> printcp(fit\_tuned) # display the results

Regression tree:

rpart(formula = GNI.per.capita..constant.2005.US..\_next ~ .,

data = training\_set, method = "anova", control = rpart.control(minbucket = 5,

cp = 1e-04))

Variables actually used in tree construction:

[1] GDP.per.capita..constant.2005.US.. GNI.per.capita..constant.2005.US..

Root node error: 2.7751e+11/2280 = 121716693

n= 2280

CP nsplit rel error xerror xstd

1 0.84951970 0 1.0000000 1.0007247 0.02770080

2 0.07550373 1 0.1504803 0.1511652 0.00663842

3 0.02551317 2 0.0749766 0.0755109 0.00321879

4 0.01401112 3 0.0494634 0.0503085 0.00248491

5 0.01191811 4 0.0354523 0.0360737 0.00141378

6 0.00518715 5 0.0235342 0.0243694 0.00113259

7 0.00449433 6 0.0183470 0.0187595 0.00087891

8 0.00295772 7 0.0138527 0.0150813 0.00088023

9 0.00205596 8 0.0108950 0.0116495 0.00045427

10 0.00145917 9 0.0088390 0.0094554 0.00039771

11 0.00141803 10 0.0073798 0.0081681 0.00037404

12 0.00082635 11 0.0059618 0.0068595 0.00033684

13 0.00057026 12 0.0051355 0.0056362 0.00031069

14 0.00047223 13 0.0045652 0.0049864 0.00030410

15 0.00042918 14 0.0040930 0.0046301 0.00028885

16 0.00033564 15 0.0036638 0.0042734 0.00027074

17 0.00031993 16 0.0033281 0.0042705 0.00027068

18 0.00022580 17 0.0030082 0.0038151 0.00019609

19 0.00020639 18 0.0027824 0.0034639 0.00019858

20 0.00017194 19 0.0025760 0.0031893 0.00021154

21 0.00014084 20 0.0024041 0.0031179 0.00021087

22 0.00013540 21 0.0022632 0.0029394 0.00020699

23 0.00012789 22 0.0021278 0.0028361 0.00020479

24 0.00011663 23 0.0019999 0.0027589 0.00020323

25 0.00010000 24 0.0018833 0.0026834 0.00020208

> summary(fit\_tuned) # detailed summary of splits

Call:

rpart(formula = GNI.per.capita..constant.2005.US..\_next ~ .,

data = training\_set, method = "anova", control = rpart.control(minbucket = 5,

cp = 1e-04))

n= 2280

CP nsplit rel error xerror xstd

1 0.84951970 0 1.0000000 1.0007247 0.02770080

2 0.07550373 1 0.1504803 0.1511652 0.00663842

3 0.02551317 2 0.0749766 0.0755109 0.00321879

4 0.01401112 3 0.0494634 0.0503085 0.00248491

5 0.01191811 4 0.0354523 0.0360737 0.00141378

6 0.00518715 5 0.0235342 0.0243694 0.00113259

7 0.00449433 6 0.0183470 0.0187595 0.00087891

8 0.00295772 7 0.0138527 0.0150813 0.00088023

9 0.00205596 8 0.0108950 0.0116495 0.00045427

10 0.00145917 9 0.0088390 0.0094554 0.00039771

11 0.00141803 10 0.0073798 0.0081681 0.00037404

12 0.00082635 11 0.0059618 0.0068595 0.00033684

13 0.00057026 12 0.0051355 0.0056362 0.00031069

14 0.00047223 13 0.0045652 0.0049864 0.00030410

15 0.00042918 14 0.0040930 0.0046301 0.00028885

16 0.00033564 15 0.0036638 0.0042734 0.00027074

17 0.00031993 16 0.0033281 0.0042705 0.00027068

18 0.00022580 17 0.0030082 0.0038151 0.00019609

19 0.00020639 18 0.0027824 0.0034639 0.00019858

20 0.00017194 19 0.0025760 0.0031893 0.00021154

21 0.00014084 20 0.0024041 0.0031179 0.00021087

22 0.00013540 21 0.0022632 0.0029394 0.00020699

23 0.00012789 22 0.0021278 0.0028361 0.00020479

24 0.00011663 23 0.0019999 0.0027589 0.00020323

25 0.00010000 24 0.0018833 0.0026834 0.00020208

Variable importance

GNI.per.capita..constant.2005.US..

19

GDP.per.capita..constant.2005.US..

18

CountryName

16

Birth.rate..crude..per.1.000.people.

13

Population.ages.65.and.above....of.total.

13

Age.dependency.ratio..old....of.working.age.population.

13

Adjusted.net.national.income.per.capita..constant.2005.US..

2

Household.final.consumption.expenditure.per.capita..constant.2005.US..

2

GNI.per.capita..Atlas.method..current.US..

2

GDP.per.capita..current.US..

2

Node number 1: 2280 observations, complexity param=0.8495197

mean=9388.39, MSE=1.217167e+08

left son=2 (1560 obs) right son=3 (720 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 13143.51 to the left, improve=0.8495197, (0 missing)

GDP.per.capita..constant.2005.US.. < 12222.06 to the left, improve=0.8454019, (0 missing)

CountryName splits as LLRRRLLLLLRLLLLLLRLLLLLRRRRRLLRRLRRLLLRRLLLLLLLLLLLRLRRLLLRLLLLLRLRLLLLRRLLL, improve=0.8397542, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 10648.21 to the left, improve=0.8157672, (142 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 7279.751 to the left, improve=0.8157559, (125 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 13096.31 to the left, agree=0.992, adj=0.974, (0 split)

CountryName splits as LLRRRLLLLLRLLLLLLRLLLLLRLRRRLLRRLRRLLLRRLLLLLLLLLLLRLRRLLLRLLLLLRLRLLLLRRLLL, agree=0.984, adj=0.950, (0 split)

Birth.rate..crude..per.1.000.people. < 16.30539 to the right, agree=0.943, adj=0.818, (0 split)

Population.ages.65.and.above....of.total. < 9.705437 to the left, agree=0.941, adj=0.814, (0 split)

Age.dependency.ratio..old....of.working.age.population. < 14.167 to the left, agree=0.937, adj=0.800, (0 split)

Node number 2: 1560 observations, complexity param=0.02551317

mean=2480.176, MSE=6799668

left son=4 (1254 obs) right son=5 (306 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 4043.95 to the left, improve=0.6674781, (0 missing)

GDP.per.capita..constant.2005.US.. < 4302.384 to the left, improve=0.6668615, (0 missing)

CountryName splits as LR---LLRLL-RLLLLL-LLLLL-R---RL-RL--LLL--LRRRLLLLRRL-L--LLR-LLLRLRL-LLRL--RRL, improve=0.6323191, (0 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 1870.33 to the left, improve=0.5586147, (124 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 2415.803 to the left, improve=0.5281439, (80 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 4185.147 to the left, agree=0.997, adj=0.984, (0 split)

CountryName splits as LR---LLLLL-LLLLLL-LLLLL-R---RL-RL--LLL--LRLLLLLLRRL-L--LLR-LLLRLRL-LLRL--LRL, agree=0.956, adj=0.778, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 3574.087 to the left, agree=0.917, adj=0.575, (0 split)

GDP.per.capita..current.US.. < 2889.287 to the left, agree=0.917, adj=0.575, (0 split)

GNI.per.capita..Atlas.method..current.US.. < 2790 to the left, agree=0.913, adj=0.559, (0 split)

Node number 3: 720 observations, complexity param=0.07550373

mean=24356.19, MSE=4.326794e+07

left son=6 (398 obs) right son=7 (322 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 24367.23 to the left, improve=0.6725966, (0 missing)

GDP.per.capita..constant.2005.US.. < 24792.82 to the left, improve=0.6696300, (0 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 13516.11 to the left, improve=0.6520190, (1 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 20438.31 to the left, improve=0.5816414, (62 missing)

GDP.per.capita..current.US.. < 16450.51 to the left, improve=0.5626488, (0 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 24336.85 to the left, agree=0.986, adj=0.969, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 13599.71 to the left, agree=0.943, adj=0.873, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 20438.31 to the left, agree=0.893, adj=0.761, (0 split)

GDP.per.capita..current.US.. < 13471.56 to the left, agree=0.868, adj=0.705, (0 split)

GNI.per.capita..Atlas.method..current.US.. < 13355 to the left, agree=0.865, adj=0.699, (0 split)

Node number 4: 1254 observations, complexity param=0.004494331

mean=1427.792, MSE=1260614

left son=8 (820 obs) right son=9 (434 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 1746.597 to the left, improve=0.7889881, (0 missing)

GDP.per.capita..constant.2005.US.. < 1679.465 to the left, improve=0.7886766, (0 missing)

CountryName splits as RR---LLRLL-RRLRRR-RRRLR------L--R--LLL--LRRRLLLRR-L-L--LL--LLL-L-L-LL-R--R-L, improve=0.7634030, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 1320.087 to the left, improve=0.7284678, (56 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 985.5047 to the left, improve=0.7040359, (104 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 1793.911 to the left, agree=0.992, adj=0.977, (0 split)

CountryName splits as RR---LLRLL-RRLLRR-RRRLR------L--R--LLL--LRRRLLLRR-L-L--LL--LLL-L-L-LL-R--R-L, agree=0.946, adj=0.843, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 1556.715 to the left, agree=0.923, adj=0.779, (0 split)

GDP.per.capita..current.US.. < 1064.737 to the left, agree=0.896, adj=0.700, (0 split)

GNI.per.capita..Atlas.method..current.US.. < 965 to the left, agree=0.895, adj=0.696, (0 split)

Node number 5: 306 observations, complexity param=0.00518715

mean=6792.888, MSE=6360818

left son=10 (239 obs) right son=11 (67 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 8104.451 to the left, improve=0.7395701, (0 missing)

GDP.per.capita..constant.2005.US.. < 8663.578 to the left, improve=0.7355499, (0 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 4985.233 to the left, improve=0.6681792, (20 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 7003.739 to the left, improve=0.5976775, (24 missing)

CountryName splits as -L-----L---L-------L----R---L--R---------RLL---LRL-------R----L-R----L---LL-, improve=0.5829579, (0 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 8551.196 to the left, agree=0.967, adj=0.851, (0 split)

CountryName splits as -L-----L---L-------L----R---L--R---------RLL---LRL-------R----L-R----L---LL-, agree=0.918, adj=0.627, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 4985.233 to the left, agree=0.895, adj=0.522, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 6348.876 to the left, agree=0.892, adj=0.507, (0 split)

Adolescent.fertility.rate..births.per.1.000.women.ages.15.19. < 41.84984 to the right, agree=0.892, adj=0.507, (0 split)

Node number 6: 398 observations, complexity param=0.01191811

mean=19503.89, MSE=1.099668e+07

left son=12 (193 obs) right son=13 (205 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 18967.26 to the left, improve=0.7556970, (0 missing)

GDP.per.capita..constant.2005.US.. < 19154.49 to the left, improve=0.7529048, (0 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 10823.64 to the left, improve=0.7056150, (1 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 16216.79 to the left, improve=0.5908564, (47 missing)

CountryName splits as --RRR-----R------------RLRRR--RL-RR---RR-L------L--R-RR--LL-----L-R----RR---, improve=0.4527160, (0 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 19149.22 to the left, agree=0.985, adj=0.969, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 10865.26 to the left, agree=0.935, adj=0.865, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 16216.79 to the left, agree=0.842, adj=0.674, (0 split)

CountryName splits as --RRR-----R------------RLLRR--RL-LR---RR-L------L--R-RR--LL-----L-R----RR---, agree=0.771, adj=0.528, (0 split)

GNI.per.capita..Atlas.method..current.US.. < 7130 to the left, agree=0.739, adj=0.461, (0 split)

Node number 7: 322 observations, complexity param=0.01401112

mean=30353.74, MSE=1.808351e+07

left son=14 (215 obs) right son=15 (107 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 30957.83 to the left, improve=0.6677584, (0 missing)

GDP.per.capita..constant.2005.US.. < 31256.14 to the left, improve=0.6568353, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 25671 to the left, improve=0.6287778, (15 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 16706.67 to the left, improve=0.5218500, (0 missing)

GNI.per.capita..Atlas.method..current.US.. < 25120 to the left, improve=0.4934209, (0 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 31106.29 to the left, agree=0.981, adj=0.944, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 25892.28 to the left, agree=0.910, adj=0.729, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 17401.27 to the left, agree=0.873, adj=0.617, (0 split)

GNI.per.capita..Atlas.method..current.US.. < 25120 to the left, agree=0.851, adj=0.551, (0 split)

GDP.per.capita..current.US.. < 24027.73 to the left, agree=0.848, adj=0.542, (0 split)

Node number 8: 820 observations, complexity param=0.0003199327

mean=702.2473, MSE=153640

left son=16 (544 obs) right son=17 (276 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 798.5761 to the left, improve=0.7047343, (0 missing)

GDP.per.capita..constant.2005.US.. < 902.1209 to the left, improve=0.6852354, (0 missing)

CountryName splits as R----LR-LR---LR---R--LR------L--R--RLL--L---RLLR--R-R--LR--LLL-L-L-RL-R----L, improve=0.6237717, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 748.784 to the left, improve=0.5706032, (53 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 578.4619 to the left, improve=0.5188860, (98 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 829.8785 to the left, agree=0.955, adj=0.866, (0 split)

CountryName splits as R----LR-LR---LR---R--LR------L--R--RLL--L---RLLR--R-R--LR--LLL-L-L-RL-R----L, agree=0.917, adj=0.754, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 687.3007 to the left, agree=0.888, adj=0.667, (0 split)

GNI.per.capita..Atlas.method..current.US.. < 565 to the left, agree=0.841, adj=0.529, (0 split)

GDP.per.capita..current.US.. < 635.917 to the left, agree=0.829, adj=0.493, (0 split)

Node number 9: 434 observations, complexity param=0.0005702614

mean=2798.637, MSE=478306.2

left son=18 (274 obs) right son=19 (160 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 2860.98 to the left, improve=0.7623655, (0 missing)

GDP.per.capita..constant.2005.US.. < 3055.687 to the left, improve=0.7567815, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 2614.449 to the left, improve=0.7126924, (3 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 1966.244 to the left, improve=0.5343174, (6 missing)

CountryName splits as LR-----R---RL-LRR-LRL-L---------L--------RRR---LR---L--------------L--L--R--, improve=0.4792677, (0 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 2944.595 to the left, agree=0.986, adj=0.962, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 2590.481 to the left, agree=0.945, adj=0.850, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 1966.244 to the left, agree=0.866, adj=0.638, (0 split)

CountryName splits as LR-----R---RL-LRL-LLL-L---------L--------RRR---LR---L--------------L--L--R--, agree=0.836, adj=0.556, (0 split)

Electric.power.consumption..kWh.per.capita. < 846.4254 to the left, agree=0.825, adj=0.525, (0 split)

Node number 10: 239 observations, complexity param=0.0008263498

mean=5644.511, MSE=1310584

left son=20 (147 obs) right son=21 (92 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 5708.239 to the left, improve=0.7321268, (0 missing)

GDP.per.capita..constant.2005.US.. < 5767.308 to the left, improve=0.7172402, (0 missing)

CountryName splits as -L-----L---R-------L--------R------------RLL---LRR------------L------R---LL-, improve=0.5285478, (0 missing)

Agricultural.land..sq..km. < 51995 to the right, improve=0.3939869, (0 missing)

Adjusted.savings..net.forest.depletion....of.GNI. < 0.007052537 to the right, improve=0.3851551, (10 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 5767.308 to the left, agree=0.983, adj=0.957, (0 split)

CountryName splits as -L-----L---L-------L--------R------------LLL---LRR------------L------R---LL-, agree=0.833, adj=0.565, (0 split)

Energy.imports..net....of.energy.use. < -47.54328 to the right, agree=0.812, adj=0.511, (0 split)

Population..total < 1189648 to the right, agree=0.774, adj=0.413, (0 split)

Merchandise.exports.to.developing.economies.in.South.Asia....of.total.merchandise.exports. < 0.05988261 to the right, agree=0.770, adj=0.402, (0 split)

Node number 11: 67 observations, complexity param=0.000429179

mean=10889.34, MSE=2890656

left son=22 (43 obs) right son=23 (24 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 11295.42 to the left, improve=0.6149675, (0 missing)

GDP.per.capita..constant.2005.US.. < 9951.249 to the left, improve=0.5648067, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 9189.89 to the left, improve=0.4823674, (14 missing)

Gross.enrolment.ratio..tertiary..male.... < 11.80288 to the left, improve=0.4717304, (3 missing)

Population..ages.0.14....of.total. < 23.88632 to the right, improve=0.3802585, (0 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 11210.46 to the left, agree=0.985, adj=0.958, (0 split)

General.government.final.consumption.expenditure....of.GDP. < 18.56634 to the left, agree=0.821, adj=0.500, (0 split)

Adjusted.savings..education.expenditure....of.GNI. < 4.05 to the left, agree=0.806, adj=0.458, (0 split)

Electricity.production.from.nuclear.sources....of.total. < 4.04491 to the left, agree=0.806, adj=0.458, (0 split)

Population..ages.0.14....of.total. < 23.5817 to the right, agree=0.806, adj=0.458, (0 split)

Node number 12: 193 observations, complexity param=0.001459166

mean=16532.89, MSE=2759925

left son=24 (109 obs) right son=25 (84 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 16346.3 to the left, improve=0.7602128, (0 missing)

GDP.per.capita..constant.2005.US.. < 16274.64 to the left, improve=0.6824829, (0 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 9398.606 to the left, improve=0.6192118, (1 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 13707.9 to the left, improve=0.6027927, (34 missing)

CountryName splits as --RRR------------------RLRRR--RL-RR---RR-L------L-----R--LL-----L------R----, improve=0.4542067, (0 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 16050.34 to the left, agree=0.943, adj=0.869, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 9471.249 to the left, agree=0.917, adj=0.810, (0 split)

CountryName splits as --RRR------------------RLRRR--RL-RR---RR-L------L-----R--LL-----L------R----, agree=0.808, adj=0.560, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 13778.13 to the left, agree=0.788, adj=0.512, (0 split)

Natural.gas.rents....of.GDP. < 6.875509e-05 to the left, agree=0.720, adj=0.357, (0 split)

Node number 13: 205 observations, complexity param=0.001418033

mean=22300.98, MSE=2617417

left son=26 (99 obs) right son=27 (106 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 21806.34 to the left, improve=0.7334060, (0 missing)

GDP.per.capita..constant.2005.US.. < 21511.08 to the left, improve=0.7265306, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 17834.8 to the left, improve=0.6431542, (13 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 12485.37 to the left, improve=0.5598297, (0 missing)

GDP.per.capita..constant.LCU. < 18672.48 to the left, improve=0.2517945, (64 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 21694.14 to the left, agree=0.980, adj=0.960, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 12624.78 to the left, agree=0.883, adj=0.758, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 17927.83 to the left, agree=0.863, adj=0.717, (0 split)

GDP.per.capita..current.US.. < 9350.909 to the left, agree=0.673, adj=0.323, (0 split)

Mortality.rate..infant..per.1.000.live.births. < 11.20727 to the right, agree=0.673, adj=0.323, (0 split)

Node number 14: 215 observations, complexity param=0.002055965

mean=27902.28, MSE=3661250

left son=28 (124 obs) right son=29 (91 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 27647.33 to the left, improve=0.7248245, (0 missing)

GDP.per.capita..constant.2005.US.. < 27525.06 to the left, improve=0.6886829, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 23938.35 to the left, improve=0.5735119, (11 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 15042.64 to the left, improve=0.3900991, (0 missing)

GNI.per.capita..PPP..constant.2011.international... < 30945.57 to the left, improve=0.2374329, (109 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 27525.06 to the left, agree=0.967, adj=0.923, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 23097.04 to the left, agree=0.860, adj=0.670, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 15482.13 to the left, agree=0.786, adj=0.495, (0 split)

GDP.per.capita..current.US.. < 20851.35 to the left, agree=0.735, adj=0.374, (0 split)

GNI.per.capita..Atlas.method..current.US.. < 21545 to the left, agree=0.726, adj=0.352, (0 split)

Node number 15: 107 observations, complexity param=0.002957715

mean=35279.56, MSE=1.072371e+07

left son=30 (83 obs) right son=31 (24 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 36176.36 to the left, improve=0.7153399, (0 missing)

GDP.per.capita..constant.2005.US.. < 36467.54 to the left, improve=0.7034619, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 30274.37 to the left, improve=0.7031161, (4 missing)

CO2.emissions.from.residential.buildings.and.commercial.and.public.services....of.total.fuel.combustion. < 11.01615 to the right, improve=0.4581147, (0 missing)

Manufacturing..value.added....of.GDP. < 17.16112 to the right, improve=0.4546990, (28 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 36467.54 to the left, agree=0.981, adj=0.917, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 30274.37 to the left, agree=0.944, adj=0.750, (0 split)

CO2.emissions.from.residential.buildings.and.commercial.and.public.services....of.total.fuel.combustion. < 11.01615 to the right, agree=0.897, adj=0.542, (0 split)

Ores.and.metals.imports....of.merchandise.imports. < 2.201724 to the right, agree=0.888, adj=0.500, (0 split)

CO2.emissions.from.electricity.and.heat.production..total....of.total.fuel.combustion. < 46.14907 to the left, agree=0.869, adj=0.417, (0 split)

Node number 16: 544 observations

mean=467.8676, MSE=23506.91

Node number 17: 276 observations

mean=1164.213, MSE=88446.53

Node number 18: 274 observations

mean=2337.193, MSE=103805.4

Node number 19: 160 observations

mean=3588.86, MSE=130541.6

Node number 20: 147 observations

mean=4869.584, MSE=235531.1

Node number 21: 92 observations

mean=6882.709, MSE=535681.7

Node number 22: 43 observations, complexity param=0.0001166296

mean=9893.255, MSE=1488518

left son=44 (20 obs) right son=45 (23 obs)

Primary splits:

GDP.per.capita..constant.2005.US.. < 9629.451 to the left, improve=0.5056749, (0 missing)

Gross.enrolment.ratio..tertiary..female.... < 4.131255 to the left, improve=0.5040835, (2 missing)

GNI.per.capita..constant.2005.US.. < 9547.544 to the left, improve=0.5022708, (0 missing)

Gross.enrolment.ratio..tertiary..male.... < 8.4388 to the left, improve=0.4842097, (2 missing)

Fixed.telephone.subscriptions < 113529 to the left, improve=0.4487088, (11 missing)

Surrogate splits:

GNI.per.capita..constant.2005.US.. < 9598.21 to the left, agree=0.953, adj=0.90, (0 split)

Gross.enrolment.ratio..tertiary..both.sexes.... < 10.68985 to the left, agree=0.837, adj=0.65, (0 split)

Gross.enrolment.ratio..tertiary..gender.parity.index..GPI. < 0.82113 to the left, agree=0.814, adj=0.60, (0 split)

Agricultural.land..sq..km. < 39685 to the left, agree=0.791, adj=0.55, (0 split)

Gross.enrolment.ratio..tertiary..female.... < 8.639965 to the left, agree=0.791, adj=0.55, (0 split)

Node number 23: 24 observations

mean=12673.99, MSE=440187.4

Node number 24: 109 observations, complexity param=0.000140843

mean=15261.32, MSE=652633.1

left son=48 (45 obs) right son=49 (64 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 14853.23 to the left, improve=0.5494456, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 12431.95 to the left, improve=0.4750976, (33 missing)

GDP.per.capita..constant.2005.US.. < 15119.28 to the left, improve=0.4434552, (0 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 8321.555 to the left, improve=0.2409040, (1 missing)

GDP.per.capita..constant.LCU. < 13380.51 to the left, improve=0.2078442, (28 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 14789.18 to the left, agree=0.826, adj=0.578, (0 split)

CountryName splits as -----------------------RLRR----R-R----RR-L------L-----R--RR-----L-----------, agree=0.743, adj=0.378, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 8321.555 to the left, agree=0.716, adj=0.311, (0 split)

General.government.final.consumption.expenditure....of.GDP. < 14.90319 to the left, agree=0.688, adj=0.244, (0 split)

Agricultural.machinery..tractors.per.100.sq..km.of.arable.land < 332.8085 to the left, agree=0.679, adj=0.222, (0 split)

Node number 25: 84 observations, complexity param=0.0001353998

mean=18182.91, MSE=673682.8

left son=50 (47 obs) right son=51 (37 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 17957.19 to the left, improve=0.6640002, (0 missing)

GDP.per.capita..constant.2005.US.. < 17856.19 to the left, improve=0.6144096, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 15057.06 to the left, improve=0.5425070, (1 missing)

GDP.per.capita..constant.LCU. < 15595.17 to the left, improve=0.2484828, (38 missing)

GNI.per.capita..constant.LCU. < 15786.36 to the left, improve=0.2477701, (38 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 17902.24 to the left, agree=0.976, adj=0.946, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 15166.97 to the left, agree=0.881, adj=0.730, (0 split)

CountryName splits as --RLR------------------LLLRR--RL-LR---LL--------------L--L------L------R----, agree=0.762, adj=0.459, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 10209.8 to the left, agree=0.702, adj=0.324, (0 split)

Household.final.consumption.expenditure..etc.....of.GDP. < 55.64601 to the right, agree=0.702, adj=0.324, (0 split)

Node number 26: 99 observations, complexity param=0.0001719373

mean=20867.33, MSE=775815

left son=52 (50 obs) right son=53 (49 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 20478.42 to the left, improve=0.6212434, (0 missing)

GDP.per.capita..constant.2005.US.. < 20527.01 to the left, improve=0.6084437, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 17025.37 to the left, improve=0.4648544, (6 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 11873.22 to the left, improve=0.3727090, (0 missing)

Net.enrolment.rate..secondary..female.... < 76.31416 to the left, improve=0.1680117, (54 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 20462.84 to the left, agree=0.980, adj=0.959, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 11873.22 to the left, agree=0.838, adj=0.673, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 16863.52 to the left, agree=0.788, adj=0.571, (0 split)

Mortality.rate..infant..per.1.000.live.births. < 14.35 to the right, agree=0.677, adj=0.347, (0 split)

Life.expectancy.at.birth..total..years. < 73.09937 to the left, agree=0.667, adj=0.327, (0 split)

Node number 27: 106 observations, complexity param=0.0001278887

mean=23639.96, MSE=624913.2

left son=54 (31 obs) right son=55 (75 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 22665.67 to the left, improve=0.5357862, (0 missing)

GDP.per.capita..constant.2005.US.. < 23217.31 to the left, improve=0.5086809, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 18750.44 to the left, improve=0.3595168, (7 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 13084.45 to the left, improve=0.2267709, (0 missing)

GNI.per.capita..constant.LCU. < 19765.69 to the left, improve=0.1573719, (31 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 22464.72 to the left, agree=0.925, adj=0.742, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 18677.3 to the left, agree=0.802, adj=0.323, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 13017.41 to the left, agree=0.755, adj=0.161, (0 split)

Gross.fixed.capital.formation....of.GDP. < 27.94086 to the right, agree=0.745, adj=0.129, (0 split)

Population..female....of.total. < 50.08328 to the left, agree=0.745, adj=0.129, (0 split)

Node number 28: 124 observations, complexity param=0.0002063919

mean=26506.75, MSE=881317.5

left son=56 (64 obs) right son=57 (60 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 26045.99 to the left, improve=0.5241114, (0 missing)

GDP.per.capita..constant.2005.US.. < 26037.89 to the left, improve=0.4336248, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 21588.99 to the left, improve=0.2605693, (4 missing)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 15094.02 to the left, improve=0.2074225, (0 missing)

GNI.per.capita..PPP..constant.2011.international... < 29426.97 to the left, improve=0.1583620, (80 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 25849.58 to the left, agree=0.887, adj=0.767, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 14951.96 to the left, agree=0.750, adj=0.483, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 21746.92 to the left, agree=0.734, adj=0.450, (0 split)

CountryName splits as --LLL-----R------R-----L-LLL--L--LR---RL-----------L-RL-----------L----RR---, agree=0.661, adj=0.300, (0 split)

Electric.power.transmission.and.distribution.losses....of.output. < 7.182221 to the left, agree=0.645, adj=0.267, (0 split)

Node number 29: 91 observations, complexity param=0.0002258029

mean=29803.89, MSE=1179409

left son=58 (41 obs) right son=59 (50 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 29120.25 to the left, improve=0.5838601, (0 missing)

GDP.per.capita..constant.2005.US.. < 29254.49 to the left, improve=0.5630902, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 24297.88 to the left, improve=0.3705925, (7 missing)

GNI.per.capita..constant.LCU. < 25455.47 to the left, improve=0.3021031, (15 missing)

GDP.per.capita..constant.LCU. < 25323.48 to the left, improve=0.2973279, (15 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 28999.37 to the left, agree=0.934, adj=0.854, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 24297.88 to the left, agree=0.791, adj=0.537, (0 split)

Household.final.consumption.expenditure.per.capita..constant.2005.US.. < 16262.39 to the left, agree=0.703, adj=0.341, (0 split)

GNI.per.capita..constant.LCU. < 25455.47 to the left, agree=0.681, adj=0.293, (0 split)

CountryName splits as --RRR-----L------R-----R--LL--R---R---RR-----------R-RL-----------R----LR---, agree=0.670, adj=0.268, (0 split)

Node number 30: 83 observations, complexity param=0.0004722342

mean=33790.21, MSE=2298110

left son=60 (52 obs) right son=61 (31 obs)

Primary splits:

GNI.per.capita..constant.2005.US.. < 33620.73 to the left, improve=0.6870582, (0 missing)

GDP.per.capita..constant.2005.US.. < 33403.12 to the left, improve=0.6756026, (0 missing)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 29014.19 to the left, improve=0.5073656, (4 missing)

GNI.per.capita..PPP..current.international... < 24145 to the left, improve=0.2895496, (14 missing)

GDP.per.capita..PPP..current.international... < 25121.51 to the left, improve=0.2530494, (14 missing)

Surrogate splits:

GDP.per.capita..constant.2005.US.. < 33136.56 to the left, agree=0.940, adj=0.839, (0 split)

Adjusted.net.national.income.per.capita..constant.2005.US.. < 27387.3 to the left, agree=0.819, adj=0.516, (0 split)

Mobile.cellular.subscriptions < 23790210 to the left, agree=0.747, adj=0.323, (0 split)

CO2.emissions.from.electricity.and.heat.production..total....of.total.fuel.combustion. < 45.21044 to the left, agree=0.735, adj=0.290, (0 split)

CO2.emissions.from.manufacturing.industries.and.construction....of.total.fuel.combustion. < 13.75883 to the right, agree=0.735, adj=0.290, (0 split)

Node number 31: 24 observations, complexity param=0.000335645

mean=40430.21, MSE=5661938

left son=62 (19 obs) right son=63 (5 obs)

Primary splits:

GDP.per.capita..constant.2005.US.. < 41325.23 to the left, improve=0.6854705, (0 missing)

Urban.population....of.total. < 84.9925 to the left, improve=0.6854705, (0 missing)

Agricultural.machinery..tractors < 143933 to the right, improve=0.6854705, (0 missing)

Merchandise.imports.from.developing.economies.in.Middle.East...North.Africa....of.total.merchandise.imports. < 0.1711272 to the right, improve=0.6854705, (0 missing)

Rural.population....of.total.population. < 15.0075 to the right, improve=0.6854705, (0 missing)

Surrogate splits:

Agricultural.machinery..tractors < 143933 to the right, agree=1, adj=1, (0 split)

GNI.per.capita..constant.2005.US.. < 41205.35 to the left, agree=1, adj=1, (0 split)

Merchandise.imports.from.developing.economies.in.Middle.East...North.Africa....of.total.merchandise.imports. < 0.1711272 to the right, agree=1, adj=1, (0 split)

Rural.population....of.total.population. < 15.0075 to the right, agree=1, adj=1, (0 split)

Urban.population....of.total. < 84.9925 to the left, agree=1, adj=1, (0 split)

Node number 44: 20 observations

mean=8962.873, MSE=625078.6

Node number 45: 23 observations

mean=10702.28, MSE=832101.5

Node number 48: 45 observations

mean=14547.18, MSE=257768.3

Node number 49: 64 observations

mean=15763.44, MSE=319555

Node number 50: 47 observations

mean=17589.49, MSE=282946.4

Node number 51: 37 observations

mean=18936.72, MSE=154473.8

Node number 52: 50 observations

mean=20180.07, MSE=292007

Node number 53: 49 observations

mean=21568.62, MSE=295720.5

Node number 54: 31 observations

mean=22739.94, MSE=192996.7

Node number 55: 75 observations

mean=24011.97, MSE=330226.6

Node number 56: 64 observations

mean=25848.69, MSE=362617.7

Node number 57: 60 observations

mean=27208.68, MSE=479986.3

Node number 58: 41 observations

mean=28887.5, MSE=536700.9

Node number 59: 50 observations

mean=30555.33, MSE=453159.4

Node number 60: 52 observations

mean=32820.01, MSE=713951.6

Node number 61: 31 observations

mean=35417.64, MSE=727935.7

Node number 62: 19 observations

mean=39419.59, MSE=1777026

Node number 63: 5 observations

mean=44270.54, MSE=1795366