



RESULTS

NEOS Server Version 6.0
 Job# : 12760358
 Password : NnigSaDZ
 User :
 Solver : go:BARON:GAMS
 Start : 2023-02-15 17:47:04
 End : 2023-02-15 17:47:32
 Host : prod-sub-1.neos-server.org

This is the Output file for the Second Example (i.e., the one with the Real Data) and Model M1 is used.

The value of the control parameter ϵ is set to be equal to 0.020.

Disclaimer:

This information is provided without any express or implied warranty. In particular, there is no warranty of any kind concerning the fitness of this information for any particular purpose.

Announcements:

Executed on prod-exec-5.neos-server.org

GAMS 41.4.0 caab8bc0 Dec 14, 2022 LEX-LEG x86 64bit/Linux - 02/15/23 17:47:06 Page 1
 General Algebraic Modeling System
 Compilation

COMPILATION TIME = 0.001 SECONDS 2 MB 41.4.0 caab8bc0 LEX-LEG
 GAMS 41.4.0 caab8bc0 Dec 14, 2022 LEX-LEG x86 64bit/Linux - 02/15/23 17:47:06 Page 2
 General Algebraic Modeling System
 Range Statistics SOLVE REAL_EXAMPLE_Original_Model_M1 Using NLP From line 293

RANGE STATISTICS (ABSOLUTE NON-ZERO FINITE VALUES)

RHS [min, max] : [2.000E-02, 1.000E+00] - Zero values observed as well
 Bound [min, max] : [NA, NA] - Zero values observed as well
 Matrix [min, max] : [1.000E+00, 2.000E+00] - Zero values observed as well

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 General Algebraic Modeling System
 Model Statistics SOLVE REAL_EXAMPLE_Original_Model_M1 Using NLP From line 293

MODEL STATISTICS

BLOCKS OF EQUATIONS	58	SINGLE EQUATIONS	58
BLOCKS OF VARIABLES	68	SINGLE VARIABLES	68
NON ZERO ELEMENTS	215	NON LINEAR N-Z	126
CODE LENGTH	409	CONSTANT POOL	16

GENERATION TIME = 0.003 SECONDS 3 MB 41.4.0 caab8bc0 LEX-LEG
 GAMS 41.4.0 caab8bc0 Dec 14, 2022 LEX-LEG x86 64bit/Linux - 02/15/23 17:47:06 Page 4
 General Algebraic Modeling System
 Solution Report SOLVE REAL_EXAMPLE_Original_Model_M1 Using NLP From line 293

S O L V E S U M M A R Y

MODEL	REAL_EXAMPLE_Original_Model_M1	OBJECTIVE	Z
TYPE	NLP	DIRECTION	MINIMIZE
SOLVER	BARON	FROM LINE	293

**** SOLVER STATUS 1 Normal Completion
 **** MODEL STATUS 2 Locally Optimal
 **** OBJECTIVE VALUE 0.2004

RESOURCE USAGE, LIMIT	26.100	10000000000.000
ITERATION COUNT, LIMIT	0	2147483647
EVALUATION ERRORS	0	0

GAMS/BARON 41.4.0 caab8bc0 Dec 14, 2022 LEG x86 64bit/Linux

BARON is a product of The Optimization Firm, LLC. <http://www.minlp.com/>
 Parts of the BARON software were created at the
 University of Illinois at Urbana-Champaign.

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BARON version 22.9.30. Built: LNX-64 Fri Sep 30 09:06:37 EDT 2022

BARON is a product of The Optimization Firm.
 For information on BARON, see <https://minlp.com/about-baron>

If you use this software, please cite publications from
<https://minlp.com/baron-publications>, such as:

Khajavirad, A. and N. V. Sahinidis,
 A hybrid LP/NLP paradigm for global optimization relaxations,
 Mathematical Programming Computation, 10, 383-421, 2018.

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This BARON run may utilize the following subsolver(s)
 For LP/MIP/QP: CLP/CBC, ILOG CPLEX
 For NLP: MINOS, SNOPT, External NLP, IPOPT, FILTERSQP

Solution = 0.200426054430193 found at node 373
 Best possible = 0.200410891315
 Absolute gap = 1.51631151927289E-5 optca = 1E-9
 Relative gap = 7.56544114777761E-5 optcr = 0.0001

	LOWER	LEVEL	UPPER	MARGINAL
---- EQU Equation1	1.000	1.000	1.000	-0.400
---- EQU Equation2	0.020	0.020	0.020	19.979
---- EQU e01_1	.	-3.845E-8	.	1.000
---- EQU e01_2	.	-4.025E-6	.	1.000
---- EQU e01_3	.	-5.854E-7	.	1.000
---- EQU e01_4	.	-1.270E-6	.	1.000
---- EQU e01_5	.	-2.984E-6	.	1.000
---- EQU e02_1	.	-1.147E-8	.	1.000
---- EQU e02_2	.	-4.114E-6	.	1.000
---- EQU e02_3	.	-1.338E-6	.	1.000
---- EQU e02_4	.	-1.144E-6	.	1.000
---- EQU e02_5	.	-3.767E-6	.	1.000
---- EQU e03_1	.	-3.260E-7	.	1.000
---- EQU e03_2	.	-6.747E-6	.	1.000
---- EQU e03_3	.	-3.457E-6	.	1.000
---- EQU e03_4	.	-2.744E-6	.	1.000
---- EQU e03_5	.	-5.619E-6	.	1.000
---- EQU e04_1	.	-3.024E-7	.	1.000
---- EQU e04_2	.	-1.173E-7	.	1.000
---- EQU e04_3	.	-1.860E-6	.	1.000
---- EQU e04_4	.	-1.138E-7	.	1.000
---- EQU e04_5	.	-5.426E-6	.	1.000
---- EQU e05_1	.	-4.636E-9	.	1.000
---- EQU e05_2	.	-3.421E-6	.	1.000
---- EQU e05_3	.	-1.163E-6	.	1.000
---- EQU e05_4	.	-9.791E-7	.	1.000
---- EQU e05_5	.	-4.426E-7	.	1.000
---- EQU e06_1	.	-1.446E-7	.	1.000
---- EQU e06_2	.	-6.397E-7	.	1.000
---- EQU e06_3	.	-2.60E-15	.	1.000
---- EQU e06_4	.	-1.855E-8	.	1.000
---- EQU e06_5	.	-9.926E-7	.	1.000
---- EQU Equation3	.	.	.	1.000
---- EQU Objective~	.	.	.	1.000
---- EQU eq1_1	.	-3.989E-6	+INF	1.672
---- EQU eq1_2	.	3.2067E-6	+INF	1.288

----	EQU eq1_3	.	-2.099E-6	+INF	2.934
----	EQU eq1_4	.	-2.899E-6	+INF	2.473
----	EQU eq2_1	.	-4.725E-6	+INF	1.206
----	EQU eq2_2	.	6.2645E-6	+INF	0.960
----	EQU eq2_3	.	-3.451E-6	+INF	1.878
----	EQU eq2_4	.	-2.816E-6	+INF	0.802
----	EQU eq3_1	.	-4.365E-6	+INF	0.050
----	EQU eq3_2	.	-1.517E-6	.	0.318
----	EQU eq3_3	.	1.5131E-6	+INF	0.098
----	EQU eq3_4	.	-7.221E-6	+INF	0.291
----	EQU eq4_1	.	7.2324E-6	.	-0.283
----	EQU eq4_2	.	0.015	+INF	.
----	EQU eq4_3	.	1.2709E-8	.	0.011
----	EQU eq4_4	.	-1.318E-6	.	0.857
----	EQU eq5_1	.	-9.623E-7	+INF	0.577
----	EQU eq5_2	.	-2.035E-7	+INF	0.954
----	EQU eq5_3	.	-1.114E-6	+INF	0.908
----	EQU eq5_4	.	-2.943E-6	+INF	0.724
----	EQU eq6_1	.	-2.056E-6	+INF	0.577
----	EQU eq6_2	.	-1.062E-6	+INF	0.954
----	EQU eq6_3	.	1.2303E-7	+INF	0.908
----	EQU eq6_4	.	9.3938E-7	+INF	0.724

		LOWER	LEVEL	UPPER	MARGINAL
----	VAR Z	-INF	0.200	+INF	.
----	VAR a1	.	0.227	+INF	.
----	VAR a2	.	0.185	+INF	.
----	VAR a3	.	0.172	+INF	.
----	VAR a4	.	0.203	+INF	.
----	VAR a5	.	0.213	+INF	.
----	VAR ee	-INF	0.020	+INF	.
----	VAR X1_1	.	0.957	+INF	-2.925E-7
----	VAR X1_2	.	0.957	+INF	.
----	VAR X1_3	.	1.143	+INF	4.0738E-7
----	VAR X1_4	.	1.169	+INF	.
----	VAR X1_5	.	0.737	+INF	.
----	VAR X2_1	.	0.973	+INF	.
----	VAR X2_2	.	1.085	+INF	6.2386E-7
----	VAR X2_3	.	0.933	+INF	.
----	VAR X2_4	.	0.891	+INF	.
----	VAR X2_5	.	1.129	+INF	.
----	VAR X3_1	.	1.006	+INF	-4.749E-7
----	VAR X3_2	.	1.017	+INF	.
----	VAR X3_3	.	0.976	+INF	.
----	VAR X3_4	.	1.027	+INF	1.7358E-7
----	VAR X3_5	.	0.977	+INF	.
----	VAR X4_1	.	0.969	+INF	-2.076E-8
----	VAR X4_2	.	1.000	+INF	.

----	VAR X4_3	.	1.074	+INF	-5.638E-7
----	VAR X4_4	.	0.913	+INF	.
----	VAR X4_5	.	1.031	+INF	.
----	VAR X5_1	.	1.066	+INF	.
----	VAR X5_2	.	0.982	+INF	-1.909E-7
----	VAR X5_3	.	0.939	+INF	.
----	VAR X5_4	.	0.996	+INF	.
----	VAR X5_5	.	1.041	+INF	.
----	VAR X6_1	.	1.065	+INF	.
----	VAR X6_2	.	0.981	+INF	1.3499E-7
----	VAR X6_3	.	0.937	+INF	2.0159E-7
----	VAR X6_4	.	0.994	+INF	.
----	VAR X6_5	.	1.039	+INF	-3.058E-7
----	VAR t1_1	.	0.002	+INF	.
----	VAR t1_2	.	0.002	+INF	.
----	VAR t1_3	.	0.021	+INF	.
----	VAR t1_4	.	0.029	+INF	.
----	VAR t1_5	.	0.069	+INF	.
----	VAR t2_1	.	0.001	+INF	.
----	VAR t2_2	.	0.007	+INF	.
----	VAR t2_3	.	0.005	+INF	.
----	VAR t2_4	.	0.012	+INF	.
----	VAR t2_5	.	0.017	+INF	.
----	VAR t3_1	.	3.8205E-5	+INF	.
----	VAR t3_2	.	2.8279E-4	+INF	.
----	VAR t3_3	.	0.001	+INF	.
----	VAR t3_4	.	0.001	+INF	.
----	VAR t3_5	.	0.001	+INF	.
----	VAR t4_1	.	0.001	+INF	.
----	VAR t4_2	.	.	+INF	.
----	VAR t4_3	.	0.006	+INF	.
----	VAR t4_4	.	0.008	+INF	.
----	VAR t4_5	.	0.001	+INF	.
----	VAR t5_1	.	0.004	+INF	.
----	VAR t5_2	.	3.0393E-4	+INF	.
----	VAR t5_3	.	0.004	+INF	.
----	VAR t5_4	.	1.9038E-5	+INF	.
----	VAR t5_5	.	0.002	+INF	.
----	VAR t6_1	.	0.004	+INF	.
----	VAR t6_2	.	3.5969E-4	+INF	.
----	VAR t6_3	.	0.004	+INF	.
----	VAR t6_4	.	3.3535E-5	+INF	.
----	VAR t6_5	.	0.002	+INF	.
----	VAR tt	.	0.200	+INF	.

**** REPORT SUMMARY : 0 NONOPT
 0 INFEASIBLE
 0 UNBOUNDED

0 ERRORS

EXECUTION TIME = 26.145 SECONDS 3 MB 41.4.0 caab8bc0 LEX-LEG

USER: NEOS Server License prod-exec-5.neos-server.orgS221207/0001AB-GEN
mac@f0:1f:af:d3:59:c4 DCE1890
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**** FILE SUMMARY

Input /var/lib/condor/execute/dir_25121/gamsexec/MODEL.gms
Output /var/lib/condor/execute/dir_25121/gamsexec/solve.lst

