**Table 2)** KMO and Bartlett test results of the studied economic components

| Bartlett test | |
|---|---|
| **KMO statistic** | 0.637 |
| **Chi-Square** | 572.025 |
| **Freedom degree** | 167 |
| **Significance level** | 0.000 |

The first component with a variance of 24.936% has the biggest variance. As the special amounts bigger than 1 are of importance, three first components with a total variance of 60.7% are selected and others are ignored. Table 3 shows the results of economic components analysis in the current research.

**Table 3)** total variance and rotated variance of economic components

| Component | Initial special load | | | Total square load | | | Total square rotated load | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Percentage from variance | Accumulative variance percentage | Total | Percentage from variance | Accumulative variance percentage | Total | Percentage from variance | Accumulative variance percentage |
| **1** | 2.519 | 32.238 | 34.238 | 2.519 | 32.238 | 34.238 | 2.443 | 24.936 | 24.936 |
| **2** | 2.312 | 20.571 | 52.809 | 2.312 | 20.571 | 52.809 | 2.095 | 20.512 | 45.448 |
| **3** | 1.485 | 11.152 | 63.961 | 1.485 | 11.152 | 63.961 | 1.781 | 15.252 | 60.7 |

**Table 4)** economic components matrix and rotated matrix in urban residential areas of the province

| Variable | First principal component | | Second principal component | | Third principal component | |
|---|---|---|---|---|---|---|
| | Matrix | Rotated matrix | Matrix | Rotated matrix | Matrix | Rotated matrix |
| EC1 | 0.425 | 0.64 | 0.546 | -0.123 | 0.205 | 0.003 |
| EC2 | 0.559 | 0.058 | -0.537 | 0.755 | -0.213 | -0.141 |
| EC3 | -0.559 | -0.058 | 0.537 | -0.755 | 0.213 | 0.14 |
| EC4 | 0.51 | 0.198 | -0.135 | 0.086 | 0.161 | -0.556 |
| EC5 | 0.249 | 0.178 | -0.204 | 0.023 | 0.743 | -0.088 |
| EC6 | -0.113 | -0.239 | -0.48 | 0.052 | 0.589 | 0.01 |
| EC7 | 0.704 | 0.678 | 0.257 | 0.222 | 0.226 | -0.075 |
| EC8 | -0.771 | -0.425 | -0.089 | -0.145 | 0.154 | 0.698 |
| EC9 | 0.694 | 0.71 | 0.451 | 0.103 | -0.012 | -0.178 |
| EC10 | -0.373 | 0.143 | 0.349 | -0.103 | 0.218 | 0.815 |
| EC11 | 0.42 | 0.102 | -0.013 | 0.035 | 0.283 | 0.182 |
| EC12 | -0.188 | 0.06 | 0.108 | 0.019 | 0.108 | -0.164 |
| EC13 | -0.115 | -0.145 | -0.191 | 0.035 | 0.245 | 0.04 |
| EC14 | 0.48 | 0.02 | -0.108 | 0.147 | 0.194 | 0.086 |
| EC15 | 0.59 | 0.043 | 0.015 | 0.038 | -0.169 | 0.386 |
| EC16 | 0.463 | -0.076 | -0.509 | 0.69 | 0.397 | 0.02 |
| EC17 | 0.729 | 0.066 | -0.326 | 0.386 | 0.11 | 0.423 |

**Table 5)** economic sustainability ranking in cities using principal component analysis

| City | First component (economic welfare) | | Second component (economic activity) | | Third component (economic diversity) | | Complex index | |
|---|---|---|---|---|---|---|---|---|
| | Score | Rank | Score | Rank | Score | Rank | Score | Rank |
| **Boldaji** | 2.142 | 1 | 0.588 | 6 | 1.257 | 3 | 1.329 | 1 |
| **Sefid dasht** | 2.011 | 2 | 0.754 | 4 | 1.061 | 5 | 1.275 | 2 |
| **Saman** | 1.389 | 4 | 0.613 | 5 | 1.426 | 1 | 1.143 | 3 |
| **Hafshejan** | 1.531 | 3 | 0.513 | 7 | 1.38 | 2 | 1.141 | 4 |
| **Boroujen** | 0.757 | 6 | 1.441 | 1 | 1.212 | 4 | 1.137 | 5 |
| **Lordegan** | 0.409 | 9 | 0.814 | 3 | 0.615 | 11 | 0.613 | 6 |
| **Farsan** | 0.421 | 8 | 0.433 | 8 | 0.781 | 8 | 0.545 | 7 |
| **Gandoman** | 0.136 | 12 | 0.361 | 12 | 1.008 | 6 | 0.502 | 8 |
| **Shahre Kurd** | 0.761 | 5 | 1.258 | 2 | -0.578 | 39 | 0.480 | 9 |
| **Ben** | 0.455 | 7 | 0.365 | 11 | 0.415 | 24 | 0.412 | 10 |
| **Faradonbeh** | -0.012 | 17 | 0.401 | 9 | 0.787 | 7 | 0.392 | 11 |
| **Ardal** | 0.113 | 13 | 0.282 | 15 | 0.606 | 12 | 0.334 | 12 |
| **Farokhshahr** | 0.21 | 11 | 0.393 | 10 | 0.362 | 26 | 0.322 | 13 |
| **Chelgerd** | 0.391 | 10 | -0.002 | 26 | 0.562 | 15 | 0.317 | 14 |
| **Shalamzar** | -0.014 | 18 | 0.291 | 14 | 0.568 | 14 | 0.282 | 15 |
| **Junqan** | 0.012 | 15 | 0.302 | 13 | 0.502 | 17 | 0.272 | 16 |
| **Sureshjan** | 0.004 | 16 | 0.116 | 20 | 0.549 | 16 | 0.223 | 17 |
| **Nafch** | 0.023 | 14 | 0.117 | 19 | 0.492 | 20 | 0.211 | 18 |
| **Gahru** | -0.355 | 23 | -0.009 | 27 | 0.688 | 9 | 0.108 | 19 |
| **Naghan** | -0.45 | 27 | 0.157 | 17 | 0.424 | 23 | 0.044 | 20 |
| **Vardanjan** | -0.135 | 21 | 0.199 | 16 | -0.075 | 36 | -0.004 | 21 |
| **Kian** | -0.452 | 29 | 0.011 | 25 | 0.327 | 27 | -0.038 | 22 |
| **Harouni** | -0.404 | 25 | 0.097 | 21 | 0.089 | 31 | -0.073 | 23 |
| **Dashtak** | -.0641 | 31 | 0.121 | 18 | 0.033 | 34 | -0.162 | 24 |
| **Pordanjan** | -0.661 | 33 | -0.244 | 29 | 0.413 | 25 | -0.164 | 25 |
| **Baba heydar** | -0.625 | 30 | 0.043 | 24 | 0.049 | 33 | -0.178 | 26 |
| **Monj** | -0.68 | 35 | -0.572 | 32 | 0.673 | 10 | -0.193 | 27 |
| **Sudejan** | -0.441 | 26 | -0.642 | 33 | 0.501 | 18 | -0.194 | 28 |
| **Bazoft** | -0.381 | 24 | -0.759 | 34 | 0.496 | 19 | -0.215 | 29 |
| **Taghanak** | -0.131 | 20 | 0.082 | 22 | -0.61 | 40 | -0.220 | 30 |
| **Dastena** | -1.236 | 40 | 0.081 | 23 | 0.307 | 28 | -0.283 | 31 |
| **Naghneh** | -0.018 | 29 | -0.944 | 35 | 0.066 | 32 | -0.299 | 32 |
| **Sardasht** | -0.894 | 39 | -0.277 | 30 | 0.239 | 30 | -0.311 | 33 |
| **Samsami** | -0.348 | 22 | -1.121 | 38 | 0.267 | 29 | -0.401 | 34 |
| **Gujan** | -0.699 | 36 | -0.342 | 31 | -0.167 | 37 | -0.403 | 35 |
| **Sar khun** | -0.849 | 38 | -0.212 | 28 | -0.212 | 38 | -0.424 | 37 |
| **Choliche** | -0.677 | 34 | -0.113 | 37 | 0.466 | 21 | -0.441 | 38 |
| **Mal e khalife** | -0.782 | 37 | -1.147 | 40 | 0.599 | 13 | -0.443 | 39 |

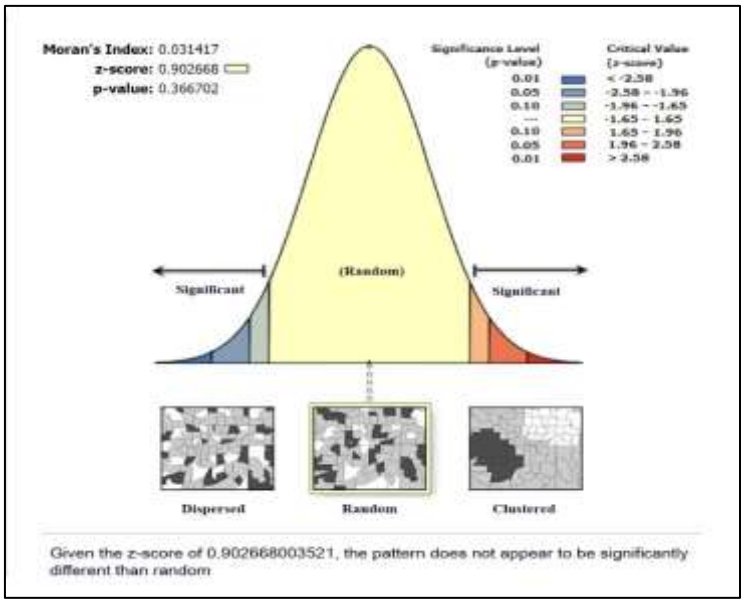


**Figure 1)** the outcome of spatial autocorrelation analysis from the geographical distribution of economic sustainability in cities

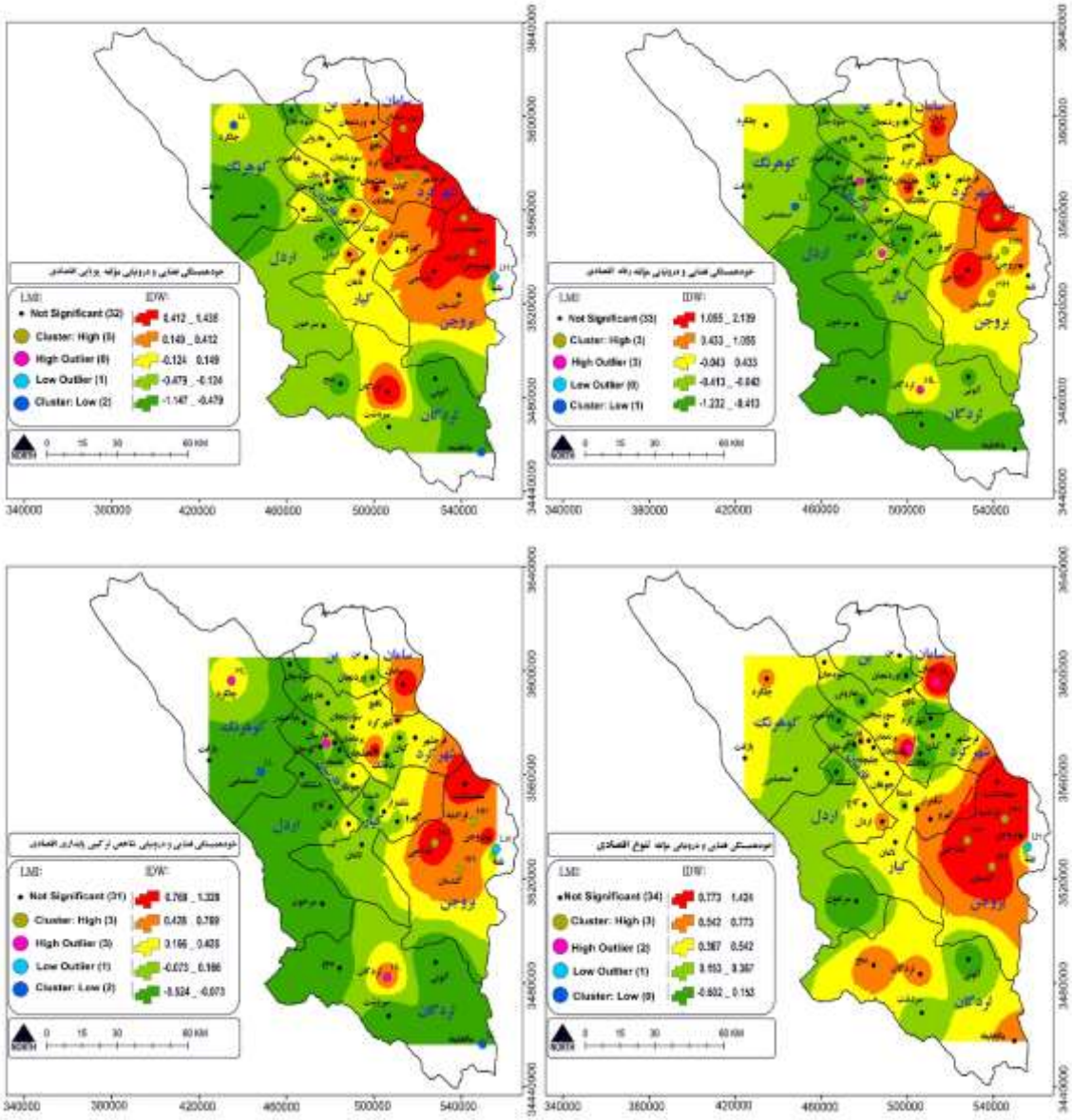


**Figure 2)** spatial autocorrelation and reverse weighting of the distance between the principal components and complex index of economic sustainability in cities of the province