FAoptions

# Two factor solution is slightly different for Nuclear, Solar and Coal.

## Nuclear

2 factor solution

| code | Items | Pdevelop | Ndevelop | Communality | Uniqueness | Complexity |
| --- | --- | --- | --- | --- | --- | --- |
| Health risk(nuclear) | Nuclear energy poses a great risk to the health of people living around it | 0.657 |  | 0.435 | 0.565 | 1.018 |
| Spoils Natural Beauty(nuclear) | Nuclear energy spoils the natural beauty of the landscape | 0.638 |  | 0.410 | 0.590 | 1.017 |
| Displacement risk(nuclear) | Nuclear energy is leading to displacement of people from their land | 0.59 |  | 0.380 | 0.620 | 1.178 |
|  | Pollution risk(nuclear) | 0.565 |  | 0.319 | 0.681 | 1.000 |
| Anti Mechanisation of work | Rapid mechanization of work is taking away jobs from workers in this country | 0.552 |  | 0.345 | 0.655 | 1.262 |
|  | Anti Large Industries | 0.532 |  | 0.284 | 0.716 | 1.004 |
| Pro Regulations | Regardless of ownership, the government should pass strong regulations and implement them | 0.53 |  | 0.290 | 0.710 | 1.065 |
| Environment over Development | Polluting industries that spoil the environment should be shut down even if it costs people their jobs |  |  | 0.153 | 0.847 | 1.003 |
| Pro Globaleconomy | Foreign companies have led to a range of benefits for the Indian people and society |  |  | 0.218 | 0.782 | 1.998 |
| Pro Public ownership | The government should own most large businesses and industries |  |  | 0.123 | 0.877 | 1.208 |
| Pro Decentralisation | Local politicians shouldn't have to ask permission from the central government to implement policies |  |  | 0.084 | 0.916 | 1.000 |
|  | Limits on Wealth |  |  | 0.144 | 0.856 | 1.999 |
|  | Pro Private ownership |  |  | 0.031 | 0.969 | 1.943 |
| Pro Localeconomy | India would be better off if foreign companies didn't come to here |  |  | 0.015 | 0.985 | 1.043 |
| National development(nuclear) | Nuclear energy pushes forward the country's development |  | 0.662 | 0.473 | 0.527 | 1.159 |
| Community pride(nuclear) | I would be proud if my community used nuclear energy |  | 0.623 | 0.434 | 0.566 | 1.234 |
| National pride(nuclear) | Nuclear energy is a mark of pride for our nation |  | 0.605 | 0.402 | 0.598 | 1.193 |
| Local prosperity(nuclear) | Nuclear energy brings economic prosperity to the surrounding regions |  | 0.586 | 0.360 | 0.640 | 1.101 |
| Job opportunities(nuclear) | Nuclear energy will bring jobs to the local community |  | 0.427 | 0.226 | 0.774 | 1.453 |
| Reliance on government(nuclear) | I don't like the idea that I have to rely on the government for electricity from nuclear energy |  |  | 0.156 | 0.844 | 1.049 |
| Pro Large Industries | Large scale industries are required for the development of the country that will benefit everyone |  |  | 0.173 | 0.827 | 1.758 |
| Anti Regulations | There is too much red-tape and the government should not interfere with businesses and industries |  |  | 0.069 | 0.931 | 1.440 |
| Pro Centralisation | Laws and policies would be implemented more smoothly if more power lay with the central government |  |  | 0.083 | 0.917 | 1.930 |
| Development over Environment | Economic growth and creating jobs should be prioritized over environmental protection |  |  | 0.004 | 0.996 | 1.025 |

Eigenvalues and Variance Explained for 2 Factor Solution

| Property | Pdevelop | Ndevelop |
| --- | --- | --- |
| SS loadings | 3.224 | 2.388 |
| Proportion Var | 0.134 | 0.099 |
| Cumulative Var | 0.134 | 0.234 |
| Proportion Explained | 0.575 | 0.425 |
| Cumulative Proportion | 0.575 | 1.000 |

## Solar

2 factor solution

| code | item | MR1 | MR2 | Communality | Uniqueness | Complexity |
| --- | --- | --- | --- | --- | --- | --- |
| National development(solar) | Solar energy pushes forward the country's development | 0.842 |  | 0.726 | 0.274 | 1.047 |
| Community pride(solar) | I would be proud if my community used solar energy | 0.787 |  | 0.649 | 0.351 | 1.094 |
| Local prosperity(solar) | Solar energy brings economic prosperity to the surrounding regions | 0.787 |  | 0.630 | 0.370 | 1.033 |
| National pride(solar) | Solar energy is a mark of pride for our nation | 0.761 |  | 0.586 | 0.414 | 1.026 |
| Reliance on government(solar) | I don't like the idea that I have to rely on the government for electricity from solar energy | 0.599 |  | 0.359 | 0.641 | 1.002 |
| Job opportunities(solar) | Solar energy will bring jobs to the local community | 0.551 |  | 0.306 | 0.694 | 1.018 |
| Pro Localeconomy | India would be better off if foreign companies didn't come to here |  |  | 0.085 | 0.915 | 1.204 |
|  | Pro Private ownership |  |  | 0.040 | 0.960 | 1.042 |
|  | Pollution risk(solar) |  | 0.706 | 0.546 | 0.454 | 1.189 |
| Health risk(solar) | Solar energy poses a great risk to the health of people living around it |  | 0.58 | 0.358 | 0.642 | 1.129 |
| Displacement risk(solar) | Solar energy is leading to displacement of people from their land |  | 0.55 | 0.307 | 0.693 | 1.028 |
| Spoils Natural Beauty(solar) | Solar energy spoils the natural beauty of the landscape |  | 0.548 | 0.306 | 0.694 | 1.036 |
| Anti Mechanisation of work | Rapid mechanization of work is taking away jobs from workers in this country |  | -0.533 | 0.317 | 0.683 | 1.223 |
| Pro Public ownership | The government should own most large businesses and industries |  | -0.482 | 0.244 | 0.756 | 1.101 |
| Environment over Development | Polluting industries that spoil the environment should be shut down even if it costs people their jobs |  | -0.469 | 0.229 | 0.771 | 1.082 |
| Pro Globaleconomy | Foreign companies have led to a range of benefits for the Indian people and society |  | 0.461 | 0.213 | 0.787 | 1.004 |
| Pro Regulations | Regardless of ownership, the government should pass strong regulations and implement them |  | -0.437 | 0.191 | 0.809 | 1.001 |
| Pro Large Industries | Large scale industries are required for the development of the country that will benefit everyone |  | 0.424 | 0.197 | 0.803 | 1.189 |
|  | Limits on Wealth |  | -0.412 | 0.172 | 0.828 | 1.016 |
|  | Anti Large Industries |  |  | 0.142 | 0.858 | 1.023 |
| Pro Centralisation | Laws and policies would be implemented more smoothly if more power lay with the central government |  |  | 0.103 | 0.897 | 1.050 |
| Pro Decentralisation | Local politicians shouldn't have to ask permission from the central government to implement policies |  |  | 0.059 | 0.941 | 1.022 |
| Development over Environment | Economic growth and creating jobs should be prioritized over environmental protection |  |  | 0.054 | 0.946 | 1.029 |
| Anti Regulations | There is too much red-tape and the government should not interfere with businesses and industries |  |  | 0.048 | 0.952 | 1.398 |

Solar: Eigenvalues and Variance Explained for 2 Factor Solution

| Property | MR1 | MR2 |
| --- | --- | --- |
| SS loadings | 3.471 | 3.394 |
| Proportion Var | 0.145 | 0.141 |
| Cumulative Var | 0.145 | 0.286 |
| Proportion Explained | 0.506 | 0.494 |
| Cumulative Proportion | 0.506 | 1.000 |

## Coal

2 factor solution

| code | item | MR1 | MR2 | Communality | Uniqueness | Complexity |
| --- | --- | --- | --- | --- | --- | --- |
|  | Pollution risk(coal) | 0.65 |  | 0.430 | 0.570 | 1.034 |
| Spoils Natural Beauty(coal) | Coal powered plants spoil the natural beauty of the landscape | 0.621 |  | 0.399 | 0.601 | 1.066 |
| Anti Mechanisation of work | Rapid mechanization of work is taking away jobs from workers in this country | 0.575 |  | 0.353 | 0.647 | 1.134 |
| Health risk(coal) | Coal powered plants pose a great risk to the health of people living around it | 0.572 |  | 0.360 | 0.640 | 1.198 |
| Displacement risk(coal) | Coal powered plants are leading to displacement of people from their land | 0.553 |  | 0.306 | 0.694 | 1.007 |
|  | Anti Large Industries | 0.528 |  | 0.284 | 0.716 | 1.039 |
| Pro Regulations | Regardless of ownership, the government should pass strong regulations and implement them | 0.472 |  | 0.231 | 0.769 | 1.079 |
| Job opportunities(coal) | Coal powered plants will bring jobs to the local community | 0.416 |  | 0.226 | 0.774 | 1.558 |
| Pro Decentralisation | Local politicians shouldn't have to ask permission from the central government to implement policies |  |  | 0.133 | 0.867 | 1.004 |
| Pro Globaleconomy | Foreign companies have led to a range of benefits for the Indian people and society |  |  | 0.179 | 0.821 | 1.999 |
| Environment over Development | Polluting industries that spoil the environment should be shut down even if it costs people their jobs |  |  | 0.093 | 0.907 | 1.143 |
|  | Limits on Wealth |  |  | 0.161 | 0.839 | 1.999 |
| Pro Public ownership | The government should own most large businesses and industries |  |  | 0.099 | 0.901 | 1.523 |
| Pro Localeconomy | India would be better off if foreign companies didn't come to here |  |  | 0.017 | 0.983 | 1.965 |
| Community pride(coal) | I would be proud if my community used coal powered plants |  | 0.653 | 0.439 | 0.561 | 1.056 |
| National pride(coal) | Coal powered plants are a mark of pride for our nation |  | 0.581 | 0.368 | 0.632 | 1.183 |
| Pro Large Industries | Large scale industries are required for the development of the country that will benefit everyone |  | -0.44 | 0.239 | 0.761 | 1.442 |
| National development(coal) | Coal powered plants push forward the country's development |  | 0.433 | 0.286 | 0.714 | 1.826 |
| Local prosperity(coal) | Coal powered plants bring economic prosperity to the surrounding regions |  |  | 0.236 | 0.764 | 1.887 |
| Pro Centralisation | Laws and policies would be implemented more smoothly if more power lay with the central government |  |  | 0.101 | 0.899 | 1.515 |
| Reliance on government(coal) | I don't like the idea that I have to rely on the government for electricity from coal powered plants |  |  | 0.100 | 0.900 | 1.514 |
| Anti Regulations | There is too much red-tape and the government should not interfere with businesses and industries |  |  | 0.099 | 0.901 | 1.664 |
|  | Pro Private ownership |  |  | 0.061 | 0.939 | 1.632 |
| Development over Environment | Economic growth and creating jobs should be prioritized over environmental protection |  |  | 0.025 | 0.975 | 1.210 |

Coal: Eigenvalues and Variance Explained for 2 Factor Solution

| Property | MR1 | MR2 |
| --- | --- | --- |
| SS loadings | 3.291 | 1.934 |
| Proportion Var | 0.137 | 0.081 |
| Cumulative Var | 0.137 | 0.218 |
| Proportion Explained | 0.630 | 0.370 |
| Cumulative Proportion | 0.630 | 1.000 |

# Alternative Solution : FA on Two Separate scales

## Scale 1: Factor analysis on Eco-political values of the perceiver scale

4 factor solution

4 factor solution same for all technologies

| code | item | MR1 | MR3 | MR4 | MR2 | Communality | Uniqueness | Complexity |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pro Regulations | Regardless of ownership, the government should pass strong regulations and implement them | 0.54 |  |  |  | 0.366 | 0.634 | 1.520 |
| Anti Mechanisation of work | Rapid mechanization of work is taking away jobs from workers in this country | 0.506 |  |  |  | 0.330 | 0.670 | 1.585 |
| Limits on Wealth | A limit should be put to how much wealth a person can amass | 0.483 |  |  |  | 0.304 | 0.696 | 1.638 |
|  | Anti Large Industries |  | 0.534 |  |  | 0.409 | 0.591 | 1.780 |
| Pro Localeconomy | India would be better off if foreign companies didn't come to here |  | 0.524 |  |  | 0.287 | 0.713 | 1.090 |
| Pro Decentralisation | Local politicians shouldn't have to ask permission from the central government to implement policies |  |  |  |  | 0.134 | 0.866 | 2.021 |
| Pro Centralisation | Laws and policies would be implemented more smoothly if more power lay with the central government |  |  | 0.488 |  | 0.280 | 0.720 | 1.360 |
| Pro Globaleconomy | Foreign companies have led to a range of benefits for the Indian people and society |  |  | 0.478 |  | 0.298 | 0.702 | 1.598 |
| Anti Regulations | There is too much red-tape and the government should not interfere with businesses and industries |  |  | 0.473 |  | 0.399 | 0.601 | 2.220 |
| Pro Large Industries | Large scale industries are required for the development of the country that will benefit everyone |  |  | 0.432 |  | 0.302 | 0.698 | 1.902 |
| Development over Environment | Economic growth and creating jobs should be prioritized over environmental protection |  |  |  | -0.536 | 0.290 | 0.710 | 1.014 |
|  | Pro Private ownership |  |  |  | 0.508 | 0.274 | 0.726 | 1.121 |
| Environment over Development | Polluting industries that spoil the environment should be shut down even if it costs people their jobs |  |  |  | 0.464 | 0.428 | 0.572 | 2.548 |
| Pro Public ownership | The government should own most large businesses and industries |  |  |  | 0.43 | 0.433 | 0.567 | 3.201 |

Eigenvalues and Variance Explained for Rotated Factor Solution

| Property | MR1 | MR3 | MR4 | MR2 |
| --- | --- | --- | --- | --- |
| SS loadings | 1.215 | 1.191 | 1.091 | 1.037 |
| Proportion Var | 0.087 | 0.085 | 0.078 | 0.074 |
| Cumulative Var | 0.087 | 0.172 | 0.250 | 0.324 |
| Proportion Explained | 0.268 | 0.263 | 0.241 | 0.229 |
| Cumulative Proportion | 0.268 | 0.531 | 0.771 | 1.000 |

## Option 1: Factor analysis on Scale 2 - Characteristics of the Technology

2 factor solution

Nuclear Energy: 2 factor solution

| Code | Items | Negative Characteristics | Positive Characteristics | Communality | Uniqueness | Complexity |
| --- | --- | --- | --- | --- | --- | --- |
| Health risk(nuclear) | Nuclear energy poses a great risk to the health of people living around it | 0.846 |  | 0.719 | 0.281 | 1.009 |
| Pollution risk(nuclear) | Nuclear energy increases pollution of air/water/land | 0.751 |  | 0.576 | 0.424 | 1.042 |
| Spoils Natural Beauty(nuclear) | Nuclear energy spoils the natural beauty of the landscape | 0.671 |  | 0.450 | 0.550 | 1.000 |
| Displacement risk(nuclear) | Nuclear energy is leading to displacement of people from their land | 0.529 |  | 0.313 | 0.687 | 1.233 |
| National development(nuclear) | Nuclear energy pushes forward the country's development |  | 0.705 | 0.521 | 0.479 | 1.097 |
| Local prosperity(nuclear) | Nuclear energy brings economic prosperity to the surrounding regions |  | 0.634 | 0.418 | 0.582 | 1.082 |
| National pride(nuclear) | Nuclear energy is a mark of pride for our nation |  | 0.595 | 0.368 | 0.632 | 1.076 |
| Community pride(nuclear) | I would be proud if my community used nuclear energy |  | 0.585 | 0.387 | 0.613 | 1.258 |
| Job opportunities(nuclear) | Nuclear energy will bring jobs to the local community |  | 0.497 | 0.293 | 0.707 | 1.366 |
| Reliance on government(nuclear) | I don't like the idea that I have to rely on the government for electricity from nuclear energy |  |  | 0.161 | 0.839 | 1.023 |

Eigenvalues and Variance Explained for 2 Factor Solution

| Property | Negative Characteristics | Positive Characteristics |
| --- | --- | --- |
| SS loadings | 2.157 | 2.050 |
| Proportion Var | 0.216 | 0.205 |
| Cumulative Var | 0.216 | 0.421 |
| Proportion Explained | 0.513 | 0.487 |
| Cumulative Proportion | 0.513 | 1.000 |