**1.Modelo RF5\_Indeg Apoio Spe Diq Cint X All var**.

***Instrucciones modelo***: **test size = 0.17 ; rd\_state = 30**

***Variables indep select to fit***:

variables = [ 'id', 'Indeg\_IntimAmigos\_',  'Indeg\_RedeRisk\_Cen', 'PC1\_Distance\_Pro', 'Degree\_RedeTotFamil', '1\_VarExp\_Moranca', '2\_VarExp\_Atri\_Tabanca']

***Model performance (scores):***

Mean Squared Error: 1.1818

R^2 Score: 0.5601 (In Excel: R2 = 0.5601 ; y = 0.4274 X + 1.0539)

**Model tot:**

Mean Squared Error (MSE): 0.5194

Root Mean Squared Error (RMSE): 0.7207

Mean Absolute Error (MAE): 0.4419

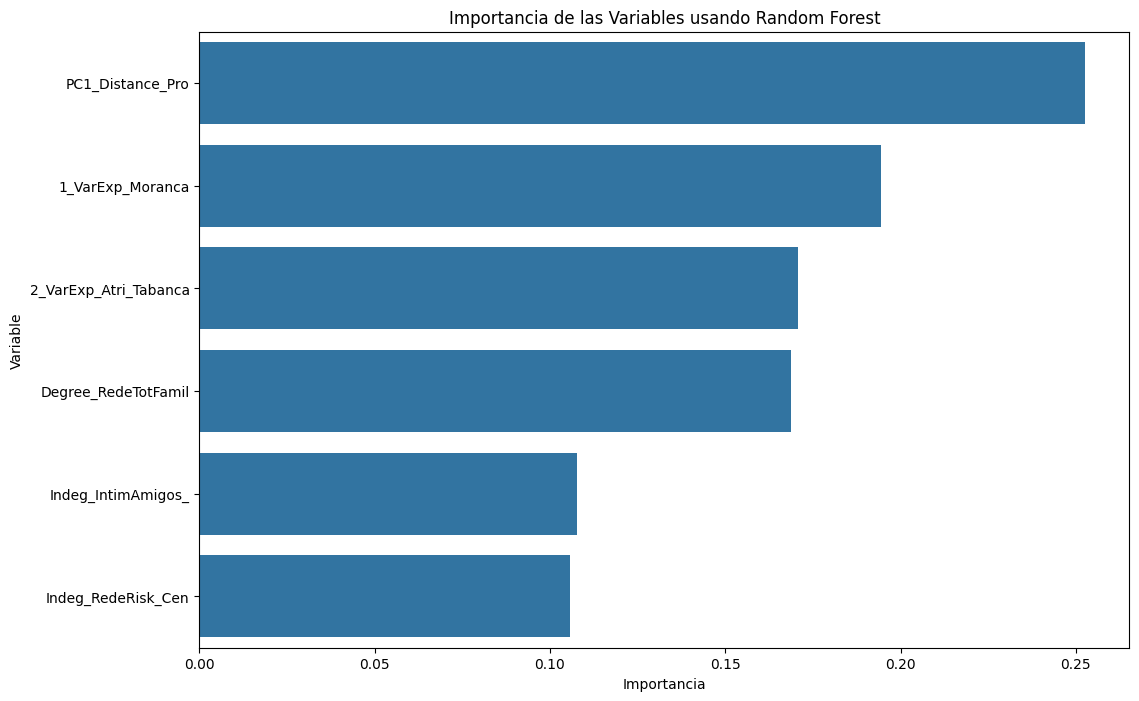
R^2 Score: 0.772

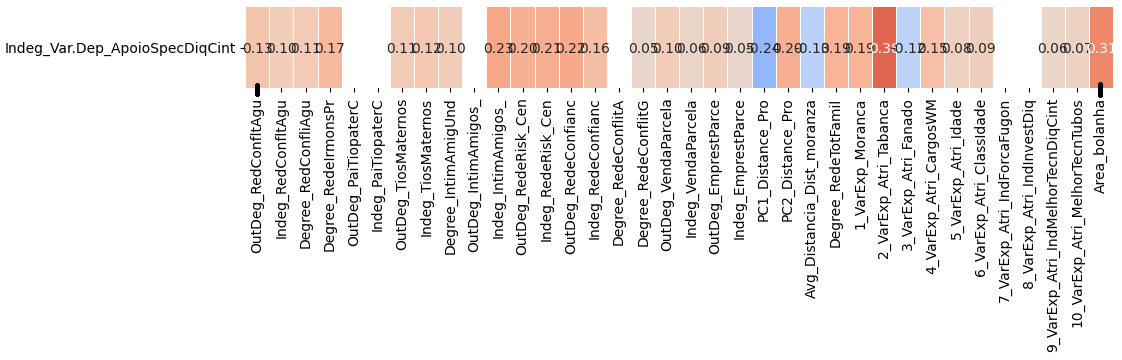
Pearson Correlation: 0.8992

***Interactions***:

| **Interacción** | **Importancia** | **Dirección** |
| --- | --- | --- |
| 0 | (1\_VarExp\_Moranca, 2\_VarExp\_Atri\_Tabanca) | 0.535744 | 0.015768 |
| 1 | (Indeg\_IntimAmigos\_, 2\_VarExp\_Atri\_Tabanca) | 0.530883 | -0.010837 |
| 2 | (Degree\_RedeTotFamil, 2\_VarExp\_Atri\_Tabanca) | 0.495715 | 0.006976 |
| 3 | (PC1\_Distance\_Pro, 2\_VarExp\_Atri\_Tabanca) | 0.452591 | -0.005249 |
| 4 | (Indeg\_RedeRisk\_Cen, 2\_VarExp\_Atri\_Tabanca) | 0.408551 | 0.047054 |
| 5 | (Indeg\_RedeRisk\_Cen, 1\_VarExp\_Moranca) | 0.280659 | 0.048542 |
| 6 | (PC1\_Distance\_Pro, 1\_VarExp\_Moranca) | 0.280614 | -0.004812 |
| 7 | (Degree\_RedeTotFamil, 1\_VarExp\_Moranca) | 0.260620 | 0.010572 |
| 8 | (PC1\_Distance\_Pro, Degree\_RedeTotFamil) | 0.257576 | -0.005734 |
| 9 | (Indeg\_IntimAmigos\_, 1\_VarExp\_Moranca) | 0.216361 | -0.003766 |

***Key results****:*





**2.Modelo RF5\_Outdeg Apoio Spe Diq Cint X All var**.

***Instrucciones modelo***: **test size = 0.25, Rd\_state = 15**.

***Variables indep select to fit***:

variables = ['id','Indeg\_IntimAmigos\_','Indeg\_RedeRisk\_Cen',

'Degree\_RedeTotFamil', '1\_VarExp\_Moranca', '7\_VarExp\_Atri\_IndForcaFugon',

  '8\_VarExp\_Atri\_IndInvestDiq','9\_VarExp\_Atri\_IndMelhorTecnDiqCint', '10\_VarExp\_Atri\_MelhorTecnTubos', 'Area\_bolanha', 'OutDeg\_RedeRisk\_Cen']

***Model performance (scores):***

Mean Squared Error: 1.0909

R^2 Score: 0.8427 (on excel: **R2= 0.8507 ; Y = 0.7986 X + 0.4198**)

**Model tot:**

Mean Squared Error (MSE): 0.8527

Root Mean Squared Error (RMSE): 0.9234

Mean Absolute Error (MAE): 0.4496

R^2 Score: 0.9323

Pearson Correlation: 0.9713

***Interactions***:

| **Interacción** | **Importancia** | **Dirección** |
| --- | --- | --- |
| 0 | (9\_VarExp\_Atri\_IndMelhorTecnDiqCint, 10\_VarExp... | 3.502650 | 0.468727 |
| 1 | (PC1\_Distance\_Pro, 10\_VarExp\_Atri\_MelhorTecnTu... | 2.908421 | 0.004340 |
| 2 | (1\_VarExp\_Moranca, 10\_VarExp\_Atri\_MelhorTecnTu... | 2.873877 | -0.005294 |
| 3 | (Indeg\_IntimAmigos\_, 10\_VarExp\_Atri\_MelhorTecn... | 2.872133 | 0.169553 |
| 4 | (8\_VarExp\_Atri\_IndInvestDiq, 10\_VarExp\_Atri\_Me... | 2.869310 | 0.091475 |
| 5 | (10\_VarExp\_Atri\_MelhorTecnTubos, Area\_bolanha) | 2.866670 | 0.857471 |
| 6 | (10\_VarExp\_Atri\_MelhorTecnTubos, OutDeg\_RedeRi... | 2.864149 | 0.857264 |
| 7 | (Indeg\_RedeRisk\_Cen, 10\_VarExp\_Atri\_MelhorTecn... | 2.860961 | 0.011005 |
| 8 | (7\_VarExp\_Atri\_IndForcaFugon, 10\_VarExp\_Atri\_M... | 2.860666 | 0.118550 |
| 9 | (Degree\_RedeTotFamil, 10\_VarExp\_Atri\_MelhorTec... | 2.853812 | 0.050528 |

***Key results****:*

