Met 15 determinanten, score > 0.192, thetaL = alles 1e-4, thetaU = alles 1e+4

theta0 is: [ 2.00478311e-03 1.71022668e+00 1.01378646e+01 9.43547342e+01 1.23418894e+03] bijhorende score is 0.194384479937

theta0 is: [ 728.65143332 9.08616159 6.57777482 37.84692075 798.12472479] bijhorende score is 0.192184523073

theta0 is: [ 2.71131618e-04 9.65044975e+02 2.58920230e+00 9.50782023e-01 6.43040235e+01] bijhorende score is 0.192415725599

theta0 is: [ 3.64029124e-03 8.94353102e+01 2.40849825e+00 4.00436138e+00 3.38978982e+02] bijhorende score is 0.192871179576

theta0 is: [ 1.79355907e+02 1.18338355e+02 2.11539724e+01 8.95991517e-03 2.62698278e-01] bijhorende score is 0.193444130676

theta0 is: [ 1.82627107e+01 1.87249150e+02 4.43363358e+00 8.11619572e-02 2.80088788e+01] bijhorende score is 0.192576972032

theta0 is: [ 1.65298849e+03 2.92213904e+01 1.71656414e+00 3.60359750e+01 2.83886859e+03] bijhorende score is 0.192194278687

Met 15 determinanten, score > 0.192,

thetaL =np.array((1e-5,1e-1,1e-1,1e-4,1e-2))

thetaU =np.array((1e2,1e3,1e3,1e2,1e4))

theta0 is: [ 1.03644548e-02 6.87798553e+00 1.53384200e+02 9.62224312e+01 1.04794634e+02] bijhorende score is 0.192252726714

theta0 is: [ 5.74454165e-02 9.29371914e+00 1.11621267e+01 1.02930605e+01 1.45230884e+02] bijhorende score is 0.192545574494

theta0 is: [ 8.26931985e-02 1.24283705e+02 2.81195190e+00 5.05277702e-03 3.36515233e+00] bijhorende score is 0.192345790907

theta0 is: [ 1.79962262e-02 7.38129351e+02 2.90677680e+01 1.58158235e-01 6.85757440e+00] bijhorende score is 0.192039689569

theta0 is: [ 1.83526619e-02 4.40386404e+02 3.24486660e+01 2.75927076e+01 8.64830008e+02] bijhorende score is 0.19214233262

theta0 is: [ 4.43779250e-03 5.58361249e+01 3.56736266e+00 3.93282663e-03 1.75395629e+00] bijhorende score is 0.193184512729

theta0 is: [ 0.02525792 12.65163238 4.10277131 0.08374119 13.94520006] bijhorende score is 0.194170089465

theta0 is: [ 5.18226127e-03 2.15870548e+02 7.49096197e+00 1.07943216e-04 5.54046064e-02] bijhorende score is 0.192342291715

theta0 is: [ 9.06459500e+00 4.31800967e+02 1.54008566e+02 4.69269064e-02 3.08051782e-02] bijhorende score is 0.192125773664

theta0 is: [ 2.88276518e-04 1.37556545e+00 7.55051939e+01 4.32412290e-02 2.45986889e+03] bijhorende score is 0.192436012339

theta0 is: [ 1.69681093e+01 8.46999499e+02 3.23017295e+01 1.42179127e-02 6.35750640e-01] bijhorende score is 0.192017856826

theta0 is: [ 4.89052309e-05 1.29745910e+02 6.00009307e+00 1.59380100e-01 6.11411922e+00] bijhorende score is 0.192024097954

theta0 is: [ 8.98803335e-05 4.02635202e+02 8.62732044e+00 8.24098455e-03 1.56708976e-01] bijhorende score is 0.193152281677

theta0 is: [ 13.78115558 24.09021123 14.04407987 3.64615016 618.30158318] bijhorende score is 0.192120948266

theta0 is: [ 5.19703645e-02 7.23904953e+01 4.94277111e+00 2.54421330e-02 2.80103529e-01] bijhorende score is 0.193855939723

Met 99 determinanten, score > 0.192, thetaL = alles 1e-4, thetaU = alles 1e+4

theta0 is: [ 14.20291821 28.57321778 788.23792782 356.6172535 60.84836176] bijhorende score is 0.192190914556

theta0 is: [ 3.45642569 772.93129684 815.99526917 130.18985461 7.66283359] bijhorende score is 0.193095385775

theta0 is: [ 3.47483894e+02 1.48114443e+02 1.33246022e+03 1.07665489e+02 2.79131013e-01] bijhorende score is 0.193616304133

theta0 is: [ 2.51035015e+02 4.37888199e+03 8.82844784e+02 4.20789451e-01 4.59062994e-03] bijhorende score is 0.193364094919

theta0 is: [ 4.74866515e-03 4.78521384e+02 1.33148010e+02 7.31384007e-02 6.62991639e-03] bijhorende score is 0.192667672749

theta0 is: [ 6.45930782e+02 6.49126383e+02 4.26966586e+02 1.22877471e-04 2.36030609e-01] bijhorende score is 0.192144348401

theta0 is: [ 6.14736547e-04 3.79414945e+03 3.38362162e+03 9.22164156e-03 6.37885762e-03] bijhorende score is 0.192332631229

theta0 is: [ 3.83131961e-04 1.05561099e+02 9.50233215e+02 2.27642843e+01 1.18832047e+01] bijhorende score is 0.19218010859

theta0 is: [ 8.31276211e-02 3.39205758e+02 4.85514382e+03 1.97989383e+02 9.92177262e-02] bijhorende score is 0.193741854919

theta0 is: [ 6.87851688e-03 1.87985245e+01 4.26661617e+03 7.82565541e-04 6.97826508e+00] bijhorende score is 0.192174372058

theta0 is: [ 5.96409768e-02 6.44447246e+01 8.49703882e-04 1.25752646e+00 7.03657254e-01] bijhorende score is 0.192060642896

Met 99 determinanten, score > 0.192,

thetaL =np.array((1e-5,1e-1,1e-1,1e-4,1e-3))

thetaU =np.array((1e2,1e4,1e4,1e2,1e2))

theta0 is: [ 1.32558804e-02 6.63915441e+01 4.16683461e+01 8.36411524e+01 2.54873583e+01] bijhorende score is 0.192699454988

theta0 is: [ 1.48535348e-04 8.50760993e+01 2.36766050e+00 2.72854102e-01 1.66775879e+01] bijhorende score is 0.193801952571

theta0 is: [ 2.53844854e+00 3.99605730e+02 1.78135294e+01 1.28136417e-02 1.66712387e-02] bijhorende score is 0.195353903401

theta0 is: [ 6.48066819e-02 4.23969326e+03 1.79450663e+02 2.33620612e+01 1.19400824e-01] bijhorende score is 0.193459738901

theta0 is: [ 1.78854249e+01 1.63774146e+03 1.96362982e+03 2.05967144e-01 6.31450439e-02] bijhorende score is 0.192049382576

theta0 is: [ 2.03511270e-02 1.10062861e+03 8.00920942e+00 5.69313662e-04 8.03326598e-03] bijhorende score is 0.194285430423

theta0 is: [ 1.17206111e-04 1.52160433e+03 5.45242384e+02 1.35099000e+01 1.11821243e+01] bijhorende score is 0.192094124665

theta0 is: [ 3.07868013 15.74937758 10.93764886 1.60193414 8.91741609] bijhorende score is 0.195975032165

theta0 is: [ 2.44690755e-03 2.39847115e+02 1.36083866e+01 1.22425439e-01 1.52465114e-01] bijhorende score is 0.193664817702

theta0 is: [ 7.01621161e+00 7.36823855e+02 5.63105749e+00 2.20578349e-01 6.79462226e+00] bijhorende score is 0.192740653719

theta0 is: [ 8.13336857e-04 1.51114736e+01 2.96137467e+00 1.96752727e-01 1.33515280e+01] bijhorende score is 0.194148878526

theta0 is: [ 9.68998635e+01 3.33425320e+03 4.44227526e+00 1.80757380e-03 2.57862937e-01] bijhorende score is 0.193031436323

theta0 is: [ 4.28880576e+01 2.00357639e+03 2.26230414e+01 8.57401346e-01 1.90711629e+01] bijhorende score is 0.193902426265

theta0 is: [ 70.73426559 6.46630837 0.25453286 47.72601986 23.62549792] bijhorende score is 0.192123664107

theta0 is: [ 2.03624358e+00 6.87134087e+02 3.10109534e+00 3.46789782e-04 1.28254107e-02] bijhorende score is 0.197549322831

theta0 is: [ 9.02529930e+00 1.48777304e+03 9.59103971e+01 9.91605200e-01 4.73864931e+00] bijhorende score is 0.192876010006

theta0 is: [ 1.87379989e-02 1.18483519e+03 4.82749903e+02 1.69874980e-03 4.54735248e-02] bijhorende score is 0.192270156615

theta0 is: [ 4.70343748e-03 2.27504378e+01 2.59920810e+02 1.01092302e-04 1.83541831e-02] bijhorende score is 0.192676136955 NMSE 14.983530742 hitrate 0.55625

theta0 is: [ 7.27784413 8.58822726 92.86261041 51.04627624 36.66680776] bijhorende score is 0.193176428766 NMSE 14.8781081019 hitrate 0.555208333333

theta0 is: [ 2.68056751e-03 2.37013058e+00 4.77971153e+01 2.58006155e+01 2.71471473e-03] bijhorende score is 0.192644764937 NMSE 14.805968039 hitrate 0.549479166667

theta0 is: [ 3.40635335e-01 2.50017858e+02 2.06515466e+02 1.42567265e-03 1.20442749e+00] bijhorende score is 0.192978074932 NMSE 14.9646515735 hitrate 0.557291666667

theta0 is: [ 2.72160531e-05 4.08516690e+03 1.69000172e+01 9.43692817e-04 1.01384446e+01] bijhorende score is 0.193587723161 NMSE 14.7732624023 hitrate 0.553645833333

theta0 is: [ 5.20932494e-03 1.92849544e+00 3.65477596e+01 2.78768697e-04 2.28142251e-03] bijhorende score is 0.192584754494 NMSE 14.8011538743 hitrate 0.548958333333

theta0 is: [ 8.40055671e-02 1.91314882e+01 4.75864191e+02 3.30325388e-01 1.87970946e-03] bijhorende score is 0.192026755498 NMSE 15.0144195629 hitrate 0.553645833333

theta0 is: [ 2.64619967e-05 1.41221282e+00 2.94831317e+01 3.58524550e-03 6.50830698e+01] bijhorende score is 0.193158641179 NMSE 14.8808484175 hitrate 0.555208333333

Conclusie: zowel bij 15 als 99 determinanten is optimaal gebied gelijkaardig:

thetaL =np.array((1e-5,1e-1,1e-1,1e-4,1e-3))

thetaU =np.array((1e2,1e4,1e4,1e2,1e2))

samen met

thetaL =np.array((1e-5,1e-1,1e-1,1e-4,1e-2))

thetaU =np.array((1e2,1e3,1e3,1e2,1e4))

geeft uiteindelijk:

thetaL =np.array((1e-5,1e-1,1e-1,1e-4,1e-3))

thetaU =np.array((1e2,1e4,1e4,1e2,1e4))