**ANNEX C Regression and tests for the NBT implementation**

1. Regression results:

Ordinary Least Squares (OLS) model:
N = 18
R-squared = 0.84505 Adj R-squared = **0.83537**
Wald F(1, 16) = 87.259841 p-value = 0.0000(\*\*\*)
RSS = 0.043212 ESS = 87.515597 TSS = 87.515597

| **Variables** | **Coefficient** | **Std. Error** | **t-stat** | **p-value** |
| --- | --- | --- | --- | --- |
| Constant | 0.551138 | 0.177153 | 3.1111 | 0.007 (\*\*\*) |
| X1 | **0.500485** | 0.053578 | 9.3413 | 0.000 (\*\*\*) |

(\*\*\*): significant at a level of confidence of 99%

1. Diagnostic tests’ results:

Diagnostics include: (i) the Breusch-Pagan test to check for heteroscedasticity and (ii) the Normal (Shapiro-Wilk) test to confirm the normal distribution of the regression residues. It is a necessary check given the low number of observations used for our estimate.

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Breusch-Pagan's test of Heteroskedasticity

Koenker's (1981) version without the normality assumption
Regression of μ2 on X1 and the Constant
H0: Homoskedasticity
H1:Heteroskedasticity

Score = 1.607534 ~ Chi2(1)
p-value = **0.2048**

Heteroskedasticty rejected with a level of confidence of 99%
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Shapiro Normality test

H0 = residuals normally distributed - μi~N(0,θ)
H1 = residuals not normally distributed - μi≠N(0,θ)

W = 0.9706
pValue = **0.8087**

H1 rejected with a level of confidence of 99%

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All regression was run using matlab