

Table 1: Test 2021

	FE				FC			
	Linear				Log			
OECD	Model	R ²	MAE (t)	MAPE (%)	Model	R ²	MAE (t)	MAPE (%)
	CatBoost Regressor	0.957	128	11.5	CatBoost Regressor	0.957	129	11.5
	Random Forest Regressor	0.955	129	12.3	Gradient Boosting Regressor	0.955	130	11.5
	Gradient Boosting Regressor	0.954	129	11.7	Random Forest Regressor	0.954	132	11.5
	Lasso	0.948	145	12.6	Ridge Regression	0.945	141	12.0
	Ridge Regression	0.946	141	12.3	Lasso	0.943	146	12.3
	Linear Regression	0.904	182	15.8	Calculation	0.700	246	19.5
	Calculation	0.700	246	19.5	Linear Regression	-30.312	3642	283.0
OECD+ours	Model	R ²	MAE (t)	MAPE (%)	Model	R ²	MAE (t)	MAPE (%)
	Random Forest Regressor	0.959	125	11.1	Random Forest Regressor	0.960	123	10.8
	CatBoost Regressor	0.957	129	11.4	CatBoost Regressor	0.954	128	11.1
	Lasso	0.945	149	13.2	Lasso	0.940	145	12.2
	Ridge Regression	0.931	150	13.5	Gradient Boosting Regressor	0.940	144	12.9
	Gradient Boosting Regressor	0.920	167	15.3	Ridge Regression	0.939	146	12.6
	Calculation	0.700	246	19.5	Calculation	0.700	246	19.5
	Linear Regression	0.466	449	35.2	Linear Regression	-113.673	6666	506.0
Original	Model	R ²	MAE (t)	MAPE (%)	Model	R ²	MAE (t)	MAPE (%)
	Lasso	0.946	148	13.0	Random Forest Regressor	0.960	124	10.7
	Ridge Regression	0.933	146	13.0	CatBoost Regressor	0.951	129	11.1
	Gradient Boosting Regressor	0.928	163	15.3	Gradient Boosting Regressor	0.947	143	13.1
	Linear Regression	0.807	214	18.3	Lasso	0.935	151	12.4
	Calculation	0.700	246	19.5	Ridge Regression	0.932	158	13.8
					Linear Regression	0.898	182	16.1
					Calculation	0.700	246	19.5
	Model	R ²	MAE (t)	MAPE (%)	Model	R ²	MAE (t)	MAPE (%)
	Gradient Boosting Regressor	0.936	133	11.0	Gradient Boosting Regressor	0.936	133	11.0
	CatBoost Regressor	0.933	134	11.5	CatBoost Regressor	0.933	134	11.5
	Random Forest Regressor	0.918	157	12.7	Random Forest Regressor	0.918	157	12.7
	Calculation	0.700	246	19.5	Calculation	0.700	246	19.5
	Ridge Regression	0.204	319	29.7	Ridge Regression	0.204	319	29.7
	Lasso	0.011	340	34.4	Lasso	0.011	340	34.4
	Linear Regression	-2.149	699	46.7	Linear Regression	-2.149	699	46.7
	Model	R ²	MAE (t)	MAPE (%)	Model	R ²	MAE (t)	MAPE (%)
	Lasso	0.954	131	11.1	Lasso	0.954	131	11.1
	Gradient Boosting Regressor	0.933	137	11.5	Gradient Boosting Regressor	0.933	137	11.5
	Calculation	0.700	246	19.5	Calculation	0.700	246	19.5
	Ridge Regression	-0.236	626	44.8	Ridge Regression	-0.236	626	44.8
	Linear Regression	-7.223	1348	91.9	Linear Regression	-7.223	1348	91.9
	Model	R ²	MAE (t)	MAPE (%)	Model	R ²	MAE (t)	MAPE (%)
	Ridge Regression	0.955	132	11.3	Ridge Regression	0.955	132	11.3
	Lasso	0.951	134	11.3	Lasso	0.951	134	11.3
	Linear Regression	0.949	137	11.3	Linear Regression	0.949	137	11.3
	Gradient Boosting Regressor	0.934	137	11.4	Gradient Boosting Regressor	0.934	137	11.4
	CatBoost Regressor	0.932	137	11.7	CatBoost Regressor	0.932	137	11.7
	Random Forest Regressor	0.920	157	12.7	Random Forest Regressor	0.920	157	12.7
	Calculation	0.700	246	19.5	Calculation	0.700	246	19.5

Table 2: Test 2020

	FE				FC			
	Linear				Log			
OECD	Model	R ²	MAE (t)	MAPE (%)				
	Gradient Boosting Regressor	0.953	130	11.6				
	Random Forest Regressor	0.949	134	11.7				
	CatBoost Regressor	0.949	131	11.6				
	Ridge Regression	0.946	144	13.1				
	Linear Regression	0.942	148	13.3				
	Lasso	0.925	169	14.6				
	Calculation	0.841	223	18.2				
OECD+ours	Model	R ²	MAE (t)	MAPE (%)	Model	R ²	MAE (t)	MAPE (%)
	CatBoost Regressor	0.954	123	11.0	CatBoost Regressor	0.956	123	11.0
	Random Forest Regressor	0.953	125	11.0	Gradient Boosting Regressor	0.954	123	11.0
	Gradient Boosting Regressor	0.953	124	11.1	Linear Regression	0.954	129	11.5
	Linear Regression	0.946	141	12.7	Random Forest Regressor	0.953	125	11.0
	Ridge Regression	0.945	140	12.6	Ridge Regression	0.953	132	11.8
	Lasso	0.925	169	14.6	Lasso	0.919	178	15.1
	Calculation	0.841	223	18.2	Calculation	0.841	223	18.2
Original								
	Model	R ²	MAE (t)	MAPE (%)				
	Lasso	0.956	125	11.0				
	Gradient Boosting Regressor	0.956	124	11.1				
	Ridge Regression	0.954	125	10.7				
	Linear Regression	0.952	127	10.9				
	Calculation	0.841	223	18.2				