## ตารางที่ จ.1 แสดงผลการคำนวณหาค่าสหสัมพันธ์ในมิติเศรษฐกิจ

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. correlate a1 a2 a3 a4 a5 a6 a7 a8 a9 a10 a11 a12 a13 a14 a15 a16 a17 a18 a19 a20 a21 a22 a23 a25 a26 a
> 27 a28 a29 a30 a31 a32 a33 a34
(obs=3)
```

| | a1 | a2 | a3 | a4 | a5 | a6 | a7 | a8 | a9 | a10 |
|---|---|---|---|---|---|---|---|---|---|---|
| a1 | 1.0000 | | | | | | | | | |
| a2 | -0.2309 | 1.0000 | | | | | | | | |
| a3 | -0.2242 | -0.8964 | 1.0000 | | | | | | | |
| a4 | 0.7998 | -0.7688 | 0.4057 | 1.0000 | | | | | | |
| a5 | 0.7998 | -0.7688 | 0.4057 | 1.0000 | 1.0000 | | | | | |
| a6 | 0.1904 | 0.9112 | -0.9994 | -0.4370 | -0.4370 | 1.0000 | | | | |
| a7 | -0.3925 | 0.9855 | -0.8083 | -0.8660 | -0.8660 | 0.8282 | 1.0000 | | | |
| a8 | -0.2515 | 0.9998 | -0.8869 | -0.7821 | -0.7821 | 0.9023 | 0.9889 | 1.0000 | | |
| a9 | -0.3388 | 0.9937 | -0.8409 | -0.8358 | -0.8358 | 0.8591 | 0.9983 | 0.9958 | 1.0000 | |
| a10 | -0.5592 | 0.9357 | -0.6825 | -0.9449 | -0.9449 | 0.7073 | 0.9820 | 0.9430 | 0.9695 | 1.0000 |
| a11 | 0.8906 | 0.2368 | -0.6428 | 0.4394 | 0.4394 | 0.6160 | 0.0687 | 0.2161 | 0.1260 | -0.1211 |
| a12 | 0.0275 | -0.9789 | 0.9680 | 0.6220 | 0.6220 | -0.9761 | -0.9302 | -0.9744 | -0.9498 | -0.8440 |
| a13 | 0.1453 | -0.9962 | 0.9316 | 0.7101 | 0.7101 | -0.9436 | -0.9670 | -0.9941 | -0.9801 | -0.9014 |
| a14 | 0.5946 | -0.9196 | 0.6503 | 0.9582 | 0.9582 | -0.6761 | -0.9729 | -0.9277 | -0.9579 | -0.9991 |
| a15 | -0.7998 | 0.7688 | -0.4057 | -1.0000 | -1.0000 | 0.4370 | 0.8660 | 0.7821 | 0.8358 | 0.9449 |
| a16 | -0.7998 | 0.7688 | -0.4057 | -1.0000 | -1.0000 | 0.4370 | 0.8660 | 0.7821 | 0.8358 | 0.9449 |
| a17 | -0.6094 | 0.9121 | -0.6360 | -0.9633 | -0.9633 | 0.6623 | 0.9684 | 0.9206 | 0.9524 | 0.9981 |
| a18 | 0.7998 | -0.7688 | 0.4057 | 1.0000 | 1.0000 | -0.4370 | -0.8660 | -0.7821 | -0.8358 | -0.9449 |
| a19 | -0.7998 | 0.7688 | -0.4057 | -1.0000 | -1.0000 | 0.4370 | 0.8660 | 0.7821 | 0.8358 | 0.9449 |
| a20 | -0.9915 | 0.1021 | 0.3494 | -0.7147 | -0.7147 | -0.3168 | 0.2692 | 0.1231 | 0.2132 | 0.4463 |
| a21 | -0.6066 | 0.9136 | -0.6388 | -0.9624 | -0.9624 | 0.6650 | 0.9693 | 0.9220 | 0.9535 | 0.9983 |
| a22 | 0.4938 | -0.9601 | 0.7367 | 0.9169 | 0.9169 | -0.7596 | -0.9936 | -0.9658 | -0.9855 | -0.9970 |
| a23 | 0.2145 | 0.9008 | -1.0000 | -0.4148 | -0.4148 | 0.9997 | 0.8142 | 0.8914 | 0.8463 | 0.6897 |
| a25 | -0.8104 | -0.3829 | 0.7526 | -0.2965 | -0.2965 | -0.7294 | -0.2207 | -0.3632 | -0.2766 | -0.0324 |
| a26 | 0.3844 | -0.9870 | 0.8135 | 0.8616 | 0.8616 | -0.8331 | -1.0000 | -0.9902 | -0.9988 | -0.9803 |
| a27 | 0.1866 | -0.9990 | 0.9156 | 0.7390 | 0.7390 | -0.9289 | -0.9768 | -0.9978 | -0.9876 | -0.9188 |
| a28 | 0.9130 | 0.1861 | -0.6023 | 0.4853 | 0.4853 | 0.5744 | 0.0169 | 0.1653 | 0.0745 | -0.1723 |
| a29 | -0.6412 | 0.8947 | -0.6041 | -0.9735 | -0.9735 | 0.6312 | 0.9575 | 0.9040 | 0.9392 | 0.9947 |
| a30 | -0.1691 | 0.9980 | -0.9226 | -0.7269 | -0.7269 | 0.9354 | 0.9729 | 0.9965 | 0.9846 | 0.9116 |
| a31 | 0.1037 | -0.9917 | 0.9460 | 0.6800 | 0.6800 | -0.9567 | -0.9555 | -0.9887 | -0.9709 | -0.8825 |
| a32 | 0.0228 | -0.9780 | 0.9692 | 0.6183 | 0.6183 | -0.9771 | -0.9285 | -0.9733 | -0.9483 | -0.8415 |
| a33 | -0.5985 | 0.9177 | -0.6465 | -0.9596 | -0.9596 | 0.6725 | 0.9717 | 0.9259 | 0.9565 | 0.9988 |
| a34 | 0.9944 | -0.3329 | -0.1195 | 0.8590 | 0.8590 | 0.0851 | -0.4879 | -0.3528 | -0.4368 | -0.6441 |

|      | a11 | a12 | a13 | a14 | a15 | a16 | a17 | a18 | a19 | a20 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| a11 | 1.0000 | | | | | | | | | |
| a12 | -0.4301 | 1.0000 | | | | | | | | |
| a13 | -0.3205 | 0.9930 | 1.0000 | | | | | | | |
| a14 | 0.1639 | 0.8201 | 0.8819 | 1.0000 | | | | | | |
| a15 | -0.4394 | -0.6220 | -0.7101 | -0.9582 | 1.0000 | | | | | |
| a16 | -0.4394 | -0.6220 | -0.7101 | -0.9582 | 1.0000 | 1.0000 | | | | |
| a17 | -0.1823 | -0.8093 | -0.8730 | -0.9998 | 0.9633 | 0.9633 | 1.0000 | | | |
| a18 | 0.4394 | 0.6220 | 0.7101 | 0.9582 | -1.0000 | -1.0000 | -0.9633 | 1.0000 | | |
| a19 | -0.4394 | -0.6220 | -0.7101 | -0.9582 | 1.0000 | 1.0000 | 0.9633 | -1.0000 | 1.0000 | |
| a20 | -0.9423 | 0.1032 | -0.0150 | -0.4846 | 0.7147 | 0.7147 | 0.5008 | -0.7147 | 0.7147 | 1.0000 |
| a21 | -0.1787 | -0.8114 | -0.8747 | -0.9999 | 0.9624 | 0.9624 | 1.0000 | -0.9624 | 0.9624 | 0.4977 |
| a22 | 0.0444 | 0.8828 | 0.9321 | 0.9928 | -0.9169 | -0.9169 | -0.9904 | 0.9169 | -0.9169 | -0.3761 |
| a23 | 0.6352 | -0.9705 | -0.9352 | -0.6578 | 0.4148 | 0.4148 | 0.6437 | -0.4148 | 0.4148 | -0.3401 |
| a25 | -0.9882 | 0.5634 | 0.4619 | -0.0108 | 0.2965 | 0.2965 | 0.0294 | -0.2965 | 0.2965 | 0.8799 |
| a26 | -0.0774 | 0.9334 | 0.9692 | 0.9708 | -0.8616 | -0.8616 | -0.9662 | 0.8616 | -0.8616 | -0.2607 |
| a27 | -0.2805 | 0.9872 | 0.9991 | 0.9009 | -0.7390 | -0.7390 | -0.8927 | 0.7390 | -0.7390 | -0.0569 |
| a28 | 0.9987 | -0.3828 | -0.2711 | 0.2148 | -0.4853 | -0.4853 | -0.2329 | 0.4853 | -0.4853 | -0.9584 |
| a29 | -0.2221 | -0.7847 | -0.8524 | -0.9982 | 0.9735 | 0.9735 | 0.9992 | -0.9735 | 0.9735 | 0.5356 |
| a30 | 0.2975 | -0.9899 | -0.9997 | -0.8930 | 0.7269 | 0.7269 | 0.8845 | -0.7269 | 0.7269 | 0.0391 |
| a31 | -0.3599 | 0.9971 | 0.9991 | 0.8614 | -0.6800 | -0.6800 | -0.8518 | 0.6800 | -0.6800 | 0.0269 |
| a32 | -0.4343 | 1.0000 | 0.9924 | 0.8174 | -0.6183 | -0.6183 | -0.8065 | 0.6183 | -0.6183 | 0.1078 |
| a33 | -0.1688 | -0.8172 | -0.8796 | -1.0000 | 0.9596 | 0.9596 | 0.9999 | -0.9596 | 0.9596 | 0.4889 |
| a34 | 0.8373 | 0.1334 | 0.2495 | 0.6766 | -0.8590 | -0.8590 | -0.6901 | 0.8590 | -0.8590 | -0.9720 |

|      | a21 | a22 | a23 | a25 | a26 | a27 | a28 | a29 | a30 | a31 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| a21 | 1.0000 | | | | | | | | | |
| a22 | -0.9909 | 1.0000 | | | | | | | | |
| a23 | 0.6464 | -0.7434 | 1.0000 | | | | | | | |
| a25 | 0.0258 | 0.1093 | -0.7460 | 1.0000 | | | | | | |
| a26 | -0.9671 | 0.9926 | -0.8192 | 0.2293 | 1.0000 | | | | | |
| a27 | -0.8943 | 0.9465 | -0.9195 | 0.4243 | 0.9787 | 1.0000 | | | | |
| a28 | -0.2294 | 0.0960 | 0.5943 | -0.9789 | -0.0257 | -0.2304 | 1.0000 | | | |
| a29 | 0.9990 | -0.9839 | 0.6120 | 0.0701 | -0.9549 | -0.8736 | -0.2723 | 1.0000 | | |
| a30 | 0.8862 | -0.9406 | 0.9264 | -0.4403 | -0.9749 | -0.9998 | 0.2477 | 0.8648 | 1.0000 | |
| a31 | -0.8537 | 0.9161 | -0.9492 | 0.4986 | 0.9580 | 0.9965 | -0.3111 | -0.8297 | -0.9978 | 1.0000 |
| a32 | -0.8086 | 0.8806 | -0.9716 | 0.5672 | 0.9317 | 0.9864 | -0.3871 | -0.7818 | -0.9892 | 0.9967 |
| a33 | 0.9999 | -0.9922 | 0.6541 | 0.0157 | -0.9696 | -0.8987 | -0.2196 | 0.9985 | 0.8908 | -0.8589 |
| a34 | -0.6875 | 0.5833 | 0.1096 | -0.7437 | 0.4803 | 0.2899 | 0.8645 | -0.7190 | -0.2728 | 0.2087 |

```
             |      a32        a33        a34
-------------+---------------------------------
         a32 |   1.0000
         a33 |  -0.8145     1.0000
         a34 |   0.1288    -0.6802     1.0000
```

. correlate a1 a2 a3 a4 a5 a6 a7 a8 a9 a10 a11 a13 a14 a15 a16 a17 a18 a19 a21 a22 a23 a27 a28 a29 a30 a
> 31 a32 a33 a34

ตัด a12 a20 a25 a26 ออก เนื่องจากข้อมูลไม่ครบ 5 ตัว

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             |      a1         a2         a3         a4         a5         a6         a7         a8         a9        a10
-------------+------------------------------------------------------------------------------------------------------------
          a1 |   1.0000
          a2 |  -0.7113     1.0000
          a3 |   0.2742    -0.8710     1.0000
          a4 |   0.8114    -0.9333     0.7094     1.0000
          a5 |   0.7836    -0.9274     0.7208     0.9971     1.0000
          a6 |   0.1164    -0.2166     0.2145     0.4323     0.4911     1.0000
          a7 |   0.0594     0.4847    -0.7035    -0.5068    -0.5266    -0.4944     1.0000
          a8 |  -0.6784     0.9353    -0.8055    -0.9429    -0.9606    -0.5285     0.5052     1.0000
          a9 |  -0.8190     0.7936    -0.5138    -0.6819    -0.6403     0.3123    -0.0582     0.6012     1.0000
         a10 |  -0.2952     0.6399    -0.6677    -0.6210    -0.5912     0.0009     0.7760     0.4623     0.4218     1.0000
         a11 |   0.2009     0.3847    -0.6667    -0.3604    -0.4207    -0.7285     0.7630     0.5652    -0.2288     0.2480
         a13 |   0.3996    -0.4127     0.2856     0.2027     0.1398    -0.7929     0.1881    -0.0822    -0.8041    -0.4067
         a14 |   0.1934    -0.0178    -0.1113    -0.0900    -0.1648    -0.8741     0.2554     0.3186    -0.4883    -0.3664
         a15 |  -0.6895     0.4983    -0.1991    -0.4959    -0.4278     0.4657     0.0102     0.2356     0.7866     0.6253
         a16 |  -0.7685     0.9226    -0.7248    -0.9935    -0.9993    -0.5185     0.5351     0.9671     0.6188     0.5755
         a17 |  -0.1918     0.0156     0.1132     0.0873     0.1623     0.8668    -0.2435    -0.3200     0.4807     0.3767
         a18 |   0.8553    -0.7905     0.4831     0.8221     0.7760    -0.0905    -0.2586    -0.6231    -0.8546    -0.7186
         a19 |  -0.8716     0.9071    -0.6312    -0.9596    -0.9352    -0.1944     0.4081     0.8296     0.7997     0.6988
         a21 |  -0.8658     0.7319    -0.3965    -0.6646    -0.6167     0.3272    -0.1181     0.5391     0.9868     0.4075
         a22 |   0.8896    -0.7765     0.4412     0.7065     0.6713    -0.2055     0.1394    -0.6376    -0.9817    -0.3008
         a23 |  -0.3542     0.8001    -0.8470    -0.8036    -0.8413    -0.6911     0.7301     0.9198     0.2836     0.4716
         a27 |   0.6652    -0.9957     0.8974     0.9339     0.9341     0.2862    -0.5446    -0.9531    -0.7349    -0.6420
         a28 |   0.4951    -0.5422     0.3949     0.7703     0.8016     0.8827    -0.5898    -0.7509    -0.0836    -0.3515
         a29 |  -0.8798     0.7813    -0.4541    -0.7298    -0.6831     0.2630    -0.0138     0.5938     0.9811     0.4946
         a30 |  -0.3103     0.2903    -0.1805    -0.0831    -0.0171     0.8622    -0.2395    -0.0517     0.7224     0.3653
         a31 |   0.2438    -0.7451     0.8485     0.7586     0.7929     0.6761    -0.8648    -0.8419    -0.1862    -0.6002
         a32 |   0.4945    -0.9488     0.9523     0.8806     0.8937     0.3973    -0.6880    -0.9412    -0.5703    -0.6544
         a33 |  -0.9123     0.8077    -0.4678    -0.7564    -0.7212     0.1580    -0.0727     0.6734     0.9795     0.3621
         a34 |   0.2487     0.0825    -0.2885     0.1178     0.0655    -0.1711    -0.1437     0.2120    -0.0603    -0.5037
```

|     | a11 | a13 | a14 | a15 | a16 | a17 | a18 | a19 | a21 | a22 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| a11 | 1.0000 | | | | | | | | | |
| a13 | 0.5074 | 1.0000 | | | | | | | | |
| a14 | 0.7500 | 0.8612 | 1.0000 | | | | | | | |
| a15 | -0.5162 | -0.8056 | -0.8053 | 1.0000 | | | | | | |
| a16 | 0.4490 | -0.1091 | 0.2007 | 0.3939 | 1.0000 | | | | | |
| a17 | -0.7471 | -0.8540 | -0.9998 | 0.8079 | -0.1982 | 1.0000 | | | | |
| a18 | 0.1593 | 0.6289 | 0.4832 | -0.9021 | -0.7521 | -0.4863 | 1.0000 | | | |
| a19 | 0.1206 | -0.4230 | -0.1891 | 0.7202 | 0.9214 | 0.1921 | -0.9491 | 1.0000 | | |
| a21 | -0.3421 | -0.7972 | -0.5451 | 0.8495 | 0.5922 | 0.5392 | -0.8873 | 0.8063 | 1.0000 | |
| a22 | 0.2331 | 0.7026 | 0.3774 | -0.7257 | -0.6528 | -0.3692 | 0.8269 | -0.7996 | -0.9784 | 1.0000 |
| a23 | 0.8388 | 0.1794 | 0.5365 | -0.0553 | 0.8578 | -0.5348 | -0.3631 | 0.6240 | 0.1943 | -0.2993 |
| a27 | -0.4674 | 0.3399 | -0.0584 | -0.4291 | -0.9323 | 0.0600 | 0.7455 | -0.8851 | -0.6660 | 0.7187 |
| a28 | -0.5819 | -0.4525 | -0.5663 | -0.0022 | -0.8150 | 0.5570 | 0.3843 | -0.6161 | -0.0922 | 0.1673 |
| a29 | -0.2755 | -0.7694 | -0.5215 | 0.8660 | 0.6590 | 0.5173 | -0.9305 | 0.8637 | 0.9938 | -0.9675 |
| a30 | -0.5829 | -0.9907 | -0.9130 | 0.7865 | -0.0150 | 0.9065 | -0.5569 | 0.3213 | 0.7255 | -0.6136 |
| a31 | -0.8659 | -0.1995 | -0.4812 | 0.0375 | -0.8079 | 0.4760 | 0.3525 | -0.5939 | -0.1022 | 0.1724 |
| a32 | -0.6506 | 0.1902 | -0.2018 | -0.2587 | -0.8982 | 0.2020 | 0.6073 | -0.7873 | -0.4815 | 0.5436 |
| a33 | -0.2006 | -0.6816 | -0.3668 | 0.7486 | 0.7026 | 0.3601 | -0.8668 | 0.8469 | 0.9798 | -0.9964 |
| a34 | 0.4776 | 0.1975 | 0.5692 | -0.6465 | -0.0400 | -0.5844 | 0.4823 | -0.3036 | -0.1895 | 0.0175 |

|     | a23 | a27 | a28 | a29 | a30 | a31 | a32 | a33 | a34 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| a23 | 1.0000 | | | | | | | | |
| a27 | -0.8509 | 1.0000 | | | | | | | |
| a28 | -0.7849 | 0.5856 | 1.0000 | | | | | | |
| a29 | 0.2672 | -0.7210 | -0.1746 | 1.0000 | | | | | |
| a30 | -0.3007 | -0.2152 | 0.5451 | 0.6927 | 1.0000 | | | | |
| a31 | -0.9744 | 0.8021 | 0.7767 | -0.1904 | 0.3055 | 1.0000 | | | |
| a32 | -0.9306 | 0.9731 | 0.6250 | -0.5478 | -0.0679 | 0.9075 | 1.0000 | | |
| a33 | 0.3427 | -0.7527 | -0.2327 | 0.9780 | 0.5897 | -0.2267 | -0.5822 | 1.0000 | |
| a34 | 0.3051 | -0.1162 | 0.1195 | -0.2354 | -0.2482 | -0.1717 | -0.1934 | -0.0690 | 1.0000 |