**Modelo 4**: Modelo log-polinomial de grado 4 con indicadoras nivel de referencia diciembre con errores ARMA(15,16) solo con ,, ,

**Estimaciones de los parámetros**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Estimate | Std. Error | t value | Pr(>|t|) |
| ar1 | 0,33502855 | 0,05791722 | 5,7846101 | 2,27E-08 |
| ar2 | 0,2512827 | 0,0603029 | 4,16700838 | 4,32E-05 |
| ar7 | -0,15268964 | 0,10013642 | -1,52481629 | 0,12862707 |
| ar9 | 0,23348587 | 0,07484894 | 3,11942787 | 0,00203457 |
| ar15 | -0,13941959 | 0,03364928 | -4,1433152 | 4,75E-05 |
| ma7 | 0,16174868 | 0,11681711 | 1,38463169 | 0,1674564 |
| ma16 | -0,0696078 | 0,06469295 | -1,075972 | 0,28302472 |
| intercept | 3,65219765 | 0,03819796 | 95,612371 | 1,80E-192 |
| t | 0,002081 | 0,00182836 | 1,13817726 | 0,25618612 |
| t2 | 4,36E-05 | 6,70E-05 | 0,650484 | 0,51600445 |
| t3 | -3,10E-07 | NA | NA | NA |
| t4 | 6,95E-10 | NA | NA | NA |
| Jan | -0,06369409 | 0,01339029 | -4,75673748 | 3,40E-06 |
| Feb | 0,07838467 | 0,01484767 | 5,2792581 | 2,91E-07 |
| Mar | 0,17338237 | 0,01707863 | 10,1520087 | 2,30E-20 |
| Apr | 0,10029274 | 0,01919604 | 5,22465873 | 3,80E-07 |
| May | 0,15948174 | 0,01960325 | 8,13547656 | 2,24E-14 |
| Jun | 0,13814447 | 0,01983747 | 6,96381626 | 3,18E-11 |
| Jul | 0,13556275 | 0,01961572 | 6,91092381 | 4,34E-11 |
| Aug | 0,14130428 | 0,01919467 | 7,36164011 | 2,92E-12 |
| Sep | 0,18175069 | 0,01702825 | 10,6734806 | 5,31E-22 |
| Oct | 0,15795202 | 0,01478296 | 10,6847332 | 4,89E-22 |
| Nov | 0,13281632 | 0,01347654 | 9,85537362 | 1,90E-19 |

**Valores para los pronósticos.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Point Forecast | Lo 95 | Hi 95 |
| 2022/11 | 159,97805 | 144,135277 | 177,562197 |
| 2022/12 | 142,552009 | 127,705334 | 159,124718 |
| 2023/1 | 133,479816 | 118,82104 | 149,947023 |
| 2023/2 | 155,345608 | 138,013853 | 174,853883 |
| 2023/3 | 168,607148 | 149,619742 | 190,004141 |
| 2023/4 | 157,19753 | 139,424524 | 177,236132 |
| 2023/5 | 173,340463 | 153,702499 | 195,487491 |
| 2023/6 | 171,208934 | 151,787007 | 193,115996 |
| 2023/7 | 173,779651 | 154,065142 | 196,01687 |
| 2023/8 | 174,978729 | 154,878897 | 197,687071 |
| 2023/9 | 184,208568 | 162,965108 | 208,221238 |
| 2023/10 | 180,236882 | 159,305519 | 203,918444 |