DX34  |    -.00061138    .....(Fixed Parameter).......
 A_P     |   -2.40630045    .....(Fixed Parameter).......
 P_M115  |   -.277550D+10   .....(Fixed Parameter).......
 P_M125  |    -.07761031    .....(Fixed Parameter).......
 P_M135  |   -.974755D+07   .....(Fixed Parameter).......
 P_M145  |   -5251.53569    .....(Fixed Parameter).......
 P_M155  |    1.84151206    .....(Fixed Parameter).......
 P_M165  |   -1.62354870    .....(Fixed Parameter).......
 P_D25   |    -.11026841    .....(Fixed Parameter).......
 P_DX15  |    6.42261456    .....(Fixed Parameter).......
```

```
 P_DX25  |    2.83449194    ......(Fixed Parameter).......
 P_DX35  |     .14493701    ......(Fixed Parameter).......
```

MNL3.99 – ASC e combinação de variáveis binárias modo utilizado na 1ª viagem do dia (se não for a 1ª viagem)

- Genéricas
- M11: Variável binária modo da 1ª viagem do dia for Walk+BUS (se não for a 1ª viagem)
- M12: Variável binária modo da 1ª viagem do dia for BUS (se não for a 1ª viagem)
- M13: Variável binária modo da 1ª viagem do dia for Outro BUS (se não for a 1ª viagem)
- M14: Variável binária modo da 1ª viagem do dia for MOTO (se não for a 1ª viagem)
- M15: Variável binária modo da 1ª viagem do dia for Walk (se não for a 1ª viagem)
- M16: Variável binária modo da 1ª viagem do dia for Auto (se não for a 1ª viagem)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rhs=M11,M12,M13,M14,M15,M16;Rh2=ONE$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 06, 2012 at 06:29:01PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  6     |
| Log likelihood function       -75341.06     |
| Number of parameters                  6     |
| Info. Criterion: AIC =          1.57917     |
|   Finite Sample: AIC =          1.57917     |
| Info. Criterion: BIC =          1.57977     |
| Info. Criterion:HQIC =          1.57935     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .38990  .38989 |
| Chi-squared[ 1]          =  96296.61339     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 ATTRIB01|    3.17943775       .01286389   247.160    .0000
 A_BP    |   -2.50879908       .02364337  -106.110    .0000
 A_B     |    -.78405366       .01183576   -66.244    .0000
```

A_BO	-2.12359009	.01978251	-107.347	.0000
A_M	-1.73655501	.01648965	-105.312	.0000
A_P	-1.34374921	.01396349	-96.233	.0000

MNL3.100 – ASC e combinação de variáveis binárias modo utilizado na 1ª viagem do dia (se não for a 1ª viagem) e distância mais curta

- Genéricas
- M11: Variável binária modo da 1ª viagem do dia for Walk+BUS (se não for a 1ª viagem)
- M12: Variável binária modo da 1ª viagem do dia for BUS (se não for a 1ª viagem)
- M13: Variável binária modo da 1ª viagem do dia for Outro BUS (se não for a 1ª viagem)
- M14: Variável binária modo da 1ª viagem do dia for MOTO (se não for a 1ª viagem)
- M15: Variável binária modo da 1ª viagem do dia for Walk (se não for a 1ª viagem)
- M16: Variável binária modo da 1ª viagem do dia for Auto (se não for a 1ª viagem)

- D2: Variável continua distância mais curta em Km entre os centróides ajustados das zonas de Geração e de Atracção (pares >=50 viagens) excepto para o modo Walk em que d2=tp/60*3,6km/h
- dx1: Variável binária para distâncias mais curtas D2<=1,0km
- dx2: Variável binária para distâncias mais curtas D2>1,0km e <=2,0km
- dx3: Variável binária para distâncias mais curtas D2>2,0km e <=5,0km
- *dx4: Variável binária para distâncias mais curtas D2>5,0km (Excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rhs=M11,M12,M13,M14,M15,M16;Rh2=ONE,D2,DX1,DX2,DX3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 06, 2012 at 06:25:34PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                 32     |
| Log likelihood function       -59190.03     |
| Number of parameters                 26     |
| Info. Criterion: AIC =          1.24109     |
|   Finite Sample: AIC =          1.24109     |
| Info. Criterion: BIC =          1.24367     |
| Info. Criterion:HQIC =          1.24187     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .52069  .52066 |
| Chi-squared[21]          = 128598.68881     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
```

| nJ = sum over i, choice set sizes |

Variable	Coefficient	Standard Error	b/St.Er.	P[|Z|>z]
ATTRIB01	3.29861161	.01556699	211.898	.0000
A_BP	-3.04488049	.08693113	-35.026	.0000
BP_D21	.06304471	.00949429	6.640	.0000
BP_DX11	.00187972	1.01256275	.002	.9985
BP_DX21	.72824965	.10914755	6.672	.0000
BP_DX31	.23168420	.06869360	3.373	.0007
A_B	-.74731740	.04833838	-15.460	.0000
B_D22	-.00830982	.00575823	-1.443	.1490
B_DX12	.11343595	.24979619	.454	.6497
B_DX22	-.14688471	.06139998	-2.392	.0167
B_DX32	.04654639	.03521180	1.322	.1862
A_BO	-2.21912723	.07748310	-28.640	.0000
BO_D23	.00932823	.00904156	1.032	.3022
BO_DX13	-30.0787621	.245586D+07	.000	1.0000
BO_DX23	-.42137172	.11767295	-3.581	.0003
BO_DX33	.07215605	.05765712	1.251	.2108
A_M	-1.38783130	.07703048	-18.017	.0000
M_D24	-.06680542	.00968963	-6.895	.0000
M_DX14	-30.2765974	.183354D+07	.000	1.0000
M_DX24	-.27806320	.09087237	-3.060	.0022
M_DX34	-.00450677	.05206982	-.087	.9310
A_P	4.33155017	.34568359	12.530	.0000
P_D25	-1.68471097	.05760066	-29.248	.0000
P_DX15	2.27471686	.33125074	6.867	.0000
P_DX25	-1.05841705	.26381643	-4.012	.0001
P_DX35	-2.35293692	.20448399	-11.507	.0000

MNL3.101 – ASC e combinação de variáveis binárias modo utilizado na 1ª viagem do dia (se não for a 1ª viagem), número total de viagens diárias pelo individuo e distância mais curta

Genéricas
- M11: Variável binária modo da 1ª viagem do dia for Walk+BUS (se não for a 1ª viagem)
- M12: Variável binária modo da 1ª viagem do dia for BUS (se não for a 1ª viagem)
- M13: Variável binária modo da 1ª viagem do dia for Outro BUS (se não for a 1ª viagem)
- M14: Variável binária modo da 1ª viagem do dia for MOTO (se não for a 1ª viagem)
- M15: Variável binária modo da 1ª viagem do dia for Walk (se não for a 1ª viagem)
- M16: Variável binária modo da 1ª viagem do dia for Auto (se não for a 1ª viagem)

- nV: ntotalviag Número total de viagens de cada individuo por dia

- D2: Variável continua distância mais curta em Km entre os centróides ajustados das zonas de Geração e de Atracção (pares >=50 viagens) excepto para o modo Walk em que d2=tp/60*3,6km/h
- dx1: Variável binária para distâncias mais curtas D2<=1,0km
- dx2: Variável binária para distâncias mais curtas D2>1,0km e <=2,0km
- dx3: Variável binária para distâncias mais curtas D2>2,0km e <=5,0km
- *dx4: Variável binária para distâncias mais curtas D2>5,0km (Excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rhs=M11,M12,M13,M14,M15,M16;Rh2=ONE,NV,D2,DX1,DX2,DX3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 06, 2012 at 07:08:31PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                 32     |
| Log likelihood function       -58039.63     |
| Number of parameters                 31     |
| Info. Criterion: AIC =          1.21708     |
|   Finite Sample: AIC =          1.21708     |
| Info. Criterion: BIC =          1.22016     |
| Info. Criterion:HQIC =          1.21802     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .53000  .52997 |
| Chi-squared[26]          = 130899.47139     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
```

```
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 ATTRIB01|    3.26666818       .01584585   206.153   .0000
 A_BP    |   -1.99789835       .10314788   -19.369   .0000
 BP_NV1  |    -.30438537       .01772872   -17.169   .0000
 BP_D21  |     .05222656       .00954837     5.470   .0000
 BP_DX11 |     .51345987      1.01373266      .507   .6125
 BP_DX21 |     .76797097       .10953731     7.011   .0000
 BP_DX31 |     .25477475       .06901318     3.692   .0002
 A_B     |     .27931994       .05617603     4.972   .0000
 B_NV2   |    -.29507356       .00833540   -35.400   .0000
 B_D22   |    -.01927682       .00582094    -3.312   .0009
 B_DX12  |     .60452667       .25329606     2.387   .0170
 B_DX22  |    -.11261602       .06200454    -1.816   .0693
 B_DX32  |     .06133256       .03561817     1.722   .0851
 A_BO    |   -1.15613867       .08965950   -12.895   .0000
 BO_NV3  |    -.30870643       .01447115   -21.333   .0000
 BO_D23  |    -.00016324       .00901303     -.018   .9855
 BO_DX13 |  -29.5097155     .240571D+07       .000  1.0000
 BO_DX23 |    -.39054260       .11790302    -3.312   .0009
 BO_DX33 |     .08610945       .05775838     1.491   .1360
 A_M     |   -1.34653120       .08567451   -15.717   .0000
 M_NV4   |    -.01211993       .00939878    -1.290   .1972
 M_D24   |    -.06694345       .00972367    -6.885   .0000
 M_DX14  |  -30.0572709     .178358D+07       .000  1.0000
 M_DX24  |    -.29803939       .09209258    -3.236   .0012
 M_DX34  |    -.00353408       .05221840     -.068   .9460
 A_P     |    5.85044804       .35688563    16.393   .0000
 P_NV5   |    -.38173779       .01578843   -24.178   .0000
 P_D25   |   -1.69465755       .05855691   -28.940   .0000
 P_DX15  |    2.61995884       .33861663     7.737   .0000
 P_DX25  |   -1.25099751       .26675108    -4.690   .0000
 P_DX35  |   -2.44181894       .20728259   -11.780   .0000
```

MNL3.102 – ASC e combinação de variáveis binárias modo utilizado na 1ª viagem do dia (se não for a 1ª viagem), número total de viagens diárias pelo individuo e distância mais curta

Genéricas
- M11a: Variável binária modo da 1ª viagem do dia for Walk+BUS (se não for a 1ª viagem) (excluindo 1ª viagens)
- M12a: Variável binária modo da 1ª viagem do dia for BUS (se não for a 1ª viagem) (excluindo 1ª viagens)
- M13a: Variável binária modo da 1ª viagem do dia for Outro BUS (se não for a 1ª viagem) (excluindo 1ª viagens)
- M14a: Variável binária modo da 1ª viagem do dia for MOTO (se não for a 1ª viagem) (excluindo 1ª viagens)
- M15a: Variável binária modo da 1ª viagem do dia for Walk (se não for a 1ª viagem) (excluindo 1ª viagens)
- M16a: Variável binária modo da 1ª viagem do dia for Auto (se não for a 1ª viagem) (excluindo 1ª viagens)

- nV: ntotalviag Número total de viagens de cada individuo por dia

- D2: Variável continua distância mais curta em Km entre os centróides ajustados das zonas de Geração e de Atracção (pares >=50 viagens) excepto para o modo Walk em que d2=tp/60*3,6km/h
- dx1: Variável binária para distâncias mais curtas D2<=1,0km
- dx2: Variável binária para distâncias mais curtas D2>1,0km e <=2,0km
- dx3: Variável binária para distâncias mais curtas D2>2,0km e <=5,0km
- *dx4: Variável binária para distâncias mais curtas D2>5,0km (Excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rhs=M11a,M12a,M13a,M14a,M15a,M16a;Rh2=ONE,NV,D2,DX1,DX2,DX3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 06, 2012 at 11:40:44PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            64877     |
| Iterations completed                 32     |
| Log likelihood function       -23952.94     |
| Number of parameters                 31     |
| Info. Criterion: AIC =           .73937     |
|   Finite Sample: AIC =           .73937     |
| Info. Criterion: BIC =           .74371     |
| Info. Criterion:HQIC =           .74071     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -80575.9206  .70273  .70270 |
| Chi-squared[26]          = 113245.96597     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+
```

```
+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
```

Variable	Coefficient	Standard Error	b/St.Er.	P[|Z|>z]
ATTRIB01	3.24181614	.01571485	206.290	.0000
A_BP	-.94198081	.17153535	-5.491	.0000
BP_NV1	-.42145941	.02583991	-16.310	.0000
BP_D21	.03528155	.01643512	2.147	.0318
BP_DX11	-28.4758685	.250574D+07	.000	1.0000
BP_DX21	.62181120	.17022880	3.653	.0003
BP_DX31	.18257958	.11084190	1.647	.0995
A_B	.46960125	.10419357	4.507	.0000
B_NV2	-.31622717	.01328166	-23.809	.0000
B_D22	-.02497583	.01084257	-2.303	.0213
B_DX12	.56869667	.32851768	1.731	.0834
B_DX22	-.12580014	.10258133	-1.226	.2201
B_DX32	.20025713	.06396629	3.131	.0017
A_BO	-.23574835	.15046028	-1.567	.1172
BO_NV3	-.41360864	.02154391	-19.198	.0000
BO_D23	-.02454841	.01520291	-1.615	.1064
BO_DX13	-28.5949932	.216289D+07	.000	1.0000
BO_DX23	-.37921774	.17813735	-2.129	.0333
BO_DX33	.04473947	.09435142	.474	.6354
A_M	-.33234640	.13855881	-2.399	.0165
M_NV4	-.13719241	.01409445	-9.734	.0000
M_D24	-.09712950	.01565499	-6.204	.0000
M_DX14	-29.1224536	.140894D+07	.000	1.0000
M_DX24	-.26741161	.13706775	-1.951	.0511
M_DX34	-.00982677	.08161171	-.120	.9042
A_P	5.47771128	.48033298	11.404	.0000
P_NV5	-.51727128	.02249624	-22.994	.0000
P_D25	-1.52692821	.07787309	-19.608	.0000
P_DX15	3.87612837	.44633044	8.684	.0000
P_DX25	-.45893704	.35831730	-1.281	.2003
P_DX35	-1.81062063	.27207465	-6.655	.0000

MNL3.103 (65796) – ASC e combinação de variáveis binárias modo utilizado na 1ª viagem do dia (se não for a 1ª viagem)

Genéricas
- M11: Variável binária modo da 1ª viagem do dia for Walk+BUS (se não for a 1ª viagem)
- M12: Variável binária modo da 1ª viagem do dia for BUS (se não for a 1ª viagem)
- M13: Variável binária modo da 1ª viagem do dia for Outro BUS (se não for a 1ª viagem)
- M14: Variável binária modo da 1ª viagem do dia for MOTO (se não for a 1ª viagem)
- M15: Variável binária modo da 1ª viagem do dia for Walk (se não for a 1ª viagem)
- M16: Variável binária modo da 1ª viagem do dia for Auto (se não for a 1ª viagem)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1];Rh2=ONE,M11,M12,M13,M14,M15,M16$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Hessian is not definite at current values.
Switching to BFGS (gradient based) method.
(Not a failure. Just looking for a better algorithm.)
Line search does not improve fn. Exit iterations. Status=3
Check derivatives (with ;OUTPUT=3). This may be a solution
if several iterations have been computed, not if only one.
  Error   806: (The log likelihood is flat at the current estimates.)
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 14, 2012 at 00:25:16AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            65796     |
| Iterations completed                  5     |
| Log likelihood function       -337962.4     |
| Number of parameters                 35     |
| Info. Criterion: AIC =         10.27410     |
|   Finite Sample: AIC =         10.27410     |
| Info. Criterion: BIC =         10.27894     |
| Info. Criterion:HQIC =         10.27560     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -81790.1222 ******* ******* |
| Response data are given as ind. choice.     |
| Number of obs.= 65796, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP    |   -6.63804966       .90069857    -7.370   .0000
```

```
BP_M111 |   -.227884D+12      .06067839  ********   .0000
BP_M121 |    1.31481430       .00284509   462.134   .0000
BP_M131 |   -.286939D+09      .00643352  ********   .0000
BP_M141 |   -3345.71657    ......(Fixed Parameter).......
BP_M151 |     .42718927       .00859939    49.677   .0000
BP_M161 |   -3.09450774    ......(Fixed Parameter).......
A_B     |    -.59463665       .99714300     -.596   .5509
B_M112  |    .334289D+12   ......(Fixed Parameter).......
B_M122  |    4.43118025      1.00000572     4.431   .0000
B_M132  |   -.241027D+09      .01502467  ********   .0000
B_M142  |   -4679.90044    ......(Fixed Parameter).......
B_M152  |     .97340261    ......(Fixed Parameter).......
B_M162  |   -1.57350255    ......(Fixed Parameter).......
A_BO    |    -.96859969    ......(Fixed Parameter).......
BO_M113 |   -.133064D+12   ......(Fixed Parameter).......
BO_M123 |   -1.56044636       .00657443  -237.351   .0000
BO_M133 |   -.422488D+09   ......(Fixed Parameter).......
BO_M143 |   -2238.64041    ......(Fixed Parameter).......
BO_M153 |   -1.02960674    ......(Fixed Parameter).......
BO_M163 |   -3.47127603    ......(Fixed Parameter).......
A_M     |    1.99290799      44.1235124      .045   .9640
M_M114  |    .238901D+11   ......(Fixed Parameter).......
M_M124  |   -1.21633995    ......(Fixed Parameter).......
M_M134  |   -.137455D+08   ......(Fixed Parameter).......
M_M144  |   -5596.89042    ......(Fixed Parameter).......
M_M154  |   -3.62308872    ......(Fixed Parameter).......
M_M164  |   -5.43162887    ......(Fixed Parameter).......
A_P     |    -.00392305    ......(Fixed Parameter).......
P_M115  |    .261560D+12   ......(Fixed Parameter).......
P_M125  |     .88234894    ......(Fixed Parameter).......
P_M135  |   -.248915D+08   ......(Fixed Parameter).......
P_M145  |   -1315.68432    ......(Fixed Parameter).......
P_M155  |    2.95733254    ......(Fixed Parameter).......
P_M165  |   -4.98323834    ......(Fixed Parameter).......
```

MNL3.104 (65796) – ASC e combinação de variáveis binárias modo utilizado na 1ª viagem do dia (se não for a 1ª viagem)

Genéricas
- M12: Variável binária modo da 1ª viagem do dia for BUS (se não for a 1ª viagem)
- M16: Variável binária modo da 1ª viagem do dia for Auto (se não for a 1ª viagem)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,M12,M16$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 14, 2012 at 00:31:18AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            65796     |
| Iterations completed                  9     |
| Log likelihood function       -46498.87     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          1.41388     |
|   Finite Sample: AIC =          1.41388     |
| Info. Criterion: BIC =          1.41595     |
| Info. Criterion:HQIC =          1.41452     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -81790.1222  .43149  .43146 |
| Chi-squared[10]           =  70582.51295    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 65796, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP    |    -.98623467       .03521746   -28.004   .0000
 BP_M121 |   -1.10554183       .09595898   -11.521   .0000
 BP_M161 |   -4.95002495       .11071726   -44.709   .0000
 A_B     |    -.97993118       .03513678   -27.889   .0000
 B_M122  |    3.08070658       .04708924    65.423   .0000
 B_M162  |   -2.62024480       .04823198   -54.326   .0000
 A_BO    |    -.43817070       .02931076   -14.949   .0000
 BO_M123 |   -3.23506986       .19030905   -16.999   .0000
```

BO_M163	-4.95909242	.08543072	-58.048	.0000
A_M	.33377318	.02404662	13.880	.0000
M_M124	-3.23117484	.13163173	-24.547	.0000
M_M164	-5.64509387	.08055821	-70.075	.0000
A_P	.81347265	.02205204	36.889	.0000
P_M125	-1.55139007	.05651063	-27.453	.0000
P_M165	-4.58099260	.04209045	-108.837	.0000

MNL3.105– ASC

- NC: Variável continua Nº total de automóveis ligeiros à disposição diária do agregado per capita (FNAUTODiario/NInd)

- Lc: Variável binária sobre a existência de licença de condução (S=1, N=0)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC,LC$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 15, 2012 at 03:42:25PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  6     |
| Log likelihood function       -104580.0     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.19217     |
|   Finite Sample: AIC =          2.19217     |
| Info. Criterion: BIC =          2.19366     |
| Info. Criterion:HQIC =          2.19262     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .15313  .15310 |
| Chi-squared[10]          =  37818.82400     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
```

A_BP	-.99262647	.03156101	-31.451	.0000
BP_NC1	-4.56890131	.12301265	-37.142	.0000

BP_LC1	-2.18017782	.05779251	-37.724	.0000
A_B	.98147614	.01688023	58.144	.0000
B_NC2	-4.16859493	.05082734	-82.015	.0000
B_LC2	-1.90576517	.02143030	-88.929	.0000
A_BO	-.78760282	.02768499	-28.449	.0000
BO_NC3	-3.28608642	.09031415	-36.385	.0000
BO_LC3	-1.97945584	.04244715	-46.633	.0000
A_M	-.23309953	.02258300	-10.322	.0000
M_NC4	-4.44682383	.07393862	-60.142	.0000
M_LC4	-1.17981085	.02901661	-40.660	.0000
A_P	.52115455	.01858535	28.041	.0000
P_NC5	-4.35436241	.05925088	-73.490	.0000
P_LC5	-1.71380635	.02455368	-69.798	.0000

MNL3.106– ASC

- NC: Variável continua Nº total de automóveis ligeiros à disposição diária do agregado per capita (FNAUTODiario/NInd)

- Lc: Variável binária sobre a existência de licença de condução (S=1, N=0)

- Sx: Variável binária sobre o sexo do Inquirido (M=0;F=1)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC,LC,SX$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 15, 2012 at 03:45:57PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  6     |
| Log likelihood function       -103805.4     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          2.17604     |
|   Finite Sample: AIC =          2.17604     |
| Info. Criterion: BIC =          2.17802     |
| Info. Criterion:HQIC =          2.17664     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .15940  .15936 |
| Chi-squared[15]          =  39367.93893     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP    |   -1.33824241       .04500442   -29.736   .0000
 BP_NC1  |   -4.63537847       .12316889   -37.634   .0000
 BP_LC1  |   -2.05496481       .05872540   -34.993   .0000
 BP_SX1  |     .55244815       .04744141    11.645   .0000
 A_B     |     .70930821       .02099539    33.784   .0000
 B_NC2   |   -4.22450513       .05110014   -82.671   .0000
 B_LC2   |   -1.80468256       .02188016   -82.480   .0000
```

B_SX2	.44443107	.02052776	21.650	.0000
A_BO	-.61175113	.03301560	-18.529	.0000
BO_NC3	-3.24630010	.09054958	-35.851	.0000
BO_LC3	-2.05528988	.04325420	-47.517	.0000
BO_SX3	-.33700074	.03641770	-9.254	.0000
A_M	.04602265	.02643020	1.741	.0816
M_NC4	-4.38093310	.07429806	-58.964	.0000
M_LC4	-1.30463926	.02982904	-43.737	.0000
M_SX4	-.56568441	.02946803	-19.197	.0000
A_P	.35152898	.02324560	15.122	.0000
P_NC5	-4.39193033	.05940470	-73.932	.0000
P_LC5	-1.64851131	.02508752	-65.710	.0000
P_SX5	.28614712	.02328735	12.288	.0000

MNL3.107– ASC

- ASC
- Variáveis binárias do escalão etário (excepto Id1)
- Variáveis binárias do nível de instrução (excepto In4)
- Variável binária Sexo (Sexo)
- Variável binária de disponibilidade de Licença de condução (Lc)
- Variáveis binárias para os escalões do rendimento liquido mensal do agregado (excepto R5)
- NC: Variável continua Nº total de automóveis ligeiros à disposição diária do agregado per capita (FNAUTODiario/NInd)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC,R1,R2,R3,R4,SX,ID2,ID3,ID4,ID5,IN1,IN2,IN3,LC$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 15, 2012 at 03:55:23PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  9     |
| Log likelihood function       -99418.80     |
| Number of parameters                 75     |
| Info. Criterion: AIC =          2.08526     |
|   Finite Sample: AIC =          2.08526     |
| Info. Criterion: BIC =          2.09270     |
| Info. Criterion:HQIC =          2.08752     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .19492  .19479 |
| Chi-squared[70]           =  48141.13331    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP    |   -4.23908572       .26123929   -16.227   .0000
 BP_NC1  |   -4.50129496       .13811430   -32.591   .0000
 BP_R11  |     .47710113       .10810117     4.413   .0000
 BP_R21  |     .20811086       .08932720     2.330   .0198
```

BP_R31	.27083744	.09164562	2.955	.0031
BP_R41	.05667268	.11305865	.501	.6162
BP_SX1	.58443492	.04885159	11.963	.0000
BP_ID21	2.86303986	.17345923	16.506	.0000
BP_ID31	2.03320314	.17888375	11.366	.0000
BP_ID41	2.23465476	.17339708	12.887	.0000
BP_ID51	2.53622507	.18066879	14.038	.0000
BP_IN11	.16490924	.21947853	.751	.4524
BP_IN21	.40881889	.18278282	2.237	.0253
BP_IN31	.73733035	.18853407	3.911	.0001
BP_LC1	-2.06627794	.06688522	-30.893	.0000
A_B	-.78061066	.08154236	-9.573	.0000
B_NC2	-4.04309442	.05696059	-70.981	.0000
B_R12	.52589023	.04839303	10.867	.0000
B_R22	.19979718	.03583917	5.575	.0000
B_R32	.16286279	.03698049	4.404	.0000
B_R42	.18057903	.04333252	4.167	.0000
B_SX2	.41199313	.02173601	18.954	.0000
B_ID22	2.10381995	.06009383	35.009	.0000
B_ID32	1.58707331	.06166807	25.736	.0000
B_ID42	1.75637827	.05935051	29.593	.0000
B_ID52	2.11864408	.06637900	31.917	.0000
B_IN12	-.82903715	.07578906	-10.939	.0000
B_IN22	-.40429011	.04966881	-8.140	.0000
B_IN32	.18063885	.05247959	3.442	.0006
B_LC2	-2.04660626	.02736290	-74.795	.0000
A_BO	-3.27264538	.24386708	-13.420	.0000
BO_NC3	-3.36360593	.10522801	-31.965	.0000
BO_R13	.42115815	.08370030	5.032	.0000
BO_R23	.06746763	.06241673	1.081	.2797
BO_R33	-.03411539	.06561795	-.520	.6031
BO_R43	-.14696530	.08168181	-1.799	.0720
BO_SX3	-.16043263	.03753786	-4.274	.0000
BO_ID23	1.80143197	.08744791	20.600	.0000
BO_ID33	.65165993	.09671105	6.738	.0000
BO_ID43	.45511700	.09208576	4.942	.0000
BO_ID53	-.16756892	.13131441	-1.276	.2019
BO_IN13	1.58230114	.24203106	6.538	.0000
BO_IN23	1.62781952	.22266770	7.311	.0000
BO_IN33	.91510491	.23036053	3.972	.0001
BO_LC3	-1.44375903	.05426231	-26.607	.0000
A_M	-5.33148608	.30079479	-17.725	.0000
M_NC4	-3.77077264	.08207891	-45.941	.0000
M_R14	.14519340	.06910866	2.101	.0356
M_R24	.03435449	.05280451	.651	.5153
M_R34	-.05844133	.05576201	-1.048	.2946
M_R44	.00493170	.06684154	.074	.9412
M_SX4	-.75805302	.03155667	-24.022	.0000
M_ID24	1.97527600	.10961221	18.021	.0000
M_ID34	3.13328053	.10741799	29.169	.0000
M_ID44	2.70637356	.10603202	25.524	.0000
M_ID54	1.99487003	.11903132	16.759	.0000
M_IN14	3.11147774	.29188432	10.660	.0000
M_IN24	3.19256501	.27939652	11.427	.0000
M_IN34	2.40494924	.28321828	8.492	.0000
M_LC4	-1.85401532	.03596026	-51.557	.0000
A_P	.12147264	.08048183	1.509	.1312
P_NC5	-4.04246359	.06517251	-62.027	.0000
P_R15	.62535218	.05246812	11.919	.0000
P_R25	.09833337	.04050475	2.428	.0152
P_R35	.00102860	.04224174	.024	.9806

P_R45	.01242127	.05004598	.248	.8040
P_SX5	.24457263	.02433931	10.048	.0000
P_ID25	.89137761	.05489950	16.237	.0000
P_ID35	.47095190	.05752914	8.186	.0000
P_ID45	.82277276	.05368703	15.325	.0000
P_ID55	1.25065520	.06228473	20.080	.0000
P_IN15	-1.17103686	.07840395	-14.936	.0000
P_IN25	-.59242332	.05362985	-11.047	.0000
P_IN35	-.14285307	.05800974	-2.463	.0138
P_LC5	-1.89530702	.03116806	-60.809	.0000

MNL3.72a – ASC e combinação de variáveis binárias do número de automóveis ligeiros à disposição diária do agregado per capita (excepto NC4a) e licença de condução (Lc).

- NC0: Variável binária Automóveis ligeiros disponiveis per capita = 0
- NC1a: Variável binária Automóveis ligeiros disponiveis per capita >0 *(excluída)*

- Lc: Variável binária sobre a existência de licença de condução (S=1, N=0)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC0,LC$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 16, 2012 at 10:40:20PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  6     |
| Log likelihood function       -104705.9     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.19481     |
|   Finite Sample: AIC =          2.19481     |
| Info. Criterion: BIC =          2.19630     |
| Info. Criterion:HQIC =          2.19526     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .15211  .15208 |
| Chi-squared[10]          =  37566.94145     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP    |   -2.68378507       .03394797   -79.056   .0000
 BP_NC01 |    2.10421433       .04576062    45.983   .0000
 BP_LC1  |   -2.38881765       .05753690   -41.518   .0000
 A_B     |    -.61857427       .01442832   -42.872   .0000
 B_NC02  |    2.04521220       .02257332    90.603   .0000
 B_LC2   |   -2.09485575       .02140224   -97.880   .0000
```

A_BO	-2.01244456	.02515972	-79.987	.0000
BO_NC03	1.57115391	.03830758	41.014	.0000
BO_LC3	-2.16548095	.04206303	-51.482	.0000
A_M	-1.89517990	.02267247	-83.589	.0000
M_NC04	2.08307257	.02986327	69.754	.0000
M_LC4	-1.38309003	.02885662	-47.930	.0000
A_P	-1.18821528	.01742632	-68.185	.0000
P_NC05	2.19159846	.02501608	87.608	.0000
P_LC5	-1.89562599	.02460921	-77.029	.0000

MNL3.69c –
- ASC
- Variáveis binárias do escalão etário (excepto Id1)
- Variáveis binárias do nível de instrução (excepto In4)
- Variável binária Sexo (Sexo)
- Variável binária de disponibilidade de Licença de condução (Lc)
- Variável discreta para os escalões do rendimento liquido mensal do agregado (R)
- Variável binária para o número de automóveis disponíveis diariamente no agregado per capita (excepto NC4a).

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC0,NC1,NC2,NC3,R,SX,ID2,ID3,ID4,ID5,IN1,IN2,IN3,LC$
```

```
+--------------------------------------------+
| Discrete choice and multinomial logit models|
+--------------------------------------------+
Normal exit from iterations. Exit status=0.
+--------------------------------------------+
| Discrete choice (multinomial logit) model  |
| Maximum Likelihood Estimates               |
| Model estimated: Jan 17, 2012 at 02:03:32AM.|
| Dependent variable              Choice     |
| Weighting variable                None     |
| Number of observations             95426     |
| Iterations completed                   9     |
| Log likelihood function       -98925.42     |
| Number of parameters                  75     |
| Info. Criterion: AIC =           2.07492     |
|   Finite Sample: AIC =           2.07492     |
| Info. Criterion: BIC =           2.08235     |
| Info. Criterion:HQIC =           2.07718     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .19892  .19879 |
| Chi-squared[70]           =  49127.89937    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+--------------------------------------------+

+--------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).     |
|       Constants only => P(i,j) uses ASCs   |
|         only. N(j)/N if fixed choice set.  |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.     |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+--------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP    |   -8.05188413       .63355177   -12.709   .0000
 BP_NC01 |    4.45752276       .58086972     7.674   .0000
 BP_NC11 |    2.73644098       .58128507     4.708   .0000
 BP_NC21 |    2.31565221       .58077440     3.987   .0001
```

BP_NC31	1.29495466	.59888770	2.162	.0306
BP_R1	-.00011932	.454309D-04	-2.626	.0086
BP_SX1	.58492071	.04889755	11.962	.0000
BP_ID21	2.88277582	.17350673	16.615	.0000
BP_ID31	2.01329832	.17902882	11.246	.0000
BP_ID41	2.19027041	.17345141	12.628	.0000
BP_ID51	2.33380843	.17958839	12.995	.0000
BP_IN11	.27721940	.21973843	1.262	.2071
BP_IN21	.53035394	.18279736	2.901	.0037
BP_IN31	.80600571	.18850284	4.276	.0000
BP_LC1	-2.09018980	.06683732	-31.273	.0000
A_B	-3.42730154	.13437666	-25.505	.0000
B_NC02	3.30921827	.10801565	30.636	.0000
B_NC12	1.67141148	.10779745	15.505	.0000
B_NC22	1.23029149	.10697815	11.500	.0000
B_NC32	.63587467	.11459226	5.549	.0000
B_R2	-.00011993	.197284D-04	-6.079	.0000
B_SX2	.41508228	.02188633	18.965	.0000
B_ID22	2.11652552	.06054482	34.958	.0000
B_ID32	1.55681502	.06229132	24.992	.0000
B_ID42	1.70525650	.05992186	28.458	.0000
B_ID52	1.92356691	.06631420	29.007	.0000
B_IN12	-.70946593	.07624008	-9.306	.0000
B_IN22	-.28249787	.04953785	-5.703	.0000
B_IN32	.25281734	.05223524	4.840	.0000
B_LC2	-2.07064791	.02756733	-75.112	.0000
A_BO	-4.81219086	.29344020	-16.399	.0000
BO_NC03	2.01656278	.17358537	11.617	.0000
BO_NC13	.75724139	.17273285	4.384	.0000
BO_NC23	.12573474	.17256209	.729	.4662
BO_NC33	-.27211663	.19056800	-1.428	.1533
BO_R3	-.00013310	.356354D-04	-3.735	.0002
BO_SX3	-.15588076	.03758824	-4.147	.0000
BO_ID23	1.79645598	.08747266	20.537	.0000
BO_ID33	.63184651	.09689040	6.521	.0000
BO_ID43	.41811932	.09220104	4.535	.0000
BO_ID53	-.31159398	.13021963	-2.393	.0167
BO_IN13	1.72268717	.24247808	7.105	.0000
BO_IN23	1.76037626	.22306478	7.892	.0000
BO_IN33	.99827944	.23052169	4.331	.0000
BO_LC3	-1.47581343	.05429643	-27.181	.0000
A_M	-7.71349849	.33165045	-23.258	.0000
M_NC04	2.66517941	.14260697	18.689	.0000
M_NC14	1.22821118	.14251459	8.618	.0000
M_NC24	.74114951	.14183548	5.225	.0000
M_NC34	.15108589	.15766916	.958	.3379
M_R4	-.197531D-04	.284114D-04	-.695	.4869
M_SX4	-.75586423	.03162169	-23.903	.0000
M_ID24	1.97149879	.10955197	17.996	.0000
M_ID34	3.10486751	.10749206	28.885	.0000
M_ID44	2.65257909	.10605485	25.011	.0000
M_ID54	1.78363263	.11845491	15.057	.0000
M_IN14	3.23621229	.29197938	11.084	.0000
M_IN24	3.33716506	.27937857	11.945	.0000
M_IN34	2.47858986	.28313996	8.754	.0000
M_LC4	-1.87699215	.03601623	-52.115	.0000
A_P	-1.60606978	.11575759	-13.874	.0000
P_NC05	2.38687932	.08474428	28.166	.0000
P_NC15	.63817982	.08504802	7.504	.0000
P_NC25	.22692946	.08360207	2.714	.0066
P_NC35	-.47346986	.09936308	-4.765	.0000

P_R5	-.00015231	.225293D-04	-6.761	.0000
P_SX5	.24901978	.02452283	10.155	.0000
P_ID25	.90954573	.05571222	16.326	.0000
P_ID35	.42099000	.05852053	7.194	.0000
P_ID45	.76549123	.05463176	14.012	.0000
P_ID55	1.08696116	.06233737	17.437	.0000
P_IN15	-1.02470094	.07909640	-12.955	.0000
P_IN25	-.46057765	.05370743	-8.576	.0000
P_IN35	-.05611949	.05786123	-.970	.3321
P_LC5	-1.93337681	.03143720	-61.500	.0000

MNL3.69d –
- ASC
- Variáveis binárias do escalão etário (excepto Id1)
- Variáveis binárias do nível de instrução (excepto In4)
- Variável binária Sexo (Sexo)
- Variável binária de disponibilidade de Licença de condução (Lc)
- Variável discreta para os escalões do rendimento liquido mensal do agregado (R)
- Variável continua para o número de automóveis disponíveis diariamente no agregado per capita (excepto NC).

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC,R,SX,ID2,ID3,ID4,ID5,IN1,IN2,IN3,LC$

+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 17, 2012 at 02:21:43AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  9     |
| Log likelihood function       -99511.46     |
| Number of parameters                 60     |
| Info. Criterion: AIC =          2.08688     |
|   Finite Sample: AIC =          2.08688     |
| Info. Criterion: BIC =          2.09284     |
| Info. Criterion:HQIC =          2.08869     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .19417  .19407 |
| Chi-squared[55]          =  47955.82092     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -3.84612670       .26210796   -14.674   .0000
 BP_NC1   |   -4.51784539       .13831732   -32.663   .0000
 BP_R1    |    -.00013829     .453617D-04    -3.049   .0023
 BP_SX1   |     .58407024       .04883428    11.960   .0000
```

BP_ID21	2.86872574	.17330956	16.553	.0000
BP_ID31	2.03845829	.17875534	11.404	.0000
BP_ID41	2.24461488	.17319491	12.960	.0000
BP_ID51	2.57448362	.17901485	14.381	.0000
BP_IN11	.16958150	.21942246	.773	.4396
BP_IN21	.40921562	.18264069	2.241	.0251
BP_IN31	.74483965	.18841597	3.953	.0001
BP_LC1	-2.06967407	.06690697	-30.934	.0000
A_B	-.37384129	.08393560	-4.454	.0000
B_NC2	-4.06617089	.05702982	-71.299	.0000
B_R2	-.00015024	.196982D-04	-7.627	.0000
B_SX2	.41227347	.02172410	18.978	.0000
B_ID22	2.11230145	.06005444	35.173	.0000
B_ID32	1.59475347	.06161990	25.880	.0000
B_ID42	1.77006897	.05926844	29.865	.0000
B_ID52	2.18231442	.06543441	33.351	.0000
B_IN12	-.82877880	.07564114	-10.957	.0000
B_IN22	-.41947028	.04954983	-8.466	.0000
B_IN32	.17420290	.05239719	3.325	.0009
B_LC2	-2.05214951	.02734340	-75.051	.0000
A_BO	-2.99912071	.24623681	-12.180	.0000
BO_NC3	-3.38314576	.10525276	-32.143	.0000
BO_R3	-.00014916	.356181D-04	-4.188	.0000
BO_SX3	-.15915128	.03753931	-4.240	.0000
BO_ID23	1.80951015	.08757925	20.661	.0000
BO_ID33	.65825228	.09680789	6.800	.0000
BO_ID43	.46968628	.09212654	5.098	.0000
BO_ID53	-.08188637	.12956940	-.632	.5274
BO_IN13	1.56886752	.24203001	6.482	.0000
BO_IN23	1.59737303	.22253469	7.178	.0000
BO_IN33	.89311278	.23028028	3.878	.0001
BO_LC3	-1.45522983	.05418436	-26.857	.0000
A_M	-5.26110991	.30233678	-17.401	.0000
M_NC4	-3.77830575	.08217057	-45.981	.0000
M_R4	-.344409D-04	.282633D-04	-1.219	.2230
M_SX4	-.75788378	.03153746	-24.031	.0000
M_ID24	1.97535667	.10946055	18.046	.0000
M_ID34	3.13304023	.10727534	29.206	.0000
M_ID44	2.70613959	.10582844	25.571	.0000
M_ID54	2.01303000	.11791766	17.071	.0000
M_IN14	3.10365127	.29181482	10.636	.0000
M_IN24	3.18511290	.27930621	11.404	.0000
M_IN34	2.39486797	.28316617	8.457	.0000
M_LC4	-1.85722616	.03591778	-51.708	.0000
A_P	.55410427	.08409405	6.589	.0000
P_NC5	-4.07782467	.06522458	-62.520	.0000
P_R5	-.00021246	.225414D-04	-9.425	.0000
P_SX5	.24421646	.02432274	10.041	.0000
P_ID25	.90328812	.05491914	16.448	.0000
P_ID35	.47927119	.05748293	8.338	.0000
P_ID45	.84558401	.05362323	15.769	.0000
P_ID55	1.37970321	.06108067	22.588	.0000
P_IN15	-1.18840070	.07830305	-15.177	.0000
P_IN25	-.64136629	.05356313	-11.974	.0000
P_IN35	-.17608448	.05802439	-3.035	.0024
P_LC5	-1.90875873	.03109630	-61.382	.0000

MNL3.108–

- ASC
- Variáveis binárias do nível de instrução (excepto In4)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,IN1,IN2,IN3$
```

```
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 18, 2012 at 00:16:48AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  8     |
| Log likelihood function       -120869.4     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          2.53368     |
|   Finite Sample: AIC =          2.53368     |
| Info. Criterion: BIC =          2.53566     |
| Info. Criterion:HQIC =          2.53428     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .02122  .02117 |
| Chi-squared[15]          =   5239.86612     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP     |   -5.26957490       .17452497   -30.194   .0000
 BP_IN11  |    1.83819781       .20220451     9.091   .0000
 BP_IN21  |    2.35329612       .17616662    13.358   .0000
 BP_IN31  |    1.78359268       .18407325     9.690   .0000
 A_B      |   -2.26629542       .04073933   -55.629   .0000
 B_IN12   |     .90675527       .05708457    15.884   .0000
 B_IN22   |    1.37725902       .04196648    32.818   .0000
 B_IN32   |    1.06918341       .04580662    23.341   .0000
 A_BO     |   -5.72156002       .21857489   -26.177   .0000
 BO_IN13  |    3.16312322       .22873802    13.829   .0000
```

BO_IN23	3.33889280	.21937378	15.220	.0000
BO_IN33	2.00073822	.22820693	8.767	.0000
A_M	-6.20113300	.27763105	-22.336	.0000
M_IN14	3.68806480	.28537335	12.924	.0000
M_IN24	4.42063355	.27799996	15.902	.0000
M_IN34	3.03148811	.28213835	10.745	.0000
A_P	-2.44711435	.04424630	-55.307	.0000
P_IN15	.99429757	.06067185	16.388	.0000
P_IN25	1.11303530	.04582081	24.291	.0000
P_IN35	.59355956	.05204638	11.404	.0000

MNL3.109 –
- ASC
- Variáveis binárias do escalão etário (excepto Id1)
- Variáveis binárias do nível de instrução (excepto In4)
- Variável binária Sexo (Sexo)
- Variável binária de disponibilidade de Licença de condução (Lc)
- Variável Continua rendimentos liquidos mensais do agregado em Euros per capita (RC=R/Nind)
- Variável continua para o número de automóveis disponíveis diariamente no agregado per capita (excepto NC).

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC,RC,SX,ID2,ID3,ID4,ID5,IN1,IN2,IN3,LC$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 25, 2012 at 10:38:49AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  9     |
| Log likelihood function       -99422.43     |
| Number of parameters                 60     |
| Info. Criterion: AIC =          2.08502     |
|   Finite Sample: AIC =          2.08502     |
| Info. Criterion: BIC =          2.09097     |
| Info. Criterion:HQIC =          2.08683     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .19489  .19479 |
| Chi-squared[55]           =  48133.87729    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP    |   -4.40713696       .26145778   -16.856   .0000
 BP_NC1  |   -4.88022583       .13125482   -37.181   .0000
 BP_RC1  |     .00072213       .00012929     5.585   .0000
 BP_SX1  |     .58092599       .04884576    11.893   .0000
 BP_ID21 |    2.88008759       .17349366    16.601   .0000
```

BP_ID31	2.06322616	.17884113	11.537	.0000
BP_ID41	2.25116919	.17331637	12.989	.0000
BP_ID51	2.55416497	.17896317	14.272	.0000
BP_IN11	.38018327	.22034884	1.725	.0845
BP_IN21	.59833593	.18381905	3.255	.0011
BP_IN31	.87005963	.18895809	4.605	.0000
BP_LC1	-2.10027655	.06703888	-31.329	.0000
A_B	-.89379725	.08233182	-10.856	.0000
B_NC2	-4.41104214	.05585359	-78.975	.0000
B_RC2	.00060467	.570394D-04	10.601	.0000
B_SX2	.41056728	.02173140	18.893	.0000
B_ID22	2.12119581	.05997803	35.366	.0000
B_ID32	1.62254998	.06149824	26.384	.0000
B_ID42	1.78140502	.05917907	30.102	.0000
B_ID52	2.17658917	.06525961	33.353	.0000
B_IN12	-.64098194	.07573569	-8.463	.0000
B_IN22	-.25050033	.04998136	-5.012	.0000
B_IN32	.28479957	.05264519	5.410	.0000
B_LC2	-2.07837074	.02742079	-75.795	.0000
A_BO	-3.00523146	.24566105	-12.233	.0000
BO_NC3	-3.35605911	.10643123	-31.533	.0000
BO_RC3	-.00056114	.00012801	-4.383	.0000
BO_SX3	-.15956997	.03754496	-4.250	.0000
BO_ID23	1.80200812	.08729677	20.642	.0000
BO_ID33	.69657334	.09642929	7.224	.0000
BO_ID43	.51078630	.09182040	5.563	.0000
BO_ID53	-.00224414	.12902776	-.017	.9861
BO_IN13	1.55964566	.24200283	6.445	.0000
BO_IN23	1.57659519	.22280435	7.076	.0000
BO_IN33	.87301360	.23038621	3.789	.0002
BO_LC3	-1.45334798	.05426522	-26.782	.0000
A_M	-5.39170819	.30150070	-17.883	.0000
M_NC4	-3.87677134	.08121072	-47.737	.0000
M_RC4	.00016886	.885196D-04	1.908	.0564
M_SX4	-.75715105	.03154194	-24.005	.0000
M_ID24	1.97418211	.10934086	18.055	.0000
M_ID34	3.14546379	.10705617	29.381	.0000
M_ID44	2.71150711	.10560748	25.675	.0000
M_ID54	1.99852310	.11749895	17.009	.0000
M_IN14	3.14372907	.29183993	10.772	.0000
M_IN24	3.22618278	.27944344	11.545	.0000
M_IN34	2.41990639	.28319782	8.545	.0000
M_LC4	-1.86167852	.03595071	-51.784	.0000
A_P	-.21074697	.08193628	-2.572	.0101
P_NC5	-4.56309014	.06314716	-72.261	.0000
P_RC5	.00088393	.614926D-04	14.375	.0000
P_SX5	.23932665	.02433913	9.833	.0000
P_ID25	.91770509	.05481764	16.741	.0000
P_ID35	.51479803	.05734947	8.977	.0000
P_ID45	.85594871	.05353430	15.989	.0000
P_ID55	1.36541329	.06091353	22.416	.0000
P_IN15	-.89963640	.07855106	-11.453	.0000
P_IN25	-.37784760	.05430845	-6.957	.0000
P_IN35	-.00139427	.05850526	-.024	.9810
P_LC5	-1.95198512	.03121096	-62.542	.0000

MNL3.110 –
- ASC
- Variáveis binárias do escalão etário (excepto Id1)
- Variáveis binárias do nível de instrução (excepto In4)
- Variável binária Sexo (Sexo)
- Variável binária de disponibilidade de Licença de condução (Lc)
- Variável Continua rendimentos liquidos mensais do agregado em Euros per capita (RC=R/Nind)
- Variável binária para o número de automóveis disponíveis diariamente no agregado per capita (excepto NC4a).

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC0,NC1,NC2,NC3,RC,SX,ID2,ID3,ID4,ID5,IN1,IN2,IN3,LC$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 25, 2012 at 10:59:24AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  9     |
| Log likelihood function       -98896.23     |
| Number of parameters                 75     |
| Info. Criterion: AIC =          2.07430     |
|   Finite Sample: AIC =          2.07430     |
| Info. Criterion: BIC =          2.08174     |
| Info. Criterion:HQIC =          2.07657     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .19915  .19903 |
| Chi-squared[70]           =  49186.28088    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP    |   -8.35576195       .63867199   -13.083   .0000
 BP_NC01 |    4.54904762       .58290575     7.804   .0000
 BP_NC11 |    2.78515430       .58415176     4.768   .0000
 BP_NC21 |    2.34413140       .58223247     4.026   .0001
 BP_NC31 |    1.27554553       .59953761     2.128   .0334
```

BP_RC1	.513427D-04	.00013300	.386	.6995
BP_SX1	.58532601	.04890739	11.968	.0000
BP_ID21	2.88500228	.17356653	16.622	.0000
BP_ID31	2.03448212	.17896161	11.368	.0000
BP_ID41	2.20359839	.17343211	12.706	.0000
BP_ID51	2.36085496	.17931018	13.166	.0000
BP_IN11	.35243346	.22048332	1.598	.1099
BP_IN21	.59429654	.18369401	3.235	.0012
BP_IN31	.84811117	.18883911	4.491	.0000
BP_LC1	-2.10167100	.06696088	-31.387	.0000
A_B	-3.63562123	.13882314	-26.189	.0000
B_NC02	3.35692085	.11022063	30.456	.0000
B_NC12	1.67421257	.11111267	15.068	.0000
B_NC22	1.22598616	.10871855	11.277	.0000
B_NC32	.59312330	.11547449	5.136	.0000
B_RC2	-.495186D-04	.576111D-04	-.860	.3900
B_SX2	.41661281	.02188450	19.037	.0000
B_ID22	2.11641690	.06051264	34.975	.0000
B_ID32	1.57751324	.06218231	25.369	.0000
B_ID42	1.72002610	.05984809	28.740	.0000
B_ID52	1.95802139	.06610120	29.622	.0000
B_IN12	-.65760905	.07627949	-8.621	.0000
B_IN22	-.23883331	.04969629	-4.806	.0000
B_IN32	.28094882	.05222919	5.379	.0000
B_LC2	-2.07822851	.02761465	-75.258	.0000
A_BO	-4.15791773	.30242557	-13.749	.0000
BO_NC03	1.65757629	.17893394	9.264	.0000
BO_NC13	.35120324	.17918413	1.960	.0500
BO_NC23	-.16083231	.17582975	-.915	.3603
BO_NC33	-.49910400	.19178181	-2.602	.0093
BO_RC3	-.00110530	.00012896	-8.571	.0000
BO_SX3	-.15337363	.03759421	-4.080	.0000
BO_ID23	1.78647288	.08725513	20.474	.0000
BO_ID33	.65615782	.09648755	6.800	.0000
BO_ID43	.45189629	.09185438	4.920	.0000
BO_ID53	-.21877777	.12955832	-1.689	.0913
BO_IN13	1.61455944	.24243699	6.660	.0000
BO_IN23	1.64959805	.22324047	7.389	.0000
BO_IN33	.92011041	.23055916	3.991	.0001
BO_LC3	-1.45574617	.05437879	-26.770	.0000
A_M	-7.29530707	.33584790	-21.722	.0000
M_NC04	2.46519128	.14648255	16.829	.0000
M_NC14	1.00320778	.14800838	6.778	.0000
M_NC24	.57934332	.14467115	4.005	.0001
M_NC34	.02446674	.15900059	.154	.8777
M_RC4	-.00050386	.910362D-04	-5.535	.0000
M_SX4	-.75053462	.03162357	-23.733	.0000
M_ID24	1.95994079	.10939594	17.916	.0000
M_ID34	3.10387901	.10722527	28.947	.0000
M_ID44	2.65288923	.10578100	25.079	.0000
M_ID54	1.79693113	.11796022	15.233	.0000
M_IN14	3.15262690	.29198336	10.797	.0000
M_IN24	3.26545430	.27945390	11.685	.0000
M_IN34	2.43400597	.28313378	8.597	.0000
M_LC4	-1.86123564	.03610021	-51.557	.0000
A_P	-2.09170861	.12173073	-17.183	.0000
P_NC05	2.54620344	.08825918	28.849	.0000
P_NC15	.74851715	.09024246	8.295	.0000
P_NC25	.29706674	.08642537	3.437	.0006
P_NC35	-.46817557	.10072356	-4.648	.0000
P_RC5	.00016825	.614993D-04	2.736	.0062

P_SX5	.24767912	.02452124	10.101	.0000
P_ID25	.91389449	.05563998	16.425	.0000
P_ID35	.44827447	.05835700	7.682	.0000
P_ID45	.77994521	.05452101	14.305	.0000
P_ID55	1.11575952	.06203649	17.986	.0000
P_IN15	-.90487775	.07921921	-11.422	.0000
P_IN25	-.35571761	.05408667	-6.577	.0000
P_IN35	.01193388	.05799011	.206	.8370
P_LC5	-1.95377542	.03151288	-61.999	.0000

MNL3.111 –
- ASC
- Variáveis binárias do escalão etário (excepto Id1)
- Variáveis binárias do nível de instrução (excepto In4)
- Variável binária Sexo (Sexo)
- Variável binária de disponibilidade de Licença de condução (Lc)
- Variável binária para rendimentos liquidos mensais do agregado em Euros per capita (excepto RC3a)
- Variável binária para o número de automóveis disponíveis diariamente no agregado per capita (excepto NC4a).

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC0,NC1,NC2,NC3,RC1,RC2,SX,ID2,ID3,ID4,ID5,IN1,IN2,IN3,LC$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 25, 2012 at 11:39:37AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  9     |
| Log likelihood function       -98893.47     |
| Number of parameters                 80     |
| Info. Criterion: AIC =          2.07435     |
|   Finite Sample: AIC =          2.07435     |
| Info. Criterion: BIC =          2.08229     |
| Info. Criterion:HQIC =          2.07676     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .19917  .19904 |
| Chi-squared[75]          =  49191.79509     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -8.33472028       .62627423   -13.308   .0000
 BP_NC01  |    4.46571793       .58175794     7.676   .0000
 BP_NC11  |    2.70725711       .58279112     4.645   .0000
 BP_NC21  |    2.24196902       .58158016     3.855   .0001
```

BP_NC31	1.21571451	.59902665	2.029	.0424
BP_RC11	.06978901	.09052056	.771	.4407
BP_RC21	.23892005	.08292323	2.881	.0040
BP_SX1	.58505014	.04890549	11.963	.0000
BP_ID21	2.87908167	.17359728	16.585	.0000
BP_ID31	2.00965962	.17910238	11.221	.0000
BP_ID41	2.18893497	.17349049	12.617	.0000
BP_ID51	2.36137257	.17910716	13.184	.0000
BP_IN11	.29298088	.22025533	1.330	.1835
BP_IN21	.53379512	.18351268	2.909	.0036
BP_IN31	.79292105	.18901473	4.195	.0000
BP_LC1	-2.09676268	.06686764	-31.357	.0000
A_B	-3.69244435	.12763185	-28.930	.0000
B_NC02	3.34715504	.10886799	30.745	.0000
B_NC12	1.67084277	.10938478	15.275	.0000
B_NC22	1.20282295	.10773198	11.165	.0000
B_NC32	.58334409	.11472416	5.085	.0000
B_RC12	.02958777	.03737281	.792	.4285
B_RC22	.10541064	.03197001	3.297	.0010
B_SX2	.41609455	.02188298	19.015	.0000
B_ID22	2.11377421	.06049811	34.940	.0000
B_ID32	1.56677777	.06223317	25.176	.0000
B_ID42	1.71374230	.05985381	28.632	.0000
B_ID52	1.95718323	.06603780	29.637	.0000
B_IN12	-.66815446	.07619128	-8.769	.0000
B_IN22	-.25098624	.04968443	-5.052	.0000
B_IN32	.26872450	.05234873	5.133	.0000
B_LC2	-2.07805427	.02760084	-75.290	.0000
A_BO	-5.11500480	.28320380	-18.061	.0000
BO_NC03	1.90022073	.17654655	10.763	.0000
BO_NC13	.59863754	.17691662	3.384	.0007
BO_NC23	.05884398	.17474783	.337	.7363
BO_NC33	-.33131119	.19100831	-1.735	.0828
BO_RC13	.37795901	.07245459	5.216	.0000
BO_RC23	.18982116	.06652405	2.853	.0043
BO_SX3	-.15532237	.03759135	-4.132	.0000
BO_ID23	1.78575854	.08726994	20.462	.0000
BO_ID33	.65242012	.09662713	6.752	.0000
BO_ID43	.43903247	.09192207	4.776	.0000
BO_ID53	-.26950158	.12959503	-2.080	.0376
BO_IN13	1.70724110	.24251085	7.040	.0000
BO_IN23	1.74044216	.22335984	7.792	.0000
BO_IN33	.99019116	.23072477	4.292	.0000
BO_LC3	-1.46540026	.05440833	-26.933	.0000
A_M	-7.79010711	.32592785	-23.901	.0000
M_NC04	2.53353604	.14481532	17.495	.0000
M_NC14	1.09642766	.14590331	7.515	.0000
M_NC24	.58814205	.14383659	4.089	.0000
M_NC34	.05440001	.15828853	.344	.7311
M_RC14	.20257983	.05919178	3.422	.0006
M_RC24	.35766341	.05335264	6.704	.0000
M_SX4	-.75629449	.03164424	-23.900	.0000
M_ID24	1.95991790	.10951911	17.896	.0000
M_ID34	3.08280134	.10741346	28.700	.0000
M_ID44	2.63537220	.10594059	24.876	.0000
M_ID54	1.77991714	.11807515	15.074	.0000
M_IN14	3.16640166	.29198627	10.844	.0000
M_IN24	3.26830967	.27947367	11.695	.0000
M_IN34	2.41771301	.28322862	8.536	.0000
M_LC4	-1.87413125	.03607818	-51.946	.0000
A_P	-1.93007203	.10551009	-18.293	.0000

P_NC05	2.50020453	.08602184	29.065	.0000
P_NC15	.70437024	.08745189	8.054	.0000
P_NC25	.23758975	.08470848	2.805	.0050
P_NC35	-.51762741	.09944919	-5.205	.0000
P_RC15	-.09177685	.04180020	-2.196	.0281
P_RC25	.00890507	.03606557	.247	.8050
P_SX5	.24884957	.02451639	10.150	.0000
P_ID25	.91155158	.05564071	16.383	.0000
P_ID35	.44186116	.05844962	7.560	.0000
P_ID45	.77900557	.05455090	14.280	.0000
P_ID55	1.12946081	.06193445	18.236	.0000
P_IN15	-.92701521	.07907654	-11.723	.0000
P_IN25	-.37795499	.05397542	-7.002	.0000
P_IN35	-.00502213	.05803327	-.087	.9310
P_LC5	-1.95085339	.03148835	-61.955	.0000

MNL3.112 –
- ASC
- Variáveis binárias do escalão etário (excepto Id1)
- Variáveis binárias do nível de instrução (excepto In4)
- Variável binária Sexo (Sexo)
- Variável binária de disponibilidade de Licença de condução (Lc)
- Variável binária para rendimentos liquidos mensais do agregado em Euros per capita (excepto RC3a)
- Variável continua para o número de automóveis disponíveis diariamente no agregado per capita (excepto NC).

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC,RC1,RC2,SX,ID2,ID3,ID4,ID5,IN1,IN2,IN3,LC$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Jan 25, 2012 at 00:01:00PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  9     |
| Log likelihood function       -99473.62     |
| Number of parameters                 65     |
| Info. Criterion: AIC =          2.08620     |
|   Finite Sample: AIC =          2.08620     |
| Info. Criterion: BIC =          2.09264     |
| Info. Criterion:HQIC =          2.08816     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********   .19448  .19437 |
| Chi-squared[60]           =  48031.49495    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -3.96662535       .25833596   -15.355   .0000
 BP_NC1   |   -4.82759934       .13403560   -36.017   .0000
 BP_RC11  |    -.23240097       .08944021    -2.598   .0094
 BP_RC21  |    -.03377368       .08299947     -.407   .6841
```

BP_SX1	.58251774	.04883864	11.927	.0000
BP_ID21	2.87564401	.17350710	16.574	.0000
BP_ID31	2.05418253	.17893466	11.480	.0000
BP_ID41	2.25232343	.17334222	12.994	.0000
BP_ID51	2.59907491	.17863545	14.550	.0000
BP_IN11	.29031533	.22004982	1.319	.1871
BP_IN21	.51084638	.18351836	2.784	.0054
BP_IN31	.80137791	.18903539	4.239	.0000
BP_LC1	-2.08797233	.06692251	-31.200	.0000
A_B	-.47064430	.08066211	-5.835	.0000
B_NC2	-4.36140991	.05666630	-76.967	.0000
B_RC12	-.25631917	.03654000	-7.015	.0000
B_RC22	-.16551760	.03215233	-5.148	.0000
B_SX2	.41243202	.02171729	18.991	.0000
B_ID22	2.11883154	.05998666	35.322	.0000
B_ID32	1.62702703	.06155918	26.430	.0000
B_ID42	1.78970918	.05919504	30.234	.0000
B_ID52	2.21748700	.06512784	34.048	.0000
B_IN12	-.68091896	.07559590	-9.007	.0000
B_IN22	-.28763166	.04983421	-5.772	.0000
B_IN32	.26174846	.05261732	4.975	.0000
B_LC2	-2.07164849	.02738662	-75.645	.0000
A_BO	-3.30783917	.24446299	-13.531	.0000
BO_NC3	-3.37962948	.10549180	-32.037	.0000
BO_RC13	.15909153	.07063517	2.252	.0243
BO_RC23	-.05296455	.06593391	-.803	.4218
BO_SX3	-.15877308	.03754484	-4.229	.0000
BO_ID23	1.80070133	.08729494	20.628	.0000
BO_ID33	.70497041	.09650980	7.305	.0000
BO_ID43	.50803388	.09180179	5.534	.0000
BO_ID53	-.02770541	.12888788	-.215	.8298
BO_IN13	1.62970037	.24205359	6.733	.0000
BO_IN23	1.64910073	.22290386	7.398	.0000
BO_IN33	.93806868	.23052549	4.069	.0000
BO_LC3	-1.45501484	.05430428	-26.794	.0000
A_M	-5.31887065	.30088990	-17.677	.0000
M_NC4	-3.89558360	.08154918	-47.770	.0000
M_RC14	-.07349351	.05763940	-1.275	.2023
M_RC24	.08921073	.05289708	1.686	.0917
M_SX4	-.75999232	.03155594	-24.084	.0000
M_ID24	1.97609161	.10946808	18.052	.0000
M_ID34	3.13472474	.10722666	29.235	.0000
M_ID44	2.70473452	.10574020	25.579	.0000
M_ID54	2.01452736	.11750875	17.144	.0000
M_IN14	3.12369319	.29184432	10.703	.0000
M_IN24	3.20173401	.27945045	11.457	.0000
M_IN34	2.39294715	.28327409	8.447	.0000
M_LC4	-1.86550647	.03593718	-51.910	.0000
A_P	.43808404	.07948863	5.511	.0000
P_NC5	-4.50162438	.06444012	-69.857	.0000
P_RC15	-.39041574	.04048436	-9.644	.0000
P_RC25	-.28745826	.03583775	-8.021	.0000
P_SX5	.24408141	.02431388	10.039	.0000
P_ID25	.91488211	.05482689	16.687	.0000
P_ID35	.52632155	.05742120	9.166	.0000
P_ID45	.87241288	.05355261	16.291	.0000
P_ID55	1.42825212	.06068489	23.536	.0000
P_IN15	-.95977463	.07830761	-12.256	.0000
P_IN25	-.43391504	.05401164	-8.034	.0000
P_IN35	-.03425087	.05834175	-.587	.5572
P_LC5	-1.93974283	.03115287	-62.265	.0000

MNL3.113 –
- ASC
- Fm - Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 9:30 (nfreq730930/2)
- Fa- Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 10:30 e as 12:30 (nfreq10301230/2)
- Ft - Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 17:00 e as 19:30 (nfreq17001930/2,5)
- Ftl - Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 19:30 (nfreq7301930/12)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,FM,FA,FT,FTL$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 06, 2012 at 11:51:19AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            41329     |
| Iterations completed                  6     |
| Log likelihood function       -51263.81     |
| Number of parameters                 25     |
| Info. Criterion: AIC =          2.48198     |
|   Finite Sample: AIC =          2.48198     |
| Info. Criterion: BIC =          2.48720     |
| Info. Criterion:HQIC =          2.48363     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -52160.0860  .01718  .01706 |
| Chi-squared[20]          =   1792.54584     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -3.13927482       .04469681   -70.235   .0000
 BP_FM1   |     .09588366       .03656606     2.622   .0087
 BP_FA1   |     .07811708       .03758625     2.078   .0377
 BP_FT1   |    -.04606151       .03236650    -1.423   .1547
```

BP_FTL1	-.07156998	.03357105	-2.132	.0330
A_B	-1.00189753	.01729748	-57.922	.0000
B_FM2	.23887665	.01374851	17.375	.0000
B_FA2	.05519668	.01384256	3.987	.0001
B_FT2	-.09845557	.01198558	-8.215	.0000
B_FTL2	-.11178838	.01243600	-8.989	.0000
A_BO	-2.90856832	.04624746	-62.891	.0000
BO_FM3	-.28113936	.05762721	-4.879	.0000
BO_FA3	.06254875	.06142037	1.018	.3085
BO_FT3	.25484882	.04200637	6.067	.0000
BO_FTL3	-.10931460	.05598246	-1.953	.0509
A_M	-2.53618690	.03801632	-66.713	.0000
M_FM4	-.09011292	.04302176	-2.095	.0362
M_FA4	-.08947638	.04389721	-2.038	.0415
M_FT4	.06534960	.03473772	1.881	.0599
M_FTL4	.00984229	.04048575	.243	.8079
A_P	-1.10566940	.01847716	-59.840	.0000
P_FM5	.22745187	.01624067	14.005	.0000
P_FA5	.21208575	.01644089	12.900	.0000
P_FT5	-.16377384	.01531300	-10.695	.0000
P_FTL5	-.16697099	.01465621	-11.393	.0000

MNL3.114 –

- ASC

- *PO1: Variável binária razão estacionamentos Pagos/Oferta total de estacionamentos na zona de atracção <=0,25 (excluída)*
- PO2: Variável binária razão estacionamentos Pagos/Oferta total de estacionamentos na zona de atracção >0,25 & <=0,5
- PO3: Variável binária razão estacionamentos Pagos/Oferta total de estacionamentos na zona de atracção >0,5

- OV1: Variável binária razão Oferta total de estacionamentos/procura total de Viagens para zona de atracção <=0,075
- OV2: Variável binária razão Oferta total de estacionamentos/procura total de Viagens para zona de atracção >0,075 & <=0,1
- OV3: Variável binária razão Oferta total de estacionamentos/procura total de Viagens para zona de atracção >0,1 & <=0,15
- *OV4: Variável binária razão Oferta total de estacionamentos/procura total de Viagens para zona de atracção >0,15 (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,PO2,PO3,OV1,OV2,OV3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 08, 2012 at 07:39:12PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            18823     |
| Iterations completed                  6     |
| Log likelihood function       -23002.46     |
| Number of parameters                 30     |
| Info. Criterion: AIC =          2.44727     |
|   Finite Sample: AIC =          2.44727     |
| Info. Criterion: BIC =          2.45977     |
| Info. Criterion:HQIC =          2.45137     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -23922.0417  .03844  .03813 |
| Chi-squared[25]           =   1839.15580    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
```

```
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -3.14003395       .11014163   -28.509   .0000
 BP_PO21  |     .56690145       .20458370     2.771   .0056
 BP_PO31  |     .65315797       .21967138     2.973   .0029
 BP_OV11  |     .55474898       .24255194     2.287   .0222
 BP_OV21  |     .38262991       .23596511     1.622   .1049
 BP_OV31  |     .73259408       .18585260     3.942   .0001
 A_B      |    -.92361492       .04207967   -21.949   .0000
 B_PO22   |     .06254798       .09106326      .687   .4922
 B_PO32   |     .30007531       .10082750     2.976   .0029
 B_OV12   |    1.10024683       .10690903    10.291   .0000
 B_OV22   |     .85577475       .09968818     8.585   .0000
 B_OV32   |     .47310457       .07987582     5.923   .0000
 A_BO     |   -3.78771875       .15074977   -25.126   .0000
 BO_PO23  |     .82835832       .57178170     1.449   .1474
 BO_PO33  |    -.48838747       .64774187     -.754   .4509
 BO_OV13  |    -.58726172       .62057355     -.946   .3440
 BO_OV23  |   -1.90206442       .63471250    -2.997   .0027
 BO_OV33  |    -.47993783       .41082443    -1.168   .2427
 A_M      |   -4.29854438       .19375321   -22.186   .0000
 M_PO24   |    -.27547187       .37813852     -.728   .4663
 M_PO34   |    -.20239383       .44701976     -.453   .6507
 M_OV14   |     .89828704       .46988002     1.912   .0559
 M_OV24   |    1.08205024       .41347418     2.617   .0089
 M_OV34   |     .26292887       .37363503      .704   .4816
 A_P      |   -1.08412290       .04462473   -24.294   .0000
 P_PO25   |    1.44039473       .09256486    15.561   .0000
 P_PO35   |    1.24243984       .09946090    12.492   .0000
 P_OV15   |    -.28082508       .10755155    -2.611   .0090
 P_OV25   |    -.65462091       .10641881    -6.151   .0000
 P_OV35   |     .96536614       .07859843    12.282   .0000
```

MNL3.115 –
- ASC

- Fm - Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 9:30 (nfreq730930/2)
~~- Ftl - Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 19:30 (nfreq7301930/12)~~

- TBA – Variável continua com a razão dos tempos médios de viagem em BUS e AUTO entre zona de Geração e Atracção

- V2 – Variável continua para velocidade comercial equivalente de BUS em km/h

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,FM,V2,TBA$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 11, 2012 at 05:40:12PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            40099     |
| Iterations completed                  9     |
| Log likelihood function       -38517.02     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          1.92209     |
|   Finite Sample: AIC =          1.92209     |
| Info. Criterion: BIC =          1.92638     |
| Info. Criterion:HQIC =          1.92345     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -50751.5442  .24107  .24099 |
| Chi-squared[15]          =  24469.05123     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |    -.92748110       .18276923    -5.075    .0000
 BP_FM1   |    -.00248848       .00491174     -.507    .6124
```

BP_V21	-.03079646	.00643110	-4.789	.0000
BP_TBA1	-1.11726204	.09424811	-11.854	.0000
A_B	.69810539	.07239483	9.643	.0000
B_FM2	.02629183	.00182259	14.426	.0000
B_V22	-.03703261	.00263440	-14.057	.0000
B_TBA2	-.75593819	.03454467	-21.883	.0000
A_BO	-3.92519559	.21015323	-18.678	.0000
BO_FM3	-.09633220	.01015450	-9.487	.0000
BO_V23	.02249795	.00728321	3.089	.0020
BO_TBA3	.46000426	.08458893	5.438	.0000
A_M	-2.68729340	.17128269	-15.689	.0000
M_FM4	-.07183786	.00725005	-9.909	.0000
M_V24	-.00828712	.00639672	-1.296	.1951
M_TBA4	.12521423	.07247495	1.728	.0840
A_P	6.14778256	.10251770	59.968	.0000
P_FM5	-.00758714	.00262306	-2.892	.0038
P_V25	-.94909875	.01185891	-80.033	.0000
P_TBA5	-.97192916	.04666084	-20.830	.0000

MNL3.116 –
- ASC

~~- Fm - Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 9:30 (nfreq730930/2)~~
- Ftl - Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 19:30 (nfreq7301930/12)

- TBA – Variável continua com a razão dos tempos médios de viagem em BUS e AUTO entre zona de Geração e Atracção

- V2 – Variável continua para velocidade comercial equivalente de BUS em km/h

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,Ftl,V2,TBA$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 11, 2012 at 05:43:08PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            40099     |
| Iterations completed                  9     |
| Log likelihood function       -38548.41     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          1.92366     |
|   Finite Sample: AIC =          1.92366     |
| Info. Criterion: BIC =          1.92795     |
| Info. Criterion:HQIC =          1.92502     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -50751.5442  .24045  .24037 |
| Chi-squared[15]          =  24406.27363     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |    -.91005235       .18270548    -4.981    .0000
 BP_FTL1  |    -.00288653       .00396867     -.727    .4670
```

BP_V21	-.03124588	.00646128	-4.836	.0000
BP_TBA1	-1.12082026	.09389491	-11.937	.0000
A_B	.79330856	.07236229	10.963	.0000
B_FTL2	.01756965	.00148060	11.867	.0000
B_V22	-.03795277	.00263860	-14.384	.0000
B_TBA2	-.79249590	.03447383	-22.988	.0000
A_BO	-3.91145166	.20932782	-18.686	.0000
BO_FTL3	-.07684100	.00811278	-9.472	.0000
BO_V23	.02266453	.00724881	3.127	.0018
BO_TBA3	.45540495	.08411077	5.414	.0000
A_M	-2.68140224	.17079654	-15.699	.0000
M_FTL4	-.05699829	.00573972	-9.930	.0000
M_V24	-.00824404	.00639662	-1.289	.1975
M_TBA4	.12416504	.07210345	1.722	.0851
A_P	6.21615648	.10273682	60.506	.0000
P_FTL5	-.00982219	.00208327	-4.715	.0000
P_V25	-.94891252	.01185817	-80.022	.0000
P_TBA5	-.99406117	.04671849	-21.278	.0000

MNL3.117 –
- ASC

- Variáveis binárias do escalão etário (excepto Id1)
- Variáveis binárias do nível de instrução (excepto In4)
- Variável binária Sexo (Sexo)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,SX,ID2,ID3,ID4,ID5,IN1,IN2,IN3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 11, 2012 at 06:47:13PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  8     |
| Log likelihood function       -113724.1     |
| Number of parameters                 45     |
| Info. Criterion: AIC =          2.38445     |
|   Finite Sample: AIC =          2.38445     |
| Info. Criterion: BIC =          2.38891     |
| Info. Criterion:HQIC =          2.38580     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .07908  .07899 |
| Chi-squared[40]          =  19530.50933     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP    |   -7.60398379       .25092809   -30.303   .0000
 BP_SX1  |    1.07488164       .04622200    23.255   .0000
 BP_ID21 |    3.33151397       .18010335    18.498   .0000
 BP_ID31 |    1.38132904       .18402952     7.506   .0000
 BP_ID41 |    1.63728950       .17899259     9.147   .0000
 BP_ID51 |    2.66846069       .18062665    14.773   .0000
 BP_IN11 |    2.51616748       .21451007    11.730   .0000
 BP_IN21 |    2.07265423       .17744701    11.680   .0000
 BP_IN31 |    1.48403557       .18550856     8.000   .0000
```

A_B	-3.90912224	.07219582	-54.146	.0000
B_SX2	.90727668	.01863766	48.680	.0000
B_ID22	2.49568208	.06050894	41.245	.0000
B_ID32	.84554323	.06043859	13.990	.0000
B_ID42	1.05658171	.05861887	18.025	.0000
B_ID52	2.15252156	.06204516	34.693	.0000
B_IN12	1.37446720	.06804589	20.199	.0000
B_IN22	1.17031996	.04301247	27.209	.0000
B_IN32	.86416143	.04718233	18.315	.0000
A_BO	-5.69123811	.23747184	-23.966	.0000
BO_SX3	.20355384	.03556047	5.724	.0000
BO_ID23	1.98828744	.09136222	21.763	.0000
BO_ID33	-.10625295	.09679844	-1.098	.2723
BO_ID43	-.25577180	.09282320	-2.755	.0059
BO_ID53	-.24006236	.12910092	-1.859	.0630
BO_IN13	3.05191671	.24091171	12.668	.0000
BO_IN23	2.75947598	.22036253	12.522	.0000
BO_IN33	1.35975363	.22923107	5.932	.0000
A_M	-8.25807031	.29819625	-27.693	.0000
M_SX4	-.23552594	.02790893	-8.439	.0000
M_ID24	2.38243992	.11344489	21.001	.0000
M_ID34	2.38216096	.10996375	21.663	.0000
M_ID44	1.99506374	.10868708	18.356	.0000
M_ID54	1.89262765	.11782784	16.063	.0000
M_IN14	5.05389652	.28985818	17.436	.0000
M_IN24	4.44446091	.27813099	15.980	.0000
M_IN34	2.91452587	.28225278	10.326	.0000
A_P	-2.89686284	.06886136	-42.068	.0000
P_SX5	.71436887	.02139428	33.391	.0000
P_ID25	1.17512015	.05447018	21.574	.0000
P_ID35	-.32928114	.05488733	-5.999	.0000
P_ID45	.06529321	.05155478	1.266	.2053
P_ID55	1.29774307	.05649089	22.973	.0000
P_IN15	.83363448	.07154113	11.653	.0000
P_IN25	.91067669	.04694949	19.397	.0000
P_IN35	.49082906	.05336597	9.197	.0000

MNL3.118 –
- ASC

- Variáveis binárias do escalão etário (excepto Id1)
- Variáveis binárias do nível de instrução (excepto In4)
- Variável binária Sexo (Sexo)
- Variáveis binárias para os escalões do rendimento liquido mensal do agregado (excepto R5)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,R1,R2,R3,R4,SX,ID2,ID3,ID4,ID5,IN1,IN2,IN3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 11, 2012 at 06:54:36PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  8     |
| Log likelihood function       -111176.7     |
| Number of parameters                 65     |
| Info. Criterion: AIC =          2.33148     |
|   Finite Sample: AIC =          2.33148     |
| Info. Criterion: BIC =          2.33792     |
| Info. Criterion:HQIC =          2.33344     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .09971  .09958 |
| Chi-squared[60]          =  24625.28274     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP     |   -7.93583574       .25641464   -30.949   .0000
 BP_R11   |    2.13493728       .09927708    21.505   .0000
 BP_R21   |    1.27445182       .08420746    15.135   .0000
 BP_R31   |     .97797032       .08871092    11.024   .0000
 BP_R41   |     .42619885       .11127066     3.830   .0001
 BP_SX1   |    1.06647522       .04639362    22.988   .0000
 BP_ID21  |    3.24161315       .17857994    18.152   .0000
 BP_ID31  |    1.15649234       .18271327     6.330   .0000
```

BP_ID41	1.44999352	.17757879	8.165	.0000
BP_ID51	2.16097823	.18272142	11.827	.0000
BP_IN11	1.78516985	.21668318	8.239	.0000
BP_IN21	1.52742396	.17933399	8.517	.0000
BP_IN31	1.14558755	.18646142	6.144	.0000
A_B	-4.19973023	.07514396	-55.889	.0000
B_R12	2.05651301	.04122486	49.885	.0000
B_R22	1.16957655	.03177303	36.810	.0000
B_R32	.80559029	.03364719	23.942	.0000
B_R42	.51518756	.04003104	12.870	.0000
B_SX2	.89505411	.01896167	47.203	.0000
B_ID22	2.41552989	.06058379	39.871	.0000
B_ID32	.63657683	.06058827	10.507	.0000
B_ID42	.88769853	.05868857	15.126	.0000
B_ID52	1.65460312	.06372614	25.964	.0000
B_IN12	.69622339	.07014243	9.926	.0000
B_IN22	.66644680	.04462353	14.935	.0000
B_IN32	.56195966	.04816139	11.668	.0000
A_BO	-5.82519073	.23936255	-24.336	.0000
BO_R13	1.65691313	.07596106	21.813	.0000
BO_R23	.84234846	.05805322	14.510	.0000
BO_R33	.47143848	.06327830	7.450	.0000
BO_R43	.11731366	.08037640	1.460	.1444
BO_SX3	.19038775	.03569090	5.334	.0000
BO_ID23	1.94881207	.09019905	21.606	.0000
BO_ID33	-.24063324	.09582390	-2.511	.0120
BO_ID43	-.37733194	.09171825	-4.114	.0000
BO_ID53	-.66483525	.13102784	-5.074	.0000
BO_IN13	2.55628417	.24144685	10.587	.0000
BO_IN23	2.36482104	.22132140	10.685	.0000
BO_IN33	1.12731133	.22974065	4.907	.0000
A_M	-8.42834501	.29944831	-28.146	.0000
M_R14	1.57991685	.06215597	25.419	.0000
M_R24	.93076811	.04891870	19.027	.0000
M_R34	.53898535	.05289184	10.190	.0000
M_R44	.30326554	.06434710	4.713	.0000
M_SX4	-.25072688	.02806922	-8.932	.0000
M_ID24	2.30836079	.11287600	20.450	.0000
M_ID34	2.21670425	.10943853	20.255	.0000
M_ID44	1.84416853	.10820768	17.043	.0000
M_ID54	1.50246604	.11939066	12.584	.0000
M_IN14	4.52318289	.29061753	15.564	.0000
M_IN24	4.05360957	.27861263	14.549	.0000
M_IN34	2.69181591	.28249417	9.529	.0000
A_P	-3.08519499	.07241752	-42.603	.0000
P_R15	2.13182282	.04537219	46.985	.0000
P_R25	1.04749289	.03660383	28.617	.0000
P_R35	.62781109	.03932205	15.966	.0000
P_R45	.34036685	.04745726	7.172	.0000
P_SX5	.69729362	.02174207	32.071	.0000
P_ID25	1.11209270	.05472222	20.323	.0000
P_ID35	-.52377877	.05528652	-9.474	.0000
P_ID45	-.09489169	.05178765	-1.832	.0669
P_ID55	.72978750	.05882151	12.407	.0000
P_IN15	.15506680	.07363211	2.106	.0352
P_IN25	.39278325	.04895851	8.023	.0000
P_IN35	.18899899	.05442725	3.473	.0005

MNL3.119 –
- ASC

- Variáveis binárias do escalão etário (excepto Id1)
- Variáveis binárias do nível de instrução (excepto In4)
- Variável binária Sexo (Sexo)
- Variável binária de disponibilidade de Licença de condução (Lc)
- Variável binária para o número de automóveis disponíveis diariamente no agregado per capita (excepto NC4a).

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC0,NC1,NC2,NC3,SX,ID2,ID3,ID4,ID5,IN1,IN2,IN3,LC$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 11, 2012 at 07:00:30PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  9     |
| Log likelihood function       -98960.05     |
| Number of parameters                 70     |
| Info. Criterion: AIC =          2.07554     |
|   Finite Sample: AIC =          2.07554     |
| Info. Criterion: BIC =          2.08248     |
| Info. Criterion:HQIC =          2.07765     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .19864  .19852 |
| Chi-squared[65]          =  49058.64002     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP    |   -8.31464937       .62613650   -13.279   .0000
 BP_NC01 |    4.52740882       .58022059     7.803   .0000
 BP_NC11 |    2.76691370       .58116452     4.761   .0000
 BP_NC21 |    2.33152631       .58074302     4.015   .0001
 BP_NC31 |    1.26803460       .59877599     2.118   .0342
 BP_SX1  |     .58565147       .04888996    11.979   .0000
```

BP_ID21	2.88314478	.17350923	16.617	.0000
BP_ID31	2.03585142	.17891657	11.379	.0000
BP_ID41	2.20646048	.17338253	12.726	.0000
BP_ID51	2.36732988	.17904788	13.222	.0000
BP_IN11	.34366056	.21829680	1.574	.1154
BP_IN21	.58722186	.18167724	3.232	.0012
BP_IN31	.84415002	.18792000	4.492	.0000
BP_LC1	-2.09830245	.06675909	-31.431	.0000
A_B	-3.68866967	.12758151	-28.912	.0000
B_NC02	3.37707345	.10743500	31.434	.0000
B_NC12	1.69945280	.10768223	15.782	.0000
B_NC22	1.24394561	.10693381	11.633	.0000
B_NC32	.60767957	.11447133	5.309	.0000
B_SX2	.41599832	.02187695	19.015	.0000
B_ID22	2.11708949	.06049379	34.997	.0000
B_ID32	1.57986788	.06215938	25.416	.0000
B_ID42	1.72125986	.05983361	28.767	.0000
B_ID52	1.95716749	.06602332	29.644	.0000
B_IN12	-.64324758	.07538188	-8.533	.0000
B_IN22	-.22577881	.04865831	-4.640	.0000
B_IN32	.29028091	.05184308	5.599	.0000
B_LC2	-2.07884295	.02754086	-75.482	.0000
A_BO	-5.10531762	.28352635	-18.007	.0000
BO_NC03	2.09870303	.17213673	12.192	.0000
BO_NC13	.79663457	.17239465	4.621	.0000
BO_NC23	.14591879	.17250498	.846	.3976
BO_NC33	-.29757959	.19043414	-1.563	.1181
BO_SX3	-.15501414	.03758010	-4.125	.0000
BO_ID23	1.79712847	.08747735	20.544	.0000
BO_ID33	.65529666	.09678098	6.771	.0000
BO_ID43	.43611939	.09213012	4.734	.0000
BO_ID53	-.27356580	.12976741	-2.108	.0350
BO_IN13	1.79212981	.24180881	7.411	.0000
BO_IN23	1.81987468	.22253896	8.178	.0000
BO_IN33	1.03822843	.23023993	4.509	.0000
BO_LC3	-1.48352557	.05426692	-27.338	.0000
A_M	-7.76282270	.32579206	-23.828	.0000
M_NC04	2.67886739	.14172226	18.902	.0000
M_NC14	1.23591396	.14237793	8.681	.0000
M_NC24	.74521854	.14177336	5.256	.0000
M_NC34	.14916072	.15753580	.947	.3437
M_SX4	-.75561466	.03161974	-23.897	.0000
M_ID24	1.96909046	.10947342	17.987	.0000
M_ID34	3.11264078	.10732129	29.003	.0000
M_ID44	2.65537941	.10588903	25.077	.0000
M_ID54	1.78487959	.11803190	15.122	.0000
M_IN14	3.24691275	.29154719	11.137	.0000
M_IN24	3.34986925	.27909423	12.003	.0000
M_IN34	2.48445413	.28301868	8.778	.0000
M_LC4	-1.87822916	.03597515	-52.209	.0000
A_P	-1.93488074	.10543465	-18.351	.0000
P_NC05	2.47250112	.08377779	29.513	.0000
P_NC15	.67257329	.08484042	7.928	.0000
P_NC25	.24263920	.08350793	2.906	.0037
P_NC35	-.51005110	.09915645	-5.144	.0000
P_SX5	.25009681	.02450954	10.204	.0000
P_ID25	.91039544	.05563921	16.362	.0000
P_ID35	.44894757	.05833709	7.696	.0000
P_ID45	.78462746	.05451355	14.393	.0000
P_ID55	1.13033914	.06191397	18.257	.0000
P_IN15	-.94123589	.07805141	-12.059	.0000

P_IN25	-.38893847	.05264574	-7.388	.0000
P_IN35	-.00836942	.05739318	-.146	.8841
P_LC5	-1.94470729	.03139812	-61.937	.0000

MNL3.120 –
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=240min (média duração)
- De3 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De4: variável binária duracão da estadia >480min (muito longa duração)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,DE2,DE3,DE4$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 11, 2012 at 07:05:09PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            61358     |
| Iterations completed                  6     |
| Log likelihood function       -78067.21     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          2.54530     |
|   Finite Sample: AIC =          2.54530     |
| Info. Criterion: BIC =          2.54824     |
| Info. Criterion:HQIC =          2.54621     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -79151.8564  .01370  .01364 |
| Chi-squared[15]          =   2169.28723     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP     |   -3.76803108       .07338068   -51.349   .0000
 BP_DE21  |     .28718010       .08805871     3.261   .0011
 BP_DE31  |     .70397956       .09438729     7.458   .0000
 BP_DE41  |    1.13283272       .08950671    12.656   .0000
 A_B      |   -1.60955949       .02700867   -59.594   .0000
 B_DE22   |     .44929158       .03203146    14.027   .0000
 B_DE32   |     .65193890       .03600513    18.107   .0000
```

B_DE42	.88245015	.03562095	24.773	.0000
A_BO	-3.43155884	.06229739	-55.084	.0000
BO_DE23	.15012385	.07638694	1.965	.0494
BO_DE33	.97272443	.07665789	12.689	.0000
BO_DE43	1.59633769	.07181945	22.227	.0000
A_M	-2.05946254	.03278498	-62.817	.0000
M_DE24	-.19423804	.04265525	-4.554	.0000
M_DE34	.27615780	.04655686	5.932	.0000
M_DE44	.18378644	.04896315	3.754	.0002
A_P	-1.46281786	.02542637	-57.532	.0000
P_DE25	.05100972	.03174306	1.607	.1081
P_DE35	.04522104	.03811380	1.186	.2354
P_DE45	-.57429842	.04658279	-12.329	.0000

MNL3.121 –
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=240min (média duração)
- De3 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De4: variável binária duracão da estadia >480min (muito longa duração)

- d2 -Var. continua para distância + curta entre centróides (excepto pedonais 3,6km/h)
- dx1 - Var.bin distância + curta entre centróides (expto ped.3,6km/h) <=1,0km
- dx2 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >1,0km e <= 2,0km
- dx3 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >2,0km e <=5,0km
- *dx4 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >5,0km (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,D2,DX1,DX2,DX3,DE2,DE3,DE4$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 12, 2012 at 00:51:28AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            61358     |
| Iterations completed                 30     |
| Log likelihood function       -61868.61     |
| Number of parameters                 40     |
| Info. Criterion: AIC =          2.01795     |
|   Finite Sample: AIC =          2.01795     |
| Info. Criterion: BIC =          2.02383     |
| Info. Criterion:HQIC =          2.01977     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -79151.8564  .21836  .21825 |
| Chi-squared[35]          =  34566.48616     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
```

A_BP	-4.31746941	.12511822	-34.507	.0000
BP_D21	.06531073	.01170774	5.578	.0000
BP_DX11	.10973949	1.01652712	.108	.9140
BP_DX21	.78336275	.12767010	6.136	.0000
BP_DX31	.28525108	.08095488	3.524	.0004
BP_DE21	.28425159	.08809172	3.227	.0013
BP_DE31	.70526425	.09442468	7.469	.0000
BP_DE41	1.12576197	.08977509	12.540	.0000
A_B	-1.54981545	.05269579	-29.411	.0000
B_D22	-.01297928	.00573692	-2.262	.0237
B_DX12	.15505598	.29694264	.522	.6015
B_DX22	-.01244751	.05623773	-.221	.8248
B_DX32	.02245085	.03275901	.685	.4931
B_DE22	.45105014	.03203941	14.078	.0000
B_DE32	.65107982	.03601046	18.080	.0000
B_DE42	.89125818	.03569963	24.965	.0000
A_BO	-3.60382760	.10229640	-35.229	.0000
BO_D23	.02650633	.00986560	2.687	.0072
BO_DX13	-29.7862042	.207572D+07	.000	1.0000
BO_DX23	-.49806666	.13658388	-3.647	.0003
BO_DX33	.11774608	.06261847	1.880	.0601
BO_DE23	.15047318	.07640932	1.969	.0489
BO_DE33	.97492165	.07668337	12.714	.0000
BO_DE43	1.57736084	.07196980	21.917	.0000
A_M	-1.68848238	.08038807	-21.004	.0000
M_D24	-.06461516	.00970590	-6.657	.0000
M_DX14	-30.5294193	.155982D+07	.000	1.0000
M_DX24	-.41537502	.08867620	-4.684	.0000
M_DX34	-.01163829	.04966372	-.234	.8147
M_DE24	-.18688594	.04270006	-4.377	.0000
M_DE34	.27347258	.04660546	5.868	.0000
M_DE44	.20781157	.04910618	4.232	.0000
A_P	4.71265963	.38466597	12.251	.0000
P_D25	-1.78709434	.06242862	-28.626	.0000
P_DX15	1.17615505	.37233184	3.159	.0016
P_DX25	-1.73790374	.29536646	-5.884	.0000
P_DX35	-2.74249295	.24127999	-11.366	.0000
P_DE25	.11456683	.05851635	1.958	.0502
P_DE35	.05589059	.06933816	.806	.4202
P_DE45	.15888375	.07836995	2.027	.0426

MNL3.122 –
- ASC

- De : variável continua duração em minutos da estadia no destino

- d2 -Var. continua para distância + curta entre centróides (excepto pedonais 3,6km/h)
- dx1 - Var.bin distância + curta entre centróides (expto ped.3,6km/h) <=1,0km
- dx2 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >1,0km e <= 2,0km
- dx3 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >2,0km e <=5,0km
- *dx4 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >5,0km (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,D2,DX1,DX2,DX3,DE$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 12, 2012 at 00:56:18AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            61358     |
| Iterations completed                 30     |
| Log likelihood function       -62057.33     |
| Number of parameters                 30     |
| Info. Criterion: AIC =          2.02377     |
|   Finite Sample: AIC =          2.02377     |
| Info. Criterion: BIC =          2.02819     |
| Info. Criterion:HQIC =          2.02514     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -79151.8564  .21597  .21589 |
| Chi-squared[25]           =  34189.04810    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -4.27221872       .11123194   -38.408   .0000
 BP_D21   |     .06515983       .01171619     5.562   .0000
 BP_DX11  |     .11080839      1.01652325      .109   .9132
```

BP_DX21	.78391536	.12769307	6.139	.0000
BP_DX31	.28725116	.08098228	3.547	.0004
BP_DE1	.00176276	.00012549	14.047	.0000
A_B	-1.35955228	.04831273	-28.141	.0000
B_D22	-.01342410	.00572120	-2.346	.0190
B_DX12	.15772368	.29688977	.531	.5952
B_DX22	-.00840072	.05612523	-.150	.8810
B_DX32	.02269974	.03268927	.694	.4874
B_DE2	.00121847	.517511D-04	23.545	.0000
A_BO	-3.67271315	.09022007	-40.708	.0000
BO_D23	.02602325	.00990897	2.626	.0086
BO_DX13	-29.8146735	.210982D+07	.000	1.0000
BO_DX23	-.49774894	.13664268	-3.643	.0003
BO_DX33	.12340864	.06272984	1.967	.0491
BO_DE3	.00266953	.950466D-04	28.087	.0000
A_M	-1.79358525	.07759286	-23.115	.0000
M_D24	-.06666120	.00972570	-6.854	.0000
M_DX14	-30.5490475	.157593D+07	.000	1.0000
M_DX24	-.42229584	.08871239	-4.760	.0000
M_DX34	-.01254317	.04971438	-.252	.8008
M_DE4	.00059917	.778576D-04	7.696	.0000
A_P	4.74518779	.38266203	12.400	.0000
P_D25	-1.78574239	.06239817	-28.619	.0000
P_DX15	1.18127996	.37222022	3.174	.0015
P_DX25	-1.73192636	.29531284	-5.865	.0000
P_DX35	-2.73898853	.24122435	-11.355	.0000
P_DE5	.00019329	.00012451	1.552	.1206

MNL3.123 –
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=240min (média duração)
- De3 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De4: variável binária duracão da estadia >480min (muito longa duração)

Tr - Trab viagens com motivo ir para o trabalho (excluída)
Es - Escola viagens com motivo ir para a escola
Lz - Lazer viagens com motivo lazer
CS - Cp_Sv viagens com motivo ir para às compras ou a serviços

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,ES,LZ,CS,DE2,DE3,DE4$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 12, 2012 at 01:18:00AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            61358     |
| Iterations completed                  6     |
| Log likelihood function       -76042.62     |
| Number of parameters                 35     |
| Info. Criterion: AIC =          2.47979     |
|   Finite Sample: AIC =          2.47980     |
| Info. Criterion: BIC =          2.48494     |
| Info. Criterion:HQIC =          2.48139     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -79151.8564  .03928  .03917 |
| Chi-squared[30]          =   6218.46996     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP    |   -3.82727951       .08157851   -46.915   .0000
```

BP_ES1	1.48890436	.06819160	21.834	.0000
BP_LZ1	-.14580158	.09617979	-1.516	.1295
BP_CS1	.23675539	.10674880	2.218	.0266
BP_DE21	.17728049	.08919383	1.988	.0469
BP_DE31	.33389487	.10153123	3.289	.0010
BP_DE41	.78799891	.09705140	8.119	.0000
A_B	-1.72853739	.03020672	-57.224	.0000
B_ES2	1.28283812	.03163394	40.553	.0000
B_LZ2	.07280336	.03272863	2.224	.0261
B_CS2	.33390990	.03826616	8.726	.0000
B_DE22	.37672539	.03246503	11.604	.0000
B_DE32	.41656638	.03870336	10.763	.0000
B_DE42	.67211036	.03839447	17.505	.0000
A_BO	-3.27655435	.06684815	-49.015	.0000
BO_ES3	1.78052000	.05079712	35.052	.0000
BO_LZ3	-.64992810	.09552498	-6.804	.0000
BO_CS3	-.54070543	.11946902	-4.526	.0000
BO_DE23	-.08411028	.07770917	-1.082	.2791
BO_DE33	.26640544	.08209012	3.245	.0012
BO_DE43	.91355310	.07726302	11.824	.0000
A_M	-1.81660039	.03540065	-51.315	.0000
M_ES4	-1.28779558	.09280930	-13.876	.0000
M_LZ4	-.59333407	.05034293	-11.786	.0000
M_CS4	-.73924865	.06709524	-11.018	.0000
M_DE24	-.18663828	.04292886	-4.348	.0000
M_DE34	.20810851	.04812721	4.324	.0000
M_DE44	.08760235	.05059885	1.731	.0834
A_P	-1.59430789	.02930305	-54.408	.0000
P_ES5	1.17652768	.03890803	30.239	.0000
P_LZ5	.20978396	.03473416	6.040	.0000
P_CS5	.27546266	.04089485	6.736	.0000
P_DE25	-.01609025	.03219326	-.500	.6172
P_DE35	-.14542956	.04117543	-3.532	.0004
P_DE45	-.73997196	.04927957	-15.016	.0000

MNL3.124 –
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=240min (média duração)
- De3 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De4: variável binária duracão da estadia >480min (muito longa duração)

Tr - Trab viagens com motivo ir para o trabalho (excluída)
Es - Escola viagens com motivo ir para a escola
Lz - Lazer viagens com motivo lazer
CS - Cp_Sv viagens com motivo ir para às compras ou a serviços

- d2 -Var. continua para distância + curta entre centróides (excepto pedonais 3,6km/h)
- dx1 - Var.bin distância + curta entre centróides (expto ped.3,6km/h) <=1,0km
- dx2 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >1,0km e <= 2,0km
- dx3 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >2,0km e <=5,0km
- *dx4 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >5,0km (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,ES,LZ,CS,D2,DX1,DX2,DX3,DE2,DE3,DE4$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 12, 2012 at 01:31:21AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            61358     |
| Iterations completed                 30     |
| Log likelihood function       -60015.48     |
| Number of parameters                 55     |
| Info. Criterion: AIC =          1.95803     |
|   Finite Sample: AIC =          1.95803     |
| Info. Criterion: BIC =          1.96612     |
| Info. Criterion:HQIC =          1.96054     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -79151.8564  .24177  .24163 |
| Chi-squared[50]          =  38272.75973     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
```

```
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
```

Variable	Coefficient	Standard Error	b/St.Er.	P[|Z|>z]
A_BP	-4.39231879	.12997355	-33.794	.0000
BP_ES1	1.49862973	.06850515	21.876	.0000
BP_LZ1	-.14907945	.09629811	-1.548	.1216
BP_CS1	.20604531	.10657467	1.933	.0532
BP_D21	.07154085	.01171650	6.106	.0000
BP_DX11	.08768218	1.01665692	.086	.9313
BP_DX21	.78264189	.12822319	6.104	.0000
BP_DX31	.26074746	.08127381	3.208	.0013
BP_DE21	.17328655	.08898336	1.947	.0515
BP_DE31	.32173763	.10119345	3.179	.0015
BP_DE41	.76027738	.09688811	7.847	.0000
A_B	-1.67619107	.05474869	-30.616	.0000
B_ES2	1.27718302	.03172832	40.254	.0000
B_LZ2	.06612867	.03274599	2.019	.0434
B_CS2	.32399381	.03825724	8.469	.0000
B_D22	-.00884542	.00582258	-1.519	.1287
B_DX12	.13296476	.29726222	.447	.6547
B_DX22	-.01842204	.05715052	-.322	.7472
B_DX32	.00698396	.03334608	.209	.8341
B_DE22	.37744450	.03243149	11.638	.0000
B_DE32	.41001788	.03866240	10.605	.0000
B_DE42	.66400252	.03846538	17.262	.0000
A_BO	-3.51191579	.10571836	-33.220	.0000
BO_ES3	1.78922635	.05107856	35.029	.0000
BO_LZ3	-.64337212	.09558647	-6.731	.0000
BO_CS3	-.54842352	.11928773	-4.597	.0000
BO_D23	.03845289	.00989616	3.886	.0001
BO_DX13	-29.2375527	.157554D+07	.000	1.0000
BO_DX23	-.47967385	.13770270	-3.483	.0005
BO_DX33	.08086298	.06343835	1.275	.2024
BO_DE23	-.06120952	.07762055	-.789	.4304
BO_DE33	.27686765	.08197202	3.378	.0007
BO_DE43	.88674210	.07721565	11.484	.0000
A_M	-1.45321708	.08152551	-17.825	.0000
M_ES4	-1.31209369	.09289941	-14.124	.0000
M_LZ4	-.58825019	.05038539	-11.675	.0000
M_CS4	-.70620921	.06714388	-10.518	.0000
M_D24	-.06592110	.00974036	-6.768	.0000
M_DX14	-30.3287314	.142251D+07	.000	1.0000
M_DX24	-.39438181	.08889172	-4.437	.0000
M_DX34	-.01154312	.04975963	-.232	.8166
M_DE24	-.17076562	.04296110	-3.975	.0001
M_DE34	.21860855	.04813401	4.542	.0000
M_DE44	.13875439	.05077512	2.733	.0063
A_P	4.55444099	.38637148	11.788	.0000
P_ES5	.94583281	.06872669	13.762	.0000
P_LZ5	.14331550	.06181291	2.319	.0204
P_CS5	.19322971	.07500984	2.576	.0100
P_D25	-1.77394038	.06257440	-28.349	.0000
P_DX15	1.21262203	.37299988	3.251	.0012
P_DX25	-1.70302957	.29590016	-5.755	.0000
P_DX35	-2.72091123	.24142019	-11.270	.0000
P_DE25	.06940640	.05943793	1.168	.2429
P_DE35	-.09851804	.07484756	-1.316	.1881
P_DE45	.02003315	.08341859	.240	.8102

~~MNL3.125 -~~
~~- ASC~~

~~- De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)~~
~~- De2 : variável binária duracão da estadia >60min & <=240min (média duração)~~
~~- De3 : variável binária duracão da estadia >240min & <=480min (longa duração)~~
~~- De4: variável binária duracão da estadia >480min (muito longa duração)~~

~~*Tr - Trab viagens com motivo ir para o trabalho (excluída)*~~
~~Es - Escola viagens com motivo ir para a escola~~
~~Lz - Lazer viagens com motivo lazer~~
~~CS - Cp_Sv viagens com motivo ir para às compras ou a serviços~~

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,ES,LZ,CS,DE2,DE3,DE4$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 12, 2012 at 01:58:34AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            61358     |
| Iterations completed                  6     |
| Log likelihood function       -76042.62     |
| Number of parameters                 35     |
| Info. Criterion: AIC =          2.47979     |
|   Finite Sample: AIC =          2.47980     |
| Info. Criterion: BIC =          2.48494     |
| Info. Criterion:HQIC =          2.48139     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -79151.8564  .03928  .03917 |
| Chi-squared[30]          =   6218.46996     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP    |   -3.82727951       .08157851   -46.915   .0000
```

BP_ES1	1.48890436	.06819160	21.834	.0000
BP_LZ1	-.14580158	.09617979	-1.516	.1295
BP_CS1	.23675539	.10674880	2.218	.0266
BP_DE21	.17728049	.08919383	1.988	.0469
BP_DE31	.33389487	.10153123	3.289	.0010
BP_DE41	.78799891	.09705140	8.119	.0000
A_B	-1.72853739	.03020672	-57.224	.0000
B_ES2	1.28283812	.03163394	40.553	.0000
B_LZ2	.07280336	.03272863	2.224	.0261
B_CS2	.33390990	.03826616	8.726	.0000
B_DE22	.37672539	.03246503	11.604	.0000
B_DE32	.41656638	.03870336	10.763	.0000
B_DE42	.67211036	.03839447	17.505	.0000
A_BO	-3.27655435	.06684815	-49.015	.0000
BO_ES3	1.78052000	.05079712	35.052	.0000
BO_LZ3	-.64992810	.09552498	-6.804	.0000
BO_CS3	-.54070543	.11946902	-4.526	.0000
BO_DE23	-.08411028	.07770917	-1.082	.2791
BO_DE33	.26640544	.08209012	3.245	.0012
BO_DE43	.91355310	.07726302	11.824	.0000
A_M	-1.81660039	.03540065	-51.315	.0000
M_ES4	-1.28779558	.09280930	-13.876	.0000
M_LZ4	-.59333407	.05034293	-11.786	.0000
M_CS4	-.73924865	.06709524	-11.018	.0000
M_DE24	-.18663828	.04292886	-4.348	.0000
M_DE34	.20810851	.04812721	4.324	.0000
M_DE44	.08760235	.05059885	1.731	.0834
A_P	-1.59430789	.02930305	-54.408	.0000
P_ES5	1.17652768	.03890803	30.239	.0000
P_LZ5	.20978396	.03473416	6.040	.0000
P_CS5	.27546266	.04089485	6.736	.0000
P_DE25	-.01609025	.03219326	-.500	.6172
P_DE35	-.14542956	.04117543	-3.532	.0004
P_DE45	-.73997196	.04927957	-15.016	.0000

MNL3.126 –
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=240min (média duração)
- De3 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De4: variável binária duracão da estadia >480min (muito longa duração)

Tr - Trab viagens com motivo ir para o trabalho (excluída)
Es - Escola viagens com motivo ir para a escola
Lz - Lazer viagens com motivo lazer
CS - Cp_Sv viagens com motivo ir para às compras ou a serviços

- nV: ntotalviag Número total de viagens de cada individuo por dia

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NV,ES,LZ,CS,DE2,DE3,DE4$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 12, 2012 at 02:04:13AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            61358     |
| Iterations completed                  6     |
| Log likelihood function       -74423.64     |
| Number of parameters                 40     |
| Info. Criterion: AIC =          2.42719     |
|   Finite Sample: AIC =          2.42719     |
| Info. Criterion: BIC =          2.43307     |
| Info. Criterion:HQIC =          2.42901     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -79151.8564  .05974  .05961 |
| Chi-squared[35]          =   9456.42317     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+---------------+--------+--------+
```

Variable	Coefficient	Standard Error	b/St.Er.	P[|Z|>z]
A_BP	-1.59190723	.14068428	-11.315	.0000
BP_NV1	-.43500031	.02481101	-17.533	.0000
BP_ES1	1.21734487	.06984901	17.428	.0000
BP_LZ1	-.49808990	.09915466	-5.023	.0000
BP_CS1	-.29204817	.11200929	-2.607	.0091
BP_DE21	-.01287470	.08968173	-.144	.8858
BP_DE31	-.14964487	.10474721	-1.429	.1531
BP_DE41	-.27917402	.10943327	-2.551	.0107
A_B	.35805907	.05316823	6.734	.0000
B_NV2	-.40148659	.00901603	-44.530	.0000
B_ES2	1.02343097	.03252598	31.465	.0000
B_LZ2	-.25661343	.03440378	-7.459	.0000
B_CS2	-.15851500	.04095658	-3.870	.0001
B_DE22	.19345067	.03330454	5.809	.0000
B_DE32	-.03357751	.04041088	-.831	.4060
B_DE42	-.33225025	.04371894	-7.600	.0000
A_BO	-1.78138462	.11267274	-15.810	.0000
BO_NV3	-.28118283	.01850196	-15.197	.0000
BO_ES3	1.59828055	.05187066	30.813	.0000
BO_LZ3	-.86341967	.09678049	-8.921	.0000
BO_CS3	-.86325453	.12169355	-7.094	.0000
BO_DE23	-.21342843	.07809366	-2.733	.0063
BO_DE33	-.05110571	.08459390	-.604	.5458
BO_DE43	.18491497	.08762949	2.110	.0348
A_M	-1.38858880	.06495854	-21.377	.0000
M_NV4	-.07493482	.00981498	-7.635	.0000
M_ES4	-1.33842301	.09308132	-14.379	.0000
M_LZ4	-.64683369	.05089057	-12.710	.0000
M_CS4	-.82055066	.06799540	-12.068	.0000
M_DE24	-.23266548	.04325483	-5.379	.0000
M_DE34	.10667667	.04939378	2.160	.0308
M_DE44	-.12288836	.05770980	-2.129	.0332
A_P	-.15505349	.05414456	-2.864	.0042
P_NV5	-.26755984	.00891291	-30.019	.0000
P_ES5	.99400098	.03966733	25.058	.0000
P_LZ5	.00212677	.03586484	.059	.9527
P_CS5	-.03719732	.04282336	-.869	.3851
P_DE25	-.15112635	.03278857	-4.609	.0000
P_DE35	-.45488701	.04259762	-10.679	.0000
P_DE45	-1.44776370	.05387309	-26.874	.0000

MNL3.127 –
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=240min (média duração)
- De3 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De4: variável binária duracão da estadia >480min (muito longa duração)

Tr - Trab viagens com motivo ir para o trabalho (excluída)
Es - Escola viagens com motivo ir para a escola
Lz - Lazer viagens com motivo lazer
CS - Cp_Sv viagens com motivo ir para às compras ou a serviços

- nV: ntotalviag Número total de viagens de cada individuo por dia

- d2 -Var. continua para distância + curta entre centróides (excepto pedonais 3,6km/h)
- dx1 - Var.bin distância + curta entre centróides (expto ped.3,6km/h) <=1,0km
- dx2 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >1,0km e <= 2,0km
- dx3 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >2,0km e <=5,0km
- *dx4 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >5,0km (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NV,ES,LZ,CS,D2,DX1,DX2,DX3,DE2,DE3,DE4$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 12, 2012 at 02:20:12AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            61358     |
| Iterations completed                 30     |
| Log likelihood function       -58417.83     |
| Number of parameters                 60     |
| Info. Criterion: AIC =          1.90612     |
|   Finite Sample: AIC =          1.90612     |
| Info. Criterion: BIC =          1.91494     |
| Info. Criterion:HQIC =          1.90886     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -79151.8564  .26195  .26181 |
| Chi-squared[55]          =  41468.06063     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
```

```
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
```

Variable	Coefficient	Standard Error	b/St.Er.	P[|Z|>z]
A_BP	-2.12711147	.17595378	-12.089	.0000
BP_NV1	-.42406028	.02469299	-17.173	.0000
BP_ES1	1.22407665	.07023100	17.429	.0000
BP_LZ1	-.49771130	.09930869	-5.012	.0000
BP_CS1	-.29208436	.11155498	-2.618	.0088
BP_D21	.05711079	.01173524	4.867	.0000
BP_DX11	.26709453	1.01708921	.263	.7929
BP_DX21	.75556487	.12862033	5.874	.0000
BP_DX31	.25528152	.08155933	3.130	.0017
BP_DE21	-.01276807	.08953932	-.143	.8866
BP_DE31	-.15155693	.10434644	-1.452	.1464
BP_DE41	-.27221331	.10888657	-2.500	.0124
A_B	.47967925	.07173946	6.686	.0000
B_NV2	-.39985982	.00905062	-44.180	.0000
B_ES2	1.01038077	.03270281	30.896	.0000
B_LZ2	-.26832575	.03452171	-7.773	.0000
B_CS2	-.15158060	.04097209	-3.700	.0002
B_D22	-.02224498	.00591788	-3.759	.0002
B_DX12	.30573750	.29858682	1.024	.3059
B_DX22	-.04338581	.05827389	-.745	.4566
B_DX32	.00235998	.03404218	.069	.9447
B_DE22	.19349966	.03335190	5.802	.0000
B_DE32	-.04103499	.04042927	-1.015	.3101
B_DE42	-.33051751	.04377116	-7.551	.0000
A_BO	-2.02168208	.14123976	-14.314	.0000
BO_NV3	-.26938785	.01840821	-14.634	.0000
BO_ES3	1.60736374	.05223632	30.771	.0000
BO_LZ3	-.85318344	.09688524	-8.806	.0000
BO_CS3	-.84721026	.12137921	-6.980	.0000
BO_D23	.02913635	.00990646	2.941	.0033
BO_DX13	-29.0623716	.154736D+07	.000	1.0000
BO_DX23	-.50084025	.13787053	-3.633	.0003
BO_DX33	.07568658	.06357162	1.191	.2338
BO_DE23	-.18395291	.07802428	-2.358	.0184
BO_DE33	-.02851209	.08443824	-.338	.7356
BO_DE43	.19143929	.08739205	2.191	.0285
A_M	-.98169353	.09926384	-9.890	.0000
M_NV4	-.07934181	.00983517	-8.067	.0000
M_ES4	-1.36851499	.09319783	-14.684	.0000
M_LZ4	-.64659861	.05096682	-12.687	.0000
M_CS4	-.78847401	.06797090	-11.600	.0000
M_D24	-.06921175	.00975157	-7.097	.0000
M_DX14	-30.2197116	.137873D+07	.000	1.0000
M_DX24	-.40299812	.08895772	-4.530	.0000
M_DX34	-.01452805	.04978670	-.292	.7704
M_DE24	-.21816826	.04328470	-5.040	.0000
M_DE34	.11246942	.04939062	2.277	.0228
M_DE44	-.08164612	.05780522	-1.412	.1578
A_P	7.12003234	.40797075	17.452	.0000
P_NV5	-.45212769	.01775889	-25.459	.0000
P_ES5	.65220404	.07013947	9.299	.0000
P_LZ5	-.21999812	.06502516	-3.383	.0007

P_CS5	-.33414964	.08060086	-4.146	.0000
P_D25	-1.81632051	.06414810	-28.314	.0000
P_DX15	1.25036756	.37987761	3.292	.0010
P_DX25	-1.85534476	.30121720	-6.159	.0000
P_DX35	-2.82676294	.24496570	-11.539	.0000
P_DE25	-.12894916	.06157317	-2.094	.0362
P_DE35	-.57787426	.07861396	-7.351	.0000
P_DE45	-1.08055859	.09317737	-11.597	.0000

MNL3.99a –
- ASC

Genéricas
- M11a: Variável binária modo da 1ª viagem do dia for Walk+BUS (se não for a 1ª viagem) (excluindo 1ª viagens)
- M12a: Variável binária modo da 1ª viagem do dia for BUS (se não for a 1ª viagem) (excluindo 1ª viagens)
- M13a: Variável binária modo da 1ª viagem do dia for Outro BUS (se não for a 1ª viagem) (excluindo 1ª viagens)
- M14a: Variável binária modo da 1ª viagem do dia for MOTO (se não for a 1ª viagem) (excluindo 1ª viagens)
- M15a: Variável binária modo da 1ª viagem do dia for Walk (se não for a 1ª viagem) (excluindo 1ª viagens)
- M16a: Variável binária modo da 1ª viagem do dia for Auto (se não for a 1ª viagem) (excluindo 1ª viagens)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rhs=M11A,M12A,M13A,M14A,M15A,M16A;Rh2=ONE$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 12, 2012 at 03:12:11PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            64877     |
| Iterations completed                  7     |
| Log likelihood function       -32647.88     |
| Number of parameters                  6     |
| Info. Criterion: AIC =          1.00664     |
|   Finite Sample: AIC =          1.00664     |
| Info. Criterion: BIC =          1.00748     |
| Info. Criterion:HQIC =          1.00690     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -80575.9206  .59482  .59481 |
| Chi-squared[ 1]          =  95856.08464     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
```

Variable	Coefficient	Standard Error	b/St.Er.	P[|Z|>z]
ATTRIB01	3.16106450	.01272500	248.414	.0000
A_BP	-2.17799169	.03543484	-61.465	.0000
A_B	-.83076058	.01995136	-41.639	.0000
A_BO	-1.89055312	.03050701	-61.971	.0000
A_M	-1.40144874	.02478485	-56.545	.0000
A_P	-1.27992260	.02171511	-58.942	.0000

MNL3.128 –
- ASC

- d2 -Var. continua para distância + curta entre centróides (excepto pedonais 3,6km/h)
- dx1 - Var.bin distância + curta entre centróides (expto ped.3,6km/h) <=1,0km
- dx2 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >1,0km e <= 2,0km
- dx3 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >2,0km e <=5,0km
- *dx4 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >5,0km (excluída)*

- Tia – Variável continua genérica duração média apreendida da viagem por modo (min) entre GA com a duração apreendida real qd é o modo escolhido

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rhs=T1A,T2A,T3A,T4A,T5A,T6A;Rh2=ONE,D2,DX1,DX2,DX3$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 12, 2012 at 03:25:25PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            30559     |
| Iterations completed                 31     |
| Log likelihood function       -31979.45     |
| Number of parameters                 26     |
| Info. Criterion: AIC =          2.09467     |
|   Finite Sample: AIC =          2.09467     |
| Info. Criterion: BIC =          2.10175     |
| Info. Criterion:HQIC =          2.09694     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -39687.0783  .19421  .19407 |
| Chi-squared[21]          =  15415.26345     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 ATTRIB01|     .01393558       .00105190    13.248   .0000
 A_BP    |   -3.09110509       .19361137   -15.966   .0000
```

BP_D21	-.00575944	.02566735	-.224	.8225
BP_DX11	-.20373701	.814430D+07	.000	1.0000
BP_DX21	.00918959	.17710021	.052	.9586
BP_DX31	-.33523408	.11342040	-2.956	.0031
A_B	-.90056250	.09440223	-9.540	.0000
B_D22	-.03983998	.01275568	-3.123	.0018
B_DX12	-.44058803	.398140D+07	.000	1.0000
B_DX22	-1.50693841	.10718183	-14.060	.0000
B_DX32	-.31869478	.05453129	-5.844	.0000
A_BO	-2.42213589	.16800971	-14.417	.0000
BO_D23	-.00843662	.02265244	-.372	.7096
BO_DX13	-.23460068	.701371D+07	.000	1.0000
BO_DX23	-.84954943	.17459922	-4.866	.0000
BO_DX33	-.19817180	.09674633	-2.048	.0405
A_M	-1.90958359	.14971712	-12.755	.0000
M_D24	-.05097703	.02032806	-2.508	.0122
M_DX14	-.17039459	.568725D+07	.000	1.0000
M_DX24	-.46230460	.14140721	-3.269	.0011
M_DX34	.15583814	.08509099	1.831	.0670
A_P	11.2640214	.59277419	19.002	.0000
P_D25	-3.01043809	.10288155	-29.261	.0000
P_DX15	27.5116228	.187469D+07	.000	1.0000
P_DX25	-6.82193326	.44410571	-15.361	.0000
P_DX35	-5.55882895	.35018060	-15.874	.0000

MNL3.113a –
- ASC

- Fm0 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 9:30 (nfreq730930/2) ***sem zeros***
- Fa0 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 10:30 e as 12:30 (nfreq10301230/2) ***sem zeros***
- Ft0 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 17:00 e as 19:30 (nfreq17001930/2,5) ***sem zeros***
- Ftl0 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 19:30 (nfreq7301930/12) ***sem zeros***

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,FM0,FA0,FT0,FTL0$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 14, 2012 at 06:10:47PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            36041     |
| Iterations completed                  7     |
| Log likelihood function       -42949.53     |
| Number of parameters                 25     |
| Info. Criterion: AIC =          2.38476     |
|   Finite Sample: AIC =          2.38476     |
| Info. Criterion: BIC =          2.39065     |
| Info. Criterion:HQIC =          2.38663     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -44220.4226  .02874  .02861 |
| Chi-squared[20]          =   2541.77616     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -3.35734302       .05239342   -64.079    .0000
 BP_FM01  |     .09541182       .03657236     2.609    .0091
 BP_FA01  |     .03858115       .03785339     1.019    .3081
```

BP_FT01	-.03966816	.03217814	-1.233	.2177
BP_FTL1	-.03824887	.03388133	-1.129	.2589
A_B	-1.22560868	.01990667	-61.568	.0000
B_FM02	.24071535	.01382447	17.412	.0000
B_FA02	.01685603	.01404447	1.200	.2301
B_FT02	-.09365559	.01204739	-7.774	.0000
B_FTL2	-.07943896	.01269783	-6.256	.0000
A_BO	-2.76178863	.05157089	-53.553	.0000
BO_FM03	-.28112071	.05696001	-4.935	.0000
BO_FA03	.07149077	.06168283	1.159	.2465
BO_FT03	.25932111	.04303855	6.025	.0000
BO_FTL3	-.13932655	.05623155	-2.478	.0132
A_M	-2.49960883	.04321524	-57.841	.0000
M_FM04	-.09577128	.04275474	-2.240	.0251
M_FA04	-.09358434	.04412148	-2.121	.0339
M_FT04	.06704701	.03527069	1.901	.0573
M_FTL4	.00779537	.04065884	.192	.8480
A_P	-1.72279608	.02402268	-71.715	.0000
P_FM05	.21553197	.01652457	13.043	.0000
P_FA05	.09360057	.01674695	5.589	.0000
P_FT05	-.14090101	.01515011	-9.300	.0000
P_FTL5	-.06758319	.01488253	-4.541	.0000

MNL3.113b –
- ASC

- Fm1 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 9:30 (nfreq730930/2) ***com valores em GA muito proximas***
- Fa1 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 10:30 e as 12:30 (nfreq10301230/2) ***com valores em GA muito proximas***
- Ft1 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 17:00 e as 19:30 (nfreq17001930/2,5) ***com valores em GA muito proximas***
- Ftl1 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 19:30 (nfreq7301930/12) ***com valores em GA muito proximas***

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,FM1,FA1,FT1,FTL1$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 14, 2012 at 06:15:45PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            41329     |
| Iterations completed                  6     |
| Log likelihood function       -50741.94     |
| Number of parameters                 25     |
| Info. Criterion: AIC =          2.45672     |
|   Finite Sample: AIC =          2.45672     |
| Info. Criterion: BIC =          2.46194     |
| Info. Criterion:HQIC =          2.45837     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -52160.0860  .02719  .02707 |
| Chi-squared[20]          =   2836.29970     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+---------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
```

A_BP	-3.34848000	.04835179	-69.252	.0000
BP_FM11	.13393027	.03366699	3.978	.0001
BP_FA11	.03623247	.03508842	1.033	.3018
BP_FT11	-.07947587	.03023976	-2.628	.0086
BP_FTL1	-.02710879	.03088878	-.878	.3801
A_B	-1.16118680	.01843095	-63.002	.0000
B_FM12	.25133472	.01327854	18.928	.0000
B_FA12	.02559646	.01368399	1.871	.0614
B_FT12	-.10978636	.01165318	-9.421	.0000
B_FTL2	-.08068247	.01225401	-6.584	.0000
A_BO	-2.85430614	.04817075	-59.254	.0000
BO_FM13	-.25028860	.05487020	-4.561	.0000
BO_FA13	.08958761	.05911408	1.516	.1296
BO_FT13	.23115636	.04149624	5.571	.0000
BO_FTL3	-.13105827	.05393150	-2.430	.0151
A_M	-2.49396795	.03965579	-62.890	.0000
M_FM14	-.06323595	.04125141	-1.533	.1253
M_FA14	-.07246764	.04268308	-1.698	.0895
M_FT14	.04515341	.03441742	1.312	.1895
M_FTL4	-.00609677	.03935348	-.155	.8769
A_P	-1.39185467	.02025659	-68.711	.0000
P_FM15	.18720313	.01487298	12.587	.0000
P_FA15	.11820363	.01543370	7.659	.0000
P_FT15	-.16055221	.01396020	-11.501	.0000
P_FTL5	-.05073026	.01365031	-3.716	.0002

MNL3.120a –
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=120min (média duração)
- De3 : variável binária duracão da estadia >120min & <=240min (média duração)
- De4 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De5: variável binária duracão da estadia >480min (muito longa duração)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,DE2,DE3,DE4,DE5$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 14, 2012 at 06:51:23PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            61358     |
| Iterations completed                  6     |
| Log likelihood function       -78027.38     |
| Number of parameters                 25     |
| Info. Criterion: AIC =          2.54416     |
|   Finite Sample: AIC =          2.54416     |
| Info. Criterion: BIC =          2.54784     |
| Info. Criterion:HQIC =          2.54530     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -79151.8564  .01421  .01413 |
| Chi-squared[20]          =   2248.95948     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -3.76803108       .07338068   -51.349    .0000
 BP_DE21  |     .15089553       .10705520     1.410    .1587
 BP_DE31  |     .38453327       .09628953     3.994    .0001
 BP_DE41  |     .70397956       .09438729     7.458    .0000
 BP_DE51  |    1.13283272       .08950671    12.656    .0000
 A_B      |   -1.60955949       .02700867   -59.594    .0000
```

B_DE22	.31724517	.03830280	8.283	.0000
B_DE32	.54394273	.03503217	15.527	.0000
B_DE42	.65193890	.03600513	18.107	.0000
B_DE52	.88245015	.03562095	24.773	.0000
A_BO	-3.43155884	.06229739	-55.084	.0000
BO_DE23	-.02217060	.09521041	-.233	.8159
BO_DE33	.26969970	.08378880	3.219	.0013
BO_DE43	.97272443	.07665789	12.689	.0000
BO_DE53	1.59633769	.07181945	22.227	.0000
A_M	-2.05946254	.03278498	-62.817	.0000
M_DE24	-.40343756	.05567278	-7.247	.0000
M_DE34	-.05317707	.04751061	-1.119	.2630
M_DE44	.27615780	.04655686	5.932	.0000
M_DE54	.18378644	.04896315	3.754	.0002
A_P	-1.46281786	.02542637	-57.532	.0000
P_DE25	-.01599338	.03876573	-.413	.6799
P_DE35	.10171375	.03565899	2.852	.0043
P_DE45	.04522104	.03811380	1.186	.2354
P_DE55	-.57429842	.04658279	-12.329	.0000

MNL3.121a –
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=120min (média duração)
- De3 : variável binária duracão da estadia >120min & <=240min (média duração)
- De4 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De5: variável binária duracão da estadia >480min (muito longa duração)

- d2 -Var. continua para distância + curta entre centróides (excepto pedonais 3,6km/h)
- dx1 - Var.bin distância + curta entre centróides (expto ped.3,6km/h) <=1,0km
- dx2 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >1,0km e <= 2,0km
- dx3 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >2,0km e <=5,0km
- *dx4 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >5,0km (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,D2,DX1,DX2,DX3,DE2,DE3,DE4,DE5$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 14, 2012 at 07:01:37PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            61358     |
| Iterations completed                 30     |
| Log likelihood function       -61828.78     |
| Number of parameters                 45     |
| Info. Criterion: AIC =          2.01681     |
|   Finite Sample: AIC =          2.01681     |
| Info. Criterion: BIC =          2.02343     |
| Info. Criterion:HQIC =          2.01887     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -79151.8564  .21886  .21874 |
| Chi-squared[40]          =  34646.16031     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+---------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
```

A_BP	-4.31739827	.12514061	-34.500	.0000
BP_D21	.06534169	.01171143	5.579	.0000
BP_DX11	.11078284	1.01653138	.109	.9132
BP_DX21	.78218124	.12768704	6.126	.0000
BP_DX31	.28492206	.08096627	3.519	.0004
BP_DE21	.14857753	.10709321	1.387	.1653
BP_DE31	.38116121	.09632480	3.957	.0001
BP_DE41	.70526838	.09442466	7.469	.0000
BP_DE51	1.12568069	.08977504	12.539	.0000
A_B	-1.54933631	.05272027	-29.388	.0000
B_D22	-.01299976	.00574077	-2.264	.0235
B_DX12	.15574547	.29695291	.524	.5999
B_DX22	-.01400682	.05626511	-.249	.8034
B_DX32	.02188303	.03277622	.668	.5044
B_DE22	.31924303	.03831134	8.333	.0000
B_DE32	.54551668	.03504031	15.568	.0000
B_DE42	.65108389	.03601042	18.080	.0000
B_DE52	.89120049	.03569959	24.964	.0000
A_BO	-3.60361885	.10231962	-35.219	.0000
BO_D23	.02651549	.00986961	2.687	.0072
BO_DX13	-29.7828322	.207327D+07	.000	1.0000
BO_DX23	-.49943420	.13659825	-3.656	.0003
BO_DX33	.11731730	.06263203	1.873	.0611
BO_DE23	-.02281621	.09523604	-.240	.8107
BO_DE33	.27078227	.08381283	3.231	.0012
BO_DE43	.97493131	.07668344	12.714	.0000
BO_DE53	1.57731042	.07196984	21.916	.0000
A_M	-1.68722980	.08044867	-20.973	.0000
M_D24	-.06472689	.00971563	-6.662	.0000
M_DX14	-30.5252916	.155696D+07	.000	1.0000
M_DX24	-.41789413	.08872320	-4.710	.0000
M_DX34	-.01270717	.04969787	-.256	.7982
M_DE24	-.39592396	.05572161	-7.105	.0000
M_DE34	-.04594906	.04756062	-.966	.3340
M_DE44	.27347571	.04660544	5.868	.0000
M_DE54	.20775330	.04910617	4.231	.0000
A_P	4.72155087	.38485228	12.268	.0000
P_D25	-1.78849252	.06246186	-28.633	.0000
P_DX15	1.16929440	.37245364	3.139	.0017
P_DX25	-1.74496904	.29549875	-5.905	.0000
P_DX35	-2.74740947	.24138170	-11.382	.0000
P_DE25	.02721903	.07122240	.382	.7023
P_DE35	.17905687	.06513300	2.749	.0060
P_DE45	.05576979	.06933984	.804	.4212
P_DE55	.15872421	.07837146	2.025	.0428

MNL3.123a –
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=120min (média duração)
- De3 : variável binária duracão da estadia >120min & <=240min (média duração)
- De4 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De5: variável binária duracão da estadia >480min (muito longa duração)

- *Rg:Variável binária para viagens de Regresso a casa (exluída)*
- Tr: Variável binária para viagens para trabalho
- Es: Variável binária para viagens para a escola
- Lz: Variável binária para viagens em lazer
- CS: Variável binária para viagens para compras/serviços

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,TR,ES,LZ,CS,DE2,DE3,DE4,DE5$
Normal exit:   6 iterations. Status=0, F=    75954.55

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -75954.54694
Estimation based on N =  61358, K =  45
Inf.Cr.AIC  = 151999.1 AIC/N =    2.477
Model estimated: May 09, 2012, 12:43:09
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0404 .0403
Chi-squared[40]           =   6394.61887
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped34068 obs
--------+------------------------------------------------------------------
        |                   Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
   A_BP |   -3.73952***       .08415   -44.44   .0000    -3.90444   -3.57459
  BP_TR1|    -.39445***       .09694    -4.07   .0000     -.58445    -.20445
  BP_ES1|    1.20332***       .09693    12.41   .0000    1.01334    1.39331
  BP_LZ1|    -.31131***       .10557    -2.95   .0032     -.51823    -.10439
  BP_CS1|     .12413          .11248     1.10   .2698     -.09632     .34458
 BP_DE21|     .13185          .10749     1.23   .2200     -.07884     .34254
 BP_DE31|     .34473***       .10249     3.36   .0008      .14385     .54561
 BP_DE41|     .54255***       .11223     4.83   .0000      .32259     .76252
 BP_DE51|    1.03809***       .11255     9.22   .0000      .81749    1.25869
    A_B |   -1.66851***       .03148   -53.00   .0000    -1.73021   -1.60680
   B_TR2|    -.28928***       .03649    -7.93   .0000     -.36080    -.21776
   B_ES2|    1.07186***       .04060    26.40   .0000      .99229    1.15143
   B_LZ2|    -.03716          .03657    -1.02   .3096     -.10885     .03452
   B_CS2|     .26780***       .04070     6.58   .0000      .18802     .34757
  B_DE22|     .28967***       .03856     7.51   .0000      .21410     .36525
  B_DE32|     .53502***       .03732    14.34   .0000      .46187     .60816
  B_DE42|     .57473***       .04272    13.45   .0000      .49099     .65847
  B_DE52|     .86331***       .04426    19.51   .0000      .77658     .95005
   A_BO |   -3.15392***       .06762   -46.64   .0000    -3.28644   -3.02139
```

BO_TR3	-.59043***	.07815	-7.56	.0000	-.74359	-.43726
BO_ES3	1.34956***	.07595	17.77	.0000	1.20071	1.49842
BO_LZ3	-.91973***	.10144	-9.07	.0000	-1.11854	-.72091
BO_CS3	-.73253***	.12200	-6.00	.0000	-.97165	-.49342
BO_DE23	-.02441	.09589	-.25	.7990	-.21235	.16352
BO_DE33	.11644	.08980	1.30	.1947	-.05956	.29245
BO_DE43	.58766***	.09220	6.37	.0000	.40694	.76838
BO_DE53	1.28922***	.09174	14.05	.0000	1.10941	1.46903
A_M	-1.83131***	.03691	-49.62	.0000	-1.90365	-1.75897
M_TR4	.04754	.04761	1.00	.3180	-.04577	.14084
M_ES4	-1.25543***	.09944	-12.63	.0000	-1.45033	-1.06054
M_LZ4	-.55222***	.05439	-10.15	.0000	-.65883	-.44562
M_CS4	-.69023***	.06916	-9.98	.0000	-.82579	-.55468
M_DE24	-.34533***	.05597	-6.17	.0000	-.45502	-.23563
M_DE34	-.10103**	.05101	-1.98	.0476	-.20100	-.00105
M_DE44	.18012***	.05631	3.20	.0014	.06975	.29049
M_DE54	.05172	.06131	.84	.3989	-.06845	.17189
A_P	-1.55284***	.03084	-50.35	.0000	-1.61328	-1.49240
P_TR5	-.20247***	.04188	-4.83	.0000	-.28455	-.12038
P_ES5	1.03358***	.04707	21.96	.0000	.94132	1.12584
P_LZ5	.13886***	.03832	3.62	.0003	.06376	.21396
P_CS5	.22705***	.04328	5.25	.0000	.14223	.31187
P_DE25	-.05361	.03901	-1.37	.1694	-.13008	.02285
P_DE35	.07762**	.03836	2.02	.0430	.00244	.15280
P_DE45	-.03534	.04598	-.77	.4421	-.12546	.05478
P_DE55	-.60487***	.05506	-10.99	.0000	-.71278	-.49696

Note: ***, **, * ==> Significance at 1%, 5%, 10% level.

MNL3.124a –
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=120min (média duração)
- De3 : variável binária duracão da estadia >120min & <=240min (média duração)
- De4 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De5: variável binária duracão da estadia >480min (muito longa duração)

- *Rg:Variável binária para viagens de Regresso a casa (exluída)*
- Tr: Variável binária para viagens para trabalho
- Es: Variável binária para viagens para a escola
- Lz: Variável binária para viagens em lazer
- CS: Variável binária para viagens para compras/serviços

- d2 -Var. continua para distância + curta entre centróides (excepto pedonais 3,6km/h)
- dx1 - Var.bin distância + curta entre centróides (expto ped.3,6km/h) <=1,0km
- dx2 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >1,0km e <= 2,0km
- dx3 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >2,0km e <=5,0km
- *dx4 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >5,0km (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,TR,ES,LZ,CS,D2,DX1,DX2,DX3,DE2,DE3,DE4,DE5$
Maximum of   100 iterations. Exit iterations with status=1.

--------------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -59931.83192
Estimation based on N =  61358, K =  65
Inf.Cr.AIC  = 119993.7 AIC/N =    1.956
Model estimated: May 09, 2012, 11:49:16
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .2428 .2427
Chi-squared[60]           =  38440.04891
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped34068 obs
--------+-----------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+-----------------------------------------------------------------------
   A_BP |   -4.30799***       .13143   -32.78  .0000    -4.56558  -4.05040
  BP_TR1|    -.39777***       .09729    -4.09  .0000     -.58846   -.20708
  BP_ES1|    1.20918***       .09750    12.40  .0000     1.01808   1.40028
  BP_LZ1|    -.31744***       .10572    -3.00  .0027     -.52466   -.11022
  BP_CS1|      .08854         .11254      .79  .4314     -.13203    .30910
  BP_D21|      .07223***       .01176     6.14  .0000      .04918    .09528
 BP_DX11|      .09008        1.01668      .09  .9294    -1.90259   2.08274
 BP_DX21|      .78639***       .12841     6.12  .0000      .53471   1.03807
 BP_DX31|      .26428***       .08142     3.25  .0012      .10470    .42385
 BP_DE21|      .12752         .10764     1.18  .2361     -.08344    .33848
 BP_DE31|      .33951***       .10195     3.33  .0009      .13970    .53933
 BP_DE41|      .53197***       .11207     4.75  .0000      .31230    .75163
```

BP_DE51	1.01165***	.11257	8.99	.0000	.79101	1.23229
A_B	-1.61604***	.05552	-29.11	.0000	-1.72485	-1.50723
B_TR2	-.28318***	.03663	-7.73	.0000	-.35498	-.21139
B_ES2	1.06889***	.04088	26.15	.0000	.98877	1.14901
B_LZ2	-.04248	.03663	-1.16	.2462	-.11427	.02932
B_CS2	.25818***	.04074	6.34	.0000	.17834	.33803
B_D22	-.00902	.00584	-1.55	.1222	-.02047	.00242
B_DX12	.13058	.29728	.44	.6605	-.45208	.71324
B_DX22	-.01977	.05723	-.35	.7298	-.13194	.09241
B_DX32	.00759	.03341	.23	.8204	-.05789	.07306
B_DE22	.28859***	.03861	7.48	.0000	.21292	.36426
B_DE32	.53377***	.03723	14.34	.0000	.46081	.60673
B_DE42	.56588***	.04283	13.21	.0000	.48195	.64982
B_DE52	.85143***	.04442	19.17	.0000	.76437	.93849
A_BO	-3.39561***	.10618	-31.98	.0000	-3.60373	-3.18749
BO_TR3	-.59893***	.07853	-7.63	.0000	-.75285	-.44501
BO_ES3	1.34899***	.07651	17.63	.0000	1.19903	1.49895
BO_LZ3	-.91816***	.10158	-9.04	.0000	-1.11725	-.71907
BO_CS3	-.74714***	.12202	-6.12	.0000	-.98630	-.50798
BO_D23	.03974***	.00995	4.00	.0001	.02025	.05924
BO_DX13	-100.237	.8000D+21	.00	1.0000	**********	**********
BO_DX23	-.47404***	.13788	-3.44	.0006	-.74428	-.20380
BO_DX33	.08491	.06362	1.33	.1820	-.03978	.20960
BO_DE23	-.00867	.09604	-.09	.9281	-.19691	.17957
BO_DE33	.14282	.08946	1.60	.1104	-.03252	.31815
BO_DE43	.60479***	.09236	6.55	.0000	.42378	.78581
BO_DE53	1.26782***	.09191	13.79	.0000	1.08768	1.44797
A_M	-1.46550***	.08222	-17.82	.0000	-1.62666	-1.30435
M_TR4	.03414	.04783	.71	.4753	-.05961	.12790
M_ES4	-1.28878***	.09974	-12.92	.0000	-1.48425	-1.09330
M_LZ4	-.55257***	.05450	-10.14	.0000	-.65939	-.44574
M_CS4	-.66024***	.06923	-9.54	.0000	-.79594	-.52455
M_D24	-.06593***	.00974	-6.77	.0000	-.08502	-.04684
M_DX14	-101.325	.8000D+21	.00	1.0000	**********	**********
M_DX24	-.39617***	.08889	-4.46	.0000	-.57040	-.22194
M_DX34	-.01141	.04975	-.23	.8185	-.10893	.08610
M_DE24	-.33184***	.05605	-5.92	.0000	-.44170	-.22198
M_DE34	-.07833	.05100	-1.54	.1245	-.17829	.02162
M_DE44	.19918***	.05651	3.52	.0004	.08842	.30994
M_DE54	.11328*	.06156	1.84	.0658	-.00738	.23394
A_P	4.60893***	.38726	11.90	.0000	3.84992	5.36794
P_TR5	-.19290***	.07402	-2.61	.0092	-.33797	-.04782
P_ES5	.80529***	.08447	9.53	.0000	.63974	.97085
P_LZ5	.07676	.06887	1.11	.2650	-.05822	.21174
P_CS5	.15600**	.07955	1.96	.0499	.00009	.31191
P_D25	-1.77707***	.06264	-28.37	.0000	-1.89984	-1.65429
P_DX15	1.19492***	.37324	3.20	.0014	.46338	1.92646
P_DX25	-1.71698***	.29612	-5.80	.0000	-2.29737	-1.13659
P_DX35	-2.72978***	.24158	-11.30	.0000	-3.20327	-2.25630
P_DE25	.00871	.07149	.12	.9030	-.13140	.14883
P_DE35	.18282***	.07094	2.58	.0100	.04379	.32186
P_DE45	.01026	.08335	.12	.9021	-.15312	.17363
P_DE55	.15299	.09441	1.62	.1051	-.03205	.33803

Note: nnnnn.D-xx or D+xx => multiply by 10 to -xx or +xx.
Note: ***, **, * ==> Significance at 1%, 5%, 10% level.

MNL3.126a –
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=120min (média duração)
- De3 : variável binária duracão da estadia >120min & <=240min (média duração)
- De4 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De5: variável binária duracão da estadia >480min (muito longa duração)

- *Rg:Variável binária para viagens de Regresso a casa (exluída)*
- Tr: Variável binária para viagens para trabalho
- Es: Variável binária para viagens para a escola
- Lz: Variável binária para viagens em lazer
- CS: Variável binária para viagens para compras/serviços

- nV: ntotalviag Número total de viagens de cada individuo por dia

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NV,TR,ES,LZ,CS,DE2,DE3,DE4,DE5$
Normal exit:   6 iterations. Status=0, F=    74322.06

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -74322.05648
Estimation based on N =  61358, K =  50
Inf.Cr.AIC  = 148744.1 AIC/N =    2.424
Model estimated: May 09, 2012, 12:58:32
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********   .0610 .0609
Chi-squared[45]           =   9659.59978
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped34068 obs
--------+------------------------------------------------------------------
        |                   Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -1.43282***       .14543    -9.85  .0000    -1.71786  -1.14778
  BP_NV1|    -.44404***       .02524   -17.59  .0000     -.49351   -.39457
  BP_TR1|    -.50763***       .09979    -5.09  .0000     -.70321   -.31205
  BP_ES1|     .84768***       .10098     8.39  .0000      .64977   1.04560
  BP_LZ1|    -.73571***       .11005    -6.69  .0000     -.95140   -.52002
  BP_CS1|    -.47315***       .11899    -3.98  .0001     -.70637   -.23993
 BP_DE21|     .00921          .10808      .09  .9321     -.20262    .22104
 BP_DE31|     .14448          .10305     1.40  .1609     -.05748    .34645
 BP_DE41|     .10693          .11511      .93  .3529     -.11868    .33255
 BP_DE51|     .02314          .12283      .19  .8505     -.21760    .26389
     A_B|     .46012***       .05463     8.42  .0000      .35304    .56720
   B_NV2|    -.40525***       .00909   -44.58  .0000     -.42306   -.38743
   B_TR2|    -.37083***       .03769    -9.84  .0000     -.44469   -.29697
   B_ES2|     .75611***       .04214    17.94  .0000      .67350    .83871
   B_LZ2|    -.41892***       .03865   -10.84  .0000     -.49467   -.34318
   B_CS2|    -.27597***       .04369    -6.32  .0000     -.36159   -.19034
  B_DE22|     .17065***       .03957     4.31  .0000      .09310    .24820
```

B_DE32	.33067***	.03831	8.63	.0000	.25559	.40576
B_DE42	.15879***	.04444	3.57	.0004	.07169	.24590
B_DE52	-.10157**	.04898	-2.07	.0381	-.19758	-.00556
A_BO	-1.58576***	.11525	-13.76	.0000	-1.81164	-1.35987
BO_NV3	-.29328***	.01884	-15.57	.0000	-.33020	-.25636
BO_TR3	-.66322***	.07972	-8.32	.0000	-.81947	-.50697
BO_ES3	1.10910***	.07854	14.12	.0000	.95517	1.26304
BO_LZ3	-1.18472***	.10366	-11.43	.0000	-1.38790	-.98154
BO_CS3	-1.10509***	.12497	-8.84	.0000	-1.35003	-.86015
BO_DE23	-.10476	.09623	-1.09	.2763	-.29337	.08385
BO_DE33	-.01921	.09028	-.21	.8315	-.19616	.15773
BO_DE43	.29963***	.09423	3.18	.0015	.11494	.48433
BO_DE53	.58523***	.09956	5.88	.0000	.39010	.78036
A_M	-1.41621***	.06614	-21.41	.0000	-1.54583	-1.28658
M_NV4	-.07213***	.00981	-7.35	.0000	-.09136	-.05290
M_TR4	.04642	.04752	.98	.3286	-.04672	.13956
M_ES4	-1.30210***	.09970	-13.06	.0000	-1.49750	-1.10669
M_LZ4	-.60622***	.05498	-11.03	.0000	-.71398	-.49846
M_CS4	-.77402***	.07014	-11.03	.0000	-.91150	-.63654
M_DE24	-.37475***	.05609	-6.68	.0000	-.48469	-.26481
M_DE34	-.15837***	.05145	-3.08	.0021	-.25920	-.05754
M_DE44	.07936	.05734	1.38	.1664	-.03303	.19175
M_DE54	-.15442**	.06709	-2.30	.0213	-.28591	-.02294
A_P	-.10430*	.05531	-1.89	.0594	-.21272	.00411
P_NV5	-.26796***	.00894	-29.99	.0000	-.28548	-.25045
P_TR5	-.22067***	.04249	-5.19	.0000	-.30394	-.13739
P_ES5	.83990***	.04805	17.48	.0000	.74572	.93408
P_LZ5	-.08446**	.03963	-2.13	.0331	-.16212	-.00679
P_CS5	-.10411**	.04535	-2.30	.0217	-.19298	-.01523
P_DE25	-.14287***	.03960	-3.61	.0003	-.22050	-.06525
P_DE35	-.08557**	.03911	-2.19	.0287	-.16223	-.00891
P_DE45	-.33718***	.04743	-7.11	.0000	-.43014	-.24422
P_DE55	-1.30395***	.05937	-21.96	.0000	-1.42032	-1.18758

Note: ***, **, * ==> Significance at 1%, 5%, 10% level.

MNL3.127a –
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=120min (média duração)
- De3 : variável binária duracão da estadia >120min & <=240min (média duração)
- De4 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De5: variável binária duracão da estadia >480min (muito longa duração)

- *Rg:Variável binária para viagens de Regresso a casa (exluída)*
- Tr: Variável binária para viagens para trabalho
- Es: Variável binária para viagens para a escola
- Lz: Variável binária para viagens em lazer
- CS: Variável binária para viagens para compras/serviços

- nV: ntotalviag Número total de viagens de cada individuo por dia

- d2 -Var. continua para distância + curta entre centróides (excepto pedonais 3,6km/h)
- dx1 - Var.bin distância + curta entre centróides (expto ped.3,6km/h) <=1,0km
- dx2 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >1,0km e <= 2,0km
- dx3 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >2,0km e <=5,0km
- *dx4 - Var.bin dist. + curta entre centróides (expto ped.3,6km/h) >5,0km (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NV,TR,ES,LZ,CS,D2,DX1,DX2,DX3,DE2,DE3,DE4,DE5$
Maximum of   100 iterations. Exit iterations with status=1.

------------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -58321.63931
Estimation based on N =  61358, K =  70
Inf.Cr.AIC  = 116783.3 AIC/N =    1.903
Model estimated: May 09, 2012, 12:19:49
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .2632 .2630
Chi-squared[65]           =  41660.43413
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped34068 obs
--------+---------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+---------------------------------------------------------------------
    A_BP|   -1.97345***       .17946   -11.00  .0000    -2.32518  -1.62171
  BP_NV1|    -.43335***       .02514   -17.24  .0000     -.48262   -.38409
  BP_TR1|    -.51169***       .10005    -5.11  .0000     -.70778   -.31559
  BP_ES1|     .84899***       .10156     8.36  .0000      .64994   1.04804
  BP_LZ1|    -.73900***       .11028    -6.70  .0000     -.95515   -.52285
  BP_CS1|    -.48018***       .11892    -4.04  .0001     -.71327   -.24710
  BP_D21|     .05820***       .01178     4.94  .0000      .03511    .08129
 BP_DX11|      .27598        1.01714      .27  .7861    -1.71758   2.26954
 BP_DX21|     .76291***       .12884     5.92  .0000      .51038   1.01543
```

BP_DX31	.26123***	.08173	3.20	.0014	.10105	.42142
BP_DE21	.01047	.10831	.10	.9230	-.20182	.22275
BP_DE31	.14234	.10254	1.39	.1651	-.05863	.34331
BP_DE41	.10745	.11482	.94	.3494	-.11759	.33249
BP_DE51	.03128	.12234	.26	.7982	-.20851	.27107
A_B	.57854***	.07282	7.95	.0000	.43582	.72126
B_NV2	-.40347***	.00912	-44.22	.0000	-.42135	-.38558
B_TR2	-.36466***	.03790	-9.62	.0000	-.43894	-.29038
B_ES2	.74494***	.04254	17.51	.0000	.66156	.82832
B_LZ2	-.42944***	.03882	-11.06	.0000	-.50552	-.35335
B_CS2	-.26951***	.04377	-6.16	.0000	-.35530	-.18372
B_D22	-.02215***	.00593	-3.73	.0002	-.03378	-.01053
B_DX12	.30719	.29865	1.03	.3037	-.27815	.89254
B_DX22	-.04209	.05836	-.72	.4707	-.15647	.07228
B_DX32	.00441	.03410	.13	.8971	-.06243	.07125
B_DE22	.17142***	.03972	4.32	.0000	.09356	.24927
B_DE32	.32794***	.03831	8.56	.0000	.25285	.40303
B_DE42	.15042***	.04463	3.37	.0008	.06295	.23790
B_DE52	-.10277**	.04915	-2.09	.0365	-.19910	-.00643
A_BO	-1.83327***	.14314	-12.81	.0000	-2.11382	-1.55273
BO_NV3	-.28161***	.01875	-15.02	.0000	-.31836	-.24485
BO_TR3	-.67122***	.08010	-8.38	.0000	-.82821	-.51424
BO_ES3	1.10820***	.07920	13.99	.0000	.95298	1.26342
BO_LZ3	-1.17974***	.10389	-11.36	.0000	-1.38336	-.97612
BO_CS3	-1.09671***	.12495	-8.78	.0000	-1.34160	-.85182
BO_D23	.03051***	.00996	3.06	.0022	.01099	.05002
BO_DX13	-100.057	.8000D+21	.00	1.0000	**********	**********
BO_DX23	-.49344***	.13807	-3.57	.0004	-.76405	-.22284
BO_DX33	.08144	.06377	1.28	.2016	-.04354	.20643
BO_DE23	-.08290	.09643	-.86	.3899	-.27190	.10610
BO_DE33	.01375	.08995	.15	.8785	-.16255	.19004
BO_DE43	.32970***	.09434	3.49	.0005	.14480	.51461
BO_DE53	.59717***	.09952	6.00	.0000	.40212	.79223
A_M	-1.00704***	.10008	-10.06	.0000	-1.20319	-.81088
M_NV4	-.07660***	.00983	-7.79	.0000	-.09588	-.05733
M_TR4	.03179	.04781	.67	.5060	-.06191	.12549
M_ES4	-1.34202***	.10004	-13.41	.0000	-1.53810	-1.14593
M_LZ4	-.61203***	.05515	-11.10	.0000	-.72012	-.50394
M_CS4	-.74564***	.07014	-10.63	.0000	-.88312	-.60816
M_D24	-.06909***	.00975	-7.09	.0000	-.08819	-.04998
M_DX14	-101.217	.8000D+21	.00	1.0000	**********	**********
M_DX24	-.40372***	.08895	-4.54	.0000	-.57806	-.22938
M_DX34	-.01419	.04977	-.29	.7756	-.11174	.08336
M_DE24	-.36141***	.05619	-6.43	.0000	-.47153	-.25129
M_DE34	-.13747***	.05144	-2.67	.0075	-.23830	-.03665
M_DE44	.09419	.05755	1.64	.1017	-.01861	.20699
M_DE54	-.10229	.06728	-1.52	.1284	-.23417	.02958
A_P	7.18507***	.40900	17.57	.0000	6.38345	7.98668
P_NV5	-.45288***	.01781	-25.43	.0000	-.48778	-.41797
P_TR5	-.23687***	.07608	-3.11	.0018	-.38598	-.08776
P_ES5	.48545***	.08666	5.60	.0000	.31559	.65531
P_LZ5	-.31604***	.07256	-4.36	.0000	-.45825	-.17382
P_CS5	-.40809***	.08555	-4.77	.0000	-.57576	-.24042
P_D25	-1.81795***	.06420	-28.32	.0000	-1.94378	-1.69212
P_DX15	1.24204***	.38010	3.27	.0011	.49706	1.98703
P_DX25	-1.86143***	.30138	-6.18	.0000	-2.45213	-1.27074
P_DX35	-2.83042***	.24507	-11.55	.0000	-3.31074	-2.35009
P_DE25	-.12254*	.07394	-1.66	.0975	-.26746	.02239
P_DE35	-.05254	.07328	-.72	.4734	-.19618	.09109
P_DE45	-.45313***	.08699	-5.21	.0000	-.62364	-.28263
P_DE55	-.92848***	.10341	-8.98	.0000	-1.13115	-.72581

```
--------+-------------------------------------------------------------------------
Note: nnnnn.D-xx or D+xx => multiply by 10 to -xx or +xx.
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-------------------------------------------------------------------------------
```

MNL3.129 –
- ASC

- nV: ntotalviag variável continua Número total de viagens de cada individuo por dia

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=120min (média duração)
- De3 : variável binária duracão da estadia >120min & <=240min (média duração)
- De4 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De5: variável binária duracão da estadia >480min (muito longa duração)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NV,DE2,DE3,DE4,DE5$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 15, 2012 at 00:00:57PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            61358     |
| Iterations completed                  6     |
| Log likelihood function       -76016.08     |
| Number of parameters                 30     |
| Info. Criterion: AIC =          2.47877     |
|   Finite Sample: AIC =          2.47877     |
| Info. Criterion: BIC =          2.48318     |
| Info. Criterion:HQIC =          2.48014     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -79151.8564  .03962  .03952 |
| Chi-squared[25]           =   6271.55591    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -1.70009413       .11885927   -14.303    .0000
 BP_NV1   |    -.44274422       .02288764   -19.344    .0000
 BP_DE21  |    -.01438215       .10774001     -.133    .8938
```

BP_DE31	.19294872	.09686505	1.992	.0464
BP_DE41	.31906112	.09599620	3.324	.0009
BP_DE51	.15954914	.09835909	1.622	.1048
A_B	.34309844	.04566818	7.513	.0000
B_NV2	-.41447980	.00844953	-49.054	.0000
B_DE22	.16110579	.03945828	4.083	.0000
B_DE32	.36018432	.03601900	10.000	.0000
B_DE42	.28611168	.03735768	7.659	.0000
B_DE52	-.04113277	.03971713	-1.036	.3004
A_BO	-1.97304823	.09854286	-20.022	.0000
BO_NV3	-.29825992	.01719748	-17.343	.0000
BO_DE23	-.13958005	.09564895	-1.459	.1445
BO_DE33	.12235793	.08422869	1.453	.1463
BO_DE43	.69085449	.07800579	8.856	.0000
BO_DE53	.89221592	.07988664	11.169	.0000
A_M	-1.91353679	.05895113	-32.460	.0000
M_NV4	-.02690907	.00911807	-2.951	.0032
M_DE24	-.41583184	.05583378	-7.448	.0000
M_DE34	-.07133420	.04789107	-1.490	.1364
M_DE44	.24473855	.04771365	5.129	.0000
M_DE54	.10964492	.05487951	1.998	.0457
A_P	-.04105452	.04700844	-.873	.3825
P_NV5	-.28993166	.00858815	-33.759	.0000
P_DE25	-.13053733	.03947616	-3.307	.0009
P_DE35	-.04270743	.03630523	-1.176	.2395
P_DE45	-.23024238	.03921789	-5.871	.0000
P_DE55	-1.26169832	.05034645	-25.060	.0000

MNL3.130 –
- ASC

- nV: ntotalviag variável continua Número total de viagens de cada individuo por dia

- *Rg:Variável binária para viagens de Regresso a casa (exluída)*
- Tr: Variável binária para viagens para trabalho
- Es: Variável binária para viagens para a escola
- Lz: Variável binária para viagens em lazer
- CS: Variável binária para viagens para compras/serviços

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NV,TR,ES,LZ,CS$
Normal exit:   6 iterations. Status=0, F=    117620.5

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -117620.47552
Estimation based on N =  95426, K =  30
Inf.Cr.AIC  = 235301.0 AIC/N =    2.466
Model estimated: May 09, 2012, 12:37:26
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0475 .0475
Chi-squared[25]           =  11737.78818
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
--------+------------------------------------------------------------------
        |                  Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -1.49766***       .05824   -25.72  .0000    -1.61180  -1.38352
  BP_NV1|    -.47013***       .01690   -27.83  .0000     -.50325   -.43702
  BP_TR1|    -.30762***       .05918    -5.20  .0000     -.42362   -.19163
  BP_ES1|    1.07662***       .06141    17.53  .0000      .95626   1.19699
  BP_LZ1|    -.63081***       .08830    -7.14  .0000     -.80387   -.45774
  BP_CS1|    -.32252***       .09851    -3.27  .0011     -.51560   -.12943
     A_B|     .33597***       .02356    14.26  .0000      .28980    .38214
   B_NV2|    -.39717***       .00618   -64.25  .0000     -.40928   -.38505
   B_TR2|    -.22394***       .02335    -9.59  .0000     -.26971   -.17818
   B_ES2|     .96096***       .03038    31.63  .0000      .90141   1.02051
   B_LZ2|    -.26757***       .03051    -8.77  .0000     -.32736   -.20778
   B_CS2|     -.06278*        .03628    -1.73  .0836     -.13389    .00834
    A_BO|   -1.18096***       .04741   -24.91  .0000    -1.27389  -1.08803
  BO_NV3|    -.43600***       .01338   -32.58  .0000     -.46223   -.40978
  BO_TR3|    -.23261***       .04723    -4.92  .0000     -.32518   -.14004
  BO_ES3|    1.49719***       .04569    32.77  .0000     1.40764   1.58675
  BO_LZ3|   -1.13681***       .08994   -12.64  .0000    -1.31309   -.96052
  BO_CS3|   -1.09318***       .11394    -9.59  .0000    -1.31650   -.86986
     A_M|   -1.94221***       .03364   -57.74  .0000    -2.00814  -1.87627
   M_NV4|    -.04672***       .00701    -6.67  .0000     -.06045   -.03298
   M_TR4|     .39781***       .02965    13.42  .0000      .33970    .45592
   M_ES4|    -.92619***       .09214   -10.05  .0000    -1.10679   -.74560
   M_LZ4|    -.39924***       .04819    -8.28  .0000     -.49370   -.30479
   M_CS4|    -.51011***       .06538    -7.80  .0000     -.63825   -.38196
```

```
     A_P|    -.85304***       .02644   -32.26  .0000      -.90487    -.80122
   P_NV5|    -.17325***       .00607   -28.56  .0000      -.18514    -.16136
   P_TR5|    -.41041***       .02902   -14.14  .0000      -.46728    -.35354
   P_ES5|     .77294***       .03637    21.25  .0000       .70167     .84422
   P_LZ5|     .08711***       .03148     2.77  .0057       .02540     .14881
   P_CS5|     .21429***       .03830     5.60  .0000       .13923     .28935
--------+-------------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-------------------------------------------------------------------------------
```

MNL3.113 (BWA) –
- ASC

- Fm - Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 9:30 (nfreq730930/2)
- Fa- Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 10:30 e as 12:30 (nfreq10301230/2)
- Ft - Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 17:00 e as 19:30 (nfreq17001930/2,5)
- Ftl - Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 19:30 (nfreq7301930/12)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=B,W,A[1]
;Rh2=ONE,FM,FA,FT,FTL$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 15, 2012 at 00:30:15PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            38310     |
| Iterations completed                  5     |
| Log likelihood function       -37462.24     |
| Number of parameters                 10     |
| Info. Criterion: AIC =          1.95626     |
|   Finite Sample: AIC =          1.95626     |
| Info. Criterion: BIC =          1.95850     |
| Info. Criterion:HQIC =          1.95697     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -38086.8580  .01640  .01627 |
| Chi-squared[ 8]          =   1249.24289     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 83169, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_B     |   -1.00290649       .01729939   -57.974   .0000
 B_FM1   |     .24105365       .01375048    17.531   .0000
 B_FA1   |     .05607699       .01383566     4.053   .0001
 B_FT1   |    -.10064613       .01196158    -8.414   .0000
```

```
 B_FTL1   |    -.11209161       .01245809    -8.997   .0000
 A_W      |   -1.10758811       .01847255   -59.959   .0000
 W_FM2    |     .22909149       .01624422    14.103   .0000
 W_FA2    |     .21235103       .01643866    12.918   .0000
 W_FT2    |    -.16468784       .01529646   -10.766   .0000
 W_FTL2   |    -.16741442       .01467436   -11.409   .0000
```

MNL3.113a (BWA) –

- ASC

- Fm0 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 9:30 (nfreq730930/2) ***sem zeros***
- Fa0 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 10:30 e as 12:30 (nfreq10301230/2) ***sem zeros***
- Ft0 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 17:00 e as 19:30 (nfreq17001930/2,5) ***sem zeros***
- Ftl0 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 19:30 (nfreq7301930/12) ***sem zeros***

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=B,W,A[1]
;Rh2=ONE,FM0,FA0,FT0,FTL0$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 15, 2012 at 00:32:13PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            33353     |
| Iterations completed                  5     |
| Log likelihood function       -30817.48     |
| Number of parameters                 10     |
| Info. Criterion: AIC =          1.84856     |
|   Finite Sample: AIC =          1.84856     |
| Info. Criterion: BIC =          1.85108     |
| Info. Criterion:HQIC =          1.84936     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -31742.6137  .02914  .02900 |
| Chi-squared[ 8]          =   1850.26868     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 83169, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
```

Variable	Coefficient	Standard Error	b/St.Er.	P[|Z|>z]
A_B	-1.22827534	.01993286	-61.621	.0000
B_FM01	.24358390	.01383504	17.606	.0000
B_FA01	.01780857	.01404848	1.268	.2049
B_FT01	-.09682815	.01203426	-8.046	.0000
B_FTL1	-.07933724	.01273095	-6.232	.0000
A_W	-1.72605376	.02404252	-71.792	.0000
W_FM02	.21881357	.01653141	13.236	.0000
W_FA02	.09415868	.01675214	5.621	.0000
W_FT02	-.14441234	.01515063	-9.532	.0000
W_FTL2	-.06724048	.01491500	-4.508	.0000

MNL3.113b (BWA) –
- ASC

- Fm1 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 9:30 (nfreq730930/2) ***com valores em GA muito proximas***
- Fa1 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 10:30 e as 12:30 (nfreq10301230/2) ***com valores em GA muito proximas***
- Ft1 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 17:00 e as 19:30 (nfreq17001930/2,5) ***com valores em GA muito proximas***
- Ftl1 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 19:30 (nfreq7301930/12) ***com valores em GA muito proximas***

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=B,W,A[1]
;Rh2=ONE,FM1,FA1,FT1,FTL1$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 15, 2012 at 00:34:22PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            38310     |
| Iterations completed                  5     |
| Log likelihood function       -37015.35     |
| Number of parameters                 10     |
| Info. Criterion: AIC =          1.93293     |
|   Finite Sample: AIC =          1.93293     |
| Info. Criterion: BIC =          1.93517     |
| Info. Criterion:HQIC =          1.93364     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -38086.8580  .02813  .02801 |
| Chi-squared[ 8]          =   2143.00763     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 83169, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+---------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
```

A_B	-1.16588532	.01846789	-63.130	.0000
B_FM11	.25580961	.01329375	19.243	.0000
B_FA11	.02774882	.01368041	2.028	.0425
B_FT11	-.11400058	.01164826	-9.787	.0000
B_FTL1	-.08151899	.01227539	-6.641	.0000
A_W	-1.39703477	.02028703	-68.863	.0000
W_FM12	.19231487	.01488919	12.916	.0000
W_FA12	.11965481	.01542417	7.758	.0000
W_FT12	-.16462426	.01395841	-11.794	.0000
W_FTL2	-.05172063	.01366156	-3.786	.0002

MNL3.115a (BWA)–
- ASC

- Fm0 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 9:30 (nfreq730930/2) ***sem zeros***

- TBA – Variável continua com a razão dos tempos médios de viagem em BUS e AUTO entre zona de Geração e Atracção

- V2 – Variável continua para velocidade comercial equivalente de BUS em km/h

```
DISCRETECHOICE;Lhs=MTRP;Choices=B,W,A[1];Rh2=ONE,FM0,V2,TBA$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 15, 2012 at 05:01:25PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            32269     |
| Iterations completed                  9     |
| Log likelihood function       -21453.30     |
| Number of parameters                  8     |
| Info. Criterion: AIC =          1.33015     |
|   Finite Sample: AIC =          1.33015     |
| Info. Criterion: BIC =          1.33223     |
| Info. Criterion:HQIC =          1.33081     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -30978.1195  .30747  .30738 |
| Chi-squared[ 6]          =  19049.64684     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 83169, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_B     |     .00765026       .08579142      .089   .9289
 B_FM01  |     .04129350       .00202992    20.342   .0000
 B_V21   |    -.01381396       .00291430    -4.740   .0000
 B_TBA1  |    -.59209241       .03829081   -15.463   .0000
 A_W     |    6.40362516       .13209424    48.478   .0000
 W_FM02  |    -.02116865       .00337797    -6.267   .0000
 W_V22   |    -.95441361       .01335122   -71.485   .0000
```

```
 W_TBA2  |     -.99291200       .05497501   -18.061   .0000
```

MNL3.115b (BWA)–
- ASC

- Fm1 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 9:30 (nfreq730930/2) ***com valores em GA muito proximas***

- TBA – Variável continua com a razão dos tempos médios de viagem em BUS e AUTO entre zona de Geração e Atracção

- V2 – Variável continua para velocidade comercial equivalente de BUS em km/h

```
DISCRETECHOICE;Lhs=MTRP;Choices=B,W,A[1];Rh2=ONE,FM1,V2,TBA$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 15, 2012 at 05:03:30PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            37226     |
| Iterations completed                  9     |
| Log likelihood function       -25500.93     |
| Number of parameters                  8     |
| Info. Criterion: AIC =          1.37049     |
|   Finite Sample: AIC =          1.37049     |
| Info. Criterion: BIC =          1.37232     |
| Info. Criterion:HQIC =          1.37107     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -37290.4129  .31615  .31608 |
| Chi-squared[ 6]          =  23578.96327     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 83169, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_B     |     .24229519       .07718734     3.139   .0017
 B_FM11  |     .04010834       .00185099    21.669   .0000
 B_V21   |    -.02573759       .00273081    -9.425   .0000
 B_TBA1  |    -.62032853       .03533782   -17.554   .0000
 A_W     |    6.22078483       .11080940    56.140   .0000
 W_FM12  |    -.01218062       .00274810    -4.432   .0000
```

```
W_V22    |     -.93522208        .01180209   -79.242   .0000
W_TBA2   |    -1.01079815        .04873781   -20.740   .0000
```

MNL3.116a (BWA)–
- ASC

- Ftl0 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 19:30 (nfreq7301930/12) ***sem zeros***

- TBA – Variável continua com a razão dos tempos médios de viagem em BUS e AUTO entre zona de Geração e Atracção

- V2 – Variável continua para velocidade comercial equivalente de BUS em km/h

```
DISCRETECHOICE;Lhs=MTRP;Choices=B,W,A[1];Rh2=ONE,Ftl0,V2,TBA$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 15, 2012 at 05:11:52PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            32269     |
| Iterations completed                  9     |
| Log likelihood function       -21484.54     |
| Number of parameters                  8     |
| Info. Criterion: AIC =          1.33209     |
|   Finite Sample: AIC =          1.33209     |
| Info. Criterion: BIC =          1.33416     |
| Info. Criterion:HQIC =          1.33275     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -30978.1195  .30646  .30637 |
| Chi-squared[ 6]          =  18987.16505     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 83169, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_B     |     .13966708       .08586401     1.627   .1038
 B_FTL1  |     .02949295       .00164598    17.918   .0000
 B_V21   |    -.01543477       .00292878    -5.270   .0000
 B_TBA1  |    -.64454708       .03823402   -16.858   .0000
 A_W     |    6.54576091       .13271190    49.323   .0000
 W_FTL2  |    -.02203437       .00268032    -8.221   .0000
 W_V22   |    -.95650493       .01335331   -71.631   .0000
```

```
 W_TBA2   |    -1.03438777        .05510522    -18.771    .0000
```

MNL3.116b (BWA)–
- ASC

- Ftl1 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 19:30 (nfreq7301930/12) ***com valores em GA muito proximas***

- TBA – Variável continua com a razão dos tempos médios de viagem em BUS e AUTO entre zona de Geração e Atracção

- V2 – Variável continua para velocidade comercial equivalente de BUS em km/h

```
DISCRETECHOICE;Lhs=MTRP;Choices=B,W,A[1];Rh2=ONE,Ftl1,V2,TBA$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 15, 2012 at 05:14:11PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            37226     |
| Iterations completed                  9     |
| Log likelihood function       -25544.36     |
| Number of parameters                  8     |
| Info. Criterion: AIC =          1.37282     |
|   Finite Sample: AIC =          1.37282     |
| Info. Criterion: BIC =          1.37466     |
| Info. Criterion:HQIC =          1.37340     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -37290.4129  .31499  .31492 |
| Chi-squared[ 6]          =  23492.11466     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 83169, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_B     |     .35467734       .07729724     4.588   .0000
 B_FTL1  |     .02885196       .00149926    19.244   .0000
 B_V21   |    -.02709771       .00274152    -9.884   .0000
 B_TBA1  |    -.66409415       .03529964   -18.813   .0000
 A_W     |    6.31422183       .11142772    56.667   .0000
 W_FTL2  |    -.01292867       .00218272    -5.923   .0000
```

```
W_V22    |     -.93604859        .01179797   -79.340   .0000
W_TBA2   |    -1.04305038        .04892348   -21.320   .0000
```

MNL3.80 –- ASC

- D2: Variável continua distância mais curta em Km entre os centróides ajustados das zonas de Geração e de Atracção (pares >=50 viagens) excepto para o modo Walk em que d2=tp/60*3,6km/h

- dx1: Variável binária para distâncias mais curtas D2<=1,0km
- *dx2a: Variável binária para distâncias mais curtas D2>1,0km (excluída)*

```
DISCRETECHOICE;Lhs=MTRP;Choices=Bp,B,Bo,M,P,A[1];Rh2=ONE,D2,DX1$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 17, 2012 at 07:50:40AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                 30     |
| Log likelihood function       -99003.91     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.07530     |
|   Finite Sample: AIC =          2.07530     |
| Info. Criterion: BIC =          2.07679     |
| Info. Criterion:HQIC =          2.07576     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********   .19828  .19825 |
| Chi-squared[10]           =  48970.91180    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -3.41226685       .04396827   -77.607    .0000
 BP_D21   |     .04404010       .00632940     6.958    .0000
 BP_DX11  |    -.81258634      1.00832627     -.806    .4203
 A_B      |   -1.03714953       .01800743   -57.596    .0000
 B_D22    |    -.00489400       .00283125    -1.729    .0839
 B_DX12   |     .02945634       .23890576      .123    .9019
 A_BO     |   -2.87159374       .03544854   -81.007    .0000
 BO_D23   |     .03216824       .00523050     6.150    .0000
 BO_DX13  |   -30.7735179     .245804D+07      .000   1.0000
```

A_M	-1.85783736	.02838850	-65.443	.0000
M_D24	-.04821523	.00477276	-10.102	.0000
M_DX14	-31.1564937	.185162D+07	.000	1.0000
A_P	3.65047664	.05678036	64.291	.0000
P_D25	-2.15546273	.02741000	-78.638	.0000
P_DX15	2.53118502	.12916087	19.597	.0000

MNL3.131 –
- ASC

- Variável binária Sexo (Sexo)
- Var.binária para nº auto disponíveis diariamente no agregado p/ capita (expto NC4a).

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC0,NC1,NC2,NC3,SX$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 21, 2012 at 01:48:05PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  8     |
| Log likelihood function       -109164.8     |
| Number of parameters                 30     |
| Info. Criterion: AIC =          2.28858     |
|   Finite Sample: AIC =          2.28858     |
| Info. Criterion: BIC =          2.29155     |
| Info. Criterion:HQIC =          2.28948     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  **********   .11600  .11594 |
| Chi-squared[25]           =  28649.04490    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -7.65289824       .57854663   -13.228   .0000
 BP_NC01  |    5.71020779       .57855649     9.870   .0000
 BP_NC11  |    3.96326291       .57940939     6.840   .0000
 BP_NC21  |    3.21482557       .57938195     5.549   .0000
 BP_NC31  |    1.89081513       .59755707     3.164   .0016
 BP_SX1   |     .96470141       .04625024    20.858   .0000
 A_B      |   -4.08726275       .10440166   -39.149   .0000
 B_NC02   |    4.28879950       .10517507    40.778   .0000
 B_NC12   |    2.57004306       .10523363    24.422   .0000
 B_NC22   |    1.87056308       .10496555    17.821   .0000
 B_NC32   |    1.02499632       .11227630     9.129   .0000
```

B_SX2	.81913748	.01931282	42.414	.0000
A_BO	-4.60769963	.16614732	-27.733	.0000
BO_NC03	3.32867385	.16797924	19.816	.0000
BO_NC13	2.24269658	.16806400	13.344	.0000
BO_NC23	1.20933920	.16886761	7.161	.0000
BO_NC33	.49492551	.18695954	2.647	.0081
BO_SX3	.07648889	.03510353	2.179	.0293
A_M	-4.06919106	.13760675	-29.571	.0000
M_NC04	3.73727205	.13900766	26.885	.0000
M_NC14	2.06744571	.13990950	14.777	.0000
M_NC24	1.38931088	.13967395	9.947	.0000
M_NC34	.46821827	.15555091	3.010	.0026
M_SX4	-.28208112	.02839591	-9.934	.0000
A_P	-3.38460083	.07943281	-42.610	.0000
P_NC05	3.31107700	.08055992	41.101	.0000
P_NC15	1.41943927	.08146221	17.425	.0000
P_NC25	.78304617	.08093913	9.675	.0000
P_NC35	-.16798184	.09706550	-1.731	.0835
P_SX5	.63520064	.02227910	28.511	.0000

MNL3.132 –
- ASC

- Variável binária Sexo (Sexo)
- Variável binária de disponibilidade de Licença de condução (Lc)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,SX,LC$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 21, 2012 at 01:53:05PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  6     |
| Log likelihood function       -110685.1     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.32013     |
|   Finite Sample: AIC =          2.32013     |
| Info. Criterion: BIC =          2.32161     |
| Info. Criterion:HQIC =          2.32058     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .10369  .10366 |
| Chi-squared[10]           =  25608.47598    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -2.30665048       .04080544   -56.528   .0000
 BP_SX1   |     .43690968       .04683887     9.328   .0000
 BP_LC1   |   -2.50977816       .05768030   -43.512   .0000
 A_B      |    -.20232591       .01732743   -11.677   .0000
 B_SX2    |     .33396246       .01947292    17.150   .0000
 B_LC2    |   -2.22876948       .02080011  -107.152   .0000
 A_BO     |   -1.37182902       .02767735   -49.565   .0000
 BO_SX3   |    -.42765278       .03599226   -11.882   .0000
 BO_LC3   |   -2.39575307       .04238867   -56.519   .0000
 A_M      |    -.88872181       .02236130   -39.744   .0000
```

M_SX4	-.68088166	.02868220	-23.739	.0000
M_LC4	-1.73205592	.02865997	-60.435	.0000
A_P	-.58322302	.01956408	-29.811	.0000
P_SX5	.17204313	.02229387	7.717	.0000
P_LC5	-2.08376468	.02397169	-86.926	.0000

MNL3.133 –
- ASC

- V2: Velocidade comercial equivalente por Bus em km/h (d2/T2*60)

- Ftl1 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 19:30 (nfreq7301930/12) ***com valores em GA muito proximas***

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,FTL1,V2$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 21, 2012 at 04:48:11PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            40099     |
| Iterations completed                  9     |
| Log likelihood function       -38793.32     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          1.93563     |
|   Finite Sample: AIC =          1.93563     |
| Info. Criterion: BIC =          1.93884     |
| Info. Criterion:HQIC =          1.93664     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -50751.5442  .23562  .23557 |
| Chi-squared[10]          =  23916.45550     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP     |   -3.32282879       .09396367   -35.363    .0000
 BP_FTL1  |     .03294109       .00347026     9.492    .0000
 BP_V21   |     .00217584       .00656017      .332    .7401
 A_B      |    -.96572150       .03623510   -26.652    .0000
 B_FTL2   |     .03992846       .00138992    28.727    .0000
```

B_V22	-.01039089	.00259499	-4.004	.0001
A_BO	-2.79932105	.09893071	-28.296	.0000
BO_FTL3	-.08298204	.00766545	-10.825	.0000
BO_V23	-.00083056	.00698771	-.119	.9054
A_M	-2.30543590	.08501737	-27.117	.0000
M_FTL4	-.05848324	.00546099	-10.709	.0000
M_V24	-.02001679	.00630730	-3.174	.0015
A_P	4.47749065	.06336826	70.658	.0000
P_FTL5	.00246054	.00200233	1.229	.2191
P_V25	-.93553700	.01160295	-80.629	.0000

MNL3.134 –
- ASC

- TBA: Variável continua Razão tempos médios de viagem em Bus/AUTO entre as zonas de Geração e Atracção

- Ftl1 : Frequencia média horária de TC potencialmente à disposição entre a zona de geração e de atracção entre as 7:30 e as 19:30 (nfreq7301930/12) ***com valores em GA muito proximas***

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,FTL1,TBA$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 21, 2012 at 04:52:36PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            40099     |
| Iterations completed                  6     |
| Log likelihood function       -49590.60     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.47416     |
|   Finite Sample: AIC =          2.47416     |
| Info. Criterion: BIC =          2.47737     |
| Info. Criterion:HQIC =          2.47517     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -50751.5442  .02288  .02280 |
| Chi-squared[10]           =   2321.89217    |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -1.98576691       .14988553   -13.249   .0000
 BP_FTL1  |     .02230912       .00356502     6.258   .0000
 BP_TBA1  |    -.79045445       .08937059    -8.845   .0000
 A_B      |    -.25839336       .05640483    -4.581   .0000
```

B_FTL2	.03492790	.00141073	24.759	.0000
B_TBA2	-.49705182	.03216066	-15.455	.0000
A_BO	-3.36076033	.15191899	-22.122	.0000
BO_FTL3	-.07316388	.00755673	-9.682	.0000
BO_TBA3	.29450075	.07746604	3.802	.0001
A_M	-2.75171313	.12842316	-21.427	.0000
M_FTL4	-.05223734	.00548881	-9.517	.0000
M_TBA4	.11034014	.06754643	1.634	.1024
A_P	-.66377586	.06284876	-10.561	.0000
P_FTL5	.03513086	.00154599	22.724	.0000
P_TBA5	-.44046275	.03578104	-12.310	.0000

MNL3.135 –
- ASC

- TBA: Variável continua Razão tempos médios de viagem em Bus/AUTO entre as zonas de Geração e Atracção

- V2: Velocidade comercial equivalente por Bus em km/h (d2/T2*60)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,V2,TBA$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 21, 2012 at 04:59:18PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            89305     |
| Iterations completed                  9     |
| Log likelihood function       -93729.37     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.09942     |
|   Finite Sample: AIC =          2.09942     |
| Info. Criterion: BIC =          2.10100     |
| Info. Criterion:HQIC =          2.09990     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .18967  .18964 |
| Chi-squared[10]          =  43877.49366     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped6121 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+--------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+--------------+----------------+--------+--------+
 A_BP     |   -1.92072469       .11159393   -17.212   .0000
 BP_V21   |    -.01469997       .00383803    -3.830   .0001
 BP_TBA1  |    -.60798626       .05482252   -11.090   .0000
 A_B      |     .95390973       .04476122    21.311   .0000
 B_V22    |    -.05006498       .00165447   -30.260   .0000
 B_TBA2   |    -.83245501       .02202552   -37.795   .0000
 A_BO     |   -3.77384856       .09442807   -39.965   .0000
```

BO_V23	.04006538	.00306859	13.057	.0000
BO_TBA3	.31887212	.03954566	8.063	.0000
A_M	-3.03130060	.07406393	-40.928	.0000
M_V24	.02259968	.00256926	8.796	.0000
M_TBA4	.30889146	.03079608	10.030	.0000
A_P	6.34008461	.07301821	86.829	.0000
P_V25	-.92798975	.00876060	-105.928	.0000
P_TBA5	-1.21488562	.03117691	-38.967	.0000

MNL3.136 –
- ASC

- nV1: variável binária Número total de viagens de cada individuo por dia <=2
- nV2: variável binária Número total de viagens de cada individuo por dia >2 & <=4
- *nV3a: variável binária Número total de viagens de cada individuo por dia >4 (Excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NV1,NV2$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 25, 2012 at 04:36:50PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            95426     |
| Iterations completed                  6     |
| Log likelihood function       -119695.5     |
| Number of parameters                 15     |
| Info. Criterion: AIC =          2.50897     |
|   Finite Sample: AIC =          2.50897     |
| Info. Criterion: BIC =          2.51046     |
| Info. Criterion:HQIC =          2.50942     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  ***********  .03072  .03069 |
| Chi-squared[10]          =   7587.74332     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped   0 bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -4.35267974       .06785252   -64.149   .0000
 BP_NV11  |    1.94634336       .07351439    26.476   .0000
 BP_NV21  |     .92896172       .07821782    11.877   .0000
 A_B      |   -2.23423604       .02459590   -90.838   .0000
 B_NV12   |    1.80316289       .02780284    64.855   .0000
 B_NV22   |    1.09161284       .02832947    38.533   .0000
 A_BO     |   -3.83822435       .05268683   -72.850   .0000
 BO_NV13  |    1.91093647       .05741811    33.281   .0000
```

BO_NV23	.84697404	.06144236	13.785	.0000
A_M	-2.28696839	.02519022	-90.788	.0000
M_NV14	.19654614	.03515771	5.590	.0000
M_NV24	.26518425	.03229884	8.210	.0000
A_P	-2.09661466	.02312360	-90.670	.0000
P_NV15	.85081002	.02882586	29.516	.0000
P_NV25	.71822172	.02778729	25.847	.0000

MNL3.137 –
- ASC

- Fl1: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas <=2 (30min de espera) (Excluída)
- Fl2: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >2 & <=4 (15min de espera)
- Fl3: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >4 & <=12 (5min de espera)
- Fl4: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >12 (menos de 5min de espera)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,FL2,FL3,FL4$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Feb 26, 2012 at 09:53:03AM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            41329     |
| Iterations completed                  6     |
| Log likelihood function       -50952.44     |
| Number of parameters                 20     |
| Info. Criterion: AIC =          2.46667     |
|   Finite Sample: AIC =          2.46667     |
| Info. Criterion: BIC =          2.47084     |
| Info. Criterion:HQIC =          2.46799     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -52160.0860  .02315  .02306 |
| Chi-squared[15]          =   2415.29546     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 A_BP     |   -3.62086013       .07888464   -45.901   .0000
 BP_FL21  |     .65522450       .10726996     6.108   .0000
```

BP_FL31	.64208498	.09655389	6.650	.0000
BP_FL41	.92854059	.09896347	9.383	.0000
A_B	-1.43787791	.02907301	-49.457	.0000
B_FL22	.68827272	.04064626	16.933	.0000
B_FL32	.68380604	.03625096	18.863	.0000
B_FL42	1.19240306	.03689525	32.319	.0000
A_BO	-2.67236626	.05009588	-53.345	.0000
BO_FL23	-.49282400	.09435836	-5.223	.0000
BO_FL33	-1.31212743	.10355737	-12.671	.0000
BO_FL43	-1.41633176	.12747396	-11.111	.0000
A_M	-2.37941640	.04374349	-54.395	.0000
M_FL24	-.49045233	.08208920	-5.975	.0000
M_FL34	-.64461534	.07176300	-8.983	.0000
M_FL44	-1.25975652	.10373371	-12.144	.0000
A_P	-1.27556392	.02725619	-46.799	.0000
P_FL25	.06414068	.04325966	1.483	.1382
P_FL35	-.09969049	.03855368	-2.586	.0097
P_FL45	.80759672	.03648375	22.136	.0000

MNL3.11wald_B – ASC e combinação de variáveis binárias sobre a categoria dos rendimentos mensais do agregado familiar ***(Avaliação se Ri para BUS é linear)***

- R1: Variável binária para rendimento liquido do agregado familiar em euros 0-500€
- R2: Variável binária para rendimento liquido do agregado familiar em euros 501-1000€
- R3: Variável binária para rendimento liquido do agregado familiar em euros 1001-1500€
- R4: Variável binária para rendimento liquido do agregado familiar em euros 1501-2000€
- R5: Variável binária para rendimento liquido do agregado familiar em euros >2000€ (excluída)

```
DISCRETECHOICE
    ;Lhs=MTRP
    ;Choices=Bp,B,Bo,M,P,A[1]
    ;Wald:2*b(8)-b(7)-b(9)=0,2*b(9)-b(8)-b(10)=0
    ;Rh2=ONE,R1,R2,R3,R4$
Normal exit:   5 iterations. Status=0, F=    119596.3

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -119596.25368
Estimation based on N =  95426, K =  25
Inf.Cr.AIC  = 239242.5 AIC/N =    2.507
Model estimated: Jul 12, 2012, 17:34:54
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0315 .0315
Chi-squared[20]           =   7786.23184
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      2 linear restrictions
Chi-squared =  313.15, P value =  .0000
--------+------------------------------------------------------------------
        |                  Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -4.23459***       .07549   -56.09  .0000    -4.38256  -4.08663
  BP_R11|    2.32018***       .09408    24.66  .0000     2.13578   2.50458
  BP_R21|    1.36321***       .08211    16.60  .0000     1.20228   1.52415
  BP_R31|    1.04860***       .08716    12.03  .0000      .87778   1.21943
  BP_R41|     .42835***       .10995     3.90  .0001      .21286    .64384
     A_B|   -2.00603***       .02620   -76.57  .0000    -2.05738  -1.95468
   B_R12|    2.19145***       .03779    58.00  .0000     2.11739   2.26551
   B_R22|    1.19754***       .02946    40.65  .0000     1.13981   1.25528
   B_R32|     .83628***       .03169    26.39  .0000      .77417    .89839
   B_R42|     .50487***       .03806    13.26  .0000      .43027    .57947
    A_BO|   -3.37375***       .04956   -68.07  .0000    -3.47089  -3.27660
  BO_R13|    1.60955***       .07229    22.27  .0000     1.46786   1.75123
  BO_R23|    1.00107***       .05579    17.94  .0000      .89173   1.11041
  BO_R33|     .59140***       .06123     9.66  .0000      .47140    .71140
  BO_R43|     .14130*         .07821     1.81  .0708     -.01199    .29459
     A_M|   -3.11559***       .04377   -71.17  .0000    -3.20139  -3.02980
   M_R14|    1.97225***       .05993    32.91  .0000     1.85479   2.08972
   M_R24|    1.37297***       .04787    28.68  .0000     1.27915   1.46679
   M_R34|     .86716***       .05201    16.67  .0000      .76522    .96909
   M_R44|     .46662***       .06340     7.36  .0000      .34236    .59089
     A_P|   -2.36712***       .03081   -76.82  .0000    -2.42752  -2.30673
   P_R15|    2.30574***       .04225    54.57  .0000     2.22293   2.38855
   P_R25|    1.07796***       .03476    31.01  .0000     1.00983   1.14609
   P_R35|     .64831***       .03801    17.06  .0000      .57381    .72281
```

```
   P_R45|      .32732***       .04644      7.05   .0000       .23630     .41834
--------+------------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
------------------------------------------------------------------------------
```

MNL3.138 –
- ASC

- D2: Variável continua distância mais curta em Km entre os centróides ajustados das zonas de Geração e de Atracção (pares >=50 viagens) excepto para o modo Walk em que d2=tp/60*3,6km/h

- Til – Variável continua genérica **Ln**(duração média apreendida da viagem por modo (min) entre GA com a duração apreendida real qd é o modo escolhido)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Attr=Til
;Rhs=T1L,T2L,T3L,T4L,T5L,T6L
;Rh2=ONE,D2$
+---------------------------------------------+
| Discrete choice and multinomial logit models|
+---------------------------------------------+
Normal exit from iterations. Exit status=0.
+---------------------------------------------+
| Discrete choice (multinomial logit) model   |
| Maximum Likelihood Estimates                |
| Model estimated: Mar 02, 2012 at 06:17:06PM.|
| Dependent variable               Choice     |
| Weighting variable                 None     |
| Number of observations            30559     |
| Iterations completed                  9     |
| Log likelihood function       -32274.10     |
| Number of parameters                 11     |
| Info. Criterion: AIC =          2.11297     |
|   Finite Sample: AIC =          2.11297     |
| Info. Criterion: BIC =          2.11597     |
| Info. Criterion:HQIC =          2.11393     |
| R2=1-LogL/LogL*  Log-L fncn  R-sqrd  RsqAdj |
| Constants only  -39687.0783  .18679  .18673 |
| Chi-squared[ 6]          =  14825.96055     |
| Prob [ chi squared > value ] =   .00000     |
| Response data are given as ind. choice.     |
| Number of obs.= 95426, skipped**** bad obs. |
+---------------------------------------------+

+---------------------------------------------+
| Notes No coefficients=> P(i,j)=1/J(i).      |
|       Constants only => P(i,j) uses ASCs    |
|         only. N(j)/N if fixed choice set.   |
|         N(j) = total sample frequency for j |
|         N    = total sample frequency.      |
|       These 2 models are simple MNL models. |
|       R-sqrd = 1 - LogL(model)/logL(other)  |
|       RsqAdj=1-[nJ/(nJ-nparm)]*(1-R-sqrd)   |
|         nJ   = sum over i, choice set sizes |
+---------------------------------------------+
+--------+-------------+----------------+--------+--------+
|Variable| Coefficient  | Standard Error |b/St.Er.|P[|Z|>z]|
+--------+-------------+----------------+--------+--------+
 TIL      |    -.62523914       .02472784   -25.285    .0000
```

A_BP	-2.41776713	.08151960	-29.659	.0000
BP_D21	.04464857	.01410352	3.166	.0015
A_B	-1.24464741	.03999175	-31.123	.0000
B_D22	.06443890	.00695675	9.263	.0000
A_BO	-2.52120390	.06655806	-37.880	.0000
BO_D23	.03760297	.01201807	3.129	.0018
A_M	-1.90109944	.05491294	-34.620	.0000
M_D24	-.03397516	.01096766	-3.098	.0019
A_P	4.79870030	.09001122	53.312	.0000
P_D25	-2.64337762	.04840542	-54.609	.0000

MNL3.11wald_OB – ASC e combinação de variáveis binárias sobre a categoria dos rendimentos mensais do agregado familiar (***avalia se Ri é linear para OB***)

- R1: Variável binária para rendimento liquido do agregado familiar em euros 0-500€
- R2: Variável binária para rendimento liquido do agregado familiar em euros 501-1000€
- R3: Variável binária para rendimento liquido do agregado familiar em euros 1001-1500€
- R4: Variável binária para rendimento liquido do agregado familiar em euros 1501-2000€
- *R5: Variável binária para rendimento liquido do agregado familiar em euros >2000€ (excluída)*

```
DISCRETECHOICE
    ;Lhs=MTRP
    ;Choices=Bp,B,Bo,M,P,A[1]
    ;Wald:2*b(13)-b(12)-b(14)=0,2*b(14)-b(13)-b(15)=0
    ;Rh2=ONE,R1,R2,R3,R4$
Normal exit:   5 iterations. Status=0, F=    119596.3

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -119596.25368
Estimation based on N =  95426, K =  25
Inf.Cr.AIC  = 239242.5 AIC/N =    2.507
Model estimated: Jul 12, 2012, 17:39:19
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0315 .0315
Chi-squared[20]           =   7786.23184
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      2 linear restrictions
Chi-squared =    6.70, P value =  .0350
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -4.23459***       .07549   -56.09  .0000     -4.38256  -4.08663
  BP_R11|    2.32018***       .09408    24.66  .0000      2.13578   2.50458
  BP_R21|    1.36321***       .08211    16.60  .0000      1.20228   1.52415
  BP_R31|    1.04860***       .08716    12.03  .0000       .87778   1.21943
  BP_R41|     .42835***       .10995     3.90  .0001       .21286    .64384
     A_B|   -2.00603***       .02620   -76.57  .0000     -2.05738  -1.95468
    B_R12|    2.19145***       .03779    58.00  .0000      2.11739   2.26551
    B_R22|    1.19754***       .02946    40.65  .0000      1.13981   1.25528
    B_R32|     .83628***       .03169    26.39  .0000       .77417    .89839
    B_R42|     .50487***       .03806    13.26  .0000       .43027    .57947
    A_BO|   -3.37375***       .04956   -68.07  .0000     -3.47089  -3.27660
  BO_R13|    1.60955***       .07229    22.27  .0000      1.46786   1.75123
  BO_R23|    1.00107***       .05579    17.94  .0000       .89173   1.11041
  BO_R33|     .59140***       .06123     9.66  .0000       .47140    .71140
  BO_R43|      .14130*        .07821     1.81  .0708      -.01199    .29459
     A_M|   -3.11559***       .04377   -71.17  .0000     -3.20139  -3.02980
    M_R14|    1.97225***       .05993    32.91  .0000      1.85479   2.08972
    M_R24|    1.37297***       .04787    28.68  .0000      1.27915   1.46679
    M_R34|     .86716***       .05201    16.67  .0000       .76522    .96909
    M_R44|     .46662***       .06340     7.36  .0000       .34236    .59089
     A_P|   -2.36712***       .03081   -76.82  .0000     -2.42752  -2.30673
    P_R15|    2.30574***       .04225    54.57  .0000      2.22293   2.38855
```

```
   P_R25|    1.07796***       .03476    31.01  .0000     1.00983    1.14609
   P_R35|     .64831***       .03801    17.06  .0000      .57381     .72281
   P_R45|     .32732***       .04644     7.05  .0000      .23630     .41834
--------+------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-----------------------------------------------------------------------------
```

MNL3.11wald_M – ASC e combinação de variáveis binárias sobre a categoria dos rendimentos mensais do agregado familiar (***avalia se Ri é linear para M***)

- R1: Variável binária para rendimento liquido do agregado familiar em euros 0-500€
- R2: Variável binária para rendimento liquido do agregado familiar em euros 501-1000€
- R3: Variável binária para rendimento liquido do agregado familiar em euros 1001-1500€
- R4: Variável binária para rendimento liquido do agregado familiar em euros 1501-2000€
- *R5: Variável binária para rendimento liquido do agregado familiar em euros >2000€ (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(18)-b(17)-b(19)=0,2*b(19)-b(18)-b(20)=0
;Rh2=ONE,R1,R2,R3,R4$
Normal exit:   5 iterations. Status=0, F=    119596.3

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -119596.25368
Estimation based on N =  95426, K =  25
Inf.Cr.AIC  = 239242.5 AIC/N =    2.507
Model estimated: Jul 13, 2012, 17:12:07
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0315 .0315
Chi-squared[20]           =   7786.23184
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      2 linear restrictions
Chi-squared =    8.21, P value =  .0165
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -4.23459***       .07549   -56.09  .0000     -4.38256  -4.08663
  BP_R11|    2.32018***       .09408    24.66  .0000      2.13578   2.50458
  BP_R21|    1.36321***       .08211    16.60  .0000      1.20228   1.52415
  BP_R31|    1.04860***       .08716    12.03  .0000       .87778   1.21943
  BP_R41|     .42835***       .10995     3.90  .0001       .21286    .64384
     A_B|   -2.00603***       .02620   -76.57  .0000     -2.05738  -1.95468
   B_R12|    2.19145***       .03779    58.00  .0000      2.11739   2.26551
   B_R22|    1.19754***       .02946    40.65  .0000      1.13981   1.25528
   B_R32|     .83628***       .03169    26.39  .0000       .77417    .89839
   B_R42|     .50487***       .03806    13.26  .0000       .43027    .57947
    A_BO|   -3.37375***       .04956   -68.07  .0000     -3.47089  -3.27660
  BO_R13|    1.60955***       .07229    22.27  .0000      1.46786   1.75123
  BO_R23|    1.00107***       .05579    17.94  .0000       .89173   1.11041
  BO_R33|     .59140***       .06123     9.66  .0000       .47140    .71140
  BO_R43|     .14130*         .07821     1.81  .0708      -.01199    .29459
     A_M|   -3.11559***       .04377   -71.17  .0000     -3.20139  -3.02980
   M_R14|    1.97225***       .05993    32.91  .0000      1.85479   2.08972
   M_R24|    1.37297***       .04787    28.68  .0000      1.27915   1.46679
   M_R34|     .86716***       .05201    16.67  .0000       .76522    .96909
   M_R44|     .46662***       .06340     7.36  .0000       .34236    .59089
     A_P|   -2.36712***       .03081   -76.82  .0000     -2.42752  -2.30673
   P_R15|    2.30574***       .04225    54.57  .0000      2.22293   2.38855
```

```
   P_R25|    1.07796***       .03476    31.01  .0000     1.00983    1.14609
   P_R35|     .64831***       .03801    17.06  .0000      .57381     .72281
   P_R45|     .32732***       .04644     7.05  .0000      .23630     .41834
--------+------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-----------------------------------------------------------------------------
```

MNL3.11wald_W – ASC e combinação de variáveis binárias sobre a categoria dos rendimentos mensais do agregado familiar (***avalia se Ri é linear para W***)

- R1: Variável binária para rendimento liquido do agregado familiar em euros 0-500€
- R2: Variável binária para rendimento liquido do agregado familiar em euros 501-1000€
- R3: Variável binária para rendimento liquido do agregado familiar em euros 1001-1500€
- R4: Variável binária para rendimento liquido do agregado familiar em euros 1501-2000€
- *R5: Variável binária para rendimento liquido do agregado familiar em euros >2000€ (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(23)-b(22)-b(24)=0,2*b(24)-b(23)-b(25)=0
;Rh2=ONE,R1,R2,R3,R4$
Normal exit:   5 iterations. Status=0, F=    119596.3

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -119596.25368
Estimation based on N =  95426, K =  25
Inf.Cr.AIC  = 239242.5 AIC/N =    2.507
Model estimated: Jul 13, 2012, 17:16:27
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0315 .0315
Chi-squared[20]           =   7786.23184
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      2 linear restrictions
Chi-squared =  422.55, P value =  .0000
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -4.23459***       .07549   -56.09  .0000     -4.38256  -4.08663
  BP_R11|    2.32018***       .09408    24.66  .0000      2.13578   2.50458
  BP_R21|    1.36321***       .08211    16.60  .0000      1.20228   1.52415
  BP_R31|    1.04860***       .08716    12.03  .0000       .87778   1.21943
  BP_R41|     .42835***       .10995     3.90  .0001       .21286    .64384
     A_B|   -2.00603***       .02620   -76.57  .0000     -2.05738  -1.95468
   B_R12|    2.19145***       .03779    58.00  .0000      2.11739   2.26551
   B_R22|    1.19754***       .02946    40.65  .0000      1.13981   1.25528
   B_R32|     .83628***       .03169    26.39  .0000       .77417    .89839
   B_R42|     .50487***       .03806    13.26  .0000       .43027    .57947
    A_BO|   -3.37375***       .04956   -68.07  .0000     -3.47089  -3.27660
  BO_R13|    1.60955***       .07229    22.27  .0000      1.46786   1.75123
  BO_R23|    1.00107***       .05579    17.94  .0000       .89173   1.11041
  BO_R33|     .59140***       .06123     9.66  .0000       .47140    .71140
  BO_R43|      .14130*        .07821     1.81  .0708      -.01199    .29459
     A_M|   -3.11559***       .04377   -71.17  .0000     -3.20139  -3.02980
   M_R14|    1.97225***       .05993    32.91  .0000      1.85479   2.08972
   M_R24|    1.37297***       .04787    28.68  .0000      1.27915   1.46679
   M_R34|     .86716***       .05201    16.67  .0000       .76522    .96909
   M_R44|     .46662***       .06340     7.36  .0000       .34236    .59089
     A_P|   -2.36712***       .03081   -76.82  .0000     -2.42752  -2.30673
   P_R15|    2.30574***       .04225    54.57  .0000      2.22293   2.38855
```

```
   P_R25|    1.07796***       .03476    31.01  .0000     1.00983    1.14609
   P_R35|     .64831***       .03801    17.06  .0000      .57381     .72281
   P_R45|     .32732***       .04644     7.05  .0000      .23630     .41834
--------+------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-------------------------------------------------------------------------------
```

MNL3.29wald_B – ASC e combinação de Variáveis binárias sobre o número de automóveis disponíveis diariamente per capita (***avalia se NCi é linear para B***)

- NC0: Variável binária Automóveis ligeiros disponíveis per capita = 0
- NC1: Variável binária Automóveis ligeiros disponíveis per capita >0 & <=0,25
- NC2: Variável binária Automóveis ligeiros disponíveis per capita >0,25 & <=0,5
- NC3: Variável binária Automóveis ligeiros disponíveis per capita >0,5 & <=0,75
- *NC4a: Variável binária Automóveis ligeiros disponíveis per capita >0,75 (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(8)-b(7)-b(9)=0,2*b(9)-b(8)-b(10)=0
;Rh2=ONE,NC0,NC1,NC2,NC3$
Normal exit:   8 iterations. Status=0, F=    110636.3

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -110636.30337
Estimation based on N =  95426, K =  25
Inf.Cr.AIC  = 221322.6 AIC/N =    2.319
Model estimated: Jul 13, 2012, 23:02:10
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .1041 .1040
Chi-squared[20]           =  25706.13248
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      2 linear restrictions
Chi-squared =  660.03, P value =  .0000
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -7.08311***       .57759   -12.26  .0000    -8.21517  -5.95105
 BP_NC01|    5.66657***       .57849     9.80  .0000     4.53275   6.80039
 BP_NC11|    3.92573***       .57935     6.78  .0000     2.79023   5.06124
 BP_NC21|    3.19850***       .57933     5.52  .0000     2.06304   4.33397
 BP_NC31|    1.87693***       .59749     3.14  .0017      .70587   3.04799
     A_B|   -3.61737***       .10342   -34.98  .0000    -3.82008  -3.41467
  B_NC02|    4.25125***       .10491    40.52  .0000     4.04563   4.45687
  B_NC12|    2.53773***       .10499    24.17  .0000     2.33195   2.74351
  B_NC22|    1.85649***       .10475    17.72  .0000     1.65119   2.06179
  B_NC32|    1.01302***       .11202     9.04  .0000      .79347   1.23257
    A_BO|   -4.57080***       .16525   -27.66  .0000    -4.89468  -4.24692
 BO_NC03|    3.32511***       .16797    19.80  .0000     2.99589   3.65432
 BO_NC13|    2.23962***       .16806    13.33  .0000     1.91024   2.56900
 BO_NC23|    1.20799***       .16887     7.15  .0000      .87702   1.53896
 BO_NC33|     .49377***       .18696     2.64  .0083      .12735    .86020
     A_M|   -4.19274***       .13711   -30.58  .0000    -4.46146  -3.92401
  M_NC04|    3.75012***       .13898    26.98  .0000     3.47771   4.02252
  M_NC14|    2.07854***       .13989    14.86  .0000     1.80436   2.35271
  M_NC24|    1.39420***       .13965     9.98  .0000     1.12048   1.66792
  M_NC34|     .47238***       .15553     3.04  .0024      .16755    .77721
     A_P|   -3.03423***       .07806   -38.87  .0000    -3.18722  -2.88123
  P_NC05|    3.28159***       .08034    40.85  .0000     3.12413   3.43906
  P_NC15|    1.39406***       .08127    17.15  .0000     1.23478   1.55333
```

```
   P_NC25|     .77197***       .08076     9.56  .0000       .61367     .93026
   P_NC35|     -.17741*        .09688    -1.83  .0671      -.36729     .01247
---------+--------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-----------------------------------------------------------------------------
```

MNL3.29wald_W – ASC e combinação de Variáveis binárias sobre o número de automóveis disponíveis diariamente per capita (***avalia se NCi é linear para W***)

- NC0: Variável binária Automóveis ligeiros disponíveis per capita = 0
- NC1: Variável binária Automóveis ligeiros disponíveis per capita >0 & <=0,25
- NC2: Variável binária Automóveis ligeiros disponíveis per capita >0,25 & <=0,5
- NC3: Variável binária Automóveis ligeiros disponíveis per capita >0,5 & <=0,75
- *NC4a: Variável binária Automóveis ligeiros disponíveis per capita >0,75 (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(23)-b(22)-b(24)=0,2*b(24)-b(23)-b(25)=0
;Rh2=ONE,NC0,NC1,NC2,NC3$
Normal exit:   8 iterations. Status=0, F=    110636.3

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -110636.30337
Estimation based on N =  95426, K =  25
Inf.Cr.AIC  = 221322.6 AIC/N =    2.319
Model estimated: Jul 13, 2012, 23:09:12
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .1041 .1040
Chi-squared[20]           =  25706.13248
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      2 linear restrictions
Chi-squared =  626.97, P value =  .0000
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -7.08311***       .57759   -12.26  .0000    -8.21517  -5.95105
 BP_NC01|    5.66657***       .57849     9.80  .0000     4.53275   6.80039
 BP_NC11|    3.92573***       .57935     6.78  .0000     2.79023   5.06124
 BP_NC21|    3.19850***       .57933     5.52  .0000     2.06304   4.33397
 BP_NC31|    1.87693***       .59749     3.14  .0017      .70587   3.04799
     A_B|   -3.61737***       .10342   -34.98  .0000    -3.82008  -3.41467
  B_NC02|    4.25125***       .10491    40.52  .0000     4.04563   4.45687
  B_NC12|    2.53773***       .10499    24.17  .0000     2.33195   2.74351
  B_NC22|    1.85649***       .10475    17.72  .0000     1.65119   2.06179
  B_NC32|    1.01302***       .11202     9.04  .0000      .79347   1.23257
    A_BO|   -4.57080***       .16525   -27.66  .0000    -4.89468  -4.24692
 BO_NC03|    3.32511***       .16797    19.80  .0000     2.99589   3.65432
 BO_NC13|    2.23962***       .16806    13.33  .0000     1.91024   2.56900
 BO_NC23|    1.20799***       .16887     7.15  .0000      .87702   1.53896
 BO_NC33|     .49377***       .18696     2.64  .0083      .12735    .86020
     A_M|   -4.19274***       .13711   -30.58  .0000    -4.46146  -3.92401
  M_NC04|    3.75012***       .13898    26.98  .0000     3.47771   4.02252
  M_NC14|    2.07854***       .13989    14.86  .0000     1.80436   2.35271
  M_NC24|    1.39420***       .13965     9.98  .0000     1.12048   1.66792
  M_NC34|     .47238***       .15553     3.04  .0024      .16755    .77721
     A_P|   -3.03423***       .07806   -38.87  .0000    -3.18722  -2.88123
  P_NC05|    3.28159***       .08034    40.85  .0000     3.12413   3.43906
  P_NC15|    1.39406***       .08127    17.15  .0000     1.23478   1.55333
```

```
   P_NC25|     .77197***       .08076     9.56  .0000      .61367     .93026
   P_NC35|     -.17741*        .09688    -1.83  .0671     -.36729     .01247
---------+--------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-----------------------------------------------------------------------------
```

MNL3.120aWald_M – (***avalia se Dei é linear para M***)
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=120min (média duração)
- De3 : variável binária duracão da estadia >120min & <=240min (média duração)
- De4 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De5: variável binária duracão da estadia >480min (muito longa duração)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(18)-b(17)-b(19)=0,2*b(19)-b(18)-b(20)=0
;Rh2=ONE,DE2,DE3,DE4,DE5$
Normal exit:   5 iterations. Status=0, F=    78027.38

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function     -78027.37664
Estimation based on N =  61358, K =  25
Inf.Cr.AIC  = 156104.8 AIC/N =    2.544
Model estimated: Jul 14, 2012, 17:54:01
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0142 .0141
Chi-squared[20]           =   2248.95947
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped34068 obs
Wald test of      2 linear restrictions
Chi-squared =   44.48, P value =  .0000
--------+------------------------------------------------------------------
        |                   Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.76803***       .07338   -51.35   .0000     -3.91185  -3.62421
  BP_DE21|      .15090         .10706     1.41   .1587      -.05893     .36072
  BP_DE31|      .38453***      .09629     3.99   .0001       .19581     .57326
  BP_DE41|      .70398***      .09439     7.46   .0000       .51898     .88898
  BP_DE51|     1.13283***      .08951    12.66   .0000       .95740    1.30826
     A_B|   -1.60956***       .02701   -59.59   .0000     -1.66250  -1.55662
   B_DE22|      .31725***      .03830     8.28   .0000       .24217     .39232
   B_DE32|      .54394***      .03503    15.53   .0000       .47528     .61260
   B_DE42|      .65194***      .03601    18.11   .0000       .58137     .72251
   B_DE52|      .88245***      .03562    24.77   .0000       .81263     .95227
    A_BO|   -3.43156***       .06230   -55.08   .0000     -3.55366  -3.30946
  BO_DE23|      -.02217         .09521     -.23   .8159      -.20878     .16444
  BO_DE33|      .26970***      .08379     3.22   .0013       .10548     .43392
  BO_DE43|      .97272***      .07666    12.69   .0000       .82248    1.12297
  BO_DE53|     1.59634***      .07182    22.23   .0000      1.45557    1.73710
     A_M|   -2.05946***       .03278   -62.82   .0000     -2.12372  -1.99521
   M_DE24|      -.40344***     .05567    -7.25   .0000      -.51255   -.29432
   M_DE34|      -.05318         .04751    -1.12   .2630      -.14630     .03994
   M_DE44|      .27616***      .04656     5.93   .0000       .18491     .36741
   M_DE54|      .18379***      .04896     3.75   .0002       .08782     .27975
     A_P|   -1.46282***       .02543   -57.53   .0000     -1.51265  -1.41298
   P_DE25|      -.01599         .03877     -.41   .6799      -.09197     .05999
   P_DE35|      .10171***      .03566     2.85   .0043       .03182     .17160
   P_DE45|      .04522         .03811     1.19   .2354      -.02948     .11992
```

```
   P_DE55|    -.57430***       .04658   -12.33   .0000      -.66560    -.48300
---------+--------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-----------------------------------------------------------------------------
```

MNL3.120aWald_W – (***avalia se Dei é linear para W***)
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=120min (média duração)
- De3 : variável binária duracão da estadia >120min & <=240min (média duração)
- De4 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De5: variável binária duracão da estadia >480min (muito longa duração)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(23)-b(22)-b(24)=0,2*b(24)-b(23)-b(25)=0
;Rh2=ONE,DE2,DE3,DE4,DE5$
Normal exit:   5 iterations. Status=0, F=    78027.38

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function     -78027.37664
Estimation based on N =  61358, K =  25
Inf.Cr.AIC  = 156104.8 AIC/N =    2.544
Model estimated: Jul 14, 2012, 18:15:33
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0142 .0141
Chi-squared[20]           =   2248.95947
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped34068 obs
Wald test of      2 linear restrictions
Chi-squared =  144.22, P value =  .0000
--------+------------------------------------------------------------------
        |                   Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.76803***       .07338   -51.35  .0000     -3.91185  -3.62421
  BP_DE21|      .15090         .10706     1.41  .1587      -.05893     .36072
  BP_DE31|      .38453***      .09629     3.99  .0001       .19581     .57326
  BP_DE41|      .70398***      .09439     7.46  .0000       .51898     .88898
  BP_DE51|     1.13283***      .08951    12.66  .0000       .95740    1.30826
     A_B|   -1.60956***       .02701   -59.59  .0000     -1.66250  -1.55662
   B_DE22|      .31725***      .03830     8.28  .0000       .24217     .39232
   B_DE32|      .54394***      .03503    15.53  .0000       .47528     .61260
   B_DE42|      .65194***      .03601    18.11  .0000       .58137     .72251
   B_DE52|      .88245***      .03562    24.77  .0000       .81263     .95227
    A_BO|   -3.43156***       .06230   -55.08  .0000     -3.55366  -3.30946
  BO_DE23|     -.02217         .09521     -.23  .8159      -.20878     .16444
  BO_DE33|      .26970***      .08379     3.22  .0013       .10548     .43392
  BO_DE43|      .97272***      .07666    12.69  .0000       .82248    1.12297
  BO_DE53|     1.59634***      .07182    22.23  .0000      1.45557    1.73710
     A_M|   -2.05946***       .03278   -62.82  .0000     -2.12372  -1.99521
   M_DE24|     -.40344***      .05567    -7.25  .0000      -.51255    -.29432
   M_DE34|     -.05318         .04751    -1.12  .2630      -.14630     .03994
   M_DE44|      .27616***      .04656     5.93  .0000       .18491     .36741
   M_DE54|      .18379***      .04896     3.75  .0002       .08782     .27975
     A_P|   -1.46282***       .02543   -57.53  .0000     -1.51265  -1.41298
   P_DE25|     -.01599         .03877     -.41  .6799      -.09197     .05999
   P_DE35|      .10171***      .03566     2.85  .0043       .03182     .17160
   P_DE45|      .04522         .03811     1.19  .2354      -.02948     .11992
```

```
   P_DE55|    -.57430***       .04658   -12.33   .0000      -.66560    -.48300
---------+--------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-----------------------------------------------------------------------------
```

MNL3.136Wald_B – (***avalia se nVi é linear para B***)
- ASC

- nV1: variável binária Número total de viagens de cada individuo por dia <=2
- nV2: variável binária Número total de viagens de cada individuo por dia >2 & <=4
- *nV3a: variável binária Número total de viagens de cada individuo por dia >4 (Excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:b(5)-b(6)=0
;Rh2=ONE,NV1,NV2$
Normal exit:   5 iterations. Status=0, F=    119695.5

--------------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -119695.49795
Estimation based on N =  95426, K =  15
Inf.Cr.AIC  = 239421.0 AIC/N =    2.509
Model estimated: Mar 09, 2012, 10:28:38
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0307 .0307
Chi-squared[10]          =   7587.74332
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      1 linear restrictions
Chi-squared = 1384.71, P value =  .0000
--------+-----------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+-----------------------------------------------------------------------
    A_BP|   -4.35268***      .06785   -64.15  .0000    -4.48567  -4.21969
 BP_NV11|    1.94634***      .07351    26.48  .0000     1.80226   2.09043
 BP_NV21|     .92896***      .07822    11.88  .0000      .77566   1.08227
     A_B|   -2.23424***      .02460   -90.84  .0000    -2.28244  -2.18603
  B_NV12|    1.80316***      .02780    64.86  .0000     1.74867   1.85766
  B_NV22|    1.09161***      .02833    38.53  .0000     1.03609   1.14714
    A_BO|   -3.83822***      .05269   -72.85  .0000    -3.94149  -3.73496
 BO_NV13|    1.91094***      .05742    33.28  .0000     1.79840   2.02347
 BO_NV23|     .84697***      .06144    13.78  .0000      .72655    .96740
     A_M|   -2.28697***      .02519   -90.79  .0000    -2.33634  -2.23760
  M_NV14|     .19655***      .03516     5.59  .0000      .12764    .26545
  M_NV24|     .26518***      .03230     8.21  .0000      .20188    .32849
     A_P|   -2.09661***      .02312   -90.67  .0000    -2.14194  -2.05129
  P_NV15|     .85081***      .02883    29.52  .0000      .79431    .90731
  P_NV25|     .71822***      .02779    25.85  .0000      .66376    .77268
--------+-----------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
--------------------------------------------------------------------------------
```

MNL3.136Wald_M – (***avalia se nVi é linear para M***)
- ASC

- nV1: variável binária Número total de viagens de cada individuo por dia <=2
- nV2: variável binária Número total de viagens de cada individuo por dia >2 & <=4
- *nV3a: variável binária Número total de viagens de cada individuo por dia >4 (Excluída)*

```
DISCRETECHOICE
    ;Lhs=MTRP
    ;Choices=Bp,B,Bo,M,P,A[1]
    ;Wald:b(11)-b(12)=0
    ;Rh2=ONE,NV1,NV2$
Normal exit:   5 iterations. Status=0, F=    119695.5

--------------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -119695.49795
Estimation based on N =  95426, K =  15
Inf.Cr.AIC  = 239421.0 AIC/N =    2.509
Model estimated: Mar 09, 2012, 10:33:41
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0307 .0307
Chi-squared[10]           =   7587.74332
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      1 linear restrictions
Chi-squared =    4.66, P value =  .0308
--------+-----------------------------------------------------------------------
        |                  Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+-----------------------------------------------------------------------
    A_BP|   -4.35268***      .06785   -64.15  .0000    -4.48567  -4.21969
 BP_NV11|    1.94634***      .07351    26.48  .0000     1.80226   2.09043
 BP_NV21|     .92896***      .07822    11.88  .0000      .77566   1.08227
     A_B|   -2.23424***      .02460   -90.84  .0000    -2.28244  -2.18603
  B_NV12|    1.80316***      .02780    64.86  .0000     1.74867   1.85766
  B_NV22|    1.09161***      .02833    38.53  .0000     1.03609   1.14714
    A_BO|   -3.83822***      .05269   -72.85  .0000    -3.94149  -3.73496
 BO_NV13|    1.91094***      .05742    33.28  .0000     1.79840   2.02347
 BO_NV23|     .84697***      .06144    13.78  .0000      .72655    .96740
     A_M|   -2.28697***      .02519   -90.79  .0000    -2.33634  -2.23760
  M_NV14|     .19655***      .03516     5.59  .0000      .12764    .26545
  M_NV24|     .26518***      .03230     8.21  .0000      .20188    .32849
     A_P|   -2.09661***      .02312   -90.67  .0000    -2.14194  -2.05129
  P_NV15|     .85081***      .02883    29.52  .0000      .79431    .90731
  P_NV25|     .71822***      .02779    25.85  .0000      .66376    .77268
--------+-----------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
--------------------------------------------------------------------------------
```

MNL3.136Wald_P – (***avalia se nVi é linear para P***)
- ASC

- nV1: variável binária Número total de viagens de cada individuo por dia <=2
- nV2: variável binária Número total de viagens de cada individuo por dia >2 & <=4
- *nV3a: variável binária Número total de viagens de cada individuo por dia >4 (Excluída)*

```
DISCRETECHOICE
    ;Lhs=MTRP
    ;Choices=Bp,B,Bo,M,P,A[1]
    ;Wald:b(14)-b(15)=0
    ;Rh2=ONE,NV1,NV2$
Normal exit:   5 iterations. Status=0, F=    119695.5

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -119695.49795
Estimation based on N =  95426, K =  15
Inf.Cr.AIC  = 239421.0 AIC/N =    2.509
Model estimated: Mar 09, 2012, 10:37:36
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0307 .0307
Chi-squared[10]          =   7587.74332
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      1 linear restrictions
Chi-squared =   32.94, P value =  .0000
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -4.35268***      .06785   -64.15  .0000    -4.48567  -4.21969
 BP_NV11|    1.94634***      .07351    26.48  .0000     1.80226   2.09043
 BP_NV21|     .92896***      .07822    11.88  .0000      .77566   1.08227
     A_B|   -2.23424***      .02460   -90.84  .0000    -2.28244  -2.18603
  B_NV12|    1.80316***      .02780    64.86  .0000     1.74867   1.85766
  B_NV22|    1.09161***      .02833    38.53  .0000     1.03609   1.14714
    A_BO|   -3.83822***      .05269   -72.85  .0000    -3.94149  -3.73496
 BO_NV13|    1.91094***      .05742    33.28  .0000     1.79840   2.02347
 BO_NV23|     .84697***      .06144    13.78  .0000      .72655    .96740
     A_M|   -2.28697***      .02519   -90.79  .0000    -2.33634  -2.23760
  M_NV14|     .19655***      .03516     5.59  .0000      .12764    .26545
  M_NV24|     .26518***      .03230     8.21  .0000      .20188    .32849
     A_P|   -2.09661***      .02312   -90.67  .0000    -2.14194  -2.05129
  P_NV15|     .85081***      .02883    29.52  .0000      .79431    .90731
  P_NV25|     .71822***      .02779    25.85  .0000      .66376    .77268
--------+------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
```

MNL3.89b – ASC e combinação de variáveis binárias do motivo da viagem (excepto Tr).

- Rg:Variável binária para viagens de Regresso a casa
- Tr: Variável binária para viagens para trabalho
- Es: Variável binária para viagens para a escola
- *Lz: Variável binária para viagens em lazer*(exluída)
- CS: Variável binária para viagens para compras/serviços

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,RG,TR,ES,CS$
Normal exit:   6 iterations. Status=0, F=    120967.6

--------------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -120967.59595
Estimation based on N =  95426, K =  25
Inf.Cr.AIC  = 241985.2 AIC/N =    2.536
Model estimated: May 11, 2012, 15:11:50
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0204 .0204
Chi-squared[20]           =   5043.54730
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
--------+-----------------------------------------------------------------------
        |                   Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+-----------------------------------------------------------------------
    A_BP|   -3.84686***       .08279   -46.46  .0000    -4.00913  -3.68459
  BP_RG1|     .72706***       .08792     8.27  .0000      .55473    .89939
  BP_TR1|     .39122***       .09719     4.03  .0001      .20073    .58172
  BP_ES1|    1.96359***       .09841    19.95  .0000     1.77070   2.15648
  BP_CS1|     .35576***       .12485     2.85  .0044      .11106    .60046
     A_B|   -1.42188***       .02715   -52.37  .0000    -1.47509  -1.36867
   B_RG2|     .35409***       .02970    11.92  .0000      .29589    .41230
   B_TR2|     .10719***       .03334     3.21  .0013      .04184    .17255
   B_ES2|    1.46036***       .03835    38.08  .0000     1.38521   1.53552
   B_CS2|     .24516***       .04281     5.73  .0000      .16125    .32907
    A_BO|   -3.93082***       .08627   -45.56  .0000    -4.09991  -3.76174
  BO_RG3|    1.22872***       .08962    13.71  .0000     1.05307   1.40438
  BO_TR3|     .97031***       .09515    10.20  .0000      .78383   1.15680
  BO_ES3|    2.87929***       .09426    30.54  .0000     2.69454   3.06405
  BO_CS3|     .08788          .14053      .63  .5317     -.18756    .36331
     A_M|   -2.54453***       .04436   -57.36  .0000    -2.63148  -2.45758
   M_RG4|     .41256***       .04814     8.57  .0000      .31821    .50692
   M_TR4|     .80950***       .04997    16.20  .0000      .71156    .90744
   M_ES4|    -.48774***       .10047    -4.85  .0000     -.68465   -.29082
   M_CS4|    -.10778          .07674    -1.40  .1602     -.25819    .04263
     A_P|   -1.47680***       .02776   -53.20  .0000    -1.53121  -1.42239
   P_RG5|    -.04198          .03126    -1.34  .1792     -.10324    .01928
   P_TR5|    -.45924***       .03741   -12.28  .0000     -.53257   -.38592
   P_ES5|     .81239***       .04325    18.78  .0000      .72762    .89715
   P_CS5|     .14258***       .04482     3.18  .0015      .05472    .23043
--------+-----------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
```

MNL3.139 –
- ASC

- Variáveis binárias do escalão etário (excepto Id1)
- Variáveis binárias do nível de instrução (excepto In4)
- Variável binária Sexo (Sexo)
- Variável binária de disponibilidade de Licença de condução (Lc)
- Variáveis binárias para os escalões do rendimento liquido mensal do agregado (excepto R5)
- Variável binária para o número de automóveis disponíveis diariamente no agregado per capita (excepto NC4a).
- Variável binária sobre a disponibilidade diária de motociclos no agregado (MOT)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Rh2=ONE,NC0,NC1,NC2,NC3,MOT,R1,R2,R3,R4,SX,ID2,ID3,ID4,ID5,IN1,IN2,IN3,LC$

Normal exit:   9 iterations. Status=0, F=    91170.61

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -91170.60781
Estimation based on N =  95426, K =  95
Inf.Cr.AIC  = 182531.2 AIC/N =    1.913
Model estimated: May 28, 2012, 08:28:01
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .2617 .2616
Chi-squared[90]           =  64637.52359
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
--------+------------------------------------------------------------------
        |                  Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -8.39963***       .62734   -13.39   .0000    -9.62919  -7.17007
 BP_NC01|    4.40629***       .58105     7.58   .0000     3.26746   5.54513
 BP_NC11|    2.65791***       .58174     4.57   .0000     1.51772   3.79810
 BP_NC21|    2.26721***       .58099     3.90   .0001     1.12850   3.40592
 BP_NC31|    1.28408**        .59896     2.14   .0320      .11015   2.45801
 BP_MOT1|      .09890         .06057     1.63   .1025     -.01981    .21761
  BP_R11|      .32177***       .10901     2.95   .0032      .10812    .53542
  BP_R21|      .29916***       .08955     3.34   .0008      .12364    .47468
  BP_R31|      .39661***       .09193     4.31   .0000      .21643    .57678
  BP_R41|      .16384         .11310     1.45   .1474     -.05782    .38551
  BP_SX1|      .58399***       .04897    11.92   .0000      .48800    .67998
 BP_ID21|    2.87282***       .17381    16.53   .0000     2.53217   3.21348
 BP_ID31|    1.98111***       .17916    11.06   .0000     1.62996   2.33227
 BP_ID41|    2.18471***       .17371    12.58   .0000     1.84423   2.52518
 BP_ID51|    2.36586***       .18121    13.06   .0000     2.01070   2.72101
 BP_IN11|      .24260         .21988     1.10   .2699     -.18835    .67355
 BP_IN21|      .48678***       .18305     2.66   .0078      .12802    .84555
 BP_IN31|      .77458***       .18861     4.11   .0000      .40491   1.14425
  BP_LC1|   -2.09155***       .06688   -31.27   .0000    -2.22263  -1.96047
     A_B|   -3.80508***       .12870   -29.57   .0000    -4.05733  -3.55283
  B_NC02|    3.33803***       .10815    30.87   .0000     3.12607   3.55000
  B_NC12|    1.66694***       .10818    15.41   .0000     1.45492   1.87897
```

B_NC22	1.21303***	.10717	11.32	.0000	1.00297	1.42309
B_NC32	.63033***	.11474	5.49	.0000	.40545	.85521
B_MOT2	-.45622***	.03330	-13.70	.0000	-.52149	-.39096
B_R12	.28616***	.04941	5.79	.0000	.18933	.38300
B_R22	.26622***	.03590	7.42	.0000	.19586	.33659
B_R32	.28018***	.03703	7.57	.0000	.20761	.35275
B_R42	.27886***	.04318	6.46	.0000	.19423	.36349
B_SX2	.41842***	.02204	18.98	.0000	.37521	.46163
B_ID22	2.14521***	.06067	35.36	.0000	2.02631	2.26411
B_ID32	1.54778***	.06245	24.79	.0000	1.42538	1.67017
B_ID42	1.70982***	.06008	28.46	.0000	1.59207	1.82757
B_ID52	1.90932***	.06720	28.41	.0000	1.77760	2.04103
B_IN12	-.68093***	.07659	-8.89	.0000	-.83105	-.53082
B_IN22	-.25780***	.04988	-5.17	.0000	-.35556	-.16004
B_IN32	.24977***	.05248	4.76	.0000	.14691	.35263
B_LC2	-2.07344***	.02777	-74.65	.0000	-2.12788	-2.01901
A_BO	-5.02994***	.28391	-17.72	.0000	-5.58639	-4.47350
BO_NC03	1.90947***	.17419	10.96	.0000	1.56806	2.25088
BO_NC13	.69438***	.17381	3.99	.0001	.35371	1.03504
BO_NC23	.10289	.17306	.59	.5521	-.23630	.44209
BO_NC33	-.27291	.19082	-1.43	.1527	-.64691	.10109
BO_MOT3	.56423***	.04406	12.81	.0000	.47788	.65058
BO_R13	.33148***	.08450	3.92	.0001	.16586	.49711
BO_R23	.13722**	.06253	2.19	.0282	.01466	.25978
BO_R33	.03632	.06591	.55	.5816	-.09286	.16551
BO_R43	-.09630	.08194	-1.18	.2399	-.25689	.06429
BO_SX3	-.16659***	.03768	-4.42	.0000	-.24045	-.09274
BO_ID23	1.73443***	.08767	19.78	.0000	1.56261	1.90625
BO_ID33	.57278***	.09690	5.91	.0000	.38286	.76271
BO_ID43	.39529***	.09229	4.28	.0000	.21440	.57617
BO_ID53	-.30201**	.13184	-2.29	.0220	-.56042	-.04361
BO_IN13	1.63730***	.24268	6.75	.0000	1.16165	2.11295
BO_IN23	1.69336***	.22331	7.58	.0000	1.25569	2.13104
BO_IN33	.98186***	.23066	4.26	.0000	.52977	1.43395
BO_LC3	-1.47217***	.05430	-27.11	.0000	-1.57859	-1.36575
A_M	-7.82909***	.33960	-23.05	.0000	-8.49469	-7.16348
M_NC04	1.47599***	.16159	9.13	.0000	1.15928	1.79270
M_NC14	.06951	.16168	.43	.6672	-.24737	.38639
M_NC24	-.01378	.16019	-.09	.9314	-.32775	.30019
M_NC34	-.30322*	.17695	-1.71	.0866	-.65003	.04359
M_MOT4	3.73994***	.04344	86.10	.0000	3.65480	3.82507
M_R14	.78472***	.08250	9.51	.0000	.62302	.94643
M_R24	.37733***	.06093	6.19	.0000	.25791	.49675
M_R34	.17345***	.06347	2.73	.0063	.04905	.29785
M_R44	.15171**	.07618	1.99	.0464	.00240	.30102
M_SX4	-.73664***	.03638	-20.25	.0000	-.80794	-.66534
M_ID24	1.51591***	.12187	12.44	.0000	1.27704	1.75477
M_ID34	2.64937***	.12022	22.04	.0000	2.41373	2.88500
M_ID44	2.35266***	.11806	19.93	.0000	2.12128	2.58405
M_ID54	2.05613***	.13421	15.32	.0000	1.79307	2.31919
M_IN14	2.21838***	.30268	7.33	.0000	1.62514	2.81161
M_IN24	2.39974***	.28498	8.42	.0000	1.84119	2.95830
M_IN34	2.19085***	.28914	7.58	.0000	1.62416	2.75755
M_LC4	-1.75122***	.04248	-41.23	.0000	-1.83448	-1.66797
A_P	-1.98749***	.10688	-18.60	.0000	-2.19697	-1.77801
P_NC05	2.46213***	.08497	28.98	.0000	2.29558	2.62867
P_NC15	.70870***	.08563	8.28	.0000	.54088	.87653
P_NC25	.25357***	.08387	3.02	.0025	.08919	.41795
P_NC35	-.46779***	.09951	-4.70	.0000	-.66281	-.27276
P_MOT5	-.68202***	.04081	-16.71	.0000	-.76201	-.60203
P_R15	.32660***	.05347	6.11	.0000	.22180	.43139

P_R25	.13919***	.04077	3.41	.0006	.05929	.21909
P_R35	.11225***	.04247	2.64	.0082	.02902	.19549
P_R45	.11823**	.05006	2.36	.0182	.02010	.21635
P_SX5	.25032***	.02471	10.13	.0000	.20189	.29875
P_ID25	.94744***	.05578	16.99	.0000	.83811	1.05676
P_ID35	.42411***	.05871	7.22	.0000	.30904	.53918
P_ID45	.77108***	.05482	14.07	.0000	.66364	.87853
P_ID55	1.01216***	.06348	15.95	.0000	.88775	1.13657
P_IN15	-.96968***	.07938	-12.22	.0000	-1.12526	-.81411
P_IN25	-.39811***	.05397	-7.38	.0000	-.50388	-.29234
P_IN35	-.04080	.05800	-.70	.4818	-.15448	.07288
P_LC5	-1.93377***	.03174	-60.93	.0000	-1.99597	-1.87156

Note: ***, **, * ==> Significance at 1%, 5%, 10% level.

MNL3.11wald_BP – ASC e combinação de variáveis binárias sobre a categoria dos rendimentos mensais do agregado familiar (***avalia se Ri é linear para BP***)

- R1: Variável binária para rendimento liquido do agregado familiar em euros 0-500€
- R2: Variável binária para rendimento liquido do agregado familiar em euros 501-1000€
- R3: Variável binária para rendimento liquido do agregado familiar em euros 1001-1500€
- R4: Variável binária para rendimento liquido do agregado familiar em euros 1501-2000€
- *R5: Variável binária para rendimento liquido do agregado familiar em euros >2000€ (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(3)-b(2)-b(4)=0,2*b(4)-b(3)-b(5)=0
;Rh2=ONE,R1,R2,R3,R4$
Normal exit:   5 iterations. Status=0, F=    119596.3

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -119596.25368
Estimation based on N =  95426, K =  25
Inf.Cr.AIC  = 239242.5 AIC/N =    2.507
Model estimated: Jul 13, 2012, 17:23:05
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0315 .0315
Chi-squared[20]           =   7786.23184
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      2 linear restrictions
Chi-squared =   45.71, P value =  .0000
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -4.23459***       .07549   -56.09  .0000     -4.38256  -4.08663
  BP_R11|    2.32018***       .09408    24.66  .0000      2.13578   2.50458
  BP_R21|    1.36321***       .08211    16.60  .0000      1.20228   1.52415
  BP_R31|    1.04860***       .08716    12.03  .0000       .87778   1.21943
  BP_R41|     .42835***       .10995     3.90  .0001       .21286    .64384
     A_B|   -2.00603***       .02620   -76.57  .0000     -2.05738  -1.95468
   B_R12|    2.19145***       .03779    58.00  .0000      2.11739   2.26551
   B_R22|    1.19754***       .02946    40.65  .0000      1.13981   1.25528
   B_R32|     .83628***       .03169    26.39  .0000       .77417    .89839
   B_R42|     .50487***       .03806    13.26  .0000       .43027    .57947
    A_BO|   -3.37375***       .04956   -68.07  .0000     -3.47089  -3.27660
  BO_R13|    1.60955***       .07229    22.27  .0000      1.46786   1.75123
  BO_R23|    1.00107***       .05579    17.94  .0000       .89173   1.11041
  BO_R33|     .59140***       .06123     9.66  .0000       .47140    .71140
  BO_R43|      .14130*        .07821     1.81  .0708      -.01199    .29459
     A_M|   -3.11559***       .04377   -71.17  .0000     -3.20139  -3.02980
   M_R14|    1.97225***       .05993    32.91  .0000      1.85479   2.08972
   M_R24|    1.37297***       .04787    28.68  .0000      1.27915   1.46679
   M_R34|     .86716***       .05201    16.67  .0000       .76522    .96909
   M_R44|     .46662***       .06340     7.36  .0000       .34236    .59089
     A_P|   -2.36712***       .03081   -76.82  .0000     -2.42752  -2.30673
   P_R15|    2.30574***       .04225    54.57  .0000      2.22293   2.38855
```

```
   P_R25|    1.07796***       .03476    31.01  .0000     1.00983    1.14609
   P_R35|     .64831***       .03801    17.06  .0000      .57381     .72281
   P_R45|     .32732***       .04644     7.05  .0000      .23630     .41834
--------+------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-------------------------------------------------------------------------------
```

MNL3.29wald_M – ASC e combinação de Variáveis binárias sobre o número de automóveis disponíveis diariamente per capita (***avalia se NCi é linear para M***)

- NC0: Variável binária Automóveis ligeiros disponíveis per capita = 0
- NC1: Variável binária Automóveis ligeiros disponíveis per capita >0 & <=0,25
- NC2: Variável binária Automóveis ligeiros disponíveis per capita >0,25 & <=0,5
- NC3: Variável binária Automóveis ligeiros disponíveis per capita >0,5 & <=0,75
- *NC4a: Variável binária Automóveis ligeiros disponíveis per capita >0,75 (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(18)-b(17)-b(19)=0,2*b(19)-b(18)-b(20)=0
;Rh2=ONE,NC0,NC1,NC2,NC3$
Normal exit:   8 iterations. Status=0, F=    110636.3

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -110636.30337
Estimation based on N =  95426, K =  25
Inf.Cr.AIC  = 221322.6 AIC/N =    2.319
Model estimated: Jul 13, 2012, 23:13:40
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .1041 .1040
Chi-squared[20]           =  25706.13248
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      2 linear restrictions
Chi-squared =  254.30, P value =  .0000
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -7.08311***       .57759   -12.26  .0000    -8.21517  -5.95105
 BP_NC01|    5.66657***       .57849     9.80  .0000     4.53275   6.80039
 BP_NC11|    3.92573***       .57935     6.78  .0000     2.79023   5.06124
 BP_NC21|    3.19850***       .57933     5.52  .0000     2.06304   4.33397
 BP_NC31|    1.87693***       .59749     3.14  .0017      .70587   3.04799
     A_B|   -3.61737***       .10342   -34.98  .0000    -3.82008  -3.41467
  B_NC02|    4.25125***       .10491    40.52  .0000     4.04563   4.45687
  B_NC12|    2.53773***       .10499    24.17  .0000     2.33195   2.74351
  B_NC22|    1.85649***       .10475    17.72  .0000     1.65119   2.06179
  B_NC32|    1.01302***       .11202     9.04  .0000      .79347   1.23257
    A_BO|   -4.57080***       .16525   -27.66  .0000    -4.89468  -4.24692
 BO_NC03|    3.32511***       .16797    19.80  .0000     2.99589   3.65432
 BO_NC13|    2.23962***       .16806    13.33  .0000     1.91024   2.56900
 BO_NC23|    1.20799***       .16887     7.15  .0000      .87702   1.53896
 BO_NC33|     .49377***       .18696     2.64  .0083      .12735    .86020
     A_M|   -4.19274***       .13711   -30.58  .0000    -4.46146  -3.92401
  M_NC04|    3.75012***       .13898    26.98  .0000     3.47771   4.02252
  M_NC14|    2.07854***       .13989    14.86  .0000     1.80436   2.35271
  M_NC24|    1.39420***       .13965     9.98  .0000     1.12048   1.66792
  M_NC34|     .47238***       .15553     3.04  .0024      .16755    .77721
     A_P|   -3.03423***       .07806   -38.87  .0000    -3.18722  -2.88123
  P_NC05|    3.28159***       .08034    40.85  .0000     3.12413   3.43906
  P_NC15|    1.39406***       .08127    17.15  .0000     1.23478   1.55333
```

```
   P_NC25|     .77197***       .08076     9.56  .0000       .61367     .93026
   P_NC35|     -.17741*        .09688    -1.83  .0671      -.36729     .01247
---------+--------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-----------------------------------------------------------------------------
```

MNL3.29wald_OB – ASC e combinação de Variáveis binárias sobre o número de automóveis disponíveis diariamente per capita (***avalia se NCi é linear para OB***)

- NC0: Variável binária Automóveis ligeiros disponíveis per capita = 0
- NC1: Variável binária Automóveis ligeiros disponíveis per capita >0 & <=0,25
- NC2: Variável binária Automóveis ligeiros disponíveis per capita >0,25 & <=0,5
- NC3: Variável binária Automóveis ligeiros disponíveis per capita >0,5 & <=0,75
- *NC4a: Variável binária Automóveis ligeiros disponíveis per capita >0,75 (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(13)-b(12)-b(14)=0,2*b(14)-b(13)-b(15)=0
;Rh2=ONE,NC0,NC1,NC2,NC3$
Normal exit:   8 iterations. Status=0, F=    110636.3

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -110636.30337
Estimation based on N =  95426, K =  25
Inf.Cr.AIC  = 221322.6 AIC/N =    2.319
Model estimated: Jul 13, 2012, 23:17:16
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .1041 .1040
Chi-squared[20]           =  25706.13248
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      2 linear restrictions
Chi-squared =   12.89, P value =  .0016
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -7.08311***       .57759   -12.26  .0000    -8.21517  -5.95105
 BP_NC01|    5.66657***       .57849     9.80  .0000     4.53275   6.80039
 BP_NC11|    3.92573***       .57935     6.78  .0000     2.79023   5.06124
 BP_NC21|    3.19850***       .57933     5.52  .0000     2.06304   4.33397
 BP_NC31|    1.87693***       .59749     3.14  .0017      .70587   3.04799
     A_B|   -3.61737***       .10342   -34.98  .0000    -3.82008  -3.41467
  B_NC02|    4.25125***       .10491    40.52  .0000     4.04563   4.45687
  B_NC12|    2.53773***       .10499    24.17  .0000     2.33195   2.74351
  B_NC22|    1.85649***       .10475    17.72  .0000     1.65119   2.06179
  B_NC32|    1.01302***       .11202     9.04  .0000      .79347   1.23257
    A_BO|   -4.57080***       .16525   -27.66  .0000    -4.89468  -4.24692
 BO_NC03|    3.32511***       .16797    19.80  .0000     2.99589   3.65432
 BO_NC13|    2.23962***       .16806    13.33  .0000     1.91024   2.56900
 BO_NC23|    1.20799***       .16887     7.15  .0000      .87702   1.53896
 BO_NC33|     .49377***       .18696     2.64  .0083      .12735    .86020
     A_M|   -4.19274***       .13711   -30.58  .0000    -4.46146  -3.92401
  M_NC04|    3.75012***       .13898    26.98  .0000     3.47771   4.02252
  M_NC14|    2.07854***       .13989    14.86  .0000     1.80436   2.35271
  M_NC24|    1.39420***       .13965     9.98  .0000     1.12048   1.66792
  M_NC34|     .47238***       .15553     3.04  .0024      .16755    .77721
     A_P|   -3.03423***       .07806   -38.87  .0000    -3.18722  -2.88123
  P_NC05|    3.28159***       .08034    40.85  .0000     3.12413   3.43906
  P_NC15|    1.39406***       .08127    17.15  .0000     1.23478   1.55333
```

```
   P_NC25|     .77197***       .08076     9.56  .0000      .61367     .93026
   P_NC35|     -.17741*        .09688    -1.83  .0671     -.36729     .01247
---------+--------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-----------------------------------------------------------------------------
```

MNL3.29wald_BP – ASC e combinação de Variáveis binárias sobre o número de automóveis disponíveis diariamente per capita (***avalia se NCi é linear para BP***)

- NC0: Variável binária Automóveis ligeiros disponíveis per capita = 0
- NC1: Variável binária Automóveis ligeiros disponíveis per capita >0 & <=0,25
- NC2: Variável binária Automóveis ligeiros disponíveis per capita >0,25 & <=0,5
- NC3: Variável binária Automóveis ligeiros disponíveis per capita >0,5 & <=0,75
- *NC4a: Variável binária Automóveis ligeiros disponíveis per capita >0,75 (excluída)*

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(3)-b(2)-b(4)=0,2*b(4)-b(3)-b(5)=0
;Rh2=ONE,NC0,NC1,NC2,NC3$
Normal exit:   8 iterations. Status=0, F=    110636.3

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -110636.30337
Estimation based on N =  95426, K =  25
Inf.Cr.AIC  = 221322.6 AIC/N =    2.319
Model estimated: Jul 13, 2012, 23:23:51
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .1041 .1040
Chi-squared[20]           =  25706.13248
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped    0 obs
Wald test of      2 linear restrictions
Chi-squared =   92.63, P value =  .0000
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -7.08311***       .57759   -12.26  .0000    -8.21517  -5.95105
 BP_NC01|    5.66657***       .57849     9.80  .0000     4.53275   6.80039
 BP_NC11|    3.92573***       .57935     6.78  .0000     2.79023   5.06124
 BP_NC21|    3.19850***       .57933     5.52  .0000     2.06304   4.33397
 BP_NC31|    1.87693***       .59749     3.14  .0017      .70587   3.04799
     A_B|   -3.61737***       .10342   -34.98  .0000    -3.82008  -3.41467
  B_NC02|    4.25125***       .10491    40.52  .0000     4.04563   4.45687
  B_NC12|    2.53773***       .10499    24.17  .0000     2.33195   2.74351
  B_NC22|    1.85649***       .10475    17.72  .0000     1.65119   2.06179
  B_NC32|    1.01302***       .11202     9.04  .0000      .79347   1.23257
    A_BO|   -4.57080***       .16525   -27.66  .0000    -4.89468  -4.24692
 BO_NC03|    3.32511***       .16797    19.80  .0000     2.99589   3.65432
 BO_NC13|    2.23962***       .16806    13.33  .0000     1.91024   2.56900
 BO_NC23|    1.20799***       .16887     7.15  .0000      .87702   1.53896
 BO_NC33|     .49377***       .18696     2.64  .0083      .12735    .86020
     A_M|   -4.19274***       .13711   -30.58  .0000    -4.46146  -3.92401
  M_NC04|    3.75012***       .13898    26.98  .0000     3.47771   4.02252
  M_NC14|    2.07854***       .13989    14.86  .0000     1.80436   2.35271
  M_NC24|    1.39420***       .13965     9.98  .0000     1.12048   1.66792
  M_NC34|     .47238***       .15553     3.04  .0024      .16755    .77721
     A_P|   -3.03423***       .07806   -38.87  .0000    -3.18722  -2.88123
  P_NC05|    3.28159***       .08034    40.85  .0000     3.12413   3.43906
  P_NC15|    1.39406***       .08127    17.15  .0000     1.23478   1.55333
```

```
  P_NC25|      .77197***       .08076     9.56  .0000       .61367     .93026
  P_NC35|     -.17741*         .09688    -1.83  .0671      -.36729     .01247
--------+--------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-----------------------------------------------------------------------------
```

MNL3.120aWald_BP – (***avalia se Dei é linear para BP***)
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=120min (média duração)
- De3 : variável binária duracão da estadia >120min & <=240min (média duração)
- De4 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De5: variável binária duracão da estadia >480min (muito longa duração)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(3)-b(2)-b(4)=0,2*b(4)-b(3)-b(5)=0
;Rh2=ONE,DE2,DE3,DE4,DE5$
Normal exit:   5 iterations. Status=0, F=    78027.38

-----------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -78027.37664
Estimation based on N =  61358, K =  25
Inf.Cr.AIC  = 156104.8 AIC/N =    2.544
Model estimated: Jul 14, 2012, 18:24:27
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0142 .0141
Chi-squared[20]           =   2248.95947
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped34068 obs
Wald test of      2 linear restrictions
Chi-squared =    2.45, P value =  .2940
--------+--------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+--------------------------------------------------------------------
    A_BP|   -3.76803***       .07338   -51.35  .0000    -3.91185   -3.62421
 BP_DE21|      .15090         .10706     1.41  .1587     -.05893     .36072
 BP_DE31|      .38453***      .09629     3.99  .0001      .19581     .57326
 BP_DE41|      .70398***      .09439     7.46  .0000      .51898     .88898
 BP_DE51|     1.13283***      .08951    12.66  .0000      .95740    1.30826
     A_B|   -1.60956***       .02701   -59.59  .0000    -1.66250   -1.55662
  B_DE22|      .31725***      .03830     8.28  .0000      .24217     .39232
  B_DE32|      .54394***      .03503    15.53  .0000      .47528     .61260
  B_DE42|      .65194***      .03601    18.11  .0000      .58137     .72251
  B_DE52|      .88245***      .03562    24.77  .0000      .81263     .95227
    A_BO|   -3.43156***       .06230   -55.08  .0000    -3.55366   -3.30946
 BO_DE23|     -.02217         .09521     -.23  .8159     -.20878     .16444
 BO_DE33|      .26970***      .08379     3.22  .0013      .10548     .43392
 BO_DE43|      .97272***      .07666    12.69  .0000      .82248    1.12297
 BO_DE53|     1.59634***      .07182    22.23  .0000     1.45557    1.73710
    A_M |   -2.05946***       .03278   -62.82  .0000    -2.12372   -1.99521
```

M_DE24	-.40344***	.05567	-7.25	.0000	-.51255	-.29432
M_DE34	-.05318	.04751	-1.12	.2630	-.14630	.03994
M_DE44	.27616***	.04656	5.93	.0000	.18491	.36741
M_DE54	.18379***	.04896	3.75	.0002	.08782	.27975
A_P	-1.46282***	.02543	-57.53	.0000	-1.51265	-1.41298
P_DE25	-.01599	.03877	-.41	.6799	-.09197	.05999
P_DE35	.10171***	.03566	2.85	.0043	.03182	.17160
P_DE45	.04522	.03811	1.19	.2354	-.02948	.11992
P_DE55	-.57430***	.04658	-12.33	.0000	-.66560	-.48300

Note: ***, **, * ==> Significance at 1%, 5%, 10% level.

MNL3.120aWald_OB – (***avalia se Dei é linear para OB***)
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=120min (média duração)
- De3 : variável binária duracão da estadia >120min & <=240min (média duração)
- De4 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De5: variável binária duracão da estadia >480min (muito longa duração)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(13)-b(12)-b(14)=0,2*b(14)-b(13)-b(15)=0
;Rh2=ONE,DE2,DE3,DE4,DE5$
Normal exit:   5 iterations. Status=0, F=    78027.38

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function     -78027.37664
Estimation based on N =  61358, K =  25
Inf.Cr.AIC  = 156104.8 AIC/N =    2.544
Model estimated: Jul 14, 2012, 18:28:26
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0142 .0141
Chi-squared[20]           =   2248.95947
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped34068 obs
Wald test of      2 linear restrictions
Chi-squared =   11.13, P value =  .0038
--------+------------------------------------------------------------------
        |                  Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.76803***       .07338   -51.35  .0000     -3.91185  -3.62421
  BP_DE21|      .15090         .10706     1.41  .1587      -.05893     .36072
  BP_DE31|      .38453***      .09629     3.99  .0001       .19581     .57326
  BP_DE41|      .70398***      .09439     7.46  .0000       .51898     .88898
  BP_DE51|     1.13283***      .08951    12.66  .0000       .95740    1.30826
     A_B|   -1.60956***       .02701   -59.59  .0000     -1.66250  -1.55662
   B_DE22|      .31725***      .03830     8.28  .0000       .24217     .39232
   B_DE32|      .54394***      .03503    15.53  .0000       .47528     .61260
   B_DE42|      .65194***      .03601    18.11  .0000       .58137     .72251
   B_DE52|      .88245***      .03562    24.77  .0000       .81263     .95227
    A_BO|   -3.43156***       .06230   -55.08  .0000     -3.55366  -3.30946
  BO_DE23|     -.02217         .09521     -.23  .8159      -.20878     .16444
  BO_DE33|      .26970***      .08379     3.22  .0013       .10548     .43392
  BO_DE43|      .97272***      .07666    12.69  .0000       .82248    1.12297
  BO_DE53|     1.59634***      .07182    22.23  .0000      1.45557    1.73710
     A_M|   -2.05946***       .03278   -62.82  .0000     -2.12372  -1.99521
   M_DE24|     -.40344***      .05567    -7.25  .0000      -.51255    -.29432
   M_DE34|     -.05318         .04751    -1.12  .2630      -.14630     .03994
   M_DE44|      .27616***      .04656     5.93  .0000       .18491     .36741
   M_DE54|      .18379***      .04896     3.75  .0002       .08782     .27975
     A_P|   -1.46282***       .02543   -57.53  .0000     -1.51265  -1.41298
   P_DE25|     -.01599         .03877     -.41  .6799      -.09197     .05999
   P_DE35|      .10171***      .03566     2.85  .0043       .03182     .17160
   P_DE45|      .04522         .03811     1.19  .2354      -.02948     .11992
```

```
   P_DE55|    -.57430***       .04658   -12.33   .0000      -.66560    -.48300
---------+--------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-----------------------------------------------------------------------------
```

MNL3.120aWald_B – (***avalia se Dei é linear para B***)
- ASC

- *De1 : variável binária duracão da estadia <=60min (curta duração) (excluída)*
- De2 : variável binária duracão da estadia >60min & <=120min (média duração)
- De3 : variável binária duracão da estadia >120min & <=240min (média duração)
- De4 : variável binária duracão da estadia >240min & <=480min (longa duração)
- De5: variável binária duracão da estadia >480min (muito longa duração)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(9)-b(8)-b(10)=0,2*b(8)-b(7)-b(9)=0
;Rh2=ONE,DE2,DE3,DE4,DE5$
Normal exit:   5 iterations. Status=0, F=    78027.38

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -78027.37664
Estimation based on N =  61358, K =  25
Inf.Cr.AIC  = 156104.8 AIC/N =    2.544
Model estimated: Jul 14, 2012, 18:32:17
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0142 .0141
Chi-squared[20]           =   2248.95947
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped34068 obs
Wald test of      2 linear restrictions
Chi-squared =    5.36, P value =  .0684
--------+------------------------------------------------------------------
        |                  Standard            Prob.      95% Confidence
   MTRP |  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.76803***       .07338   -51.35  .0000     -3.91185  -3.62421
  BP_DE21|     .15090         .10706     1.41  .1587     -.05893     .36072
  BP_DE31|     .38453***      .09629     3.99  .0001      .19581     .57326
  BP_DE41|     .70398***      .09439     7.46  .0000      .51898     .88898
  BP_DE51|    1.13283***      .08951    12.66  .0000      .95740    1.30826
     A_B|   -1.60956***       .02701   -59.59  .0000    -1.66250  -1.55662
   B_DE22|     .31725***      .03830     8.28  .0000      .24217     .39232
   B_DE32|     .54394***      .03503    15.53  .0000      .47528     .61260
   B_DE42|     .65194***      .03601    18.11  .0000      .58137     .72251
   B_DE52|     .88245***      .03562    24.77  .0000      .81263     .95227
    A_BO|   -3.43156***       .06230   -55.08  .0000    -3.55366  -3.30946
  BO_DE23|     -.02217        .09521     -.23  .8159     -.20878     .16444
  BO_DE33|     .26970***      .08379     3.22  .0013      .10548     .43392
  BO_DE43|     .97272***      .07666    12.69  .0000      .82248    1.12297
  BO_DE53|    1.59634***      .07182    22.23  .0000     1.45557    1.73710
     A_M|   -2.05946***       .03278   -62.82  .0000    -2.12372  -1.99521
   M_DE24|    -.40344***      .05567    -7.25  .0000     -.51255   -.29432
   M_DE34|    -.05318         .04751    -1.12  .2630     -.14630     .03994
   M_DE44|     .27616***      .04656     5.93  .0000      .18491     .36741
   M_DE54|     .18379***      .04896     3.75  .0002      .08782     .27975
     A_P|   -1.46282***       .02543   -57.53  .0000    -1.51265  -1.41298
   P_DE25|    -.01599         .03877     -.41  .6799     -.09197     .05999
   P_DE35|     .10171***      .03566     2.85  .0043      .03182     .17160
   P_DE45|     .04522         .03811     1.19  .2354     -.02948     .11992
```

```
   P_DE55|    -.57430***       .04658   -12.33   .0000      -.66560    -.48300
---------+--------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-----------------------------------------------------------------------------
```

MNL3.91wald_B – ASC e combinação de variáveis binárias razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO (TBA) (***avalia se TBA é linear para B***)

- TB1 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO <=1
- TB2 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >1 e <=1.5
- TB3 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >1.5 e <=2
-TB4 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >2 (excluído por ser o teoricamente mais favorável ao AUTO)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(7)-b(6)-b(8)=0
;Rh2=ONE,TB1,TB2,TB3$
Normal exit:   5 iterations. Status=0, F=    114751.4

------------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -114751.41062
Estimation based on N =  89305, K =  20
Inf.Cr.AIC  = 229542.8 AIC/N =    2.570
Model estimated: Jul 15, 2012, 00:55:12
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0079 .0079
Chi-squared[15]           =   1833.42073
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped 6121 obs
Wald test of      1 linear restrictions
Chi-squared =   17.40, P value =  .0000
--------+---------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+---------------------------------------------------------------------
    A_BP|   -3.38020***      .05794   -58.34  .0000    -3.49376  -3.26664
 BP_TB11|     .92704***      .11139     8.32  .0000      .70872   1.14536
 BP_TB21|     .45152***      .06623     6.82  .0000      .32171    .58134
 BP_TB31|     .18142***      .06832     2.66  .0079      .04751    .31534
     A_B|   -1.59659***      .02561   -62.33  .0000    -1.64679  -1.54639
  B_TB12|    1.06524***      .05092    20.92  .0000      .96545   1.16504
  B_TB22|     .74430***      .02883    25.82  .0000      .68780    .80079
  B_TB32|     .64485***      .02899    22.24  .0000      .58803    .70168
    A_BO|   -2.59263***      .03985   -65.07  .0000    -2.67072  -2.51453
 BO_TB13|    -.65904***      .14430    -4.57  .0000     -.94186   -.37621
 BO_TB23|    -.20178***      .04995    -4.04  .0001     -.29968   -.10389
 BO_TB33|    -.06799         .04873    -1.40  .1629     -.16349    .02751
     A_M|   -2.08565***      .03163   -65.95  .0000    -2.14764  -2.02366
  M_TB14|     .12820         .08242     1.56  .1198     -.03334    .28975
  M_TB24|    -.20928***      .03964    -5.28  .0000     -.28697   -.13159
  M_TB34|    -.15009***      .03915    -3.83  .0001     -.22681   -.07336
     A_P|   -1.67309***      .02645   -63.26  .0000    -1.72493  -1.62126
  P_TB15|    1.25355***      .05007    25.04  .0000     1.15542   1.35168
  P_TB25|     .33232***      .03085    10.77  .0000      .27186    .39277
  P_TB35|    -.04368         .03220    -1.36  .1750     -.10679    .01944
--------+---------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
```

MNL3.91wald_W – ASC e combinação de variáveis binárias razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO (TBA) (***avalia se TBA é linear para W***)

- TB1 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO <=1
- TB2 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >1 e <=1.5
- TB3 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >1.5 e <=2
-TB4 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >2 (excluído por ser o teoricamente mais favorável ao AUTO)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(19)-b(18)-b(20)=0
;Rh2=ONE,TB1,TB2,TB3$
Normal exit:   5 iterations. Status=0, F=    114751.4

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -114751.41062
Estimation based on N =  89305, K =  20
Inf.Cr.AIC  = 229542.8 AIC/N =    2.570
Model estimated: Jul 15, 2012, 00:59:48
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0079 .0079
Chi-squared[15]           =   1833.42073
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped 6121 obs
Wald test of      1 linear restrictions
Chi-squared =   94.29, P value =  .0000
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.38020***      .05794   -58.34  .0000    -3.49376  -3.26664
 BP_TB11|     .92704***      .11139     8.32  .0000      .70872   1.14536
 BP_TB21|     .45152***      .06623     6.82  .0000      .32171    .58134
 BP_TB31|     .18142***      .06832     2.66  .0079      .04751    .31534
     A_B|   -1.59659***      .02561   -62.33  .0000    -1.64679  -1.54639
  B_TB12|    1.06524***      .05092    20.92  .0000      .96545   1.16504
  B_TB22|     .74430***      .02883    25.82  .0000      .68780    .80079
  B_TB32|     .64485***      .02899    22.24  .0000      .58803    .70168
    A_BO|   -2.59263***      .03985   -65.07  .0000    -2.67072  -2.51453
 BO_TB13|    -.65904***      .14430    -4.57  .0000     -.94186   -.37621
 BO_TB23|    -.20178***      .04995    -4.04  .0001     -.29968   -.10389
 BO_TB33|    -.06799         .04873    -1.40  .1629     -.16349    .02751
     A_M|   -2.08565***      .03163   -65.95  .0000    -2.14764  -2.02366
  M_TB14|     .12820         .08242     1.56  .1198     -.03334    .28975
  M_TB24|    -.20928***      .03964    -5.28  .0000     -.28697   -.13159
  M_TB34|    -.15009***      .03915    -3.83  .0001     -.22681   -.07336
     A_P|   -1.67309***      .02645   -63.26  .0000    -1.72493  -1.62126
  P_TB15|    1.25355***      .05007    25.04  .0000     1.15542   1.35168
  P_TB25|     .33232***      .03085    10.77  .0000      .27186    .39277
  P_TB35|    -.04368         .03220    -1.36  .1750     -.10679    .01944
--------+------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
```

MNL3.91wald_M – ASC e combinação de variáveis binárias razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO (TBA) (***avalia se TBA é linear para M***)

- TB1 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO <=1
- TB2 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >1 e <=1.5
- TB3 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >1.5 e <=2
-TB4 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >2 (excluído por ser o teoricamente mais favorável ao AUTO)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(15)-b(14)-b(16)=0
;Rh2=ONE,TB1,TB2,TB3$
Normal exit:   5 iterations. Status=0, F=    114751.4

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -114751.41062
Estimation based on N =  89305, K =  20
Inf.Cr.AIC  = 229542.8 AIC/N =    2.570
Model estimated: Jul 15, 2012, 01:02:36
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0079 .0079
Chi-squared[15]           =   1833.42073
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped 6121 obs
Wald test of      1 linear restrictions
Chi-squared =   18.28, P value =  .0000
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.38020***      .05794   -58.34  .0000    -3.49376  -3.26664
 BP_TB11|     .92704***      .11139     8.32  .0000      .70872   1.14536
 BP_TB21|     .45152***      .06623     6.82  .0000      .32171    .58134
 BP_TB31|     .18142***      .06832     2.66  .0079      .04751    .31534
     A_B|   -1.59659***      .02561   -62.33  .0000    -1.64679  -1.54639
  B_TB12|    1.06524***      .05092    20.92  .0000      .96545   1.16504
  B_TB22|     .74430***      .02883    25.82  .0000      .68780    .80079
  B_TB32|     .64485***      .02899    22.24  .0000      .58803    .70168
    A_BO|   -2.59263***      .03985   -65.07  .0000    -2.67072  -2.51453
 BO_TB13|    -.65904***      .14430    -4.57  .0000     -.94186   -.37621
 BO_TB23|    -.20178***      .04995    -4.04  .0001     -.29968   -.10389
 BO_TB33|    -.06799         .04873    -1.40  .1629     -.16349    .02751
     A_M|   -2.08565***      .03163   -65.95  .0000    -2.14764  -2.02366
  M_TB14|     .12820         .08242     1.56  .1198     -.03334    .28975
  M_TB24|    -.20928***      .03964    -5.28  .0000     -.28697   -.13159
  M_TB34|    -.15009***      .03915    -3.83  .0001     -.22681   -.07336
     A_P|   -1.67309***      .02645   -63.26  .0000    -1.72493  -1.62126
  P_TB15|    1.25355***      .05007    25.04  .0000     1.15542   1.35168
  P_TB25|     .33232***      .03085    10.77  .0000      .27186    .39277
  P_TB35|    -.04368         .03220    -1.36  .1750     -.10679    .01944
--------+------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
```

MNL3.91wald_OB – ASC e combinação de variáveis binárias razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO (TBA) (***avalia se TBA é linear para OB***)

- TB1 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO <=1
- TB2 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >1 e <=1.5
- TB3 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >1.5 e <=2
-TB4 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >2 (excluído por ser o teoricamente mais favorável ao AUTO)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(11)-b(10)-b(12)=0
;Rh2=ONE,TB1,TB2,TB3$
Normal exit:   5 iterations. Status=0, F=    114751.4

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -114751.41062
Estimation based on N =  89305, K =  20
Inf.Cr.AIC  = 229542.8 AIC/N =    2.570
Model estimated: Jul 15, 2012, 01:04:46
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0079 .0079
Chi-squared[15]           =   1833.42073
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped 6121 obs
Wald test of      1 linear restrictions
Chi-squared =    4.42, P value =  .0354
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.38020***      .05794   -58.34  .0000    -3.49376  -3.26664
 BP_TB11|     .92704***      .11139     8.32  .0000      .70872   1.14536
 BP_TB21|     .45152***      .06623     6.82  .0000      .32171    .58134
 BP_TB31|     .18142***      .06832     2.66  .0079      .04751    .31534
     A_B|   -1.59659***      .02561   -62.33  .0000    -1.64679  -1.54639
  B_TB12|    1.06524***      .05092    20.92  .0000      .96545   1.16504
  B_TB22|     .74430***      .02883    25.82  .0000      .68780    .80079
  B_TB32|     .64485***      .02899    22.24  .0000      .58803    .70168
    A_BO|   -2.59263***      .03985   -65.07  .0000    -2.67072  -2.51453
 BO_TB13|    -.65904***      .14430    -4.57  .0000     -.94186   -.37621
 BO_TB23|    -.20178***      .04995    -4.04  .0001     -.29968   -.10389
 BO_TB33|    -.06799         .04873    -1.40  .1629     -.16349    .02751
     A_M|   -2.08565***      .03163   -65.95  .0000    -2.14764  -2.02366
  M_TB14|     .12820         .08242     1.56  .1198     -.03334    .28975
  M_TB24|    -.20928***      .03964    -5.28  .0000     -.28697   -.13159
  M_TB34|    -.15009***      .03915    -3.83  .0001     -.22681   -.07336
     A_P|   -1.67309***      .02645   -63.26  .0000    -1.72493  -1.62126
  P_TB15|    1.25355***      .05007    25.04  .0000     1.15542   1.35168
  P_TB25|     .33232***      .03085    10.77  .0000      .27186    .39277
  P_TB35|    -.04368         .03220    -1.36  .1750     -.10679    .01944
--------+------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
```

MNL3.91wald_BP – ASC e combinação de variáveis binárias razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO (TBA) (***avalia se TBA é linear para BP***)

- TB1 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO <=1
- TB2 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >1 e <=1.5
- TB3 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >1.5 e <=2
-TB4 - razão entre o tempo médio de viagem em BUS e o tempo médio de viagem em AUTO >2 (excluído por ser o teoricamente mais favorável ao AUTO)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(3)-b(2)-b(4)=0
;Rh2=ONE,TB1,TB2,TB3$
Normal exit:   5 iterations. Status=0, F=    114751.4

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function   -114751.41062
Estimation based on N =  89305, K =  20
Inf.Cr.AIC  = 229542.8 AIC/N =    2.570
Model estimated: Jul 15, 2012, 01:06:45
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0079 .0079
Chi-squared[15]           =   1833.42073
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped 6121 obs
Wald test of      1 linear restrictions
Chi-squared =    2.91, P value =  .0878
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.38020***      .05794   -58.34  .0000    -3.49376  -3.26664
 BP_TB11|     .92704***      .11139     8.32  .0000      .70872   1.14536
 BP_TB21|     .45152***      .06623     6.82  .0000      .32171    .58134
 BP_TB31|     .18142***      .06832     2.66  .0079      .04751    .31534
     A_B|   -1.59659***      .02561   -62.33  .0000    -1.64679  -1.54639
  B_TB12|    1.06524***      .05092    20.92  .0000      .96545   1.16504
  B_TB22|     .74430***      .02883    25.82  .0000      .68780    .80079
  B_TB32|     .64485***      .02899    22.24  .0000      .58803    .70168
    A_BO|   -2.59263***      .03985   -65.07  .0000    -2.67072  -2.51453
 BO_TB13|    -.65904***      .14430    -4.57  .0000     -.94186   -.37621
 BO_TB23|    -.20178***      .04995    -4.04  .0001     -.29968   -.10389
 BO_TB33|    -.06799         .04873    -1.40  .1629     -.16349    .02751
     A_M|   -2.08565***      .03163   -65.95  .0000    -2.14764  -2.02366
  M_TB14|     .12820         .08242     1.56  .1198     -.03334    .28975
  M_TB24|    -.20928***      .03964    -5.28  .0000     -.28697   -.13159
  M_TB34|    -.15009***      .03915    -3.83  .0001     -.22681   -.07336
     A_P|   -1.67309***      .02645   -63.26  .0000    -1.72493  -1.62126
  P_TB15|    1.25355***      .05007    25.04  .0000     1.15542   1.35168
  P_TB25|     .33232***      .03085    10.77  .0000      .27186    .39277
  P_TB35|    -.04368         .03220    -1.36  .1750     -.10679    .01944
--------+------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
```

MNL3.137wald_B – ***(avalia se Ftl1 é linear para B)***
- ASC

- Fl1: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas <=2 (30min de espera) (Excluída)
- Fl2: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >2 & <=4 (15min de espera)
- Fl3: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >4 & <=12 (5min de espera)
- Fl4: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >12 (menos de 5min de espera)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(7)-b(6)-b(8)=0
;Rh2=ONE,FL2,FL3,FL4$
Normal exit:   5 iterations. Status=0, F=    50952.44

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -50952.43828
Estimation based on N =  41329, K =  20
Inf.Cr.AIC  = 101944.9 AIC/N =    2.467
Model estimated: Jul 15, 2012, 09:37:13
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0232 .0231
Chi-squared[15]           =   2415.29546
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped54097 obs
Wald test of      1 linear restrictions
Chi-squared =    82.30, P value =   .0000
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.62086***      .07888   -45.90  .0000    -3.77547  -3.46625
 BP_FL21|     .65522***      .10727     6.11  .0000      .44498    .86547
 BP_FL31|     .64208***      .09655     6.65  .0000      .45284    .83133
 BP_FL41|     .92854***      .09896     9.38  .0000      .73458   1.12251
     A_B|   -1.43788***      .02907   -49.46  .0000    -1.49486  -1.38090
  B_FL22|     .68827***      .04065    16.93  .0000      .60861    .76794
  B_FL32|     .68381***      .03625    18.86  .0000      .61276    .75486
  B_FL42|    1.19240***      .03690    32.32  .0000     1.12009   1.26472
    A_BO|   -2.67237***      .05010   -53.35  .0000    -2.77055  -2.57418
 BO_FL23|    -.49282***      .09436    -5.22  .0000     -.67776   -.30789
 BO_FL33|   -1.31213***      .10356   -12.67  .0000    -1.51510  -1.10916
 BO_FL43|   -1.41633***      .12747   -11.11  .0000    -1.66618  -1.16649
     A_M|   -2.37942***      .04374   -54.39  .0000    -2.46515  -2.29368
  M_FL24|    -.49045***      .08209    -5.97  .0000     -.65134   -.32956
  M_FL34|    -.64462***      .07176    -8.98  .0000     -.78527   -.50396
  M_FL44|   -1.25976***      .10373   -12.14  .0000    -1.46307  -1.05644
     A_P|   -1.27556***      .02726   -46.80  .0000    -1.32899  -1.22214
  P_FL25|     .06414        .04326     1.48  .1382     -.02065    .14893
  P_FL35|    -.09969***      .03855    -2.59  .0097     -.17525   -.02413
  P_FL45|     .80760***      .03648    22.14  .0000      .73609    .87910
```

```
--------+-------------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-------------------------------------------------------------------------------
```

MNL3.137wald_W – **(*avalia se Ftl1 é linear para W)***
- ASC

- Fl1: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas <=2 (30min de espera) (Excluída)
- Fl2: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >2 & <=4 (15min de espera)
- Fl3: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >4 & <=12 (5min de espera)
- Fl4: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >12 (menos de 5min de espera)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(19)-b(18)-b(20)=0
;Rh2=ONE,FL2,FL3,FL4$
Normal exit:   5 iterations. Status=0, F=    50952.44

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -50952.43828
Estimation based on N =  41329, K =  20
Inf.Cr.AIC  = 101944.9 AIC/N =    2.467
Model estimated: Jul 15, 2012, 09:41:25
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0232 .0231
Chi-squared[15]           =   2415.29546
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped54097 obs
Wald test of      1 linear restrictions
Chi-squared =  244.59, P value =  .0000
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.62086***      .07888   -45.90  .0000    -3.77547  -3.46625
 BP_FL21|     .65522***      .10727     6.11  .0000      .44498    .86547
 BP_FL31|     .64208***      .09655     6.65  .0000      .45284    .83133
 BP_FL41|     .92854***      .09896     9.38  .0000      .73458   1.12251
     A_B|   -1.43788***      .02907   -49.46  .0000    -1.49486  -1.38090
  B_FL22|     .68827***      .04065    16.93  .0000      .60861    .76794
  B_FL32|     .68381***      .03625    18.86  .0000      .61276    .75486
  B_FL42|    1.19240***      .03690    32.32  .0000     1.12009   1.26472
    A_BO|   -2.67237***      .05010   -53.35  .0000    -2.77055  -2.57418
 BO_FL23|    -.49282***      .09436    -5.22  .0000     -.67776   -.30789
 BO_FL33|   -1.31213***      .10356   -12.67  .0000    -1.51510  -1.10916
 BO_FL43|   -1.41633***      .12747   -11.11  .0000    -1.66618  -1.16649
     A_M|   -2.37942***      .04374   -54.39  .0000    -2.46515  -2.29368
  M_FL24|    -.49045***      .08209    -5.97  .0000     -.65134   -.32956
  M_FL34|    -.64462***      .07176    -8.98  .0000     -.78527   -.50396
  M_FL44|   -1.25976***      .10373   -12.14  .0000    -1.46307  -1.05644
     A_P|   -1.27556***      .02726   -46.80  .0000    -1.32899  -1.22214
  P_FL25|     .06414        .04326     1.48  .1382     -.02065    .14893
  P_FL35|    -.09969***      .03855    -2.59  .0097     -.17525   -.02413
  P_FL45|     .80760***      .03648    22.14  .0000      .73609    .87910
```

```
--------+-------------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-------------------------------------------------------------------------------
```

MNL3.137wald_M – ***(avalia se Ftl1 é linear para M)***
- ASC

- Fl1: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas <=2 (30min de espera) (Excluída)
- Fl2: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >2 & <=4 (15min de espera)
- Fl3: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >4 & <=12 (5min de espera)
- Fl4: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >12 (menos de 5min de espera)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(15)-b(14)-b(16)=0
;Rh2=ONE,FL2,FL3,FL4$
Normal exit:   5 iterations. Status=0, F=    50952.44

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -50952.43828
Estimation based on N =  41329, K =  20
Inf.Cr.AIC  = 101944.9 AIC/N =    2.467
Model estimated: Jul 15, 2012, 09:43:25
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0232 .0231
Chi-squared[15]           =   2415.29546
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped54097 obs
Wald test of      1 linear restrictions
Chi-squared =     7.98, P value =  .0047
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.62086***      .07888   -45.90  .0000    -3.77547  -3.46625
 BP_FL21|     .65522***      .10727     6.11  .0000      .44498    .86547
 BP_FL31|     .64208***      .09655     6.65  .0000      .45284    .83133
 BP_FL41|     .92854***      .09896     9.38  .0000      .73458   1.12251
     A_B|   -1.43788***      .02907   -49.46  .0000    -1.49486  -1.38090
  B_FL22|     .68827***      .04065    16.93  .0000      .60861    .76794
  B_FL32|     .68381***      .03625    18.86  .0000      .61276    .75486
  B_FL42|    1.19240***      .03690    32.32  .0000     1.12009   1.26472
    A_BO|   -2.67237***      .05010   -53.35  .0000    -2.77055  -2.57418
 BO_FL23|    -.49282***      .09436    -5.22  .0000     -.67776   -.30789
 BO_FL33|   -1.31213***      .10356   -12.67  .0000    -1.51510  -1.10916
 BO_FL43|   -1.41633***      .12747   -11.11  .0000    -1.66618  -1.16649
     A_M|   -2.37942***      .04374   -54.39  .0000    -2.46515  -2.29368
  M_FL24|    -.49045***      .08209    -5.97  .0000     -.65134   -.32956
  M_FL34|    -.64462***      .07176    -8.98  .0000     -.78527   -.50396
  M_FL44|   -1.25976***      .10373   -12.14  .0000    -1.46307  -1.05644
     A_P|   -1.27556***      .02726   -46.80  .0000    -1.32899  -1.22214
  P_FL25|     .06414        .04326     1.48  .1382     -.02065    .14893
  P_FL35|    -.09969***      .03855    -2.59  .0097     -.17525   -.02413
  P_FL45|     .80760***      .03648    22.14  .0000      .73609    .87910
```

```
--------+-------------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-------------------------------------------------------------------------------
```

MNL3.137wald_OB – **(*avalia se Ftl1 é linear para OB)***
- ASC

- *Fl1: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas <=2 (30min de espera) (Excluída)*
- Fl2: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >2 & <=4 (15min de espera)
- Fl3: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >4 & <=12 (5min de espera)
- Fl4: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >12 (menos de 5min de espera)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(11)-b(10)-b(12)=0
;Rh2=ONE,FL2,FL3,FL4$
Normal exit:   5 iterations. Status=0, F=    50952.44

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -50952.43828
Estimation based on N =  41329, K =  20
Inf.Cr.AIC  = 101944.9 AIC/N =    2.467
Model estimated: Jul 15, 2012, 09:45:58
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0232 .0231
Chi-squared[15]           =   2415.29546
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped54097 obs
Wald test of      1 linear restrictions
Chi-squared =     9.65, P value =  .0019
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.62086***      .07888   -45.90  .0000    -3.77547  -3.46625
 BP_FL21|     .65522***      .10727     6.11  .0000      .44498    .86547
 BP_FL31|     .64208***      .09655     6.65  .0000      .45284    .83133
 BP_FL41|     .92854***      .09896     9.38  .0000      .73458   1.12251
     A_B|   -1.43788***      .02907   -49.46  .0000    -1.49486  -1.38090
  B_FL22|     .68827***      .04065    16.93  .0000      .60861    .76794
  B_FL32|     .68381***      .03625    18.86  .0000      .61276    .75486
  B_FL42|    1.19240***      .03690    32.32  .0000     1.12009   1.26472
    A_BO|   -2.67237***      .05010   -53.35  .0000    -2.77055  -2.57418
 BO_FL23|    -.49282***      .09436    -5.22  .0000     -.67776   -.30789
 BO_FL33|   -1.31213***      .10356   -12.67  .0000    -1.51510  -1.10916
 BO_FL43|   -1.41633***      .12747   -11.11  .0000    -1.66618  -1.16649
     A_M|   -2.37942***      .04374   -54.39  .0000    -2.46515  -2.29368
  M_FL24|    -.49045***      .08209    -5.97  .0000     -.65134   -.32956
  M_FL34|    -.64462***      .07176    -8.98  .0000     -.78527   -.50396
  M_FL44|   -1.25976***      .10373   -12.14  .0000    -1.46307  -1.05644
     A_P|   -1.27556***      .02726   -46.80  .0000    -1.32899  -1.22214
  P_FL25|     .06414        .04326     1.48  .1382     -.02065    .14893
  P_FL35|    -.09969***      .03855    -2.59  .0097     -.17525   -.02413
  P_FL45|     .80760***      .03648    22.14  .0000      .73609    .87910
```

```
--------+-------------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-------------------------------------------------------------------------------
```

MNL3.137wald_BP – ***(avalia se Ftl1 é linear para BP)***
- ASC

- *Fl1: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas <=2 (30min de espera) (Excluída)*
- Fl2: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >2 & <=4 (15min de espera)
- Fl3: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >4 & <=12 (5min de espera)
- Fl4: Variável binária Frequência média horária potencial de TC 7:30-19:30 com valores em GA muito próximas >12 (menos de 5min de espera)

```
DISCRETECHOICE
;Lhs=MTRP
;Choices=Bp,B,Bo,M,P,A[1]
;Wald:2*b(3)-b(2)-b(4)=0
;Rh2=ONE,FL2,FL3,FL4$
Normal exit:   5 iterations. Status=0, F=    50952.44

---------------------------------------------------------------------------
Discrete choice (multinomial logit) model
Dependent variable                Choice
Log likelihood function    -50952.43828
Estimation based on N =  41329, K =  20
Inf.Cr.AIC  = 101944.9 AIC/N =    2.467
Model estimated: Jul 15, 2012, 09:47:52
R2=1-LogL/LogL* Log-L fncn R-sqrd R2Adj
Constants only  **********  .0232 .0231
Chi-squared[15]           =   2415.29546
Prob [ chi squared > value ] =   .00000
Response data are given as ind. choices
Number of obs.= 95426, skipped54097 obs
Wald test of      1 linear restrictions
Chi-squared =     4.22, P value =  .0399
--------+------------------------------------------------------------------
        |                 Standard            Prob.      95% Confidence
    MTRP|  Coefficient       Error       z    |z|>Z*         Interval
--------+------------------------------------------------------------------
    A_BP|   -3.62086***      .07888   -45.90  .0000    -3.77547  -3.46625
 BP_FL21|     .65522***      .10727     6.11  .0000      .44498    .86547
 BP_FL31|     .64208***      .09655     6.65  .0000      .45284    .83133
 BP_FL41|     .92854***      .09896     9.38  .0000      .73458   1.12251
     A_B|   -1.43788***      .02907   -49.46  .0000    -1.49486  -1.38090
  B_FL22|     .68827***      .04065    16.93  .0000      .60861    .76794
  B_FL32|     .68381***      .03625    18.86  .0000      .61276    .75486
  B_FL42|    1.19240***      .03690    32.32  .0000     1.12009   1.26472
    A_BO|   -2.67237***      .05010   -53.35  .0000    -2.77055  -2.57418
 BO_FL23|    -.49282***      .09436    -5.22  .0000     -.67776   -.30789
 BO_FL33|   -1.31213***      .10356   -12.67  .0000    -1.51510  -1.10916
 BO_FL43|   -1.41633***      .12747   -11.11  .0000    -1.66618  -1.16649
     A_M|   -2.37942***      .04374   -54.39  .0000    -2.46515  -2.29368
  M_FL24|    -.49045***      .08209    -5.97  .0000     -.65134   -.32956
  M_FL34|    -.64462***      .07176    -8.98  .0000     -.78527   -.50396
  M_FL44|   -1.25976***      .10373   -12.14  .0000    -1.46307  -1.05644
     A_P|   -1.27556***      .02726   -46.80  .0000    -1.32899  -1.22214
  P_FL25|     .06414        .04326     1.48  .1382     -.02065    .14893
  P_FL35|    -.09969***      .03855    -2.59  .0097     -.17525   -.02413
  P_FL45|     .80760***      .03648    22.14  .0000      .73609    .87910
```

```
--------+-------------------------------------------------------------------------
Note: ***, **, * ==>  Significance at 1%, 5%, 10% level.
-------------------------------------------------------------------------------
```