Short, medium and long term time series forecasting using the L-Co-R algorithm

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Abstract

This paper describes the coevolutionary algorithm L-Co-R (Lags COevolving with Rbfns), an analyzes a study about its performance in the short, medium and long term time series forecasting tasks. The method allows the coevolution, in a single process, of the time series model as well as the set of lags to be used for predictions. Radial basis functions neural networks are used as the model, being the individuals of one population, while set of candidate lags are also evaluated as individuals of the second population. In order to test the behaviour of the algorithm in a new context of a variable horizon, 5 different measures have been analyzed, for more than 30 different databases, comparing against 6 existing algorithms and, all of this, for 7 different prediction horizons. The statistical analysis of the results shows that L-Co-R outperforms the rest of methods, regardless of the horizon.

1. Experimental study

Comparison between lags selected by the EPAF and the selected ones by L-Co-R.

Data set	EPAF	L-Co-R
Accidents	1,3,4,9,11,12,13,15,25,57	1,2,3,7,9,12
AccDeath	1,7,8,10,11,12,13,15,23,40,44	1,4,6,8,12
AccVictims	1,7,8,9,12,13,18,22,25,26,27,49	1,3,6,12
Airline	1,4,11,12,13,23	1,2,4
WmFrancfort	1,3,30	1,3,6,10
WmLondon	1	4,8,10
WmMadrid	1,12,30	1,3,4,5,6,9,10
WmMilan	1,30	2,8,10
WmNewYork	1,30	3,6,7,10,11
WmParis	1,30	1,2,4,5,7,8,10,11
WmTokyo	1,6	5,7,9,10,11
Colgtems	1,2,3,5,30	1,2,4,6,9,10,12,15,16
Colgtepr	1,2,3,4	1,2,4,12,15,17
Crestms	1,2,3	1,2,3,4,7,10
Crestpr	1,2,3,4,5	1,4,7,9,11,12,13,14,19,20
Deceases	1,3,9,10,11,12,13,23,24,25,37	1,3,4,5,7,8,9,12,13
Spectators	1,3,7,9,11,12,13,14,23,24,26,29,36	4,6,8,10,11,12,14,15,17
SpaMovSpec	1,5,10,11,24,50	1,3,4,6,9,11,13,14,15,17
ForMovSpec	1,3,4,5,7,11,12,13,24,29,39	1,2,4,6,8,9,10,12,13
Exchange	1	1,3,5,6,7
Gasoline	1,2,3,4,5,6,7,8,14,27	1,3,5,13,14,16,17,19,24,25,30,31,33,42
MortCanc	1	1,2,3
MortMade	1,2,4,6,7,8	1,3,4
Books	1,12	3,5,6,8,9
Motorcycles	1,2,4,5,6,7,8,10,11,12,13,14,25,48	1,4,8,9,10,11,12,15
Unemployed	1	1,8
FreeHouPrize	1	4
Prisoners	1	2,4,6,12,13,14,15,17
Takings	1,2,3,6,7,8,9,11,12,13,14,23,25,26,31	1,2,3,5,9,10,12
TurIn	1,2,6,7,8,9,13,25	1,2,6,11,12,15,17
TurOut	1,3,5,6,7,9,13,16,21	1,2,3,4,7,8,10,12
TUrban	1,3,4,6,9,11,12,13,14,15	1,4,5,7,8,9,12
Cars	1,4,8,9,12,13,14,15,22	1,5,6,8,12,16
HouseFin	1,2,3,4,8,11,12,13,14,15,17,22,35	3,4,6,7,8,9,12,14

Table 1. Lags selected by EPAF and L-Co-R for each data set.

Results yielded by L-Co-R method compared with the rest of the algorithms and for every error measure (MAE, MAPE, MASE, MdAPE, and sMdAPE, respectively), for horizon 1, 2, 4, 8, 10, 20, and 50.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**9359.349**	4.355E+05	7.812E+05	5.612E+04	8.086E+04	5.041E+04	7.335E+05	5.099E+04	1.646E+04
AccDeath	**39.366**	4675.734	261.333	289.911	242.435	209.799	237.240	210.640	52.711
AccVictims	**528.072**	1.625E+04	3.987E+04	7413.000	1.070E+04	2552.246	2.033E+04	2657.952	760.218
Airline	51.814	56.463	**11.037**	42.641	18.385	23.326	11.888	23.178	82.689
WmFrancfort	**14.408**	206.350	464.058	92.467	99.660	100.993	659.066	101.070	31.685
WmLondon	**6.728**	91.891	32.433	15.205	16.485	16.625	32.588	16.268	10.189
WmMadrid	**15.508**	155.412	4.720E+18	78.206	82.921	83.026	1.827E+17	84.516	39.978
WmMilan	**13.907**	480.290	861.486	152.728	158.461	158.306	623.087	159.087	93.693
WmNewYork	**9.887**	298.502	110.343	72.617	73.713	73.459	103.277	74.401	19.122
WmParis	**11.395**	237.531	185.922	169.109	169.330	168.756	181.220	167.881	73.353
WmTokyo	**4.379**	121.214	21.159	16.265	20.808	20.302	21.174	21.404	9.787
Colgtems	**0.041**	2.894	0.123	0.120	0.126	0.126	0.123	0.120	0.042
Colgtepr	**0.049**	5.352	0.303	0.324	0.323	0.322	0.324	0.317	0.129
Crestms	0.048	3.187	0.045	0.053	**0.042**	0.047	0.044	0.049	0.058
Crestpr	0.068	1.841	0.065	0.069	**0.061**	0.070	0.068	0.066	0.075
Deceases	**2493.083**	2.051E+05	1.115E+06	1.977E+04	2.441E+04	1.044E+04	2.416E+06	1.099E+04	2538.661
Spectators	**1833.423**	1.678E+04	6632.096	8899.585	6346.641	6668.242	6786.637	6572.979	3504.857
SpaMovSpec	**792.918**	1.473E+04	5.030E+09	2751.159	1547.548	1157.977	1.845E+10	1128.254	847.034
ForMovSpec	**1864.939**	1.060E+04	6903.731	8918.942	7543.617	7193.939	7486.768	7347.619	2941.280
Exchange	**0.030**	0.884	0.583	1.228	1.229	1.231	0.589	1.230	0.982
Gasoline	26.609	1659.901	1368.390	822.727	1144.346	1083.564	7441.400	1076.772	114.701
MortCanc	4311.068	4.872E+04	3.459E+04	1.509E+04	1.276E+04	1.164E+04	3.417E+04	1.280E+04	**2558.699**
MortMade	**1.294E+04**	4.332E+04	2.361E+04	3.324E+04	2.845E+04	2.015E+04	2.169E+04	2.519E+04	2.918E+04
Books	1517.897	6.276E+04	4702.814	2628.607	2700.069	2681.937	3892.503	2518.032	**1441.195**
Motorcycles	**3406.407**	8.231E+04	1.012E+05	5246.981	3.232E+04	4972.096	8.019E+04	4904.721	4358.273
Unemployed	3.175E+05	4.488E+05	3.695E+05	2.584E+05	**1.687E+05**	1.885E+05	3.635E+05	2.810E+05	5.755E+05
FreeHouPrize	**30.663**	475.035	102.819	81.307	74.080	74.775	98.206	76.335	205.248
Prisoners	**335.249**	4.407E+04	2.931E+04	2.493E+04	2.269E+04	2.681E+04	3.068E+04	2.619E+04	2254.584
Takings	**9066.360**	7.692E+04	2.576E+04	4.472E+04	3.860E+04	2.083E+04	2.713E+04	1.983E+04	1.342E+04
TurIn	**4348.885**	5.092E+04	8125.545	5346.808	5422.068	4714.937	9173.879	4661.194	6807.011
TurOut	7238.103	1.472E+05	5718.211	7226.637	6583.926	6242.454	1.638E+04	**5502.513**	1.069E+04
TUrban	2.994E+04	1.693E+06	4.458E+07	2.954E+05	3.239E+05	1.136E+05	2.386E+08	1.230E+05	**2.219E+04**
Cars	5.960E+04	3.549E+06	1.735E+05	3.056E+05	1.515E+05	1.574E+05	2.176E+05	1.577E+05	**4.423E+04**
HouseFin	9354.751	8.617E+04	1.416E+06	2.638E+04	3.880E+04	1.391E+04	1.752E+06	1.356E+04	**9018.47**

Table 2. Comparison among the methods regarding MAE with horizon equal to 1.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**0.432**	300.736	538.062	43.177	56.398	35.416	510.974	35.865	15.341
AccDeath	**3.768**	846.347	519.683	606.858	432.049	335.364	450.568	356.938	19.393
AccVictims	**0.117**	423.550	891.292	214.475	238.433	100.048	788.280	100.589	9.935
Airline	19.281	**4.175**	5.667	18.178	7.770	10.070	5.800	10.270	53.636
WmFrancfort	**0.540**	50.235	115.114	24.925	26.578	26.911	162.299	26.917	12.136
WmLondon	**0.078**	34.552	14.238	6.811	7.394	7.466	14.306	7.296	5.212
WmMadrid	**0.309**	42.431	1.012E+18	19.893	21.027	21.062	3.917E+16	21.444	12.930
WmMilan	**1.223**	560.832	198.560	38.706	40.261	40.204	144.676	40.379	34.823
WmNewYork	**0.094**	62.291	33.615	22.256	22.532	22.427	31.572	22.710	7.536
WmParis	**1.364**	56.778	46.800	42.211	42.137	41.993	45.500	41.772	25.880
WmTokyo	**0.006**	466.303	35.085	27.058	34.530	33.659	35.107	35.509	12.591
Colgtems	**1.505**	241.615	122.352	118.746	125.129	125.601	121.616	119.684	18.865
Colgtepr	**0.254**	299.596	20.243	21.702	21.651	21.565	21.864	21.193	7.358
Crestms	**1.016**	174.082	10.151	12.084	9.569	10.628	10.016	11.137	13.688
Crestpr	**0.012**	49.625	3.789	3.969	3.572	4.039	3.964	3.815	4.262
Deceases	**0.057**	124.988	4171.248	85.826	94.629	44.201	7134.274	46.034	8.040
Spectators	**4.292**	761.847	330.549	463.646	281.150	338.340	334.979	333.512	40.240
SpaMovSpec	**25.663**	464.728	8.309E+08	1320.780	804.564	566.631	2.992E+09	534.917	88.197
ForMovSpec	**3.698**	713.870	656.366	828.488	708.733	711.377	744.107	727.076	41.054
Exchange	**0.323**	31.625	22.161	47.044	47.078	47.148	22.382	47.116	45.254
Gasoline	**0.129**	45.528	65.298	35.932	49.630	47.231	490.115	47.010	9.359
MortCanc	**0.507**	23583.926	50982.436	15229.556	22601.441	21041.056	38664.348	22496.528	5.440
MortMade	**1.218**	107.899	89.851	116.751	115.773	93.734	89.663	89.876	31.000
Books	**6.634**	239.405	49.294	30.827	31.782	30.788	42.025	29.892	23.476
Motorcycles	86.173	205.594	858.605	51.876	256.689	40.211	668.072	**40.022**	89.111
Unemployed	9.206	**2.434**	10.916	9.496	5.336	5.965	10.760	9.200	18.726
FreeHouPrize	**1.415**	27.389	4.930	3.850	3.512	3.544	4.702	3.617	10.227
Prisoners	**0.214**	70.011	57.038	47.328	48.004	48.422	58.481	49.319	3.150
Takings	**3.064**	516.609	98.938	144.502	121.822	67.581	84.574	64.239	28.456
TurIn	**0.533**	34.375	8.095	5.343	5.435	4.756	9.202	4.696	6.377
TurOut	**1.140**	54.858	5.079	6.651	6.027	5.782	15.812	5.136	9.634
TUrban	**1.825**	601.135	1.076E+04	107.623	108.978	45.094	5.666E+04	49.427	9.291
Cars	**18.661**	756.159	668.864	1350.170	626.907	579.962	942.617	564.535	45.940
HouseFin	**5.636**	106.733	2316.286	80.554	107.796	47.899	3026.778	44.603	19.555

Table 3. Comparison among the methods regarding MAPE with horizon equal to 1.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	0.909	34.960	79.328	**0.739**	3.081	5.029	65.152	5.086	2.237
AccDeath	1.023	136.922	4.380	8.183	4.517	5.803	5.153	5.833	**0.972**
AccVictims	**1.029**	30.513	69.999	13.270	3.607	4.651	25.986	4.913	1.578
Airline	0.987	0.191	**0.092**	0.870	0.365	0.292	0.103	0.315	1.441
WmFrancfort	**1.248**	14.313	32.036	6.414	6.913	7.005	45.540	7.011	7.988
WmLondon	**1.321**	13.958	4.927	1.707	2.039	2.111	4.950	1.982	3.484
WmMadrid	**1.300**	2.863	3.066E+17	5.081	5.387	5.394	1.187E+16	5.491	8.625
WmMilan	**1.182**	11.545	39.441	10.885	11.294	11.283	24.751	11.338	19.327
WmNewYork	**1.231**	29.834	9.139	7.258	7.367	7.342	8.623	7.436	6.228
WmParis	**1.103**	19.547	8.980	14.759	14.778	14.728	9.228	14.652	15.744
WmTokyo	**1.518**	29.756	5.194	3.993	5.108	4.984	5.198	5.254	1.628
Colgtems	0.970	70.262	2.986	2.893	3.061	3.064	2.977	2.899	**0.869**
Colgtepr	**0.858**	101.366	5.726	6.144	6.127	6.100	6.139	5.996	2.307
Crestms	0.991	65.133	0.561	0.631	**0.534**	0.548	0.554	0.660	1.418
Crestpr	0.980	26.111	0.553	0.488	0.548	0.583	0.514	**0.486**	1.330
Deceases	**0.999**	84.219	460.625	6.838	4.162	2.238	998.835	2.300	1.144
Spectators	**0.977**	9.684	3.817	5.137	3.663	3.849	3.838	3.794	1.831
SpaMovSpec	0.958	17.614	6.244E+06	2.959	1.470	0.886	2.291E+07	**0.806**	1.933
ForMovSpec	**0.910**	1.374	3.550	4.672	3.931	3.769	2.917	3.849	1.626
Exchange	**1.145**	31.420	15.009	54.223	54.266	54.346	14.739	54.309	70.734
Gasoline	**0.409**	21.430	16.742	12.722	17.974	17.166	101.233	17.059	1.698
MortCanc	0.942	7.834	7.926	0.387	3.062	2.508	8.590	2.669	**0.277**
MortMade	1.133	0.874	0.703	1.075	1.753	**0.269**	0.600	1.570	1.712
Books	1.024	40.588	1.055	0.822	0.508	**0.385**	0.596	0.654	1.147
Motorcycles	**1.025**	21.548	28.792	1.123	4.316	1.242	19.197	1.215	2.670
Unemployed	3.224	5.774	6.191	**1.886**	2.680	3.005	6.087	3.899	15.809
FreeHouPrize	**0.873**	8.559	1.951	2.397	2.382	2.292	1.885	2.377	6.805
Prisoners	**0.462**	72.334	22.037	33.725	22.131	39.834	24.705	35.566	4.031
Takings	**0.965**	8.315	2.184	4.842	1.676	2.254	2.257	2.142	1.978
TurIn	**1.056**	8.825	1.974	1.180	1.241	1.132	1.865	1.089	1.950
TurOut	0.999	19.311	**0.586**	0.798	0.758	0.792	1.944	0.672	2.241
TUrban	0.993	58.326	1565.053	10.555	**0.241**	1.597	8465.803	2.343	0.897
Cars	1.250	77.501	3.260	6.620	3.186	3.409	3.637	3.420	**1.048**
HouseFin	1.054	8.390	155.469	2.147	1.678	**0.216**	189.479	0.225	1.502

Table 4. Comparison among the methods regarding MASE with horizon equal to 1.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**1.905**	47.412	36.375	36.243	44.996	33.954	38.149	35.492	13.683
AccDeath	**0.915**	98.673	190.886	266.875	221.828	186.757	199.549	184.601	16.380
AccVictims	**0.293**	90.021	31.935	138.363	120.674	33.935	37.160	36.344	9.504
Airline	**1.333**	16.750	3.524	15.802	6.224	7.941	3.834	9.103	15.212
WmFrancfort	**2.319**	26.487	30.587	24.032	25.142	26.494	30.718	26.721	11.026
WmLondon	**0.286**	16.598	14.150	6.395	6.834	7.035	14.378	7.043	5.099
WmMadrid	**0.521**	20.763	22.195	19.046	20.638	20.771	22.498	20.782	11.446
WmMilan	**0.546**	41.636	40.131	37.717	39.213	39.073	39.453	39.487	34.643
WmNewYork	**0.520**	28.271	24.030	22.539	22.034	22.345	24.341	22.838	5.712
WmParis	**2.048**	31.337	40.691	41.657	40.450	40.328	40.784	40.369	23.773
WmTokyo	**1.457**	53.528	34.135	25.949	33.329	32.644	34.238	34.392	9.556
Colgtems	**1.838**	105.204	107.239	104.643	108.514	108.867	107.077	105.630	13.806
Colgtepr	**0.115**	35.676	20.120	20.730	21.254	20.835	20.001	20.587	6.364
Crestms	**0.546**	32.681	7.318	10.865	7.988	8.767	7.760	9.347	12.697
Crestpr	**0.480**	11.255	2.921	3.235	2.458	3.192	2.914	2.979	3.414
Deceases	**0.033**	71.158	32.146	65.168	51.209	24.012	40.327	25.993	5.458
Spectators	**2.806**	170.139	189.701	244.679	181.648	200.650	194.851	191.784	39.955
SpaMovSpec	**9.287**	104.833	113.331	345.402	143.447	112.690	169.294	113.692	54.033
ForMovSpec	**0.027**	101.443	278.349	434.823	272.276	291.237	284.306	312.477	32.322
Exchange	**0.013**	16.422	17.009	45.882	45.677	45.799	17.008	45.770	45.961
Gasoline	**0.001**	14.589	48.975	47.156	50.773	48.895	49.424	48.170	8.923
MortCanc	**0.020**	84.455	19.699	25.595	11.564	10.092	19.336	12.039	5.116
MortMade	**0.586**	17.668	19.650	24.128	15.838	13.239	18.006	23.200	28.374
Books	**1.615**	110.920	21.143	17.446	20.432	22.652	20.336	19.216	18.093
Motorcycles	**4.604**	104.070	37.822	30.900	157.470	36.581	42.096	36.201	43.058
Unemployed	3.318	8.489	2.331	8.023	**2.308**	2.669	2.421	4.945	10.698
FreeHouPrize	1.088	6.610	4.071	4.145	3.657	3.735	4.027	3.831	6.572
Prisoners	**0.192**	19.603	25.763	20.521	21.552	26.298	25.769	26.952	1.621
Takings	**2.512**	109.377	55.852	135.472	93.241	59.132	57.722	55.492	24.928
TurIn	**1.055**	10.668	6.919	4.524	4.902	4.351	6.816	4.415	4.605
TurOut	**0.693**	12.715	3.624	3.984	4.443	4.232	4.078	3.477	7.689
TUrban	**2.560**	129.223	66.730	74.341	57.560	19.885	127.745	22.819	6.374
Cars	**1.122**	103.049	278.362	528.130	283.314	282.586	295.020	272.297	14.808
HouseFin	**3.331**	35.493	14.757	41.579	40.426	18.632	18.461	17.816	17.297

Table 5. Comparison among the methods regarding MdAPE with horizon equal to 1.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**7.743**	33.318	40.987	38.315	45.334	40.577	41.318	42.910	14.688
AccDeath	10.224	**-115.993**	101.641	114.807	83.938	97.627	102.772	97.126	15.140
AccVictims	**5.417**	25.769	24.763	85.137	60.897	29.364	28.545	30.836	9.073
Airline	10.553	17.372	**3.484**	14.640	6.109	7.815	3.796	8.822	16.297
WmFrancfort	**5.064**	30.531	36.027	27.314	28.756	30.541	36.151	30.843	11.308
WmLondon	**3.515**	18.101	15.227	6.606	6.976	6.983	15.493	7.050	5.233
WmMadrid	**3.699**	23.069	24.275	21.050	23.013	23.180	24.754	23.193	10.827
WmMilan	**4.572**	50.803	48.057	46.482	48.777	48.562	48.175	49.202	41.900
WmNewYork	**3.096**	32.925	27.202	25.402	24.762	25.157	27.627	25.785	5.553
WmParis	**4.065**	37.160	50.854	52.617	50.705	50.515	50.776	50.578	26.980
WmTokyo	**4.537**	35.434	29.158	22.969	28.568	28.046	29.233	29.325	9.120
Colgtems	**12.966**	13.273	69.800	68.699	70.346	70.182	69.733	68.528	13.315
Colgtepr	**2.152**	16.305	18.281	18.783	19.212	18.863	18.182	18.661	6.168
Crestms	9.810	**2.781**	7.527	10.437	8.320	8.976	7.993	9.586	13.557
Crestpr	3.373	10.664	2.899	3.184	**2.429**	3.172	2.905	2.977	3.474
Deceases	7.409	93.774	33.424	51.428	42.748	27.195	34.306	29.752	**5.453**
Spectators	**15.949**	84.231	97.391	110.043	95.185	100.121	98.457	97.811	33.302
SpaMovSpec	40.860	**12.974**	67.632	129.367	90.029	81.827	74.277	82.023	59.943
ForMovSpec	**17.766**	107.665	116.614	136.960	115.299	118.502	116.155	121.792	27.822
Exchange	**0.932**	17.892	18.590	59.541	59.197	59.401	18.589	59.353	59.674
Gasoline	**1.618**	15.374	64.703	61.705	67.624	64.838	64.732	63.551	9.036
MortCanc	8.286	96.567	16.505	29.354	11.218	9.935	17.349	11.796	**5.256**
MortMade	**10.533**	17.518	21.203	27.439	15.876	13.871	19.433	27.224	24.849
Books	16.829	**8.183**	19.584	17.440	18.751	22.199	19.002	19.356	19.574
Motorcycles	25.549	**14.159**	37.437	28.024	47.660	44.287	36.474	43.379	50.360
Unemployed	3.579	8.429	2.338	8.031	**2.305**	2.685	2.432	4.874	11.340
FreeHouPrize	**1.102**	6.601	4.154	4.233	3.725	3.807	4.107	3.906	6.362
Prisoners	**0.371**	21.616	29.460	22.867	24.155	30.310	29.460	31.216	1.634
Takings	**15.146**	52.149	43.116	80.763	68.738	45.604	44.487	43.387	22.165
TurIn	**3.231**	10.331	6.687	4.424	4.785	4.258	6.578	4.324	4.714
TurOut	4.541	12.007	3.583	3.985	4.434	4.143	4.012	**3.425**	7.600
TUrban	9.046	19.083	27.125	54.196	51.593	18.860	41.279	21.445	**6.584**
Cars	26.023	**-180.476**	143.135	175.122	132.439	147.887	142.626	144.447	13.784
HouseFin	**13.223**	42.745	13.771	39.028	44.051	20.366	15.925	19.193	17.278

Table 6. Comparison among the methods regarding sMdAPE with horizon equal to 1.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**9744.618**	4.356E+05	8.632E+05	4.972E+04	1.003E+05	5.113E+04	1.487E+06	5.356E+04	1.666E+04
AccDeath	**42.029**	4675.642	235.774	281.300	243.032	216.900	269.554	216.307	51.345
AccVictims	**529.526**	1.629E+04	6.855E+04	7837.063	2.123E+04	3228.589	4.493E+04	3417.606	763.654
Airline	95.567	55.805	16.172	40.450	**15.076**	21.519	16.747	25.192	77.177
WmFrancfort	**14.391**	206.267	207.226	91.772	99.660	98.072	331.557	96.711	31.903
WmLondon	**6.723**	91.634	39.377	15.609	16.100	16.236	38.904	16.115	10.086
WmMadrid	**15.531**	155.430	3.647E+12	55.300	60.538	60.534	5.067E+11	60.583	40.180
WmMilan	**13.942**	480.225	169.150	156.134	159.248	158.603	170.963	159.681	95.880
WmNewYork	**9.910**	298.384	76.835	70.967	71.957	70.970	97.915	72.021	19.227
WmParis	**11.394**	237.482	192.155	170.208	170.425	170.982	193.685	170.107	74.807
WmTokyo	**4.289**	121.683	20.578	21.350	20.997	21.354	20.640	20.602	9.853
Colgtems	**0.041**	2.893	0.126	0.122	0.124	0.125	0.126	0.123	0.042
Colgtepr	**0.053**	5.348	0.304	0.321	0.325	0.315	0.311	0.321	0.130
Crestms	**0.048**	3.188	0.053	0.059	0.055	0.056	0.053	0.056	0.057
Crestpr	**0.067**	1.841	0.080	0.076	0.078	0.074	0.090	0.075	0.074
Deceases	2474.761	2.052E+05	3.890E+06	2.230E+04	3.308E+04	1.093E+04	1.558E+06	1.159E+04	2580.364
Spectators	**1830.330**	1.686E+04	6624.814	8963.369	7295.276	6508.515	6809.615	6395.163	3552.505
SpaMovSpec	793.059	1.470E+04	2.038E+10	2683.179	1629.619	1182.150	4.104E+08	1156.018	858.840
ForMovSpec	1987.145	1.061E+04	6971.132	9052.590	7357.073	7377.748	6987.680	7456.899	2972.219
Exchange	**0.030**	0.885	0.578	1.228	1.229	1.233	0.580	1.231	0.983
Gasoline	**7.436**	1656.980	2.433E+04	783.734	1147.066	1129.605	9110.250	1164.167	2595.424
MortCanc	4124.459	4.861E+04	9.022E+04	1.402E+04	1.579E+04	1.551E+04	8.320E+04	1.574E+04	3.063E+04
MortMade	1.330E+04	4.139E+04	3.143E+04	7.944E+04	3.898E+04	4.545E+04	3.023E+04	3.187E+04	**1461.956**
Books	**1486.368**	6.270E+04	4.700E+03	3586.486	2947.586	2731.558	5533.784	2718.471	4422.628
Motorcycles	**3398.631**	8.232E+04	5.837E+04	5350.962	4.637E+04	5470.230	2.168E+05	5512.282	5.896E+05
Unemployed	3.800E+05	4.508E+05	7.829E+05	2.825E+05	2.094E+05	2.353E+05	7.933E+05	2.741E+05	**220.907**
FreeHouPrize	**32.842**	474.890	80.118	86.886	74.164	77.212	80.048	72.767	2291.805
Prisoners	**354.562**	4.421E+04	3.203E+04	2.564E+04	2.468E+04	2.617E+04	3.246E+04	2.396E+04	1.361E+04
Takings	9395.354	7.736E+04	3.079E+04	4.472E+04	5.220E+04	2.070E+04	3.730E+04	2.046E+04	**6879.691**
TurIn	**4474.806**	5.091E+04	7752.461	5977.392	5612.788	5236.050	8391.520	5581.264	1.086E+04
TurOut	7218.633	1.470E+05	**4638.230**	6152.737	5179.314	4923.718	1.728E+04	5140.277	2.158E+04
TUrban	**2.778E+04**	1.694E+06	5.329E+10	2.958E+05	5.205E+05	1.234E+05	9.805E+08	1.373E+05	4.460E+04
Cars	5.504E+04	3.545E+06	2.575E+05	3.007E+05	1.732E+05	1.604E+05	3.172E+05	1.533E+05	**9176.040**
HouseFin	9724.260	8.602E+04	8.528E+06	3.058E+04	3.252E+04	1.403E+04	1.692E+06	1.406E+04	**114.874**

Table 7. Comparacin de los mtodos con respecto a la medida de calidad MAE with horizon equal to 2.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuadraticLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**0.061**	300.571	602.602	36.997	72.218	36.412	1134.879	38.114	15.482
AccDeath	**1.783**	842.374	330.700	617.832	403.002	307.983	404.745	327.131	19.302
AccVictims	**0.643**	424.459	2948.277	205.575	412.383	116.236	921.521	119.645	9.996
Airline	33.900	29.280	7.615	16.930	**7.167**	9.251	7.663	11.302	48.552
WmFrancfort	**0.472**	50.216	52.160	24.653	26.570	26.183	81.287	25.841	12.110
WmLondon	**0.044**	34.449	17.113	6.938	7.215	7.261	16.927	7.213	5.115
WmMadrid	**0.353**	42.434	8.042E+11	14.309	15.594	15.602	1.117E+11	15.606	12.839
WmMilan	**1.233**	561.020	42.935	39.688	40.384	40.263	43.573	40.522	35.550
WmNewYork	**0.200**	62.263	23.464	21.761	21.993	21.708	30.173	22.019	7.530
WmParis	**1.339**	56.770	47.199	42.429	42.372	42.496	47.531	42.287	26.233
WmTokyo	**0.506**	466.930	34.141	35.336	34.850	35.280	34.242	34.077	12.694
Colgtems	**3.251**	240.752	125.451	121.091	123.994	125.024	125.348	123.022	19.052
Colgtepr	**0.243**	299.225	20.332	21.471	21.769	21.115	20.832	21.491	7.423
Crestms	**1.557**	174.136	12.283	14.000	12.713	12.818	12.163	12.854	13.599
Crestpr	**0.191**	49.632	4.637	4.361	4.502	4.285	5.188	4.335	4.245
Deceases	**0.004**	125.070	1.151E+04	94.217	115.549	45.853	6762.435	46.927	8.169
Spectators	**3.476**	761.929	367.210	467.166	397.324	364.386	370.662	357.997	40.850
SpaMovSpec	**24.655**	458.732	1.866E+09	1379.632	801.790	553.551	1.106E+08	518.864	89.522
ForMovSpec	**6.981**	720.927	637.192	841.731	655.751	712.827	633.341	714.202	41.615
Exchange	**0.332**	31.647	21.955	47.044	47.067	47.198	22.027	47.125	45.338
Gasoline	**0.355**	45.335	1566.400	36.677	52.697	51.885	439.559	53.482	5.590
MortCanc	**0.625**	2.354E+04	2.235E+04	2.359E+04	2.422E+04	2.356E+04	2.122E+04	2.405E+04	32.594
MortMade	**0.066**	109.773	110.700	135.205	132.804	125.326	108.618	105.282	23.820
Books	**7.400**	237.971	65.434	41.800	34.269	31.880	80.315	31.274	90.417
Motorcycles	86.435	206.451	460.411	51.092	382.573	43.493	1735.826	44.047	**19.174**
Unemployed	10.835	72.519	22.918	9.923	**6.927**	7.732	23.209	9.079	11.007
FreeHouPrize	**1.360**	27.396	3.821	4.130	3.526	3.677	3.818	3.460	3.202
Prisoners	**0.049**	70.124	61.307	50.465	47.425	50.439	61.256	47.665	28.889
Takings	**2.655**	522.689	96.141	144.502	166.475	68.378	113.456	66.938	6.445
TurIn	**0.665**	34.339	7.698	5.970	5.577	5.229	8.334	5.574	9.783
TurOut	**0.608**	54.818	4.182	5.666	4.727	4.532	15.109	4.695	9.117
TUrban	**1.683**	606.949	1.353E+07	107.732	156.751	47.176	2.699E+05	50.934	46.563
Cars	**18.907**	745.921	853.965	1295.053	693.221	627.418	2359.365	591.490	19.894
HouseFin	**5.034**	106.449	1.878E+04	82.062	83.621	46.656	3088.992	45.809	9.363

Table 8. Comparison among the methods regarding MAPE with horizon equal to 2.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	0.946	34.843	82.171	**0.365**	5.502	5.036	122.115	5.275	2.264
AccDeath	1.092	136.919	6.126	7.811	6.318	5.816	7.003	5.792	**0.947**
AccVictims	**1.031**	30.639	119.669	14.911	9.744	4.964	67.620	5.377	1.585
Airline	1.821	0.195	0.149	0.800	0.198	0.258	**0.147**	0.376	1.345
WmFrancfort	**1.247**	14.307	8.309	6.366	6.913	6.803	17.105	6.708	8.043
WmLondon	**1.320**	13.919	5.617	1.518	1.909	1.884	5.491	1.882	3.449
WmMadrid	**1.302**	2.865	2.370E+11	3.593	3.933	3.933	3.292E+10	3.936	8.668
WmMilan	**1.185**	11.557	9.723	11.128	11.350	11.304	8.694	11.381	19.778
WmNewYork	**1.234**	29.822	6.240	7.093	7.192	7.093	8.142	7.198	6.262
WmParis	**1.103**	19.547	16.770	14.855	14.874	14.922	16.888	14.846	16.056
WmTokyo	**1.486**	29.871	5.052	5.241	5.154	5.242	5.067	5.058	1.639
Colgtems	0.985	70.225	3.060	2.961	3.012	3.019	3.055	2.971	**0.876**
Colgtepr	**0.925**	101.295	5.758	6.076	6.159	5.972	5.889	6.080	2.325
Crestms	1.008	65.206	0.587	**0.321**	0.676	0.634	0.601	0.598	1.408
Crestpr	0.988	26.114	0.669	0.475	0.663	**0.452**	0.701	0.560	1.322
Deceases	**0.991**	84.269	1606.771	6.128	1.567	2.351	631.564	2.720	1.163
Spectators	**0.976**	9.730	3.693	5.174	4.201	3.757	3.667	3.691	1.855
SpaMovSpec	0.959	17.576	2.530E+07	2.940	1.314	0.864	5.091E+05	**0.827**	1.960
ForMovSpec	**0.970**	1.408	3.633	4.742	3.800	3.865	3.577	3.906	1.644
Exchange	**1.149**	31.466	15.252	54.228	54.259	54.408	15.185	54.324	70.850
Gasoline	**0.114**	21.440	331.726	12.083	18.138	17.902	91.609	18.450	0.281
MortCanc	**0.901**	7.834	21.099	3.027	2.389	3.317	19.562	2.287	1.796
MortMade	1.164	0.788	0.765	3.289	**0.002**	1.129	0.650	1.727	1.163
Books	1.003	40.521	1.954	0.970	0.873	0.552	2.536	**0.549**	2.710
Motorcycles	**1.023**	21.581	15.252	1.226	4.550	1.420	60.275	1.435	16.197
Unemployed	3.859	5.866	13.176	3.310	**3.140**	3.556	13.353	3.912	7.325
FreeHouPrize	**0.935**	8.631	2.290	2.581	2.266	2.190	2.254	2.225	4.098
Prisoners	**0.489**	72.810	29.501	19.855	32.600	25.689	31.748	25.798	2.006
Takings	**1.000**	8.361	2.356	4.842	1.183	2.233	2.785	2.200	1.971
TurIn	**1.087**	8.875	1.714	1.298	1.105	1.148	1.879	1.234	2.276
TurOut	0.996	19.273	**0.399**	0.678	0.587	0.624	1.764	0.629	0.872
TUrban	0.922	58.394	1.904E+06	10.423	**0.258**	1.031	3.416E+04	0.876	1.057
Cars	**1.154**	77.409	3.795	6.554	3.417	3.348	3.898	3.133	1.528
HouseFin	1.096	8.376	941.800	2.465	1.443	**0.128**	176.165	0.248	1.701

Table 9. Comparison among the methods regarding MASE with horizon equal to 2.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**2.151**	47.793	37.035	32.177	53.498	34.693	40.028	35.223	13.930
AccDeath	**1.112**	98.664	182.715	208.382	176.094	178.944	178.122	178.034	16.370
AccVictims	**0.941**	91.209	40.368	148.241	295.038	40.878	47.863	44.658	9.790
Airline	14.680	15.959	**5.137**	17.623	6.178	7.251	5.397	10.834	13.222
WmFrancfort	**2.190**	26.486	31.525	24.032	25.754	25.258	31.738	24.669	10.923
WmLondon	**0.307**	16.563	13.475	6.176	7.491	6.056	13.465	6.559	5.077
WmMadrid	**0.555**	20.716	23.944	12.529	13.097	13.514	24.299	13.547	10.879
WmMilan	**0.608**	41.612	37.958	37.568	39.885	39.517	37.610	39.563	34.698
WmNewYork	**0.698**	28.275	22.204	22.229	22.417	22.078	22.242	22.325	5.516
WmParis	**2.048**	31.339	42.748	41.561	41.414	41.782	42.732	41.359	24.092
WmTokyo	**1.207**	54.155	32.336	32.882	33.046	33.457	32.391	31.811	9.968
Colgtems	**3.928**	105.412	109.783	107.594	106.968	109.746	110.570	109.292	13.806
Colgtepr	**0.504**	35.667	20.087	20.305	21.308	20.794	20.138	21.343	6.554
Crestms	**1.290**	32.557	10.566	11.660	11.652	11.135	10.253	11.093	12.478
Crestpr	**0.053**	11.201	3.512	3.468	3.884	3.601	4.162	3.535	3.220
Deceases	**0.110**	71.304	30.122	69.245	71.119	21.722	47.642	23.799	5.628
Spectators	**3.248**	169.959	188.131	233.583	197.967	180.909	185.342	178.491	39.973
SpaMovSpec	**9.575**	104.617	139.198	395.008	143.120	94.272	196.301	94.466	54.217
ForMovSpec	**3.229**	99.674	266.827	383.999	330.316	293.984	274.505	302.107	33.305
Exchange	**0.032**	16.442	17.156	45.692	45.883	45.983	17.161	45.941	46.061
Gasoline	**1.379E-04**	15.050	47.237	46.187	51.294	48.913	47.939	50.624	6.145
MortCanc	**0.752**	84.124	51.170	18.970	18.879	18.469	51.248	18.966	31.965
MortMade	**1.446**	16.189	21.987	87.789	30.307	34.191	20.382	24.624	18.269
Books	**2.865**	108.276	21.551	27.575	18.438	18.333	21.446	18.259	43.247
Motorcycles	**4.369**	105.664	43.072	32.467	268.723	37.667	44.441	39.167	13.247
Unemployed	4.758	8.871	3.968	7.792	**3.465**	10.834	4.035	5.387	7.079
FreeHouPrize	**1.061**	6.596	3.872	4.213	3.846	3.811	3.901	3.877	1.655
Prisoners	**0.050**	19.633	22.654	21.286	21.668	23.000	22.716	20.935	25.346
Takings	**2.226**	112.648	60.703	135.472	118.684	60.302	60.091	59.225	4.899
TurIn	**1.288**	10.732	7.543	5.962	5.929	4.470	7.645	5.414	7.796
TurOut	**0.038**	13.167	3.168	3.868	3.818	3.562	3.298	3.756	6.054
TUrban	**1.762**	129.089	95.816	74.341	147.630	21.238	165.274	25.407	15.802
Cars	**1.911**	102.483	291.919	549.598	318.938	278.596	307.897	264.250	17.333
HouseFin	**4.160**	34.793	18.048	53.223	40.319	19.976	25.112	19.506	8.935

Table 10. Comparison among the methods regarding MdAPE with horizon equal to 2.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**8.551**	33.888	43.348	31.691	46.990	41.508	44.894	42.540	14.973
AccDeath	11.361	**-115.972**	103.528	112.586	93.643	98.288	103.883	97.226	15.131
AccVictims	**5.537**	25.760	32.367	85.661	113.725	33.942	34.909	36.702	9.332
Airline	28.488	16.720	**5.119**	16.194	6.041	7.161	5.308	10.320	14.158
WmFrancfort	**5.013**	30.529	37.168	27.314	29.561	28.911	37.314	28.142	10.787
WmLondon	**3.533**	18.059	14.422	5.991	7.220	6.091	14.407	6.465	5.209
WmMadrid	**3.680**	23.056	26.110	13.367	14.015	14.494	26.562	14.533	10.316
WmMilan	**4.574**	50.748	46.837	46.257	49.821	49.248	46.275	49.320	41.981
WmNewYork	**3.084**	32.931	24.967	25.009	25.247	24.818	25.001	25.131	5.368
WmParis	**4.065**	37.162	54.316	52.462	52.229	52.818	54.182	52.143	27.392
WmTokyo	**4.298**	35.834	27.836	28.239	28.360	28.651	27.876	27.413	9.784
Colgtems	**12.032**	12.733	70.873	69.958	69.693	70.358	71.193	70.173	13.346
Colgtepr	**2.164**	16.224	18.254	18.434	19.256	18.829	18.295	19.272	6.346
Crestms	9.825	**2.700**	10.739	12.382	11.011	11.123	10.418	11.329	13.308
Crestpr	3.234	10.624	3.534	3.409	3.810	3.585	4.146	3.532	**3.227**
Deceases	7.252	93.687	32.400	54.202	59.794	23.980	44.729	26.456	**5.474**
Spectators	**15.221**	84.784	96.940	107.745	99.488	94.886	96.261	94.107	33.315
SpaMovSpec	40.936	**12.482**	84.409	134.477	91.955	84.547	82.676	84.005	60.617
ForMovSpec	**19.323**	107.447	113.569	131.440	124.550	118.966	115.328	120.237	28.551
Exchange	0.934	17.915	18.766	59.223	59.543	59.712	18.772	59.642	59.842
Gasoline	**0.010**	15.927	61.429	60.056	68.987	64.822	61.681	67.931	6.340
MortCanc	**7.838**	96.248	73.094	17.273	19.063	17.099	72.245	19.260	27.519
MortMade	**11.088**	15.826	23.213	129.732	28.971	35.199	21.994	27.775	19.679
Books	14.490	**8.361**	21.454	24.989	20.311	18.379	21.316	18.445	51.838
Motorcycles	25.782	14.224	42.390	29.346	93.367	46.106	44.774	48.288	**14.187**
Unemployed	5.613	8.888	3.771	7.500	**3.526**	4.588	3.935	5.362	6.837
FreeHouPrize	**1.141**	6.579	3.949	4.304	3.922	3.886	3.977	3.955	1.668
Prisoners	**0.404**	21.602	25.538	23.821	24.301	25.963	25.616	23.625	22.495
Takings	15.637	52.447	46.400	80.763	94.760	46.317	45.805	45.585	**5.022**
TurIn	**3.335**	10.424	7.281	5.789	5.758	4.373	7.379	5.273	7.895
TurOut	4.376	12.364	**3.124**	3.850	3.746	3.503	3.225	3.700	6.243
TUrban	**8.439**	19.030	27.874	54.196	74.021	20.392	32.906	25.137	14.645
Cars	21.613	**-179.914**	142.443	173.595	128.180	144.908	135.461	141.525	17.996
HouseFin	14.113	41.649	17.060	42.607	42.642	21.654	16.199	20.862	**9.248**

Table 11. Comparison among the methods regarding sMdAPE with horizon equal to 2.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**9890.537**	4.355E+05	1.113E+07	5.025E+04	9.862E+04	5.354E+04	1.094E+08	5.097E+04	1.670E+04
AccDeath	**39.753**	4675.458	225.206	288.336	269.442	219.833	227.629	220.517	53.712
AccVictims	**578.976**	1.620E+04	2.146E+05	7864.067	2.047E+04	3528.485	1.036E+05	3505.110	767.828
Airline	59.734	**29.107**	103.056	81.383	68.064	46.453	97.798	66.463	82.261
WmFrancfort	**14.373**	206.198	1193.539	91.578	101.600	100.347	883.455	99.013	32.242
WmLondon	**6.726**	92.062	34.631	18.735	16.658	16.618	34.587	16.667	10.287
WmMadrid	**15.519**	155.504	9.448E+04	53.123	58.537	57.195	1.272E+07	57.775	40.547
WmMilan	13.917	480.197	179.803	153.887	156.551	156.739	198.802	156.938	95.918
WmNewYork	**9.873**	298.327	253.613	67.986	71.822	70.968	826.640	73.387	19.371
WmParis	**11.414**	237.712	156.384	166.030	168.983	170.338	156.777	168.773	75.178
WmTokyo	**4.484**	121.581	20.940	15.899	20.575	20.630	20.940	21.424	9.693
Colgtems	**0.041**	2.895	0.126	0.115	0.128	0.125	0.128	0.122	0.042
Colgtepr	**0.053**	5.351	0.413	0.322	0.323	0.317	0.355	0.326	0.130
Crestms	**0.048**	3.187	0.055	0.058	0.052	0.057	0.056	0.057	0.057
Crestpr	**0.067**	1.840	0.090	0.082	0.083	0.078	0.088	0.076	0.074
Deceases	2360.929	2.050E+05	9.266E+06	2.141E+04	2.608E+04	1.017E+04	8.627E+06	1.021E+04	2539.782
Spectators	1884.264	1.670E+04	7194.746	9466.132	6625.805	6461.579	7221.477	6731.645	3563.398
SpaMovSpec	791.834	1.469E+04	5.232E+07	2453.310	1505.180	1243.789	9.662E+06	1294.733	837.910
ForMovSpec	2013.064	1.060E+04	6783.731	9068.313	7504.307	7647.903	6956.240	7632.388	2978.229
Exchange	**0.030**	0.885	0.542	1.222	1.231	1.231	0.542	1.231	0.983
Gasoline	4.668	1655.897	9837.872	787.874	1121.706	1148.125	9447.244	1150.030	2353.181
MortCanc	4273.731	4.854E+04	2.511E+04	1.754E+04	1.497E+04	1.621E+04	2.814E+04	1.500E+04	2.947E+04
MortMade	1.387E+04	4.290E+04	3.850E+04	5.279E+04	4.465E+04	2.731E+04	4.011E+04	2.908E+04	**1464.867**
Books	1481.814	6.275E+04	3747.166	3837.440	3195.327	3237.263	3676.438	3148.412	4409.434
Motorcycles	3399.299	8.230E+04	8.365E+04	5712.342	3.201E+04	5740.521	8.922E+04	5873.293	5.900E+05
Unemployed	4.393E+05	3.901E+05	1.097E+06	3.192E+05	2.766E+05	3.070E+05	9.935E+05	3.235E+05	**218.954**
FreeHouPrize	35.973	474.758	63.540	67.607	61.665	58.401	63.567	61.050	2294.094
Prisoners	344.584	4.397E+04	2.854E+04	2.517E+04	2.601E+04	2.535E+04	2.837E+04	2.606E+04	1.360E+04
Takings	9486.409	7.747E+04	4.557E+04	4.472E+04	5.645E+04	2.039E+04	5.968E+04	1.984E+04	**6890.751**
TurIn	4230.194	5.091E+04	8517.942	5654.471	5082.151	5327.101	9579.160	5122.059	1.075E+04
TurOut	6829.778	1.472E+05	**4112.850**	5707.827	5021.270	4851.767	5414.819	4989.308	2.250E+04
TUrban	**3.018E+04**	1.698E+06	9.499E+10	2.855E+05	3.045E+05	1.211E+05	4.950E+08	1.307E+05	4.439E+04
Cars	5.633E+04	3.543E+06	3.893E+05	2.964E+05	1.662E+05	1.639E+05	3.702E+05	1.613E+05	**8904.855**
HouseFin	9466.874	8.603E+04	1.921E+05	2.915E+04	3.822E+04	1.428E+04	7.226E+05	1.462E+04	**114.873**

Table 12. Comparison among the methods regarding MAE with horizon equal to 4.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**0.281**	299.804	7359.960	40.198	69.408	38.662	7.252E+04	36.921	15.549
AccDeath	**1.356**	845.270	670.281	871.731	627.388	537.712	590.114	521.006	19.763
AccVictims	**0.419**	421.044	3708.343	225.477	520.497	121.299	2276.494	122.371	10.043
Airline	19.771	**12.195**	68.643	45.056	35.409	24.682	63.556	35.505	53.446
WmFrancfort	**0.380**	50.201	277.459	24.592	27.106	26.773	224.196	26.420	12.317
WmLondon	**0.011**	34.620	15.200	8.410	7.468	7.449	15.182	7.473	5.248
WmMadrid	**0.339**	42.459	2.208E+04	13.768	15.070	14.762	2.972E+06	14.898	13.053
WmMilan	**1.301**	561.205	45.010	39.092	39.735	39.788	49.234	39.832	35.595
WmNewYork	**0.161**	62.248	75.710	20.781	21.939	21.665	259.874	22.401	7.611
WmParis	**1.389**	56.821	39.348	41.319	42.035	42.356	39.443	41.989	26.495
WmTokyo	**0.362**	467.105	34.763	26.660	34.153	34.256	34.763	35.582	12.469
Colgtems	**2.693**	241.834	127.030	115.570	127.765	125.245	128.306	122.066	18.869
Colgtepr	**0.298**	299.421	27.722	21.534	21.606	21.240	23.728	21.836	7.426
Crestms	**1.341**	174.083	12.539	13.369	11.973	13.104	13.046	13.058	13.624
Crestpr	**0.065**	49.605	5.192	4.765	4.817	4.507	5.096	4.409	4.245
Deceases	**0.615**	124.963	2.886E+04	94.374	105.992	42.828	2.676E+04	43.147	8.033
Spectators	**2.709**	755.815	364.020	508.572	371.252	348.083	370.256	363.039	40.923
SpaMovSpec	**25.646**	454.251	1.726E+06	1277.131	711.519	444.432	2.168E+06	512.770	88.908
ForMovSpec	**6.009**	721.241	620.395	855.863	781.949	723.589	696.373	729.289	41.623
Exchange	**0.299**	31.638	20.630	46.814	47.134	47.149	20.665	47.136	45.322
Gasoline	**0.032**	45.369	407.774	36.977	51.692	52.848	391.881	52.931	4.981
MortCanc	**0.112**	2.361E+04	2.359E+04	3.190E+04	2.478E+04	2.644E+04	2.356E+04	2.545E+04	31.457
MortMade	**0.263**	106.702	123.718	133.097	147.082	117.496	125.628	110.329	23.750
Books	**6.036**	238.460	42.341	42.792	36.334	36.276	41.581	35.220	90.380
Motorcycles	85.699	205.203	878.618	58.276	263.636	46.905	662.887	47.763	**19.197**
Unemployed	12.866	14.105	32.298	11.059	**9.453**	10.333	29.407	10.874	10.907
FreeHouPrize	**1.738**	27.389	3.018	3.198	2.922	2.767	3.019	2.893	3.206
Prisoners	**0.198**	70.069	51.315	47.604	47.990	47.493	50.942	47.956	28.858
Takings	**3.293**	521.154	140.372	144.502	179.632	67.636	178.822	65.816	6.454
TurIn	**0.679**	34.299	8.443	5.680	5.089	5.332	9.705	5.132	9.672
TurOut	**0.655**	54.865	3.754	5.298	4.615	4.503	4.937	4.638	9.419
TUrban	**1.975**	611.336	5.313E+07	103.052	98.094	46.251	2.086E+05	49.711	46.374
Cars	**15.509**	738.183	1680.042	1339.223	748.977	660.080	1524.616	642.292	19.444
HouseFin	**6.313**	106.459	461.491	96.341	101.031	50.398	1812.595	50.453	9.362

Table 13. Comparison among the methods regarding MAPE with horizon equal to 4.

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Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	0.961	35.002	1134.095	**0.123**	0.895	5.184	1.141E+04	4.903	2.269
AccDeath	1.033	136.926	6.060	8.052	7.307	5.902	6.062	5.894	**0.991**
AccVictims	**1.128**	30.401	393.400	14.425	6.638	5.346	177.431	5.230	1.594
Airline	1.138	**0.176**	1.199	1.171	1.100	0.417	1.076	0.823	1.433
WmFrancfort	**1.245**	14.303	72.485	6.352	7.047	6.960	58.497	6.868	8.129
WmLondon	**1.321**	13.984	5.260	2.604	2.065	2.030	5.247	2.063	3.517
WmMadrid	**1.301**	2.862	6137.257	3.451	3.803	3.716	8.262E+05	3.753	8.748
WmMilan	**1.183**	11.560	7.107	10.968	11.158	11.171	5.464	11.185	19.786
WmNewYork	**1.229**	29.816	17.904	6.795	7.178	7.093	78.656	7.335	6.309
WmParis	**1.105**	19.567	13.407	14.490	14.748	14.866	13.247	14.729	16.136
WmTokyo	**1.554**	29.846	5.140	3.791	5.051	5.064	5.140	5.259	1.612
Colgtems	0.988	70.274	3.064	2.787	3.099	3.039	3.092	2.947	**0.868**
Colgtepr	**0.925**	101.353	5.745	6.096	6.112	6.007	4.494	6.177	2.326
Crestms	1.009	65.144	0.621	0.637	0.601	**0.595**	0.635	0.610	1.411
Crestpr	0.984	26.098	**0.474**	0.566	0.538	0.589	0.535	0.582	1.325
Deceases	0.946	84.186	3858.500	6.444	**0.411**	2.218	3582.420	2.101	1.145
Spectators	**1.004**	9.642	3.727	5.435	3.795	3.730	3.821	3.886	1.861
SpaMovSpec	0.957	17.565	6.494E+04	2.776	**0.732**	0.921	1.195E+04	1.018	1.912
ForMovSpec	**0.982**	1.399	3.411	4.750	3.922	4.006	3.430	3.998	1.647
Exchange	**1.144**	31.455	16.915	53.961	54.329	54.347	16.872	54.332	70.814
Gasoline	**0.072**	21.395	98.266	12.105	17.749	18.196	121.001	18.226	0.255
MortCanc	**0.934**	7.746	1.134	4.007	2.092	3.112	1.931	2.414	1.729
MortMade	1.214	0.731	1.579	**0.080**	1.018	0.196	1.785	1.558	1.166
Books	1.000	40.580	**0.176**	0.466	0.459	0.509	0.180	0.519	2.702
Motorcycles	**1.023**	21.535	22.005	1.137	2.788	1.403	22.187	1.456	16.210
Unemployed	4.461	**3.362**	18.392	4.157	3.851	4.540	16.598	4.786	7.260
FreeHouPrize	**1.024**	8.652	2.095	2.229	1.916	1.799	2.096	1.908	4.102
Prisoners	**0.475**	71.075	44.692	34.390	37.469	35.259	44.567	37.749	2.004
Takings	**1.010**	8.375	3.175	4.842	2.574	2.208	4.516	2.144	1.974
TurIn	1.028	8.935	1.981	1.161	**0.989**	1.112	1.788	1.070	2.254
TurOut	0.943	19.323	0.371	0.642	0.606	0.612	**0.305**	0.675	0.909
TUrban	**1.001**	58.616	3.394E+06	9.846	3.128	1.082	9471.857	1.224	1.052
Cars	**1.181**	77.365	7.399	6.322	3.315	3.436	4.740	3.358	1.483
HouseFin	1.067	8.384	18.524	2.372	0.824	0.215	72.272	**0.270**	1.701

Table 14. Comparison among the methods regarding MASE with horizon equal to 4.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	2.597	47.435	35.167	31.928	43.798	33.770	38.192	31.711	13.930
AccDeath	1.390	98.676	189.741	251.024	229.169	184.262	194.065	183.217	16.593
AccVictims	0.550	90.141	42.636	138.748	218.227	45.180	49.604	46.738	9.790
Airline	11.643	11.341	19.818	23.761	23.303	11.559	19.392	19.180	13.222
WmFrancfort	2.129	26.477	35.033	23.581	26.264	26.357	35.452	25.831	11.506
WmLondon	0.251	16.609	15.519	7.604	7.327	7.531	15.589	7.501	5.218
WmMadrid	0.593	20.748	21.589	11.711	13.267	12.743	22.057	12.925	11.524
WmMilan	0.608	41.668	37.720	37.210	38.477	38.617	37.778	38.734	34.698
WmNewYork	0.580	28.274	21.892	21.143	22.526	22.684	22.086	23.209	5.755
WmParis	2.048	31.341	39.645	40.228	40.759	41.667	39.467	40.525	24.092
WmTokyo	1.713	53.763	33.032	23.045	32.367	32.319	33.021	33.330	9.540
Colgtems	3.347	105.431	112.896	107.447	117.903	111.301	113.589	110.272	13.578
Colgtepr	0.552	35.741	20.352	21.269	21.016	21.032	20.363	21.634	6.554
Crestms	1.079	32.635	11.400	11.675	10.803	11.162	12.032	11.452	12.478
Crestpr	0.383	11.295	3.957	3.779	4.728	3.586	3.903	3.589	3.220
Deceases	0.627	71.514	29.440	68.797	55.584	19.945	41.230	19.796	5.288
Spectators	2.063	168.970	205.820	307.524	185.216	205.345	204.056	209.686	39.973
SpaMovSpec	9.036	104.595	185.798	304.575	167.001	145.728	213.496	151.591	54.217
ForMovSpec	2.106	100.909	292.463	383.999	319.298	307.080	279.572	289.651	33.305
Exchange	0.013	16.435	17.078	45.701	45.776	45.799	17.077	45.797	46.061
Gasoline	6.242E-05	14.491	47.773	46.568	50.235	50.146	48.422	49.524	4.087
MortCanc	0.217	83.627	56.406	15.364	16.399	17.856	57.591	17.365	31.965
MortMade	2.664	17.291	24.534	38.029	36.676	19.717	21.276	21.277	18.269
Books	1.656	109.511	31.971	30.584	28.760	28.460	31.647	28.809	43.247
Motorcycles	4.982	104.459	46.124	32.590	206.147	41.154	52.008	43.352	13.247
Unemployed	7.135	10.704	7.397	7.278	7.314	7.507	7.379	7.861	7.079
FreeHouPrize	1.524	6.556	3.176	3.771	3.320	3.147	3.181	3.251	1.655
Prisoners	0.169	19.680	21.094	21.142	21.835	20.894	21.131	21.860	25.346
Takings	3.245	112.118	58.596	135.472	143.272	56.824	59.599	55.837	4.899
TurIn	1.252	10.612	7.877	5.040	4.934	4.824	7.914	4.807	7.796
TurOut	0.088	12.932	2.771	3.926	3.437	3.476	3.108	3.457	6.695
TUrban	2.462	129.451	103.318	73.796	79.568	21.761	156.718	23.376	13.815
Cars	0.419	102.582	293.453	526.008	281.676	282.538	302.634	278.799	17.261
HouseFin	3.155	34.816	18.923	48.908	43.003	20.921	22.817	21.356	8.911

Table 15. Comparison among the methods regarding MdAPE with horizon equal to 4.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**8.740**	33.521	40.560	30.482	51.553	40.489	40.465	37.776	14.973
AccDeath	10.238	**-118.056**	103.720	115.751	112.009	103.383	106.057	101.477	15.321
AccVictims	**5.987**	25.433	31.915	81.918	90.286	36.804	34.721	37.801	9.332
Airline	16.760	11.272	15.975	22.045	21.703	**11.074**	15.793	17.631	14.158
WmFrancfort	**4.941**	30.517	40.878	26.733	30.234	30.361	41.941	29.664	11.489
WmLondon	**3.548**	18.113	16.826	7.905	7.606	7.738	16.908	7.646	5.358
WmMadrid	**3.680**	23.087	23.869	12.440	14.210	13.611	24.426	13.819	11.572
WmMilan	**4.574**	50.718	46.489	45.715	47.643	47.859	46.575	48.040	41.981
WmNewYork	**3.089**	32.929	24.133	23.642	25.385	25.587	24.478	26.257	5.594
WmParis	**4.065**	37.165	49.417	50.356	51.191	52.634	49.050	50.824	27.392
WmTokyo	**4.650**	35.656	28.349	20.664	27.859	27.812	28.341	28.546	9.105
Colgtems	**12.121**	13.177	72.156	69.896	74.176	71.200	72.433	70.749	13.192
Colgtepr	**2.147**	16.328	18.417	19.224	19.018	19.022	18.443	19.515	6.346
Crestms	9.890	**2.730**	11.150	11.915	11.035	11.231	11.876	11.781	13.308
Crestpr	3.290	10.703	3.957	3.828	4.619	3.585	3.881	3.561	**3.227**
Deceases	6.871	93.842	31.706	51.183	58.849	21.812	40.049	21.732	**5.432**
Spectators	**16.689**	83.241	100.992	121.174	96.159	101.235	100.344	102.230	33.315
SpaMovSpec	40.860	**12.533**	65.233	122.908	92.082	94.296	54.082	93.627	59.270
ForMovSpec	**19.648**	107.288	117.368	131.440	122.973	120.943	113.507	118.158	28.551
Exchange	0.929	17.903	18.672	59.237	59.363	59.401	18.671	59.398	59.842
Gasoline	**5.773E-04**	15.314	62.410	60.702	67.086	67.044	62.692	65.951	4.173
MortCanc	**8.226**	97.090	80.381	15.426	17.895	18.556	83.551	17.604	27.519
MortMade	**11.515**	17.199	23.866	42.419	34.470	19.472	19.854	21.902	19.679
Books	14.491	**8.321**	29.127	30.807	29.754	27.248	29.151	27.014	51.838
Motorcycles	25.802	14.379	43.783	28.744	99.122	51.033	43.581	53.876	**14.187**
Unemployed	7.627	10.583	**5.260**	7.288	7.313	7.619	5.460	7.970	6.837
FreeHouPrize	**1.578**	6.551	3.227	3.844	3.376	3.197	3.233	3.305	1.668
Prisoners	**0.371**	21.637	23.581	23.641	24.511	23.423	23.628	24.661	22.495
Takings	15.654	52.548	44.561	80.763	88.279	44.228	45.641	43.572	**5.022**
TurIn	**3.070**	10.292	7.584	4.915	4.815	4.768	7.645	4.714	7.895
TurOut	4.193	12.276	**2.741**	3.850	3.379	3.417	3.070	3.397	6.926
TUrban	**8.558**	19.256	34.010	54.196	70.910	20.741	42.745	22.222	12.923
Cars	23.609	**-179.438**	148.344	176.249	140.641	142.868	143.172	142.004	16.560
HouseFin	13.564	41.437	18.206	40.847	30.643	22.635	21.284	22.960	**9.248**

Table 16. Comparison among the methods regarding sMdAPE with horizon equal to 4.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**9097.905**	4.355E+05	8.848E+06	5.014E+04	7.175E+04	4.900E+04	3.997E+07	4.797E+07	1.671E+04
AccDeath	**42.460**	4677.911	233.745	276.448	255.507	220.857	234.131	216.684	51.873
AccVictims	**546.629**	1.640E+04	1.250E+04	7571.038	3.670E+04	3046.302	7172.308	3229.811	746.119
Airline	79.823	**44.523**	93.263	57.842	131.784	73.245	160.880	74.038	84.713
WmFrancfort	**14.352**	206.433	1036.971	90.313	94.525	95.527	1671.321	95.447	32.024
WmLondon	**6.702**	91.881	31.696	17.038	16.221	16.243	31.748	16.208	10.048
WmMadrid	**15.553**	155.476	1.450E+07	57.184	61.332	60.923	5.201E+07	59.819	39.901
WmMilan	**13.899**	480.204	143.769	152.406	155.322	156.176	148.334	155.742	94.395
WmNewYork	**9.903**	298.381	72.733	69.511	71.749	72.181	72.460	71.795	19.428
WmParis	**11.408**	237.743	145.356	162.625	167.927	167.428	145.728	167.709	74.248
WmTokyo	**4.316**	121.618	21.170	20.206	20.451	21.682	21.259	20.814	9.744
Colgtems	**0.042**	2.894	0.126	0.124	0.127	0.118	0.127	0.127	0.042
Colgtepr	**0.053**	5.349	0.331	0.338	0.318	0.319	0.320	0.322	0.130
Crestms	**0.049**	3.187	0.057	0.054	0.055	0.055	0.058	0.057	0.057
Crestpr	**0.068**	1.841	0.078	0.085	0.081	0.079	0.084	0.077	0.074
Deceases	**2287.800**	2.052E+05	9.614E+04	2.085E+04	3.262E+04	1.022E+04	7.091E+06	1.028E+04	2580.545
Spectators	**1803.455**	1.673E+04	6992.920	9672.674	7614.295	6634.579	7020.901	6520.112	3516.474
SpaMovSpec	**792.250**	1.470E+04	4.293E+07	2335.617	1951.624	1291.067	1.331E+07	1295.830	842.877
ForMovSpec	1923.340	1.060E+04	6780.550	8893.464	7705.964	7353.629	6993.719	7360.590	2971.069
Exchange	**0.030**	0.884	0.574	1.229	1.235	1.231	0.586	1.233	0.982
Gasoline	**5.042**	1663.416	1.292E+04	855.416	1137.267	1165.491	9015.811	1158.146	2327.504
MortCanc	**4495.981**	4.865E+04	2.066E+04	1.702E+04	1.466E+04	1.775E+04	2.065E+04	1.560E+04	2.982E+04
MortMade	1.414E+04	4.474E+04	6.074E+04	6.248E+04	5.053E+04	2.847E+04	6.742E+04	3.335E+04	**1469.440**
Books	**1483.416**	6.275E+04	2745.559	3024.713	2688.834	2687.130	2840.711	2603.387	4297.368
Motorcycles	**3407.906**	8.231E+04	3.391E+04	5855.664	8.073E+04	5122.312	3.504E+04	5013.341	5.901E+05
Unemployed	4.367E+05	3.882E+05	1698.104	3.891E+05	3.741E+05	3.898E+05	3.899E+05	3.967E+05	**211.421**
FreeHouPrize	47.557	474.919	49.602	54.473	53.857	57.369	49.573	56.296	2288.657
Prisoners	**337.094**	4.420E+04	2.789E+04	2.517E+04	2.540E+04	2.518E+04	2.789E+04	2.507E+04	1.347E+04
Takings	9359.842	7.703E+04	2.844E+04	4.484E+04	4.469E+04	2.049E+04	3.820E+04	2.039E+04	**6814.124**
TurIn	**4353.989**	5.092E+04	9994.606	5530.046	5468.634	5094.798	9927.027	5270.862	1.083E+04
TurOut	7451.133	1.472E+05	**4818.635**	5070.363	6386.842	5179.787	5315.774	5503.554	2.199E+04
TUrban	**3.108E+04**	1.700E+06	3.711E+08	2.793E+05	5.337E+05	1.140E+05	3.128E+11	1.185E+05	4.485E+04
Cars	5.302E+04	3.549E+06	3.087E+05	2.907E+05	1.744E+05	1.702E+05	5.094E+05	1.656E+05	**9168.730**
HouseFin	8937.074	8.612E+04	1.226E+06	3.355E+04	2.944E+04	1.720E+04	1.749E+06	1.758E+04	**114.893**

Table 17. Comparison among the methods regarding MAE with horizon equal to 8.

19

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**0.583**	301.125	6335.886	40.081	53.720	34.661	2.741E+04	34.424	15.562
AccDeath	**4.205**	847.515	645.076	745.116	746.205	626.944	620.365	675.024	19.051
AccVictims	**0.626**	427.999	281.283	205.864	720.326	111.799	203.887	114.911	9.726
Airline	29.578	**22.228**	47.753	29.265	63.003	40.174	92.802	39.453	55.045
WmFrancfort	**0.323**	50.256	280.118	24.251	25.192	25.515	456.315	25.485	12.257
WmLondon	**0.002**	34.547	13.901	7.632	7.272	7.280	13.923	7.265	5.138
WmMadrid	**0.314**	42.446	3.392E+06	14.827	15.799	15.714	1.217E+07	15.423	12.901
WmMilan	**1.187**	561.056	36.773	38.671	39.419	39.630	37.977	39.528	34.954
WmNewYork	**0.119**	62.256	22.268	21.255	21.918	22.057	22.192	21.942	7.651
WmParis	**1.378**	56.830	36.828	40.443	41.720	41.610	36.881	41.701	26.059
WmTokyo	**0.265**	467.846	35.172	33.725	33.990	35.921	35.316	34.561	12.544
Colgtems	**3.539**	241.129	126.394	121.394	128.487	118.473	127.767	127.015	19.046
Colgtepr	**0.280**	299.418	22.228	22.605	21.321	21.347	21.384	21.575	7.456
Crestms	1.324	174.083	13.046	12.709	12.694	12.679	13.260	13.072	13.613
Crestpr	**0.037**	49.630	4.526	4.893	4.669	4.588	4.836	4.486	4.209
Deceases	**0.342**	125.043	380.176	92.754	132.580	42.756	2.014E+04	43.847	8.170
Spectators	**2.691**	757.280	358.387	449.969	385.421	351.269	356.826	350.391	40.437
SpaMovSpec	**24.486**	457.069	1.594E+08	1054.446	1156.035	582.332	1.133E+07	576.407	85.193
ForMovSpec	**5.127**	712.827	652.411	995.451	694.531	729.120	644.084	735.112	41.542
Exchange	**0.363**	31.610	21.808	47.068	47.312	47.137	22.223	47.209	45.308
Gasoline	**0.086**	45.630	647.956	39.796	52.369	53.631	387.979	53.303	4.824
MortCanc	**1.396**	2.319E+04	2.228E+04	1.867E+04	2.290E+04	2.425E+04	2.223E+04	2.425E+04	31.870
MortMade	**0.591**	105.256	137.759	145.610	102.818	112.497	144.007	110.626	23.929
Books	**6.507**	239.137	31.659	32.984	31.154	30.741	32.791	29.968	89.771
Motorcycles	84.655	205.424	315.831	57.474	688.125	41.035	334.467	40.333	**19.200**
Unemployed	13.076	14.483	12.884	13.085	12.583	12.921	12.887	13.140	**10.547**
FreeHouPrize	2.196	27.388	2.363	2.611	2.568	2.740	2.362	2.684	3.197
Prisoners	**0.120**	70.299	51.293	47.604	47.770	47.550	51.295	47.538	28.571
Takings	3.477	520.458	88.341	144.924	144.688	66.855	116.480	66.044	6.382
TurIn	**0.468**	34.346	9.959	5.552	5.475	5.087	9.918	5.263	9.752
TurOut	**0.485**	54.905	4.409	4.635	5.820	4.781	4.810	5.081	9.253
TUrban	2.118	611.418	1.268E+05	99.328	157.467	44.472	1.754E+08	45.434	46.674
Cars	13.133	752.162	944.101	1231.718	691.667	691.288	1185.073	679.324	19.878
HouseFin	5.956	106.520	2612.673	98.367	78.868	60.185	3543.789	60.061	9.372

Table 18. Comparison among the methods regarding MAPE with horizon equal to 8.

20

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	0.884	34.930	903.569	**0.638**	1.547	4.865	4150.943	4.682	2.271
AccDeath	1.103	136.993	6.329	7.626	7.055	5.997	6.287	5.825	**0.957**
AccVictims	**1.065**	30.884	23.419	14.720	27.083	4.653	9.211	4.930	1.548
Airline	1.521	**0.212**	1.099	1.028	2.369	1.533	2.649	1.508	1.476
WmFrancfort	**1.243**	14.319	62.496	6.264	6.557	6.626	107.080	6.620	8.074
WmLondon	**1.316**	13.957	4.815	2.058	1.965	1.941	4.823	1.955	3.436
WmMadrid	**1.304**	2.872	9.421E+05	3.715	3.984	3.958	3.379E+06	3.886	8.608
WmMilan	**1.181**	11.564	9.564	10.862	11.070	11.131	9.271	11.100	19.472
WmNewYork	**1.233**	29.822	7.252	6.947	7.171	7.214	7.233	7.176	6.327
WmParis	**1.104**	19.569	12.073	14.193	14.656	14.612	12.030	14.636	15.936
WmTokyo	**1.496**	29.856	5.197	4.960	5.020	5.323	5.219	5.109	1.621
Colgtems	0.979	70.246	3.043	3.002	3.073	2.854	3.063	3.068	**0.876**
Colgtepr	**0.916**	101.325	6.260	6.405	6.032	6.040	5.967	6.103	2.337
Crestms	1.012	65.140	0.605	**0.069**	0.633	0.526	0.578	0.651	1.410
Crestpr	0.996	26.127	0.649	0.689	0.541	**0.536**	0.640	0.682	1.314
Deceases	**0.916**	84.266	29.088	7.309	1.953	2.319	2934.730	2.101	1.163
Spectators	**0.961**	9.658	3.842	5.562	4.064	3.830	3.743	3.763	1.837
SpaMovSpec	**0.958**	17.574	5.322E+04	2.800	1.922	1.039	1.630E+04	1.048	1.924
ForMovSpec	**0.939**	1.367	3.352	4.659	4.037	3.852	3.203	3.856	1.643
Exchange	**1.147**	31.382	25.346	54.244	54.532	54.334	25.847	54.416	70.783
Gasoline	**0.078**	21.442	180.603	13.175	17.977	18.471	109.951	18.355	0.252
MortCanc	0.982	7.703	1.389	**0.272**	2.174	2.905	1.389	2.712	1.749
MortMade	1.238	**0.825**	1.660	0.910	1.899	1.265	3.182	1.699	1.169
Books	1.001	40.581	**0.427**	0.836	0.741	0.604	0.464	0.599	2.633
Motorcycles	**1.025**	21.585	7.241	1.167	1.917	1.266	5.360	1.180	16.211
Unemployed	4.434	**3.267**	6.157	5.371	5.410	6.196	6.170	6.205	7.010
FreeHouPrize	1.354	8.590	1.594	**1.132**	1.371	1.440	1.592	1.432	4.092
Prisoners	**0.465**	71.400	42.081	34.390	35.191	34.569	42.089	34.091	1.985
Takings	**0.997**	8.325	1.879	4.854	1.390	2.218	2.382	2.202	1.952
TurIn	**1.058**	8.866	1.705	1.106	1.175	1.080	1.665	1.138	2.269
TurOut	1.028	19.306	0.499	0.540	0.796	0.684	**0.458**	0.728	0.889
TUrban	1.031	58.653	1.315E+04	8.797	**0.661**	1.218	1.118E+07	1.142	1.063
Cars	**1.112**	77.506	6.241	6.270	3.337	3.516	9.452	3.393	1.527
HouseFin	1.007	8.397	131.399	2.871	0.872	**0.223**	182.354	0.334	1.701

Table 19. Comparison among the methods regarding MASE with horizon equal to 8.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**2.458**	47.660	38.027	31.290	37.311	31.902	40.633	31.270	13.930
AccDeath	**0.909**	98.714	175.479	226.970	187.911	190.047	170.663	180.055	16.370
AccVictims	**0.974**	91.227	35.235	148.241	389.070	40.416	38.696	44.773	8.134
Airline	**8.275**	14.975	28.169	16.571	35.725	23.925	28.769	25.336	17.202
WmFrancfort	**2.090**	26.533	26.938	23.222	24.457	25.005	27.019	24.907	11.506
WmLondon	**0.251**	16.608	14.010	6.918	7.056	7.039	14.009	7.105	5.077
WmMadrid	**0.596**	20.789	24.067	12.925	14.019	13.642	24.068	13.154	10.879
WmMilan	**0.479**	41.599	37.004	37.452	37.977	38.408	37.488	38.165	34.698
WmNewYork	**0.582**	28.270	23.193	21.761	22.431	22.326	23.179	22.253	5.755
WmParis	**2.048**	31.338	39.366	39.734	40.648	40.390	39.443	40.345	24.092
WmTokyo	**1.288**	53.554	34.025	32.810	31.899	34.201	34.346	32.841	9.540
Colgtems	**4.000**	105.348	112.517	113.418	117.545	105.364	115.542	114.398	13.806
Colgtepr	**0.526**	35.605	20.480	22.568	20.873	20.935	20.444	21.354	6.554
Crestms	**1.188**	32.503	11.596	11.536	11.004	11.041	12.219	11.500	12.478
Crestpr	**0.460**	11.280	3.775	4.265	3.852	3.772	4.269	3.582	3.220
Deceases	**0.525**	71.549	28.637	62.904	56.580	20.191	37.684	19.824	5.628
Spectators	**1.309**	169.052	199.901	253.315	195.923	188.377	190.997	194.693	39.973
SpaMovSpec	**7.808**	104.637	237.716	308.761	180.208	129.295	264.272	128.491	53.849
ForMovSpec	**2.996**	101.222	273.123	425.518	316.450	303.042	270.457	306.366	33.305
Exchange	**0.054**	16.409	17.111	45.932	46.102	45.876	17.115	45.965	46.061
Gasoline	**1.382E-04**	14.938	47.960	47.437	50.477	50.620	48.476	50.336	4.087
MortCanc	**1.310**	84.595	22.650	22.730	12.401	24.790	22.571	17.087	31.965
MortMade	**3.493**	19.038	27.719	36.147	43.360	18.581	21.908	24.782	18.269
Books	**1.900**	109.544	19.758	20.611	19.211	18.657	19.743	19.488	42.869
Motorcycles	**5.011**	105.194	45.909	33.294	473.683	31.528	52.853	32.584	13.247
Unemployed	7.345	12.671	7.803	7.278	9.357	8.043	7.709	8.045	**7.079**
FreeHouPrize	2.007	6.583	2.588	2.577	2.730	2.611	2.625	2.840	**1.655**
Prisoners	**0.107**	19.699	21.976	21.142	21.812	21.604	21.974	21.329	25.346
Takings	**3.118**	111.840	60.355	135.110	100.912	60.506	61.749	59.551	4.312
TurIn	**1.036**	10.767	7.930	4.989	4.907	4.647	7.771	4.666	7.796
TurOut	**0.042**	13.175	3.599	3.584	4.265	4.007	3.717	4.054	6.054
TUrban	**2.529**	129.645	66.092	74.341	138.985	20.457	102.916	18.852	15.802
Cars	**1.882**	102.749	283.462	552.609	265.803	303.510	304.536	293.876	17.333
HouseFin	**3.345**	35.692	29.797	62.283	43.817	26.770	43.650	26.836	8.935

Table 20. Comparison among the methods regarding MdAPE with horizon equal to 8.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PoICuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**7.805**	33.567	43.610	31.130	41.369	37.767	44.753	37.057	14.973
AccDeath	10.803	**-114.789**	102.322	109.929	100.907	101.187	103.571	101.781	15.131
AccVictims	**5.683**	26.570	30.296	85.455	113.647	33.568	31.705	36.774	7.808
Airline	20.802	**14.657**	25.217	15.303	33.615	21.396	25.922	22.340	18.436
WmFrancfort	**4.920**	30.592	30.594	26.273	27.864	28.579	30.734	28.452	11.489
WmLondon	**3.548**	18.112	15.065	7.118	6.885	6.964	15.064	7.175	5.209
WmMadrid	**3.644**	23.109	27.032	13.818	15.075	14.641	27.017	14.081	10.316
WmMilan	**4.536**	50.770	45.353	46.081	46.878	47.539	46.082	47.167	41.981
WmNewYork	**3.117**	32.924	26.235	24.418	25.265	25.133	26.217	25.040	5.594
WmParis	**4.065**	37.161	48.936	49.586	51.017	50.612	49.077	50.541	27.392
WmTokyo	**4.338**	35.708	29.077	28.186	27.511	29.193	29.312	28.181	9.105
Colgtems	**12.120**	12.810	71.985	72.375	74.033	68.727	73.313	72.121	13.346
Colgtepr	**2.150**	16.248	18.578	20.280	18.901	18.945	18.548	19.282	6.346
Crestms	9.883	**2.728**	11.778	10.907	10.874	11.190	12.058	11.679	13.308
Crestpr	3.300	10.677	3.789	4.236	3.779	3.760	4.255	3.578	**3.227**
Deceases	6.478	93.845	31.549	47.853	41.068	22.431	34.688	21.965	**5.474**
Spectators	**15.225**	83.686	100.209	111.743	114.246	96.858	97.624	98.409	33.315
SpaMovSpec	40.874	**13.031**	90.478	121.358	108.703	90.243	94.933	90.611	59.270
ForMovSpec	**18.328**	107.461	114.069	135.965	122.516	119.919	112.074	120.539	28.551
Exchange	**0.933**	17.875	18.672	59.626	59.912	59.532	18.680	59.682	59.842
Gasoline	**9.223E-04**	15.862	62.635	62.187	67.517	67.864	63.157	67.396	4.173
MortCanc	**9.140**	99.610	20.334	25.658	11.677	23.969	20.271	16.223	27.519
MortMade	**12.234**	18.538	22.977	34.124	49.891	20.008	18.802	24.092	19.679
Books	14.777	**8.404**	19.906	18.680	19.162	18.801	19.859	19.369	48.883
Motorcycles	25.802	**14.128**	41.643	28.663	64.358	37.005	44.577	37.888	14.187
Unemployed	7.868	12.724	8.021	7.288	9.446	8.339	7.930	8.293	**6.837**
FreeHouPrize	1.994	6.573	2.622	2.611	2.767	2.629	2.660	2.877	**1.668**
Prisoners	**0.370**	21.656	24.689	23.641	24.482	24.327	24.686	24.094	22.495
Takings	15.673	52.053	45.654	80.635	67.546	46.420	46.177	45.792	**4.407**
TurIn	**3.202**	10.399	7.618	5.013	4.863	4.547	7.486	4.577	7.895
TurOut	4.801	12.392	**3.539**	3.546	4.176	3.928	3.665	3.972	6.243
TUrban	**9.514**	19.373	45.026	54.404	80.122	18.915	50.015	18.176	14.645
Cars	22.415	**-179.659**	159.522	167.149	150.253	157.650	153.868	153.356	17.996
HouseFin	12.977	42.450	29.700	49.712	45.128	29.003	36.243	29.086	**9.248**

Table 21. Comparison among the methods regarding sMdAPE with horizon equal to 8.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	9425.178	4.353E+05	4.478E+09	5.278E+04	1.260E+05	5.070E+04	1.554E+10	4.970E+04	1.665E+04
AccDeath	39.686	4676.928	212.662	247.906	229.903	211.164	207.342	209.315	52.746
AccVictims	517.140	1.633E+04	1.032E+05	7.437E+03	5.111E+04	3127.540	4.755E+04	3031.426	751.298
Airline	88.757	38.718	140.757	89.693	101.516	57.470	138.339	78.121	84.750
WmFrancfort	14.336	206.334	124.271	91.314	95.161	94.551	143.442	95.333	31.523
WmLondon	6.723	1032.096	30.405	15.947	15.976	16.136	30.453	16.032	10.182
WmMadrid	15.520	155.550	1023.640	56.840	59.138	58.380	7295.679	58.307	40.084
WmMilan	13.904	480.194	163.253	156.150	158.136	157.872	169.485	158.116	94.362
WmNewYork	9.983	298.507	2799.526	67.551	70.399	70.194	2622.206	69.886	19.576
WmParis	11.383	237.692	155.444	165.872	167.208	168.562	156.354	167.169	73.848
WmTokyo	4.281	121.231	20.516	13.589	20.369	20.085	20.488	19.605	9.770
Colgtems	0.041	2.892	0.128	0.114	0.126	0.128	0.129	0.130	0.041
Colgtepr	0.053	5.351	0.654	0.316	0.318	0.319	0.338	0.321	0.130
Crestms	0.048	3.187	0.055	0.060	0.059	0.057	0.056	0.057	0.058
Crestpr	0.067	1.841	0.078	0.081	0.073	0.076	0.081	0.080	0.074
Deceases	2281.750	2.051E+05	5.004E+05	2.151E+04	3.084E+04	1.016E+04	2.231E+05	1.036E+04	2461.255
Spectators	1856.289	1.673E+04	6932.089	9686.954	7906.280	6702.871	7147.897	6511.439	3486.357
SpaMovSpec	798.215	1.472E+04	3.196E+08	2320.665	1175.420	1220.810	3.401E+09	1217.054	859.265
ForMovSpec	2063.426	1.059E+04	6515.254	9245.842	7359.916	7218.981	6328.270	7300.041	2924.396
Exchange	0.030	0.884	0.516	1.233	1.233	1.233	0.519	1.231	0.982
Gasoline	3.286	1663.046	5.695E+04	856.666	1161.587	1136.870	8250.708	1133.288	2515.221
MortCanc	4404.800	4.869E+04	1.968E+04	1.900E+04	1.488E+04	1.563E+04	1.972E+04	1.501E+04	2.881E+04
MortMade	1.309E+04	4.377E+04	7.484E+04	6.848E+04	4.887E+04	3.470E+04	6.685E+04	3.194E+04	1449.472
Books	1495.043	6.276E+04	3460.519	3210.324	2604.323	2759.151	3100.322	2632.754	4343.153
Motorcycles	3384.810	8.229E+04	1.325E+05	5652.880	8.419E+04	5352.706	1.268E+05	5469.131	5.895E+05
Unemployed	4.270E+05	4.663E+05	4.229E+05	4.247E+05	4.089E+05	4.287E+05	4.231E+05	4.286E+05	206.110
FreeHouPrize	43.419	474.875	70.380	77.129	73.349	77.026	70.259	75.522	2293.881
Prisoners	340.430	4.428E+04	2.768E+04	2.517E+04	2.512E+04	2.568E+04	2.766E+04	2.625E+04	1.331E+04
Takings	9512.564	7.720E+04	8.891E+04	4.484E+04	8.147E+04	1.923E+04	7.389E+04	2.018E+04	6856.984
TurIn	4088.763	5.095E+04	7972.133	6315.117	5317.768	5541.014	2.233E+04	5355.379	1.086E+04
TurOut	6680.046	1.472E+05	3794.230	4911.236	5749.779	5396.619	4374.328	5339.558	2.221E+04
TUrban	3.364E+04	1.694E+06	1.771E+08	2.666E+05	5.346E+05	1.197E+05	3.342E+08	1.163E+05	4.444E+04
Cars	6.013E+04	3.549E+06	1.892E+05	2.750E+05	1.712E+05	1.605E+05	2.199E+05	1.674E+05	9130.563
HouseFin	9839.909	8.614E+04	3.644E+05	3.485E+04	6.076E+04	1.638E+04	3.449E+05	1.642E+04	115.041

Table 22. Comparison among the methods regarding MAE with horizon equal to 10.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**0.069**	300.786	3.007E+06	38.941	93.459	35.159	1.040E+07	34.412	15.491
AccDeath	**4.195**	853.562	616.001	508.924	422.152	616.210	567.935	643.366	19.443
AccVictims	**0.734**	426.159	1880.216	191.619	925.709	115.208	893.226	113.138	9.809
Airline	29.444	**18.289**	73.572	47.207	40.694	29.314	68.745	39.592	55.082
WmFrancfort	**0.439**	50.231	32.393	24.490	25.385	25.248	36.933	25.448	12.096
WmLondon	**0.095**	202.732	13.341	7.132	7.161	7.234	13.362	7.187	5.205
WmMadrid	**0.373**	42.473	259.284	14.787	15.262	15.078	1846.214	15.046	12.965
WmMilan	**1.208**	560.734	41.530	39.638	40.159	40.130	43.029	40.153	34.943
WmNewYork	**0.307**	62.291	780.079	20.611	21.522	21.451	730.759	21.360	7.713
WmParis	**1.321**	56.816	38.982	41.325	41.572	41.921	39.190	41.579	25.918
WmTokyo	**0.238**	465.041	34.030	22.413	33.813	33.247	33.977	32.466	12.580
Colgtems	**3.070**	240.407	128.202	112.850	125.057	127.332	129.517	129.393	18.809
Colgtepr	**0.379**	299.520	47.214	21.198	21.301	21.381	22.817	21.512	7.464
Crestms	**1.032**	174.037	12.643	13.737	13.549	13.101	12.944	12.969	13.671
Crestpr	**0.055**	49.630	4.515	4.667	4.205	4.419	4.688	4.616	4.245
Deceases	**0.209**	125.122	1255.338	98.293	123.850	42.418	612.508	42.897	7.820
Spectators	**3.473**	758.057	361.327	510.876	414.789	355.106	368.180	353.750	39.962
SpaMovSpec	25.337	464.251	1.398E+07	937.093	523.007	550.560	4.337E+08	553.445	89.550
ForMovSpec	**4.217**	715.838	630.931	1054.183	767.303	752.424	636.814	731.062	40.764
Exchange	**0.324**	31.614	19.712	47.206	47.204	47.203	19.817	47.151	45.311
Gasoline	**0.088**	45.480	2245.721	40.144	53.070	52.225	348.545	52.095	5.362
MortCanc	**1.838**	2.364E+04	2.003E+04	1.992E+04	2.315E+04	1.830E+04	2.008E+04	2.209E+04	30.747
MortMade	**1.142**	109.165	167.849	152.657	168.493	121.344	155.647	119.860	23.655
Books	**6.818**	239.689	37.762	34.916	30.177	32.305	34.842	30.368	89.946
Motorcycles	86.865	206.215	844.612	56.679	678.484	43.524	872.776	44.237	**19.169**
Unemployed	12.544	16.967	13.804	14.037	13.419	13.992	13.806	14.005	**10.303**
FreeHouPrize	**1.693**	27.377	3.345	3.676	3.496	3.668	3.339	3.598	3.205
Prisoners	**0.165**	70.331	51.075	47.604	47.489	48.091	51.052	48.557	28.089
Takings	**3.695**	519.861	228.592	144.924	264.177	65.174	226.065	68.055	6.426
TurIn	**0.339**	34.388	7.925	6.384	5.358	5.572	22.548	5.381	9.781
TurOut	**0.332**	54.888	3.416	4.515	5.286	4.933	3.901	4.866	9.328
TUrban	**2.301**	604.581	4.595E+04	96.297	168.780	46.340	1.767E+05	45.102	46.416
Cars	**12.839**	759.065	957.490	1337.498	753.829	667.111	1146.602	682.778	19.777
HouseFin	**4.623**	106.548	763.828	115.572	145.859	59.943	7615.907	59.855	9.384

Table 23. Comparison among the methods regarding MAPE with horizon equal to 10.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	0.915	34.991	4.698E+05	**0.027**	6.926	5.174	1.630E+06	5.025	2.263
AccDeath	1.031	136.969	5.526	5.761	5.726	5.636	5.402	5.462	**0.973**
AccVictims	**1.007**	30.710	195.774	13.810	15.590	4.931	78.495	4.629	1.559
Airline	1.691	**0.190**	2.393	1.901	1.023	1.042	2.117	1.429	1.476
WmFrancfort	**1.242**	14.312	3.660	6.334	6.601	6.558	4.707	6.613	7.947
WmLondon	**1.320**	156.774	4.616	1.858	1.873	1.908	4.626	1.884	3.482
WmMadrid	**1.301**	2.863	59.037	3.693	3.842	3.793	468.506	3.788	8.648
WmMilan	**1.181**	11.560	8.979	11.129	11.271	11.252	8.945	11.269	19.465
WmNewYork	**1.243**	29.834	269.036	6.751	7.036	7.016	251.386	6.985	6.375
WmParis	**1.102**	19.560	13.559	14.476	14.593	14.711	13.602	14.589	15.850
WmTokyo	**1.484**	29.760	5.036	3.301	5.000	4.931	5.029	4.813	1.625
Colgtems	0.992	70.211	3.094	2.749	3.038	3.097	3.112	3.149	**0.865**
Colgtepr	**0.918**	101.365	11.000	5.994	6.022	6.048	4.827	6.084	2.340
Crestms	1.004	65.168	0.617	**0.543**	0.669	0.557	0.637	0.659	1.417
Crestpr	0.985	26.098	0.544	0.557	**0.507**	0.541	0.513	0.724	1.325
Deceases	0.914	84.222	198.928	7.265	**0.641**	2.287	73.376	2.282	1.109
Spectators	**0.989**	9.660	3.894	5.591	4.495	3.869	3.891	3.758	1.821
SpaMovSpec	0.965	17.619	3.967E+05	2.494	**0.574**	1.054	4.221E+06	1.073	1.961
ForMovSpec	**1.007**	1.379	3.165	4.843	3.831	3.782	3.085	3.824	1.617
Exchange	**1.144**	31.396	22.773	54.414	54.411	54.411	22.897	54.351	70.794
Gasoline	**0.051**	21.761	891.330	13.168	18.391	18.018	102.982	17.961	0.272
MortCanc	0.963	7.820	0.653	**0.633**	1.894	1.621	0.651	1.544	1.690
MortMade	1.146	0.710	2.193	3.772	**0.060**	0.438	3.296	1.416	1.154
Books	1.009	40.595	0.348	0.249	0.406	0.425	**0.183**	0.560	2.661
Motorcycles	**1.018**	21.547	35.035	1.033	5.420	1.330	33.032	1.370	16.193
Unemployed	4.336	**3.370**	6.857	6.092	6.371	6.879	6.846	6.848	6.834
FreeHouPrize	**1.236**	8.551	2.305	2.039	2.000	2.122	2.302	2.049	4.101
Prisoners	**0.469**	72.255	41.501	34.390	34.426	35.990	41.456	37.969	1.962
Takings	1.013	8.346	8.508	4.854	**0.930**	2.061	4.814	2.146	1.964
TurIn	**0.993**	8.830	1.748	1.157	0.998	1.125	5.103	1.075	2.275
TurOut	0.922	19.340	**0.407**	0.502	0.744	0.720	0.410	0.701	0.898
TUrban	1.116	58.398	6141.025	8.787	6.918	1.510	1.169E+04	1.155	**1.053**
Cars	**1.261**	77.502	3.711	5.886	3.245	3.254	3.703	3.411	1.521
HouseFin	1.109	8.410	33.374	3.361	1.572	**0.154**	364.515	0.213	1.703

Table 24. Comparison among the methods regarding MASE with horizon equal to 10.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**2.233**	47.442	38.905	33.234	51.998	34.835	44.671	33.615	13.930
AccDeath	**1.140**	98.658	175.913	204.753	210.903	184.109	174.474	178.362	16.370
AccVictims	**0.758**	91.610	34.638	138.748	592.184	40.120	41.116	39.219	8.134
Airline	**8.298**	13.501	34.812	32.903	29.388	17.553	35.367	30.795	17.202
WmFrancfort	**2.139**	26.557	27.311	23.935	24.305	24.547	27.470	24.358	10.923
WmLondon	**0.251**	37.285	13.533	7.207	7.231	6.956	13.510	7.131	5.077
WmMadrid	**0.596**	20.754	21.521	13.150	13.160	12.645	22.028	12.761	10.879
WmMilan	**0.512**	41.694	38.439	38.468	38.973	38.919	38.525	38.975	34.698
WmNewYork	**0.707**	28.272	22.001	20.589	21.820	21.747	22.030	21.907	5.755
WmParis	**2.048**	31.338	39.180	40.579	40.234	40.540	39.183	40.516	23.639
WmTokyo	**1.346**	53.669	31.657	20.630	31.318	31.802	32.023	30.390	9.540
Colgtems	**3.940**	105.531	111.472	96.264	111.940	114.865	112.041	116.868	13.578
Colgtepr	**0.564**	35.819	20.521	21.687	20.774	21.216	20.038	21.361	6.554
Crestms	**1.014**	32.481	11.331	12.782	11.236	11.363	11.075	11.075	12.478
Crestpr	**0.348**	11.410	3.766	4.118	3.331	3.765	4.198	3.796	3.220
Deceases	**0.299**	71.320	30.120	69.245	67.030	20.735	38.139	21.139	5.288
Spectators	**2.645**	168.915	191.025	271.295	195.682	179.028	186.489	177.234	39.938
SpaMovSpec	**10.748**	104.749	191.406	293.919	90.784	130.765	226.541	128.654	54.217
ForMovSpec	**1.064**	100.153	272.845	347.430	300.720	302.737	258.489	303.399	31.339
Exchange	**0.010**	16.408	17.094	46.120	45.913	45.926	17.098	45.879	46.061
Gasoline	**2.007E-6**	15.016	47.238	47.498	50.953	49.672	48.286	49.391	4.087
MortCanc	**1.423**	85.232	21.734	32.735	17.681	19.270	21.538	17.139	26.600
MortMade	**1.235**	17.209	19.737	37.461	44.814	17.917	21.580	22.944	18.269
Books	**2.269**	110.855	26.989	31.486	21.090	21.133	26.612	20.271	43.247
Motorcycles	**4.074**	105.061	48.274	31.925	408.583	40.139	57.250	40.717	13.247
Unemployed	6.893	14.800	7.141	7.256	7.343	7.366	7.108	7.409	**6.064**
FreeHouPrize	**1.257**	6.606	3.405	3.795	3.677	3.547	3.404	3.621	1.655
Prisoners	**0.159**	19.778	21.707	21.142	21.494	22.122	21.769	23.263	24.510
Takings	**2.646**	111.252	62.982	135.110	197.435	53.535	63.557	54.740	4.899
TurIn	**0.761**	10.753	7.090	5.617	4.890	5.286	6.774	5.073	7.796
TurOut	**0.314**	12.573	2.647	3.561	3.461	4.133	2.890	3.927	6.054
TUrban	**2.624**	129.132	56.165	73.796	91.683	24.380	84.404	18.004	13.815
Cars	**0.013**	102.993	302.432	511.662	293.337	289.192	322.049	291.904	17.333
HouseFin	**4.718**	35.669	26.552	63.249	97.404	23.509	39.113	23.066	8.935

Table 25. Comparison among the methods regarding MdAPE with horizon equal to 10.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**7.966**	33.308	41.810	31.131	42.352	41.870	40.890	39.815	14.973
AccDeath	10.185	**-114.467**	103.711	102.484	108.662	101.320	100.641	103.579	15.131
AccVictims	**5.260**	26.235	28.807	85.661	98.528	33.365	32.802	32.674	7.808
Airline	23.301	**13.118**	29.280	28.247	29.106	16.217	30.859	26.688	18.436
WmFrancfort	**4.996**	30.624	31.563	27.189	27.667	27.983	31.544	27.737	10.787
WmLondon	**3.502**	45.829	14.515	7.476	6.978	6.948	14.489	6.997	5.209
WmMadrid	**3.635**	23.112	24.059	14.076	14.087	13.499	24.750	13.632	10.316
WmMilan	**4.532**	50.670	47.543	47.629	48.405	48.324	47.367	48.410	41.981
WmNewYork	**3.140**	32.926	24.688	22.952	24.492	24.400	24.735	24.603	5.594
WmParis	**4.062**	37.161	48.726	50.908	50.367	50.848	48.685	50.810	26.808
WmTokyo	**4.309**	35.459	27.330	18.701	27.078	27.411	27.602	26.345	9.105
Colgtems	**12.111**	12.237	71.571	64.985	71.770	72.550	71.795	73.354	13.192
Colgtepr	**2.171**	16.333	18.535	19.566	18.819	19.173	18.192	19.288	6.346
Crestms	9.945	**2.748**	11.372	13.261	11.904	11.465	11.198	11.288	13.308
Crestpr	3.297	10.793	3.781	4.035	3.388	3.752	4.189	3.773	**3.227**
Deceases	6.660	93.663	30.465	51.428	40.743	23.014	33.287	23.653	**5.432**
Spectators	**15.551**	84.022	97.934	115.127	99.459	94.402	96.652	93.788	33.290
SpaMovSpec	40.863	**12.859**	60.177	116.116	68.153	82.131	61.627	81.521	60.617
ForMovSpec	**19.562**	107.644	114.420	126.850	120.113	120.257	112.244	120.368	27.094
Exchange	**0.924**	17.875	18.672	59.944	59.593	59.616	18.679	59.538	59.842
Gasoline	**6.011E-04**	15.865	61.381	62.291	68.372	66.183	62.607	65.715	4.173
MortCanc	**8.310**	95.990	20.210	39.297	18.528	18.531	20.135	18.296	23.466
MortMade	**10.456**	16.894	17.453	31.551	40.040	19.686	17.961	21.696	19.469
Books	14.485	**8.184**	25.689	28.975	23.124	20.698	25.526	20.151	48.883
Motorcycles	25.253	**14.027**	35.889	29.581	92.623	49.877	39.319	50.398	14.187
Unemployed	7.351	14.502	7.416	7.288	7.470	7.591	7.329	7.639	**5.886**
FreeHouPrize	**1.523**	6.589	3.464	3.868	3.746	3.611	3.463	3.687	1.668
Prisoners	**0.381**	21.789	24.350	23.641	24.082	24.914	24.428	26.467	21.834
Takings	15.467	52.410	47.730	80.635	95.940	42.203	47.260	42.880	**5.022**
TurIn	**2.941**	10.418	6.865	5.529	4.790	5.156	6.572	4.947	7.895
TurOut	4.380	11.923	**2.620**	3.498	3.402	4.048	2.856	3.852	6.243
TUrban	**10.061**	18.715	34.187	54.196	54.226	22.757	41.803	17.088	12.923
Cars	24.267	**-180.300**	145.928	166.488	149.406	142.002	144.018	141.796	17.996
HouseFin	13.889	42.416	24.353	48.748	45.891	25.731	29.378	24.583	**9.248**

Table 26. Comparison among the methods regarding sMdAPE with horizon equal to 10.

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Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**9564.719**	4.355E+05	3.741E+08	5.740E+04	1.363E+05	5.072E+04	2.976E+08	4.904E+04	1.657E+04
AccDeath	**39.205**	4676.395	225.241	229.632	348.054	219.834	226.595	216.682	52.224
AccVictims	**511.217**	1.633E+04	5.797E+05	6653.728	6.289E+04	3002.346	1.381E+04	3004.602	738.408
Airline	87.540	**56.496**	617.300	90.017	207.779	76.528	584.194	80.839	83.677
WmFrancfort	**14.300**	206.413	111.952	94.870	96.887	97.321	111.429	96.582	31.712
WmLondon	**6.698**	91.806	36.640	17.327	16.168	16.176	37.157	16.212	9.820
WmMadrid	**15.366**	155.583	206.276	57.472	58.832	58.398	543.856	58.477	40.529
WmMilan	**13.929**	480.148	149.488	155.654	157.131	155.896	150.721	157.110	93.727
WmNewYork	**9.885**	298.488	79.981	68.132	69.181	69.660	74.994	69.654	19.266
WmParis	**11.429**	237.640	157.811	169.885	168.752	168.886	157.629	168.985	73.818
WmTokyo	**4.294**	122.025	20.971	19.643	20.537	21.570	20.990	20.851	9.886
Colgtems	**0.042**	2.894	0.126	0.118	0.128	0.115	0.125	0.126	0.042
Colgtepr	**0.054**	5.351	0.306	0.320	0.321	0.322	0.303	0.317	0.130
Crestms	**0.048**	3.188	0.053	0.063	0.053	0.058	0.055	0.059	0.058
Crestpr	**0.068**	1.840	0.076	0.083	0.080	0.076	0.079	0.074	0.075
Deceases	**2250.287**	2.051E+05	1.928E+06	2.294E+04	4.968E+04	1.070E+04	8.586E+05	1.068E+04	2578.909
Spectators	**1770.097**	1.661E+04	6969.020	9436.447	8004.671	6876.736	7226.860	6635.922	3508.807
SpaMovSpec	**798.710**	1.473E+04	6.141E+10	2791.496	1492.142	1191.998	4.999E+11	1172.914	842.478
ForMovSpec	**1884.039**	1.063E+04	6400.111	9001.437	7050.630	7158.443	8499.815	7120.110	2964.628
Exchange	**0.030**	0.884	0.509	1.213	1.231	1.231	0.502	1.234	0.982
Gasoline	**7.693**	1652.813	1.310E+06	918.025	1113.890	1118.512	1.264E+06	1157.069	2558.699
MortCanc	–	–	–	–	–	–	–	–	–
MortMade	1.259E+04	4.433E+04	5.580E+04	5.298E+04	9.027E+04	2.564E+04	4.142E+04	3.159E+04	**1478.730**
Books	**1510.496**	6.276E+04	1.033E+04	3482.691	2688.136	2838.840	9038.358	2715.209	4236.979
Motorcycles	**3363.490**	8.231E+04	5.361E+04	5960.135	5.473E+04	5073.932	1.935E+05	5007.306	5.862E+05
Unemployed	4.618E+05	4.449E+05	4.688E+05	5.313E+05	4.676E+05	4.726E+05	4.684E+05	4.689E+05	**205.248**
FreeHouPrize	–	–	–	–	–	–	–	–	–
Prisoners	**332.701**	4.430E+04	3.581E+04	2.517E+04	2.572E+04	2.495E+04	3.244E+04	2.586E+04	1.344E+04
Takings	9210.845	7.736E+04	6.291E+04	4.484E+04	4.996E+04	1.992E+04	5.868E+04	1.979E+04	**6769.658**
TurIn	**4074.927**	5.090E+04	2.008E+04	5303.770	5603.871	5081.324	1.547E+05	5059.713	1.076E+04
TurOut	6147.162	1.472E+05	**5020.856**	5161.485	6293.402	5359.218	7053.307	5852.372	2.210E+04
TUrban	**2.841E+04**	1.699E+06	8.736E+06	2.428E+05	3.352E+05	1.165E+05	3.832E+06	1.217E+05	4.482E+04
Cars	5.294E+04	3.548E+06	2.302E+05	2.783E+05	1.660E+05	1.638E+05	2.507E+05	1.663E+05	**9010.467**
HouseFin	9308.824	8.611E+04	2.597E+05	3.777E+04	1.819E+05	1.723E+04	3.343E+06	1.774E+04	**114.733**

Table 27. Comparison among the methods regarding MAE with horizon equal to 20.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**0.078**	299.826	2.398E+05	44.208	104.926	36.307	1.818E+05	35.087	15.422
AccDeath	**0.921**	847.506	739.226	728.362	1253.967	749.177	742.713	727.410	19.208
AccVictims	**0.846**	425.836	8195.989	191.339	1339.263	107.214	306.396	107.005	9.585
Airline	37.637	**28.754**	309.393	42.485	116.829	35.959	297.581	36.989	54.588
WmFrancfort	**0.408**	50.250	29.973	25.428	25.868	25.984	29.837	25.790	12.140
WmLondon	**0.130**	34.517	15.991	7.778	7.249	7.250	16.212	7.267	5.051
WmMadrid	**0.104**	42.475	48.580	14.826	15.174	15.064	123.065	15.083	13.109
WmMilan	**1.309**	561.141	38.319	39.540	39.890	39.573	38.635	39.882	34.766
WmNewYork	**0.139**	62.288	24.187	20.843	21.159	21.314	22.782	21.301	7.607
WmParis	**1.350**	56.805	39.770	42.319	42.002	42.034	39.730	42.047	25.935
WmTokyo	**1.020**	470.093	34.782	32.617	34.049	35.783	34.813	34.605	12.735
Colgtems	**3.507**	241.418	125.638	117.778	127.704	115.613	124.928	125.493	18.891
Colgtepr	**0.209**	299.496	20.486	21.437	21.481	21.576	20.287	21.260	7.457
Crestms	**0.900**	174.115	12.084	14.332	12.270	13.373	12.734	13.536	13.725
Crestpr	**0.083**	49.602	4.367	4.769	4.636	4.392	4.570	4.276	4.263
Deceases	**0.140**	125.067	4977.076	94.165	178.271	43.374	2265.155	43.712	8.164
Spectators	**3.362**	753.915	351.027	517.587	351.679	353.644	359.623	350.289	40.355
SpaMovSpec	**25.418**	465.284	5.683E+09	1107.778	566.270	525.283	4.561E+10	520.656	84.830
ForMovSpec	**5.632**	710.327	641.410	822.470	700.142	721.326	841.623	712.911	41.472
Exchange	**0.272**	31.626	19.407	46.451	47.149	47.152	19.135	47.240	45.293
Gasoline	**0.358**	45.163	5.584E+04	42.480	51.385	51.534	5.388E+04	53.279	5.440
MortCanc	—	—	—	—	—	—	—	—	—
MortMade	**0.452**	108.358	149.391	140.189	158.816	99.164	121.554	73.857	24.076
Books	**6.920**	238.940	120.333	37.681	31.321	32.575	105.143	31.692	89.611
Motorcycles	86.240	205.280	651.953	60.508	438.966	41.400	1280.615	41.180	**19.016**
Unemployed	13.118	16.581	14.981	17.379	15.199	15.142	14.964	15.063	**10.227**
FreeHouPrize	—	—	—	—	—	—	—	—	—
Prisoners	**0.138**	70.297	60.352	47.604	48.126	47.497	56.605	48.320	28.525
Takings	**3.273**	520.230	185.038	144.924	151.099	66.557	186.539	66.208	6.348
TurIn	**0.347**	34.329	20.741	5.316	5.587	5.078	150.572	5.049	9.684
TurOut	**0.560**	54.807	4.446	4.736	5.639	4.937	6.289	5.379	9.292
TUrban	**2.080**	606.906	2257.142	89.378	106.222	44.692	1121.620	46.994	46.659
Cars	**13.597**	756.050	941.697	1272.464	627.703	686.153	976.904	688.239	19.599
HouseFin	**6.368**	106.663	499.673	118.754	436.450	60.925	5963.056	61.644	9.359

Table 28. Comparison among the methods regarding MAPE with horizon equal to 20.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**0.929**	34.902	3.910E+04	1.121	5.869	4.959	3.041E+04	4.796	2.252
AccDeath	1.018	136.941	5.910	6.179	3.040	5.862	5.538	5.696	**0.963**
AccVictims	**0.996**	30.725	1141.456	11.353	19.545	4.638	13.335	4.628	1.532
Airline	1.668	**0.170**	12.928	1.166	3.933	1.247	12.566	1.360	1.458
WmFrancfort	**1.239**	14.317	7.765	6.580	6.720	6.750	7.729	6.699	7.995
WmLondon	**1.315**	13.945	5.288	2.185	1.951	1.999	5.476	1.999	3.358
WmMadrid	**1.288**	2.881	10.353	3.734	3.822	3.794	29.642	3.799	8.744
WmMilan	**1.184**	11.580	10.442	11.094	11.199	11.111	10.326	11.198	19.334
WmNewYork	**1.231**	29.832	4.528	6.809	6.914	6.962	4.536	6.962	6.275
WmParis	**1.106**	19.557	13.773	14.826	14.728	14.739	13.757	14.748	15.844
WmTokyo	**1.488**	29.955	5.148	4.822	5.041	5.295	5.153	5.119	1.644
Colgtems	0.986	70.252	3.021	2.856	3.098	2.766	2.994	3.040	**0.869**
Colgtepr	**0.951**	101.351	5.796	6.063	6.072	6.099	5.736	6.011	2.338
Crestms	1.008	65.192	0.564	1.021	0.568	0.619	**0.483**	0.708	1.423
Crestpr	1.001	26.102	0.506	0.466	0.504	0.544	**0.461**	0.506	1.330
Deceases	**0.901**	84.234	767.342	8.212	3.948	2.513	300.912	2.413	1.162
Spectators	**0.944**	9.589	3.852	5.447	4.233	3.969	3.963	3.830	1.833
SpaMovSpec	0.966	17.619	7.623E+07	3.085	**0.825**	0.901	6.205E+08	0.856	1.923
ForMovSpec	**0.920**	1.373	3.130	4.715	3.667	3.750	4.238	3.730	1.639
Exchange	**1.147**	31.403	18.336	53.567	54.351	54.354	18.714	54.455	70.765
Gasoline	**0.118**	21.460	2.075E+04	14.095	17.649	17.727	1.997E+04	18.338	0.277
MortCanc	—	—	—	—	—	—	—	—	—
MortMade	1.102	**0.762**	3.254	3.779	2.226	0.993	1.991	1.054	1.177
Books	1.019	40.594	5.704	**0.127**	0.693	0.851	4.876	0.777	2.596
Motorcycles	**1.012**	21.536	11.739	1.023	2.416	1.163	51.615	1.099	16.105
Unemployed	4.690	**2.547**	7.728	9.231	6.980	7.785	7.740	7.540	6.805
FreeHouPrize	—	—	—	—	—	—	—	—	—
Prisoners	**0.459**	72.763	61.446	34.390	36.016	33.338	52.999	36.346	1.981
Takings	0.981	8.363	4.394	4.854	**0.370**	2.151	4.275	2.124	1.939
TurIn	**0.990**	8.885	2.613	1.182	1.203	1.137	35.277	1.115	2.254
TurOut	0.849	19.340	0.562	**0.542**	0.793	0.714	0.723	0.769	0.893
TUrban	0.943	58.592	290.145	6.780	**0.474**	1.506	113.325	1.736	1.062
Cars	**1.110**	77.486	3.960	6.026	3.168	3.361	3.166	3.434	1.501
HouseFin	1.049	8.379	20.127	3.768	6.159	**0.255**	346.004	0.353	1.699

Table 29. Comparison among the methods regarding MASE with horizon equal to 20.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**2.232**	47.299	38.606	33.706	67.790	32.821	46.243	31.726	13.930
AccDeath	**1.907**	98.686	192.577	179.731	229.871	192.530	186.698	186.396	16.370
AccVictims	**1.058**	91.190	37.239	86.687	442.829	40.116	39.821	41.653	8.134
Airline	18.776	18.707	89.534	33.516	38.930	30.353	96.054	30.230	**13.222**
WmFrancfort	**2.102**	26.531	30.437	24.032	24.569	24.936	30.434	24.597	10.923
WmLondon	**0.205**	16.572	15.755	7.207	7.185	7.540	15.927	7.470	5.077
WmMadrid	**0.477**	20.817	21.864	12.537	13.228	12.709	22.108	12.702	11.524
WmMilan	**0.608**	41.732	37.570	38.227	38.701	38.567	37.532	38.750	34.499
WmNewYork	**0.630**	28.282	21.257	20.648	21.266	21.157	20.839	21.251	5.755
WmParis	**2.048**	31.335	40.205	40.645	40.477	40.403	40.045	40.682	23.958
WmTokyo	**0.743**	54.178	33.374	31.544	32.116	34.575	33.435	33.665	9.968
Colgtems	**4.000**	105.391	107.914	100.847	108.308	100.127	103.185	112.002	13.578
Colgtepr	**0.418**	35.591	20.887	20.620	21.158	21.363	20.605	21.143	6.554
Crestms	**0.774**	32.386	11.124	12.019	11.075	11.606	11.618	11.837	13.446
Crestpr	**0.350**	11.280	3.800	4.011	4.366	3.637	4.308	3.566	3.220
Deceases	**0.187**	71.368	33.019	72.176	123.664	21.341	65.785	21.565	5.628
Spectators	**2.824**	168.084	200.543	234.202	181.089	200.937	198.382	199.370	39.973
SpaMovSpec	**9.649**	104.822	239.248	390.483	142.253	127.385	375.410	119.782	53.849
ForMovSpec	**1.592**	102.508	247.170	434.610	272.343	268.781	252.627	277.971	33.305
Exchange	**0.048**	16.409	17.063	45.373	45.929	45.900	17.063	45.983	46.061
Gasoline	**9.543E-06**	13.996	47.290	48.493	49.818	48.308	47.515	49.981	5.116
MortCanc	–	–	–	–	–	–	–	–	–
MortMade	**3.326**	17.997	24.510	13.299	72.294	28.619	19.608	29.985	18.269
Books	**2.094**	109.471	16.130	28.574	16.075	19.727	15.841	17.699	42.869
Motorcycles	**3.998**	104.391	47.949	33.897	285.921	32.949	50.574	31.769	13.247
Unemployed	**4.475**	15.517	7.078	11.086	7.323	7.289	7.097	7.091	6.572
FreeHouPrize	–	–	–	–	–	–	–	–	–
Prisoners	**0.123**	19.657	21.261	21.142	21.717	19.903	21.236	21.670	25.346
Takings	**2.716**	110.988	62.595	135.110	110.694	55.980	64.645	54.573	4.312
TurIn	**0.896**	10.722	7.981	4.895	4.753	4.684	8.031	4.624	7.796
TurOut	**0.009**	12.521	3.306	3.558	4.737	4.006	3.688	4.335	6.054
TUrban	**2.253**	129.519	40.768	65.112	62.799	21.339	53.367	24.011	15.802
Cars	**0.109**	102.467	288.206	434.774	243.364	280.101	296.707	285.886	17.261
HouseFin	**3.159**	35.180	43.720	66.156	270.674	24.812	62.659	25.745	8.911

Table 30. Comparison among the methods regarding MdAPE with horizon equal to 20.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**8.225**	33.716	39.467	36.493	56.145	39.005	41.218	37.449	14.973
AccDeath	10.278	**-114.312**	106.943	112.203	88.504	101.842	105.615	101.845	15.131
AccVictims	**5.093**	26.247	29.245	78.206	51.462	33.419	31.138	34.432	7.808
Airline	23.179	18.189	61.079	30.370	15.970	26.816	64.797	26.340	**14.158**
WmFrancfort	**4.898**	30.589	35.901	27.314	28.009	28.490	35.896	28.049	10.967
WmLondon	**3.438**	18.069	17.105	7.302	7.327	7.371	17.306	7.369	5.209
WmMadrid	**3.669**	23.157	24.548	13.376	14.165	13.572	24.856	13.563	11.572
WmMilan	**4.533**	50.602	46.260	47.261	47.986	47.781	46.202	48.063	41.690
WmNewYork	**3.055**	32.940	23.715	23.025	23.796	23.662	23.177	23.783	5.594
WmParis	**4.058**	37.156	50.322	51.011	50.748	50.632	50.071	51.072	27.220
WmTokyo	**4.179**	35.986	28.601	27.247	27.672	29.454	28.646	28.774	9.784
Colgtems	**12.114**	12.677	70.022	67.042	70.260	66.152	68.121	71.329	13.192
Colgtepr	**2.174**	16.336	18.912	18.693	19.134	19.293	18.681	19.115	6.346
Crestms	9.944	**2.712**	11.033	12.593	11.658	11.810	11.418	12.229	14.418
Crestpr	3.271	10.677	3.781	3.932	4.464	3.648	4.295	3.559	**3.227**
Deceases	6.500	93.748	31.357	53.036	76.920	23.548	38.550	23.985	**5.474**
Spectators	**15.393**	82.993	99.779	107.877	102.615	100.155	99.226	99.638	33.315
SpaMovSpec	40.969	**13.102**	74.553	132.225	94.026	86.233	88.272	86.661	59.270
ForMovSpec	**17.711**	107.021	108.861	136.805	115.314	114.554	110.135	115.992	28.551
Exchange	**0.935**	17.875	18.654	58.687	59.621	59.571	18.655	59.712	59.842
Gasoline	**0.004**	14.795	61.805	64.015	66.343	63.808	61.852	66.813	5.256
MortCanc	—	—	—	—	—	—	—	—	—
MortMade	**9.983**	18.007	23.547	13.477	62.282	26.240	20.450	27.783	19.679
Books	14.915	**8.425**	16.244	33.337	16.131	19.714	16.378	17.382	48.883
Motorcycles	25.579	14.487	44.507	29.581	68.802	38.684	49.053	37.108	**14.187**
Unemployed	**5.911**	15.242	7.368	11.779	7.393	7.570	7.387	7.298	6.362
FreeHouPrize	—	—	—	—	—	—	—	—	—
Prisoners	**0.358**	21.686	23.622	23.641	24.363	22.221	23.684	24.500	22.495
Takings	15.387	52.333	45.960	80.635	58.237	43.690	46.725	42.799	**4.407**
TurIn	**2.882**	10.431	7.584	4.778	4.807	4.598	7.626	4.528	7.895
TurOut	3.957	11.870	**3.264**	3.496	4.628	3.926	3.637	4.244	6.243
TUrban	**8.458**	19.179	36.409	53.956	53.295	19.630	35.260	22.338	14.645
Cars	22.365	**-180.558**	146.685	173.991	151.421	154.359	144.399	155.362	16.560
HouseFin	13.174	42.335	33.918	52.849	32.562	27.594	45.008	27.691	**8.823**

Table 31. Comparison among the methods regarding sMdAPE with horizon equal to 20.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**9560.105**	4.356E+05	6.846E+11	5.185E+04	1.550E+05	4.988E+04	2.898E+10	5.217E+04	1.649E+04
AccDeath	**40.264**	4676.673	331.555	229.901	316.455	203.092	269.083	209.734	53.274
AccVictims	**574.593**	1.635E+04	6202.401	5768.966	4579.765	3276.469	9864.157	3151.514	769.699
Airline	–	–	–	–	–	–	–	–	–
WmFrancfort	–	–	–	–	–	–	–	–	–
WmLondon	–	–	–	–	–	–	–	–	–
WmMadrid	–	–	–	–	–	–	–	–	–
WmMilan	–	–	–	–	–	–	–	–	–
WmNewYork	–	–	–	–	–	–	–	–	–
WmParis	–	–	–	–	–	–	–	–	–
WmTokyo	–	–	–	–	–	–	–	–	–
Colgtems	0.041	2.892	0.126	0.117	0.124	0.127	0.127	0.124	**0.041**
Colgtepr	**0.055**	5.349	0.305	0.331	0.319	0.320	0.306	0.318	0.127
Crestms	**0.048**	3.188	0.290	0.070	0.061	0.059	3.182	0.054	0.057
Crestpr	**0.067**	1.842	0.074	0.082	0.071	0.077	0.075	0.078	0.074
Deceases	2418.620	2.050E+05	5.569E+04	2.030E+04	4.468E+05	1.090E+04	1.791E+05	1.211E+04	2561.455
Spectators	**1779.455**	1.680E+04	1.340E+04	9862.337	6037.541	6577.892	1.817E+04	6525.891	3542.563
SpaMovSpec	**792.077**	1.467E+04	7.183E+05	2378.327	1431.326	1186.523	1.498E+05	1169.323	845.093
ForMovSpec	**1956.254**	1.058E+04	6937.108	8684.155	9601.160	7221.250	6946.815	7257.428	2986.011
Exchange	–	–	–	–	–	–	–	–	–
Gasoline	**5.155**	1660.769	1274.047	1020.286	1124.020	1160.855	1477.676	1161.788	2558.699
MortCanc	–	–	–	–	–	–	–	–	–
MortMade	–	–	–	–	–	–	–	–	–
Books	–	–	–	–	–	–	–	–	–
Motorcycles	**3412.405**	8.231E+04	5.508E+04	5265.649	2.352E+04	5384.323	1.985E+05	5502.137	5.755E+05
Unemployed	–	–	–	–	–	–	–	–	–
FreeHouPrize	–	–	–	–	–	–	–	–	–
Prisoners	**325.697**	4.383E+04	2.803E+04	3.636E+04	2.565E+04	2.531E+04	2.802E+04	2.610E+04	1.365E+04
Takings	9328.618	7.679E+04	6.255E+05	4.382E+04	3.124E+04	2.072E+04	3.351E+05	2.048E+04	**6894.346**
TurIn	**4410.710**	5.087E+04	2.904E+05	9058.200	5240.458	5820.182	1.915E+05	5819.868	1.075E+04
TurOut	7681.529	1.471E+05	6259.051	6695.993	6204.934	**5397.359**	3.292E+04	5721.844	2.219E+04
TUrban	–	–	–	–	–	–	–	–	–
Cars	5.746E+04	3.549E+06	2.118E+05	2.542E+05	1.649E+05	1.599E+05	2.416E+05	1.633E+05	**8905.108**
HouseFin	9846.833	8.611E+04	2.500E+07	4.214E+04	3.388E+04	1.655E+04	5.835E+07	1.839E+04	**115.053**

Table 32. Comparison among the methods regarding MAE with horizon equal to 50.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**0.365**	300.871	4.122E+08	38.645	120.334	35.400	1.745E+07	36.387	15.339
AccDeath	**3.432**	850.075	858.711	771.181	746.098	782.730	853.883	793.102	19.618
AccVictims	**1.056**	426.920	208.815	189.178	127.398	112.715	280.035	108.503	10.064
Airline	–	–	–	–	–	–	–	–	–
WmFrancfort	–								
WmLondon	–								
WmMadrid	–								
WmMilan	–								
WmNewYork	–								
WmParis	–								
WmTokyo	–	–	–	–	–	–	–	–	–
Colgtems	**3.238**	240.459	126.071	117.148	123.205	127.175	126.782	124.428	18.560
Colgtepr	**0.479**	299.390	20.389	22.235	21.357	21.417	20.474	21.320	7.233
Crestms	**1.111**	174.119	68.401	15.837	14.042	13.630	753.876	12.503	13.616
Crestpr	**0.143**	49.648	4.296	4.769	4.093	4.436	4.331	4.519	4.228
Deceases	**0.316**	124.924	177.073	90.603	1613.277	46.527	617.371	50.324	8.103
Spectators	**3.415**	761.703	534.063	523.015	276.353	324.594	676.681	322.817	40.759
SpaMovSpec	**22.689**	449.441	1.198E+05	1058.265	638.056	550.148	2.965E+04	545.748	86.657
ForMovSpec	**5.783**	707.000	616.723	981.616	1051.018	709.152	630.310	705.742	41.718
Exchange	–	–	–	–	–	–	–	–	–
Gasoline	**0.084**	45.491	57.911	47.598	51.625	53.420	65.389	53.444	5.440
MortCanc	–								
MortMade	–								
Books	–								
Motorcycles	86.214	205.656	429.451	52.606	203.373	43.796	1762.440	44.128	**18.726**
Unemployed	–								
FreeHouPrize	–								
Prisoners	**0.136**	69.991	51.571	80.578	48.119	47.813	51.658	48.609	28.947
Takings	**3.752**	518.044	1512.548	142.119	101.862	67.707	964.452	67.397	6.460
TurIn	**0.534**	34.316	288.971	9.002	5.250	5.837	188.465	5.807	9.707
TurOut	**0.549**	54.821	5.363	6.107	5.627	4.909	26.724	5.202	9.291
TUrban	–								
Cars	19.166	756.952	934.502	1084.786	656.792	662.717	934.394	687.769	**19.111**
HouseFin	**5.529**	106.437	9.215E+04	136.596	82.807	58.223	1.275E+05	64.395	9.385

Table 33. Comparison among the methods regarding MAPE with horizon equal to 50.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**0.929**	34.946	7.182E+07	1.023	2.292	4.948	3.040E+06	5.221	2.241
AccDeath	1.046	136.949	5.579	5.663	**0.140**	5.387	5.255	5.611	0.983
AccVictims	**1.119**	30.780	4.802	10.164	2.885	5.405	10.893	5.192	1.597
Airline	–	–	–	–	–	–	–	–	–
WmFrancfort	–							–	–
WmLondon	–							–	–
WmMadrid	–					–	–	–	–
WmMilan	–							–	–
WmNewYork	–					–		–	–
WmParis	–					–		–	–
WmTokyo							–	–	–
Colgtems	0.986	70.205	3.023	2.820	2.991	3.070	3.007	3.009	**0.857**
Colgtepr	**0.928**	101.326	5.768	6.278	6.040	6.055	5.794	6.028	2.271
Crestms	1.005	65.197	5.391	0.605	0.590	0.608	66.117	**0.471**	1.410
Crestpr	0.986	26.147	0.598	0.846	0.598	**0.544**	0.645	0.674	1.320
Deceases	**0.969**	84.208	11.563	5.319	11.856	2.164	48.212	2.409	1.155
Spectators	**0.949**	9.698	7.362	5.670	3.002	3.797	10.197	3.767	1.850
SpaMovSpec	0.957	17.524	874.893	2.518	0.968	0.938	173.172	**0.883**	1.929
ForMovSpec	**0.955**	1.349	3.449	4.549	4.443	3.783	3.380	3.802	1.651
Exchange	–	–	–	–	–	–	–	–	–
Gasoline	**0.079**	21.463	17.631	16.127	17.814	18.398	20.150	18.412	0.277
MortCanc	–	–	–	–	–	–	–	–	–
MortMade	–	–	–	–	–	–	–	–	–
Books	–	–	–	–	–	–	–	–	–
Motorcycles	1.027	21.558	12.928	**0.837**	0.884	1.285	48.482	1.329	15.809
Unemployed	–	–	–	–	–	–	–	–	–
FreeHouPrize	–	–	–	–	–	–	–	–	–
Prisoners	**0.449**	70.154	42.247	73.219	35.819	34.712	42.203	37.161	2.012
Takings	**0.993**	8.299	64.204	4.744	2.362	2.243	27.556	2.208	1.975
TurIn	**1.071**	8.863	70.964	2.116	1.103	1.351	42.853	1.329	2.253
TurOut	1.060	19.298	**0.593**	0.785	0.667	0.698	2.905	0.733	0.897
TUrban	–	–	–	–	–	–	–	–	–
Cars	**1.205**	77.498	3.601	5.531	3.113	3.344	4.152	3.448	1.483
HouseFin	1.109	8.411	2624.211	4.540	0.959	**0.261**	6339.365	0.472	1.703

Table 34. Comparison among the methods regarding MASE with horizon equal to 50.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**2.871**	47.421	37.498	32.675	60.950	33.169	39.965	36.019	13.436
AccDeath	**0.739**	98.656	191.942	183.680	210.193	164.217	183.484	167.457	16.593
AccVictims	**1.388**	91.222	40.420	54.887	53.165	43.238	40.948	42.703	9.790
Airline	–	–	–	–	–	–	–	–	–
WmFrancfort	–	–	–	–	–	–	–	–	–
WmLondon	–	–	–	–	–	–	–	–	–
WmMadrid	–	–	–	–	–	–	–	–	–
WmMilan	–	–	–	–	–	–	–	–	–
WmNewYork	–	–	–	–	–	–	–	–	–
WmParis	–	–	–	–	–	–	–	–	–
WmTokyo	–	–	–	–	–	–	–	–	–
Colgtems	**3.919**	105.231	103.269	99.172	99.185	108.113	99.948	111.403	13.578
Colgtepr	**0.602**	35.656	20.485	20.916	21.551	20.710	20.205	21.004	6.314
Crestms	**0.897**	32.377	13.572	12.946	14.007	12.070	13.921	10.827	12.478
Crestpr	**0.121**	11.290	3.093	4.130	2.997	3.667	3.266	3.693	3.220
Deceases	**0.168**	71.347	33.601	61.468	778.560	20.134	41.727	24.588	5.628
Spectators	**2.720**	170.378	194.701	249.577	142.771	181.339	185.699	175.454	39.973
SpaMovSpec	**6.257**	104.456	129.015	298.928	121.342	106.450	161.463	101.097	53.849
ForMovSpec	**2.055**	101.817	310.910	401.059	270.464	295.469	303.967	285.575	33.305
Exchange	–	–	–	–	–	–	–	–	–
Gasoline	**5.689E-06**	15.335	47.513	48.220	48.550	50.101	47.629	50.148	5.116
MortCanc	–	–	–	–	–	–	–	–	–
MortMade	–	–	–	–	–	–	–	–	–
Books	–	–	–	–	–	–	–	–	–
Motorcycles	**4.280**	104.128	44.705	29.987	128.473	37.954	52.060	36.843	10.698
Unemployed	–	–	–	–	–	–	–	–	–
FreeHouPrize	–	–	–	–	–	–	–	–	–
Prisoners	**0.113**	19.440	21.538	40.040	21.836	21.150	21.521	22.281	25.346
Takings	**3.290**	110.490	69.577	133.860	70.899	57.712	78.176	58.382	4.899
TurIn	**1.279**	10.628	7.873	5.457	5.049	5.441	7.958	5.271	7.796
TurOut	**0.177**	13.124	3.444	3.683	3.981	3.906	4.620	4.011	6.374
TUrban	–	–	–	–	–	–	–	–	–
Cars	**2.184**	102.804	300.779	531.231	272.099	275.676	306.551	281.089	17.261
HouseFin	**3.886**	35.315	32.267	73.109	49.924	21.653	46.690	25.438	8.935

Table 35. Comparison among the methods regarding MdAPE with horizon equal to 50.

Data set	L-Co-R	EvRBF	NNEP	Fuzzy-WM	PolCuaLMS	RBFN	NNEP2	RBFN2	ARIMA
Accidents	**8.288**	33.569	40.181	37.588	55.635	39.337	40.621	43.402	14.404
AccDeath	10.464	**-119.053**	102.868	105.882	84.075	97.390	99.492	97.779	15.321
AccVictims	**6.130**	26.366	32.305	43.068	41.807	35.755	31.962	35.567	9.332
Airline	–	–	–	–	–	–	–	–	–
WmFrancfort	–	–	–	–	–	–	–	–	–
WmLondon	–	–	–	–	–	–	–	–	–
WmMadrid	–	–	–	–	–	–	–	–	–
WmMilan	–	–	–	–	–	–	–	–	–
WmNewYork	–	–	–	–	–	–	–	–	–
WmParis	–	–	–	–	–	–	–	–	–
WmTokyo	–	–	–	–	–	–	–	–	–
Colgtems	**12.057**	12.305	68.085	66.298	66.303	69.765	66.702	71.192	13.192
Colgtepr	**2.263**	16.190	18.593	18.936	19.455	18.761	18.364	19.001	6.121
Crestms	9.940	**2.788**	13.063	13.214	13.942	12.369	12.485	10.985	13.308
Crestpr	3.231	10.685	3.073	4.046	**2.986**	3.651	3.273	3.689	3.227
Deceases	7.211	93.842	36.997	47.541	37.382	21.848	39.165	27.564	**5.474**
Spectators	**15.322**	84.438	98.417	111.026	88.635	95.078	96.245	93.354	33.315
SpaMovSpec	41.146	**12.584**	53.749	132.706	82.435	81.466	44.004	81.315	59.270
ForMovSpec	**18.817**	108.238	120.283	133.029	149.457	119.169	118.646	117.520	28.551
Exchange	–	–	–	–	–	–	–	–	–
Gasoline	**0.007**	16.170	62.261	63.539	64.114	66.938	62.400	67.041	5.256
MortCanc	–	–	–	–	–	–	–	–	–
MortMade	–	–	–	–	–	–	–	–	–
Books	–	–	–	–	–	–	–	–	–
Motorcycles	25.802	14.495	47.594	28.186	88.603	45.927	48.422	44.253	**11.340**
Unemployed	–	–	–	–	–	–	–	–	–
FreeHouPrize	–	–	–	–	–	–	–	–	–
Prisoners	**0.368**	21.409	24.138	33.361	24.512	23.700	24.116	25.222	22.495
Takings	15.921	51.932	48.632	80.189	60.111	44.760	51.053	45.125	**5.022**
TurIn	**3.254**	10.337	7.594	5.312	4.926	5.296	7.404	5.144	7.895
TurOut	4.609	12.325	**3.409**	3.616	3.977	3.833	4.444	3.937	6.584
TUrban	–	–	–	–	–	–	–	–	–
Cars	23.245	**-179.490**	150.263	163.616	147.205	150.253	155.445	147.719	16.560
HouseFin	14.509	42.208	23.288	53.538	45.110	22.480	28.969	26.684	**9.248**

Table 36. Comparison among the methods regarding sMdAPE with horizon equal to 50.

Results of the methods for MAE, MAPE, MASE, MdAPE, and sMdAPE, respectively. Every figure represents the number of data bases (expressed as a percentage) in which every algorithm obtains the best result, distinguishing each horizon individually.
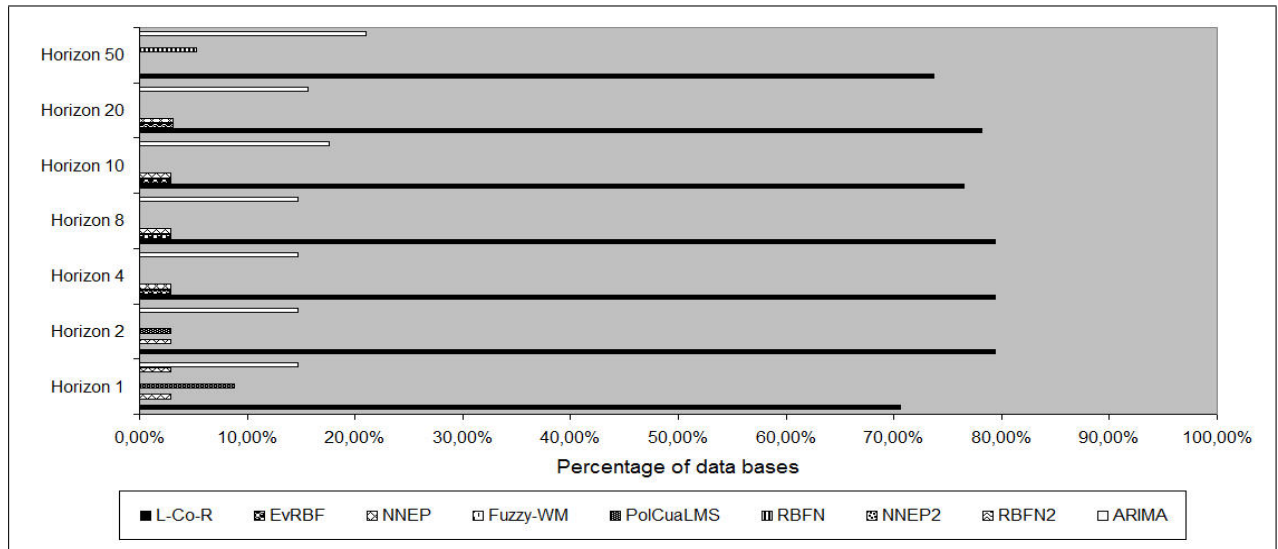

Figure 1. Graphic of the number of time series (expressed as a percentage) in which every algorithm obtains better results than the other methods with respect to MAE, for horizons 1, 2, 4, 8, 10, 20, and 50.

Figure 2. Graphic of the number of time series (expressed as a percentage) in which every algorithm obtains better results than the other methods with respect to MAPE, for horizons 1, 2, 4, 8, 10, 20, and 50.

Figure 3. Graphic of the number of time series (expressed as a percentage) in which every algorithm obtains better results than the other methods with respect to MASE, for horizons 1, 2, 4, 8, 10, 20, and 50.

Figure 4. Graphic of the number of time series (expressed as a percentage) in which every algorithm obtains better results than the other methods with respect to MdAPE, for horizons 1, 2, 4, 8, 10, 20, and 50.
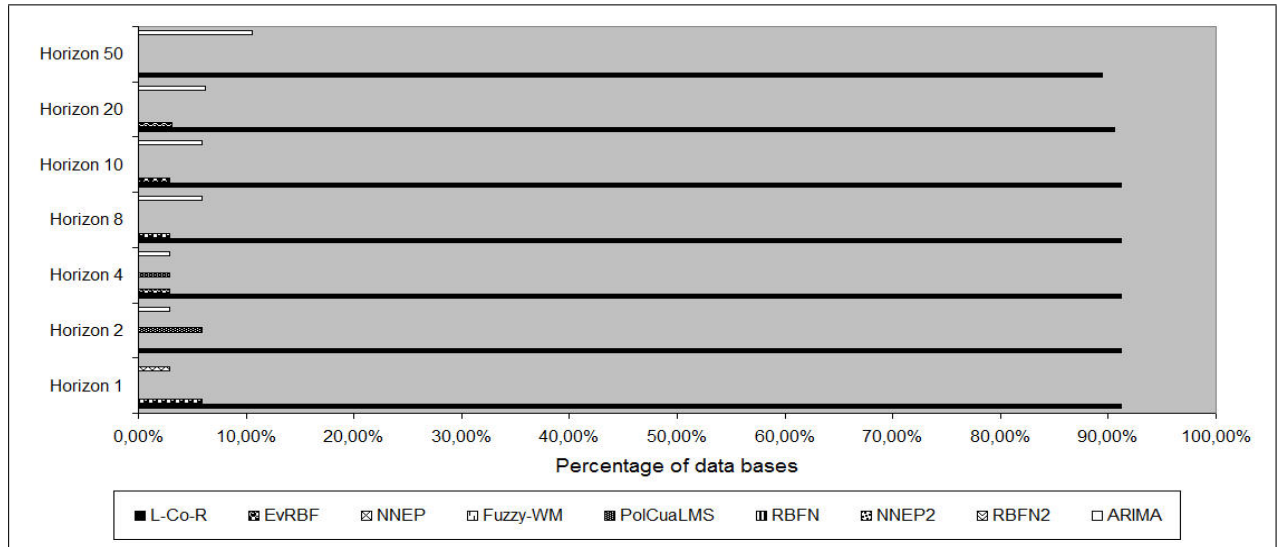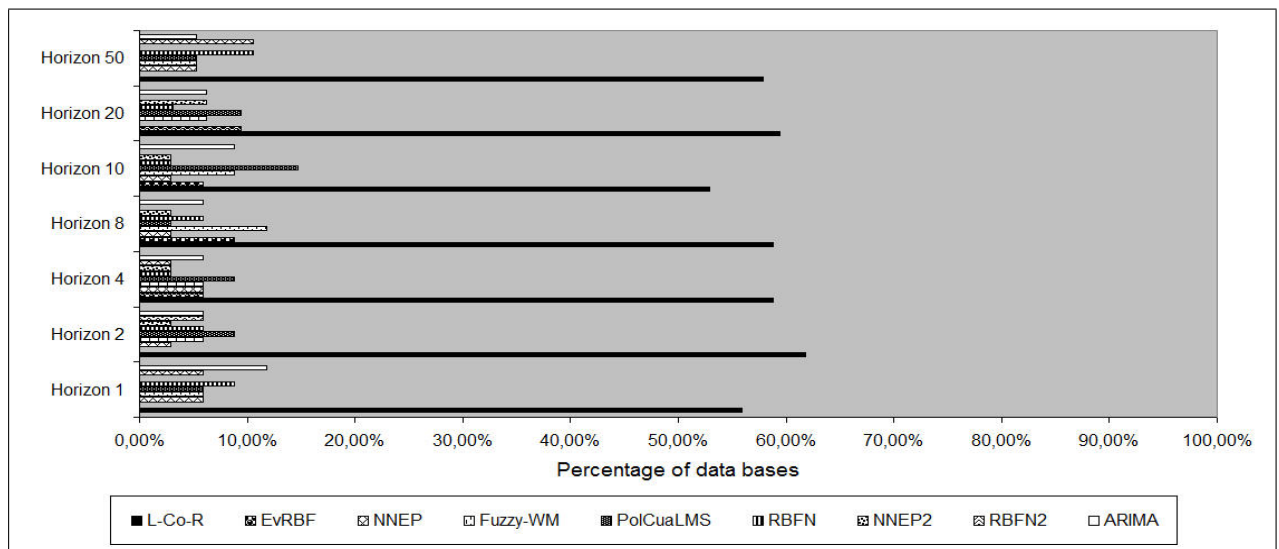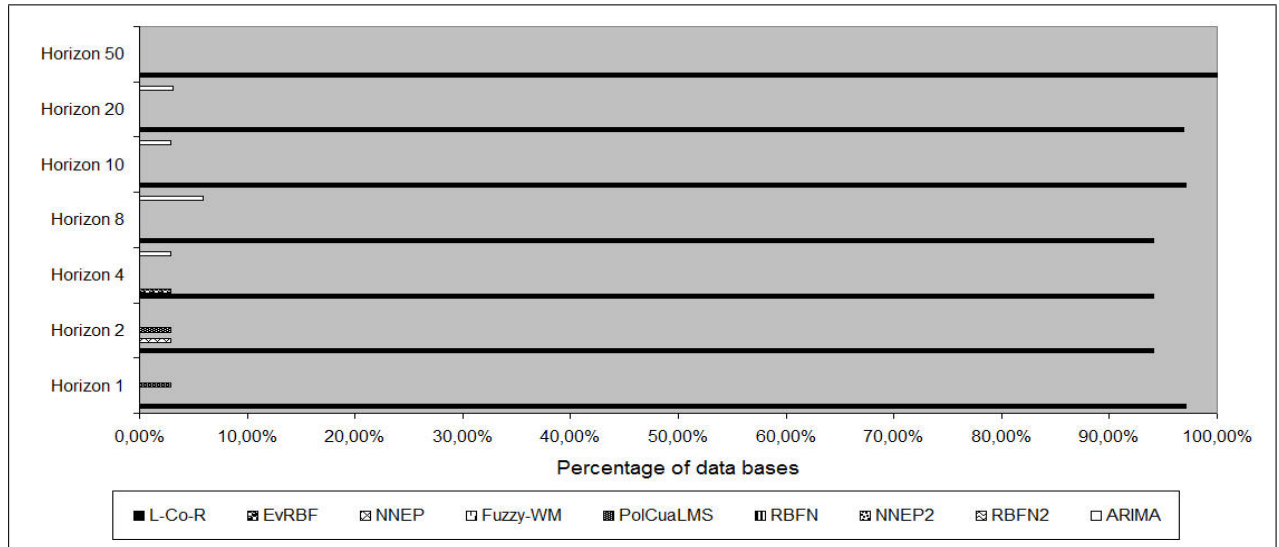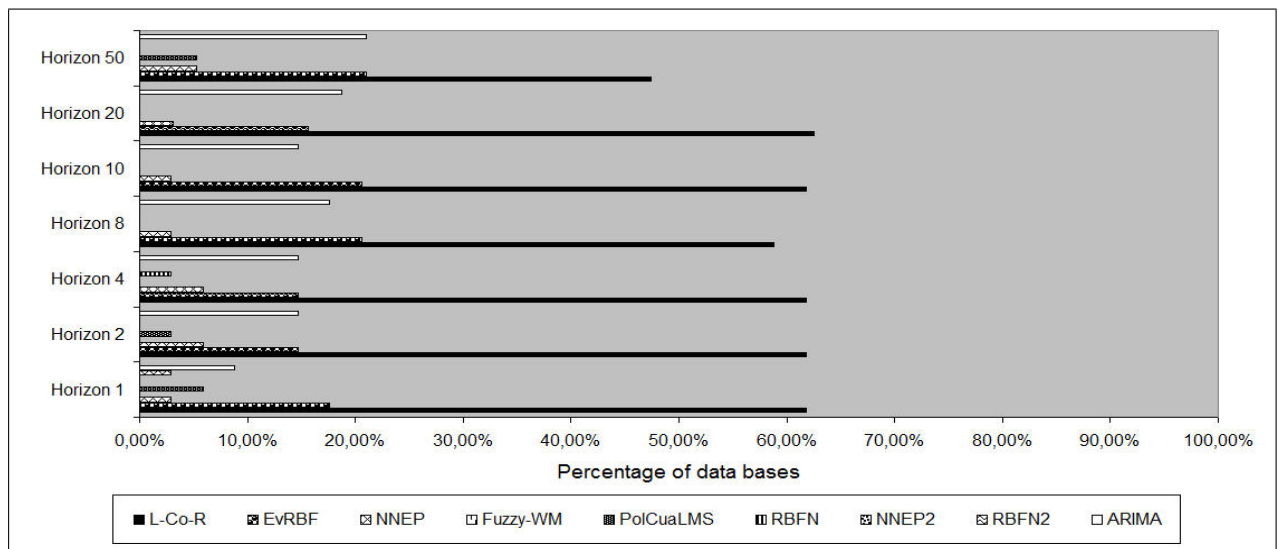

Figure 5. Graphic of the number of time series (expressed as a percentage) in which every algorithm obtains better results than the other methods with respect to sMdAPE, for horizons 1, 2, 4, 8, 10, 20, and 50.

2. Statistical study

Ranking of the methods obtained by Friedman method with respect to MAE, MAPE, MASE, MdAPE, and sMdAPE, and for horizon 1, 2, 4, 8, 10, 20, and 50, respectively.

MAE		MAPE		MASE		MdAPE		sMdAPE	
Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking
L-Co-R	**1.809**	**L-Co-R**	**1.412**	**L-Co-R**	**2.441**	**L-Co-R**	**1.118**	**L-Co-R**	**2.059**
ARIMA	3.294	ARIMA	3.382	RBFN	4.441	ARIMA	3.765	ARIMA	3.971
RBFN2	4.309	RBFN2	4.529	PolCuad.	4.529	RBFN	5.088	EvRBF	5.147
RBFN	4.309	RBFN	4.558	RBFN2	4.706	RBFN2	5.265	NNEP	5.206
PolCuad.	4.809	PolCuad.	5.118	ARIMA	4.735	NNEP	5.382	PolCuad.	5.441
Fuzzy-WM	5.506	Fuzzy-WM	5.324	Fuzzy-WM	4.794	PolCuad.	5.500	RBFN	5.500
NNEP	6.279	NNEP	6.441	NNEP	5.794	NNEP2	6.059	NNEP2	5.618
NNEP2	6.779	NNEP2	6.971	NNEP2	6.147	Fuzzy-WM	6.176	RBFN2	5.974
EvRBF	8.206	EvRBF	7.265	EvRBF	7.441	EvRBF	6.647	Fuzzy-WM	6.265

Table 37. Average rankings of the algorithms (Friedman) for horizon 1.

MAE		MAPE		MASE		MdAPE		sMdAPE	
Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking
L-Co-R	**1.647**	**L-Co-R**	**1.441**	**L-Co-R**	**2.412**	**L-Co-R**	**1.265**	**L-Co-R**	**1.918**
ARIMA	3.411	ARIMA	3.029	RBFN	4.235	ARIMA	3.450	ARIMA	3.353
RBFN2	4.264	RBFN	4.412	RBFN2	4.294	RBFN2	4.912	EvRBF	5.147
RBFN	4.382	RBFN2	4.412	PolCua.	4.559	RBFN	5.088	RBFN2	5.412
Fuzzy-WM	5.118	PolCua.	5.412	ARIMA	4.823	NNEP	5.235	RBFN	5.418
PolCua.	5.147	Fuzzy-WM	5.618	Fuzzy-WM	4.882	NNEP2	6.000	NNEP	5.441
NNEP	6.294	NNEP	6.382	NNEP	5.941	Fuzzy-WM	6.147	NNEP2	5.765
NNEP2	6.794	NNEP2	6.676	NNEP2	6.382	PolCua.	6.294	Fuzzy-WM	6.206
EvRBF	7.941	EvRBF	7.618	EvRBF	7.471	EvRBF	6.559	PolCua.	6.353

Table 38. Average rankings of the algorithms (Friedman) for horizon 2.

MAE		MAPE		MASE		MdAPE		sMdAPE	
Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking
L-Co-R	**1.529**	**L-Co-R**	**1.294**	**L-Co-R**	**2.441**	**L-Co-R**	**1.088**	**L-Co-R**	**1.853**
ARIMA	3.500	ARIMA	3.147	PolCua.	4.265	ARIMA	3.235	ARIMA	3.206
RBFN	4.059	RBFN	4.147	RBFN	4.294	RBFN	4.912	EvRBF	5.029
RBFN2	4.471	RBFN2	4.618	ARIMA	4.824	RBFN2	5.353	NNEP	5.353
PolCua.	5.029	PolCua.	5.471	RBFN2	4.882	NNEP	5.647	RBFN	5.412
Fuzzy-WM	5.059	Fuzzy-WM	5.529	Fuzzy-WM	4.912	Fuzzy-WM	5.941	NNEP2	5.618
NNEP	6.647	NNEP	6.675	NNEP	6.059	NNEP2	6.176	RBFN2	5.765
NNEP2	6.971	NNEP2	6.912	NNEP2	6.118	PolCua.	6.265	Fuzzy-WM	6.176
EvRBF	7.735	EvRBF	7.118	EvRBF	7.206	EvRBF	6.382	PolCua.	6.588

Table 39. Average rankings of the algorithms (Friedman) for horizon 4.

MAE		MAPE		MASE		MdAPE		sMdAPE	
Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking
L-Co-R	**1.676**	**L-Co-R**	**1.324**	**L-Co-R**	**2.265**	**L-Co-R**	**1.088**	**L-Co-R**	**1.706**
ARIMA	3.441	ARIMA	3.059	Fuzzy-WM	4.382	ARIMA	3.235	ARIMA	3.147
RBFN	4.441	RBFN2	4.765	RBFN	4.706	RBFN	5.088	EvRBF	4.971
RBFN2	4.441	RBFN	4.824	RBFN2	4.794	RBFN2	5.147	RBFN	5.324
Fuzzy-WM	5.147	Fuzzy-WM	5.441	ARIMA	4.853	Fuzzy-WM	5.374	RBFN2	5.441
PolCua.	5.500	PolCua.	5.735	PolCua.	4.971	NNEP	5.618	Fuzzy-WM	5.735
NNEP	5.824	NNEP	5.971	NNEP	5.735	NNEP2	6.147	NNEP	5.853
NNEP2	6.735	NNEP2	6.471	NNEP2	5.971	PolCua.	6.471	NNEP2	6.235
EvRBF	7.794	EvRBF	7.412	EvRBF	7.324	EvRBF	6.471	PolCua.	6.588

Table 40. Average rankings of the algorithms (Friedman) for horizon 8.

MAE		MAPE		MASE		MdAPE		sMdAPE	
Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking
L-Co-R	**1.559**	**L-Co-R**	**1.206**	**L-Co-R**	**2.353**	**L-Co-R**	**1.029**	**L-Co-R**	**1.706**
ARIMA	3.382	ARIMA	2.918	Fuzzy-WM	4.559	ARIMA	3.265	ARIMA	3.206
RBFN2	4.382	RBFN	4.706	PolCua.	4.588	RBFN	5.235	EvRBF	4.941
RBFN	4.559	RBFN2	4.794	RBFN	4.647	RBFN2	5.235	NNEP	5.294
Fuzzy-WM	5.176	Fuzzy-WM	5.265	RBFN2	4.765	NNEP	5.382	RBFN2	5.529
PolCua.	5.265	PolCua.	5.559	ARIMA	4.765	NNEP2	5.971	NNEP2	5.618
NNEP	6.471	NNEP	6.471	NNEP2	5.824	PolCua.	6.088	RBFN	5.618
NNEP2	6.500	NNEP2	6.765	NNEP	6.265	Fuzzy-WM	6.353	PolCua.	6.412
EvRBF	7.706	EvRBF	7.324	EvRBF	7.235	EvRBF	6.441	Fuzzy-WM	6.441

Table 41. Average rankings of the algorithms (Friedman) for horizon 10.

MAE		MAPE		MASE		MdAPE		sMdAPE	
Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking
L-Co-R	**1.469**	**L-Co-R**	**1.250**	**L-Co-R**	**2.218**	**L-Co-R**	**1.063**	**L-Co-R**	**1.594**
ARIMA	2.906	ARIMA	2.781	RBFN2	4.531	ARIMA	3.156	ARIMA	3.063
RBFN2	4.469	RBFN2	4.531	ARIMA	4.563	RBFN	5.156	EvRBF	4.750
RBFN	4.531	RBFN	4.781	PolCua.	4.718	RBFN2	5.531	NNEP	5.436
Fuzzy-WM	5.406	Fuzzy-WM	5.438	RBFN	4.750	NNEP	5.531	RBFN	5.500
PolCua.	5.656	PolCua.	5.844	Fuzzy-WM	4.969	NNEP2	5.750	NNEP2	5.844
NNEP	6.375	NNEP	6.406	NNEP2	5.906	Fuzzy-WM	5.844	RBFN2	6.031
NNEP2	6.563	NNEP2	6.719	NNEP	6.188	EvRBF	6.313	Fuzzy-WM	6.156
EvRBF	7.625	EvRBF	7.250	EvRBF	7.156	PolCua.	6.656	PolCua.	6.625

Table 42. Average rankings of the algorithms (Friedman) for horizon 20.

MAE		MAPE		MASE		MdAPE		sMdAPE	
Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking	Method	Ranking
L-Co-R	**1.421**	**L-Co-R**	**1.263**	**L-Co-R**	**2.368**	**L-Co-R**	**1.000**	**L-Co-R**	**2.000**
ARIMA	3.158	ARIMA	2.474	PolCua.	3.737	ARIMA	3.053	ARIMA	3.105
RBFN	4.053	RBFN2	4.316	RBFN	4.263	RBFN	4.789	EvRBF	4.105
RBFN2	4.105	RBFN	4.474	RBFN2	4.474	RBFN2	5.263	RBFN	5.263
PolCua.	4.842	PolCua.	4.895	ARIMA	4.579	NNEP	5.526	NNEP	5.474
Fuzzy-WM	5.579	Fuzzy-WM	6.105	Fuzzy-WM	5.579	PolCua.	6.105	RBFN2	5.737
NNEP	6.526	NNEP	6.895	NNEP	6.053	NNEP2	6.211	NNEP2	5.789
NNEP2	7.105	EvRBF	7.105	NNEP2	7.053	EvRBF	6.368	PolCua.	6.421
EvRBF	8.211	NNEP2	7.474	EvRBF	7.895	Fuzzy-WM	6.684	Fuzzy-WM	7.105

Table 43. Average rankings of the algorithms (Friedman) for horizon 50.

Results of the Holm procedure regarding horizon 1, 2, 4, 8, 10, 20, and 50, respectively.

Measure	Alg$_{Control}$	i	Algorithm	z	p	α/i	Hypothesis
MAE	L-Co-R	8	EvRBF	9.631	5.912E-22	0.006	**Rejected**
		7	NNEP2	7.483	7.240E-14	0.007	**Rejected**
		6	NNEP	6.731	1.689E-11	0.008	**Rejected**
		5	Fuzzy-WM	5.114	3.147E-07	0.01	**Rejected**
		4	PolCuaLMS	4.517	6.283E-06	0.013	**Rejected**
		3	RBFN2	3.764	1.673E-04	0.017	**Rejected**
		2	RBFN	3.764	1.673E-04	0.025	**Rejected**
		1	ARIMA	2.236	2.534E-02	0.05	**Rejected**
MAPE	L-Co-R	8	EvRBF	8.812	1.231E-18	0.006	**Rejected**
		7	NNEP2	8.369	5.808E-17	0.007	**Rejected**
		6	NNEP	7.572	3.675E-14	0.008	**Rejected**
		5	Fuzzy-WM	5.889	3.877E-09	0.01	**Rejected**
		4	PolCuaLMS	5.579	2.414E-08	0.013	**Rejected**
		3	RBFN	4.738	2.158E-06	0.017	**Rejected**
		2	RBFN2	4.694	2.682E-06	0.025	**Rejected**
		1	ARIMA	2.967	3.009E-03	0.05	**Rejected**
MASE	L-Co-R	8	EvRBF	7.528	5.163E-14	0.006	**Rejected**
		7	NNEP2	5.579	2.414E-08	0.007	**Rejected**
		6	NNEP	5.048	4.464E-07	0.008	**Rejected**
		5	Fuzzy-WM	3.542	3.964E-04	0.01	**Rejected**
		4	ARIMA	3.454	5.525E-04	0.013	**Rejected**
		3	RBFN2	3.410	6.505E-04	0.017	**Rejected**
		2	PolCuaLMS	3.144	1.667E-03	0.025	**Rejected**
		1	RBFN	2.967	3.009E-03	0.05	**Rejected**
MdAPE	L-Co-R	8	EvRBF	8.325	8.449E-17	0.006	**Rejected**
		7	Fuzzy-WM	7.616	2.611E-14	0.007	**Rejected**
		6	NNEP2	7.439	1.013E-13	0.008	**Rejected**
		5	PolCuaLMS	6.598	4.172E-11	0.01	**Rejected**
		4	NNEP	6.421	1.356E-10	0.013	**Rejected**
		3	RBFN2	6.244	4.277E-10	0.017	**Rejected**
		2	RBFN	5.978	2.260E-09	0.025	**Rejected**
		1	ARIMA	3.985	6.740E-05	0.05	**Rejected**
sMdAPE	L-Co-R	8	Fuzzy-WM	6.332	2.418E-10	0.006	**Rejected**
		7	RBFN2	5.624	1.870E-08	0.007	**Rejected**
		6	NNEP2	5.358	8.416E-08	0.008	**Rejected**
		5	RBFN	5.181	2.209E-07	0.01	**Rejected**
		4	PolCuaLMS	5.092	3.538E-07	0.013	**Rejected**
		3	NNEP	4.738	2.158E-06	0.017	**Rejected**
		2	EvRBF	4.649	3.328E-06	0.025	**Rejected**
		1	ARIMA	2.878	3.999E-03	0.05	**Rejected**

Table 44. Results of Holm's procedure in every comparison between control algorithm and the rest of algorithms for horizon 1.

Measure	Alg$_{Control}$	i	Algorithm	z	p	α/i	Hypothesis
MAE	L-Co-R	8	EvRBF	9.476	2.640E-21	0.006	**Rejected**
		7	NNEP2	7.749	9.252E-15	0.007	**Rejected**
		6	NNEP	6.996	2.627E-12	0.008	**Rejected**
		5	PolCuaLMS	5.269	1.369E-07	0.01	**Rejected**
		4	Fuzzy-WM	5.225	1.740E-07	0.013	**Rejected**
		3	RBFN	4.118	3.820E-05	0.017	**Rejected**
		2	RBFN2	3.941	8.115E-05	0.025	**Rejected**
		1	ARIMA	2.657	7.888E-03	0.05	**Rejected**
MAPE	L-Co-R	8	EvRBF	9.299	1.418E-20	0.006	**Rejected**
		7	NNEP2	7.882	3.223E-15	0.007	**Rejected**
		6	NNEP	7.439	1.013E-13	0.008	**Rejected**
		5	Fuzzy-WM	6.288	3.219E-10	0.01	**Rejected**
		4	PolCuaLMS	5.978	2.260E-09	0.013	**Rejected**
		3	RBFN2	4.472	7.736E-06	0.017	**Rejected**
		2	RBFN	4.472	7.736E-06	0.025	**Rejected**
		1	ARIMA	2.391	1.680E-02	0.05	**Rejected**
MASE	L-Co-R	8	EvRBF	7.616	2.611E-14	0.006	**Rejected**
		7	NNEP2	5.978	2.260E-09	0.007	**Rejected**
		6	NNEP	5.314	1.074E-07	0.008	**Rejected**
		5	Fuzzy-WM	3.720	1.996E-04	0.01	**Rejected**
		4	ARIMA	3.631	2.823E-04	0.013	**Rejected**
		3	PolCuaLMS	3.232	1.227E-03	0.017	**Rejected**
		2	RBFN2	2.834	4.597E-03	0.025	**Rejected**
		1	RBFN	2.745	6.044E-03	0.05	**Rejected**
MdAPE	L-Co-R	8	EvRBF	7.971	1.580E-15	0.006	**Rejected**
		7	PolCuaLMS	7.572	3.675E-14	0.007	**Rejected**
		6	Fuzzy-WM	7.351	1.973E-13	0.008	**Rejected**
		5	NNEP2	7.129	1.010E-12	0.01	**Rejected**
		4	NNEP	5.978	2.260E-09	0.013	**Rejected**
		3	RBFN	5.756	8.588E-09	0.017	**Rejected**
		2	RBFN2	5.491	4.001E-08	0.025	**Rejected**
		1	ARIMA	3.365	7.645E-04	0.05	**Rejected**
sMdAPE	L-Co-R	8	PolCuaLMS	6.686	2.287E-11	0.006	**Rejected**
		7	Fuzzy-WM	6.465	1.013E-10	0.007	**Rejected**
		6	NNEP2	5.801	6.601E-09	0.008	**Rejected**
		5	NNEP	5.314	1.074E-07	0.01	**Rejected**
		4	RBFN2	5.269	1.369E-07	0.013	**Rejected**
		3	RBFN	5.269	1.369E-07	0.017	**Rejected**
		2	EvRBF	4.871	1.111E-06	0.025	**Rejected**
		1	ARIMA	2.170	3.003E-02	0.05	**Rejected**

Table 45. Results of Holm's procedure in every comparison between control algorithm and the rest of algorithms for horizon 2.

Measure	Alg$_{Control}$	i	Algorithm	z	p	α/i	Hypothesis
MAE	L-Co-R	8	EvRBF	9.343	9.343E-21	0.006	**Rejected**
		7	NNEP2	8.192	2.571E-16	0.007	**Rejected**
		6	NNEP	7.705	1.310E-14	0.008	**Rejected**
		5	Fuzzy-WM	5.314	1.074E-07	0.01	**Rejected**
		4	PolCuaLMS	5.269	1.369E-07	0.013	**Rejected**
		3	RBFN2	4.428	9.508E-06	0.017	**Rejected**
		2	RBFN	3.808	1.400E-04	0.025	**Rejected**
		1	ARIMA	2.967	3.009E-03	0.05	**Rejected**
MAPE	L-Co-R	8	EvRBF	8.768	1.825E-18	0.006	**Rejected**
		7	NNEP2	8.458	2.729E-17	0.007	**Rejected**
		6	NNEP	8.236	1.777E-16	0.008	**Rejected**
		5	Fuzzy-WM	6.376	1.813E-10	0.01	**Rejected**
		4	PolCuaLMS	6.288	3.219E-10	0.013	**Rejected**
		3	RBFN2	5.004	5.623E-07	0.017	**Rejected**
		2	RBFN	4.295	1.745E-05	0.025	**Rejected**
		1	ARIMA	2.790	5.276E-03	0.05	**Rejected**
MASE	L-Co-R	8	EvRBF	7.173	7.311E-13	0.006	**Rejected**
		7	NNEP2	5.535	3.111E-08	0.007	**Rejected**
		6	NNEP	5.447	5.136E-08	0.008	**Rejected**
		5	Fuzzy-WM	3.720	1.996E-04	0.01	**Rejected**
		4	RBFN2	3.675	2.376E-04	0.013	**Rejected**
		3	ARIMA	3.587	3.348E-04	0.017	**Rejected**
		2	RBFN	2.790	5.276E-03	0.025	**Rejected**
		1	PolCuaLMS	2.745	6.044E-03	0.05	**Rejected**
MdAPE	L-Co-R	8	EvRBF	7.971	1.580E-15	0.006	**Rejected**
		7	PolCuaLMS	7.793	6.522E-15	0.007	**Rejected**
		6	NNEP2	7.661	1.851E-14	0.008	**Rejected**
		5	Fuzzy-WM	7.306	2.746E-13	0.01	**Rejected**
		4	NNEP	6.864	6.719E-12	0.013	**Rejected**
		3	RBFN2	6.421	1.356E-10	0.017	**Rejected**
		2	RBFN	5.756	8.588E-09	0.025	**Rejected**
		1	ARIMA	3.232	1.227E-03	0.05	**Rejected**
sMdAPE	L-Co-R	8	PolCuaLMS	7.129	1.010E-12	0.006	**Rejected**
		7	Fuzzy-WM	6.509	7.552E-11	0.007	**Rejected**
		6	RBFN2	5.889	3.877E-09	0.008	**Rejected**
		5	NNEP2	5.668	1.445E-08	0.01	**Rejected**
		4	RBFN	5.358	8.416E-08	0.013	**Rejected**
		3	NNEP	5.269	1.369E-07	0.017	**Rejected**
		2	EvRBF	4.782	1.733E-06	0.025	**Rejected**
		1	ARIMA	2.037	4.166E-02	0.05	**Rejected**

Table 46. Results of Holm's procedure in every comparison between control algorithm and the rest of algorithms for horizon 4.

Measure	Alg$_{Control}$	i	Algorithm	z	p	α/i	Hypothesis
MAE	L-Co-R	8	EvRBF	9.210	3.249E-20	0.006	**Rejected**
		7	NNEP2	7.616	2.611E-14	0.007	**Rejected**
		6	NNEP	6.244	4.277E-10	0.008	**Rejected**
		5	PolCuaLMS	5.756	8.588E-09	0.01	**Rejected**
		4	Fuzzy-WM	5.225	1.740E-07	0.013	**Rejected**
		3	RBFN2	4.162	3.149E-05	0.017	**Rejected**
		2	RBFN	4.162	3.149E-05	0.025	**Rejected**
		1	ARIMA	2.657	7.888E-03	0.05	**Rejected**
MAPE	L-Co-R	8	EvRBF	9.166	4.904E-20	0.006	**Rejected**
		7	NNEP2	7.749	9.252E-15	0.007	**Rejected**
		6	NNEP	6.996	2.627E-12	0.008	**Rejected**
		5	PolCuaLMS	6.642	3.092E-11	0.01	**Rejected**
		4	Fuzzy-WM	6.199	5.671E-10	0.013	**Rejected**
		3	RBFN	5.269	1.369E-07	0.017	**Rejected**
		2	RBFN2	5.181	2.209E-07	0.025	**Rejected**
		1	ARIMA	2.613	8.987E-03	0.05	**Rejected**
MASE	L-Co-R	8	EvRBF	7.616	2.611E-14	0.006	**Rejected**
		7	NNEP2	5.579	2.414E-08	0.007	**Rejected**
		6	NNEP	5.225	1.740E-07	0.008	**Rejected**
		5	PolCuaLMS	4.074	4.625E-05	0.01	**Rejected**
		4	ARIMA	3.897	9.751E-05	0.013	**Rejected**
		3	RBFN2	3.808	1.400E-04	0.017	**Rejected**
		2	RBFN	3.675	2.376E-04	0.025	**Rejected**
		1	Fuzzy-WM	3.188	1.432E-03	0.05	**Rejected**
MdAPE	L-Co-R	8	EvRBF	8.103	5.345E-16	0.006	**Rejected**
		7	PolCuaLMS	8.103	5.345E-16	0.007	**Rejected**
		6	NNEP2	7.616	2.611E-14	0.008	**Rejected**
		5	Fuzzy-WM	6.996	2.627E-12	0.01	**Rejected**
		4	NNEP	6.819	9.153E-12	0.013	**Rejected**
		3	RBFN2	6.111	9.917E-10	0.017	**Rejected**
		2	RBFN	6.022	1.721E-09	0.025	**Rejected**
		1	ARIMA	3.232	1.227E-03	0.05	**Rejected**
sMdAPE	L-Co-R	8	PolCuaLMS	7.351	1.973E-13	0.006	**Rejected**
		7	NNEP2	6.819	9.153E-12	0.007	**Rejected**
		6	NNEP	6.244	4.277E-10	0.008	**Rejected**
		5	Fuzzy-WM	6.066	1.308E-09	0.01	**Rejected**
		4	RBFN2	5.624	1.870E-08	0.013	**Rejected**
		3	RBFN	5.447	5.136E-08	0.017	**Rejected**
		2	EvRBF	4.915	8.871E-07	0.025	**Rejected**
		1	ARIMA	2.170	3.003E-02	0.05	**Rejected**

Table 47. Results of Holm's procedure in every comparison between control algorithm and the rest of algorithms for horizon 8.

Measure	Alg$_\text{Control}$	i	Algorithm	z	p	α/i	Hypothesis
MAE	L-Co-R	8	EvRBF	9.255	2.149E-20	0.006	**Rejected**
		7	NNEP2	7.439	1.013E-13	0.007	**Rejected**
		6	NNEP	7.395	1.415E-13	0.008	**Rejected**
		5	PolCuaLMS	5.579	2.414E-08	0.01	**Rejected**
		4	Fuzzy-WM	5.447	5.136E-08	0.013	**Rejected**
		3	RBFN	4.517	6.283E-06	0.017	**Rejected**
		2	RBFN2	4.251	2.129E-05	0.025	**Rejected**
		1	ARIMA	2.745	6.044E-03	0.05	**Rejected**
MAPE	L-Co-R	8	EvRBF	9.210	3.249E-20	0.006	**Rejected**
		7	NNEP2	8.369	5.808E-17	0.007	**Rejected**
		6	NNEP	7.926	2.259E-15	0.008	**Rejected**
		5	PolCuaLMS	6.554	5.619E-11	0.01	**Rejected**
		4	Fuzzy-WM	6.111	9.917E-10	0.013	**Rejected**
		3	RBFN2	5.402	6.581E-08	0.017	**Rejected**
		2	RBFN	5.269	1.369E-07	0.025	**Rejected**
		1	ARIMA	2.568	1.022E-02	0.05	**Rejected**
MASE	L-Co-R	8	EvRBF	7.351	1.973E-13	0.006	**Rejected**
		7	NNEP	5.889	3.877E-09	0.007	**Rejected**
		6	NNEP2	5.225	1.740E-07	0.008	**Rejected**
		5	ARIMA	3.631	2.823E-04	0.01	**Rejected**
		4	RBFN2	3.631	2.823E-04	0.013	**Rejected**
		3	RBFN	3.454	5.525E-04	0.017	**Rejected**
		2	PolCuaLMS	3.365	7.645E-04	0.025	**Rejected**
		1	Fuzzy-WM	3.321	8.968E-04	0.05	**Rejected**
MdAPE	L-Co-R	8	EvRBF	8.148	3.710E-16	0.006	**Rejected**
		7	Fuzzy-WM	8.015	1.103E-15	0.007	**Rejected**
		6	PolCuaLMS	7.616	2.611E-14	0.008	**Rejected**
		5	NNEP2	7.439	1.013E-13	0.01	**Rejected**
		4	NNEP	6.554	5.619E-11	0.013	**Rejected**
		3	RBFN	6.332	2.418E-10	0.017	**Rejected**
		2	RBFN2	6.332	2.418E-10	0.025	**Rejected**
		1	ARIMA	3.365	7.645E-04	0.05	**Rejected**
sMdAPE	L-Co-R	8	Fuzzy-WM	7.129	1.010E-12	0.006	**Rejected**
		7	PolCuaLMS	7.085	1.391E-12	0.007	**Rejected**
		6	RBFN	5.889	3.877E-09	0.008	**Rejected**
		5	NNEP2	5.889	3.877E-09	0.01	**Rejected**
		4	NNEP	5.756	8.588E-09	0.013	**Rejected**
		3	RBFN2	5.756	8.588E-09	0.017	**Rejected**
		2	EvRBF	4.871	1.111E-06	0.025	**Rejected**
		1	ARIMA	2.258	2.393E-02	0.05	**Rejected**

Table 48. Results of Holm's procedure in every comparison between control algorithm and the rest of algorithms for horizon 10.

Measure	Alg$_{Control}$	i	Algorithm	z	p	α/i	Hypothesis
MAE	L-Co-R	8	EvRBF	8.992	2.433E-19	0.006	**Rejected**
		7	NNEP2	7.440	1.008E-13	0.007	**Rejected**
		6	NNEP	7.166	7.720E-13	0.008	**Rejected**
		5	PolCuaLMS	6.116	9.581E-10	0.01	**Rejected**
		4	Fuzzy-WM	5.751	8.867E-09	0.013	**Rejected**
		3	RBFN	4.473	7.711E-06	0.017	**Rejected**
		2	RBFN2	4.382	1.177E-05	0.025	**Rejected**
		1	ARIMA	2.100	3.576E-02	0.05	**Rejected**
MAPE	L-Co-R	8	EvRBF	8.764	1.892E-18	0.006	**Rejected**
		7	NNEP2	7.988	1.376E-15	0.007	**Rejected**
		6	NNEP	7.531	5.028E-14	0.008	**Rejected**
		5	PolCuaLMS	6.710	1.952E-11	0.01	**Rejected**
		4	Fuzzy-WM	6.116	9.581E-10	0.013	**Rejected**
		3	RBFN	5.158	2.500E-07	0.017	**Rejected**
		2	RBFN2	4.793	1.647E-06	0.025	**Rejected**
		1	ARIMA	2.237	2.532E-02	0.05	**Rejected**
MASE	L-Co-R	8	EvRBF	7.212	5.527E-13	0.006	**Rejected**
		7	NNEP	5.797	6.762E-09	0.007	**Rejected**
		6	NNEP2	5.386	7.207E-08	0.008	**Rejected**
		5	Fuzzy-WM	4.017	5.904E-05	0.01	**Rejected**
		4	RBFN	3.697	2.181E-04	0.013	**Rejected**
		3	PolCuaLMS	3.651	2.607E-04	0.017	**Rejected**
		2	ARIMA	3.423	6.187E-04	0.025	**Rejected**
		1	RBFN2	3.378	7.312E-04	0.05	**Rejected**
MdAPE	L-Co-R	8	PolCuaLMS	8.170	3.079E-16	0.006	**Rejected**
		7	EvRBF	7.668	1.745E-14	0.007	**Rejected**
		6	Fuzzy-WM	6.983	2.880E-12	0.008	**Rejected**
		5	NNEP2	6.847	7.566E-12	0.01	**Rejected**
		4	NNEP	6.527	6.709E-11	0.013	**Rejected**
		3	RBFN2	6.527	6.709E-11	0.017	**Rejected**
		2	RBFN	5.979	2.241E-09	0.025	**Rejected**
		1	ARIMA	3.058	2.227E-03	0.05	**Rejected**
sMdAPE	L-Co-R	8	PolCuaLMS	7.349	2.003E-13	0.006	**Rejected**
		7	Fuzzy-WM	6.664	2.666E-11	0.007	**Rejected**
		6	RBFN2	6.481	9.089E-11	0.008	**Rejected**
		5	NNEP2	6.208	5.383E-10	0.01	**Rejected**
		4	RBFN	5.705	1.160E-08	0.013	**Rejected**
		3	NNEP	5.614	1.975E-08	0.017	**Rejected**
		2	EvRBF	4.610	4.027E-06	0.025	**Rejected**
		1	ARIMA	2.145	3.193E-02	0.05	**Rejected**

Table 49. Results of Holm's procedure in every comparison between control algorithm and the rest of algorithms for horizon 20.

Measure	Alg$_{Control}$	i	Algorithm	z	p	α/i	Hypothesis
MAE	L-Co-R	8	EvRBF	7.641	2.150E-14	0.006	**Rejected**
		7	NNEP2	6.397	1.581E-10	0.007	**Rejected**
		6	NNEP	5.746	9.150E-09	0.008	**Rejected**
		5	Fuzzy-WM	4.680	2.875E-06	0.01	**Rejected**
		4	PolCuaLMS	3.850	1.180E-04	0.013	**Rejected**
		3	RBFN2	3.021	2.520E-03	0.017	**Rejected**
		2	RBFN	2.962	3.059E-03	0.025	**Rejected**
		1	ARIMA	1.955	5.061E-02	0.05	**Rejected**
MAPE	L-Co-R	8	NNEP2	6.990	2.754E-12	0.006	**Rejected**
		7	EvRBF	6.575	4.863E-11	0.007	**Rejected**
		6	NNEP	6.338	2.326E-10	0.008	**Rejected**
		5	Fuzzy-WM	5.450	5.048E-08	0.01	**Rejected**
		4	PolCuaLMS	4.087	4.366E-05	0.013	**Rejected**
		3	RBFN	3.613	3.023E-04	0.017	**Rejected**
		2	RBFN2	3.436	5.912E-04	0.025	**Rejected**
		1	ARIMA	1.362	1.731E-01	0.05	**Non reject.**
MASE	L-Co-R	8	EvRBF	6.220	4.982E-10	0.006	**Rejected**
		7	NNEP2	5.272	1.350E-07	0.007	**Rejected**
		6	NNEP	4.146	3.377E-05	0.008	**Rejected**
		5	Fuzzy-WM	3.613	3.023E-04	0.01	**Rejected**
		4	RBFN2	2.369	1.782E-02	0.013	**Rejected**
		3	RBFN	2.132	3.297E-02	0.017	**Rejected**
		2	PolCuaLMS	1.540	1.235E-01	0.025	**Non reject.**
		1	ARIMA	1.362	1.731E-01	0.05	**Non reject.**
MdAPE	L-Co-R	8	Fuzzy-WM	6.397	1.581E-10	0.006	**Rejected**
		7	EvRBF	6.042	1.523E-09	0.007	**Rejected**
		6	NNEP2	5.864	4.512E-09	0.008	**Rejected**
		5	PolCuaLMS	5.746	9.150E-09	0.01	**Rejected**
		4	NNEP	5.094	3.502E-07	0.013	**Rejected**
		3	RBFN2	4.798	1.602E-06	0.017	**Rejected**
		2	RBFN	4.265	2.000E-05	0.025	**Rejected**
		1	ARIMA	2.310	2.088E-02	0.05	**Rejected**
sMdAPE	L-Co-R	8	Fuzzy-WM	5.746	9.150E-09	0.006	**Rejected**
		7	PolCuaLMS	4.976	6.500E-07	0.007	**Rejected**
		6	NNEP2	4.265	2.000E-05	0.008	**Rejected**
		5	RBFN2	4.206	2.603E-05	0.01	**Rejected**
		4	NNEP	3.910	9.249E-05	0.013	**Rejected**
		3	RBFN	3.673	2.401E-04	0.017	**Rejected**
		2	EvRBF	2.369	1.782E-02	0.025	**Rejected**
		1	ARIMA	1.244	2.135E-01	0.05	**Non reject.**

Table 50. Results of Holm's procedure in every comparison between control algorithm and the rest of algorithms for horizon 50.