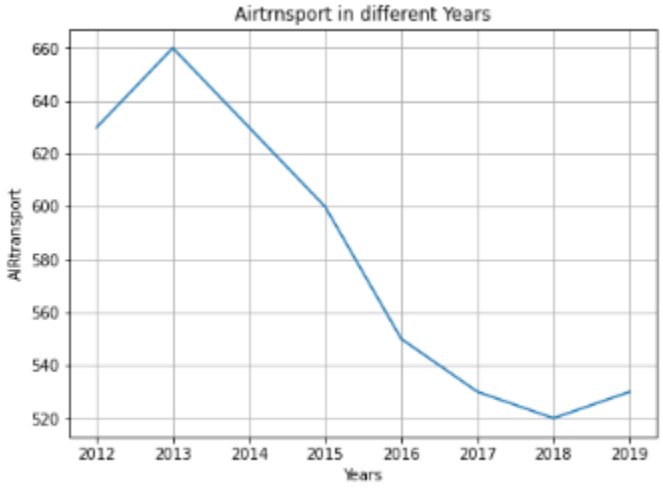
Report

The taken data regarding the transport as the air transport passengers carried and gross its source is World Bank Indicators, and Gross National Income. The purpose was to see how the two variables are correlated, if one has an impact on the others, particularly if the high gross national income stimulated the many air transport passengers.

The first step was to read the data, extract different columns, in the work 9 years were extracted (from 20), the case study was Afghanistan from the other countries, the intention was to see how impact dull gross national income to Air transport passenger was from 2012 to 2019. Below are the correlations between the extracted variables. The correlations shows that there is positive correlation between the air transport and gross national income means that increase in gross national income maximized the air transport passenger. Moreover, there is negative correlation between years and gross national income and also with air transport means that as the years goes on the gross national income reduced and affected also the air transport passenger.

	AirTransport	Years	GNI
AirTransport	1.000000	-0.769914	0.756961
Years	-0.769914	1.000000	-0.925382
GNI	0.756961	-0.925382	1.000000

The graph below shows how the air transport passenger decreased in different years from 2012 to 2019. Since the air transport increase with the increase of gross national income and it was seen above that the gross national income reduced in the set period that is how the graph find decrease also in air transport passenger.



To find the air transport passenger for 2021, The first step was to find the linear model for transport and gross national income, predict the gross national income in 2021 and find its corresponding air transport passenger based on the GNI found

OLS Regression Results

Dep. Variable:	AirTransport	R-squared (uncentered):	0.972
Model:	OLS	Adj. R-squared (uncentered):	0.968
Method:	Least Squares	F-statistic:	246.2
Date:	Wed, 20 Oct 2021	Prob (F-statistic):	1.03e-06
Time:	23:02:55	Log-Likelihood:	-112.02
No. Observations:	8	AIC:	226.0
Df Residuals:	7	BIC:	226.1
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
GNI	2963.3730	188.878	15.689	0.000	2516.748	3409.998

Omnibus:	1.125	Durbin-Watson:	0.679
Prob(Omnibus):	0.570	Jarque-Bera (JB):	0.793
Skew:	-0.543	Prob(JB):	0.673
Kurtosis:	1.905	Cond. No.	1.00

Notes:
[1] R^2 is computed without centering (uncentered) since the model does not contain a constant.
[2] Standard Errors assume that the covariance matrix of the errors is correctly specified.

The transport GNI2021 was 0.2888 4 * 2021 and result `583.74564` and with that the transport of 2021 was 2964.373 * GNI2021 and result was `1730439.8140837199`. The variables were obtained from the models shown above and below.

OLS Regression Results

Dep. Variable:	GNI	R-squared (uncentered):	0.992
Model:	OLS	Adj. R-squared (uncentered):	0.991
Method:	Least Squares	F-statistic:	867.9
Date:	Wed, 20 Oct 2021	Prob (F-statistic):	1.34e-08
Time:	23:02:55	Log-Likelihood:	-42.992
No. Observations:	8	AIC:	87.98
Df Residuals:	7	BIC:	88.06
Df Model:	1		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
Years	0.2884	0.010	29.460	0.000	0.265	0.312

Omnibus:	3.004	Durbin-Watson:	0.269
Prob(Omnibus):	0.223	Jarque-Bera (JB):	0.910
Skew:	0.177	Prob(JB):	0.634
Kurtosis:	1.386	Cond. No.	1.00

Notes:
[1] R^2 is computed without centering (uncentered) since the model does not contain a constant.
[2] Standard Errors assume that the covariance matrix of the errors is correctly specified.