1. **IPM**

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| Dependent Variable: IPM | | |  |  |
| Method: Panel Fully Modified Least Squares (FMOLS) | | | | |
| Date: 04/07/21 Time: 11:41 | | |  |  |
| Sample (adjusted): 2011 2019 | | |  |  |
| Periods included: 9 | | |  |  |
| Cross-sections included: 140 | | |  |  |
| Total panel (balanced) observations: 1260 | | | |  |
| Panel method: Grouped estimation | | | |  |
| Long-run covariance estimates (Bartlett kernel, Newey-West fixed | | | | |
| bandwidth) | | |  |  |
| Warning: one more more cross-sections have been dropped due to | | | | |
| estimation errors | | |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
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|  |  |  |  |  |
| LNHEALTH | 16.11813 | 0.038023 | 423.9016 | 0.0000 |
| DUMMYPENDIDIKAN | 52.64895 | 6.819515 | 7.720337 | 0.0000 |
| DUMMYPENDIDIKAN\*LNHEALTH | -12.95771 | 1.779291 | -7.282513 | 0.0000 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | -1.201893 | Mean dependent var | | 67.35704 |
| Adjusted R-squared | -1.205396 | S.D. dependent var | | 5.718651 |
| S.E. of regression | 8.492525 | Sum squared resid | | 90658.59 |
| Long-run variance | 13.19285 |  |  |  |
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| Dependent Variable: IPM | | |  |  |
| Method: Panel Fully Modified Least Squares (FMOLS) | | | | |
| Date: 04/07/21 Time: 11:40 | | |  |  |
| Sample (adjusted): 2011 2019 | | |  |  |
| Periods included: 9 | | |  |  |
| Cross-sections included: 24 | | |  |  |
| Total panel (balanced) observations: 216 | | | |  |
| Panel method: Grouped estimation | | | |  |
| Long-run covariance estimates (Bartlett kernel, Newey-West fixed | | | | |
| bandwidth) | | |  |  |
| Warning: one more more cross-sections have been dropped due to | | | | |
| estimation errors | | |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| LNEDUC | 12.44054 | 0.065247 | 190.6680 | 0.0000 |
| DUMMYKESEHATAN | 59.78713 | 4.452282 | 13.42843 | 0.0000 |
| DUMMYKESEHATAN\*LNEDUC | -11.07252 | 0.815960 | -13.56994 | 0.0000 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | 0.101849 | Mean dependent var | | 64.27172 |
| Adjusted R-squared | 0.093416 | S.D. dependent var | | 11.82491 |
| S.E. of regression | 11.25905 | Sum squared resid | | 27001.22 |
| Long-run variance | 4.578486 |  |  |  |
|  |  |  |  |  |
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| Dependent Variable: IPM | | |  |  |
| Method: Panel Fully Modified Least Squares (FMOLS) | | | | |
| Date: 04/07/21 Time: 11:38 | | |  |  |
| Sample (adjusted): 2011 2019 | | |  |  |
| Periods included: 9 | | |  |  |
| Cross-sections included: 61 | | |  |  |
| Total panel (balanced) observations: 549 | | | |  |
| Panel method: Grouped estimation | | | |  |
| Long-run covariance estimates (Bartlett kernel, Newey-West fixed | | | | |
| bandwidth) | | |  |  |
| Warning: one more more cross-sections have been dropped due to | | | | |
| estimation errors | | |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| DUMMYPENDIDIKAN | 1.986257 | 5.673052 | 0.350121 | 0.7264 |
| DUMMYKESEHATAN | 116.1245 | 7.872575 | 14.75052 | 0.0000 |
| DUMMYPENDIDIKAN\*LNHEALTH | 8.721427 | 1.411242 | 6.179967 | 0.0000 |
| DUMMYKESEHATAN\*LNEDUC | -14.81842 | 2.145292 | -6.907412 | 0.0000 |
|  |  |  |  |  |
|  |  |  |  |  |
| R-squared | -8.482234 | Mean dependent var | | 67.89242 |
| Adjusted R-squared | -8.534430 | S.D. dependent var | | 6.055708 |
| S.E. of regression | 18.69874 | Sum squared resid | | 190555.3 |
| Long-run variance | 53.73761 |  |  |  |
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| Date: 04/07/21 Time: 11:36 |  |  |  |
| Sample: 2010 2019 | |  |  |
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|  |  |  |  |
|  | LNHEALTH | LNEDUC | IPM |
|  |  |  |  |
|  |  |  |  |
| Mean | 4.603360 | 5.399265 | 66.79472 |
| Median | 4.592838 | 5.485916 | 66.74429 |
| Maximum | 7.604246 | 8.366669 | 86.65000 |
| Minimum | 0.810573 | 0.955409 | 19.61736 |
| Std. Dev. | 0.841843 | 0.993760 | 7.023344 |
| Skewness | -0.016774 | -0.642524 | -0.938355 |
| Kurtosis | 3.090565 | 3.472266 | 7.070915 |
|  |  |  |  |
| Jarque-Bera | 1.908259 | 383.4679 | 4110.978 |
| Probability | 0.385147 | 0.000000 | 0.000000 |
|  |  |  |  |
| Sum | 22602.50 | 26510.39 | 327962.1 |
| Sum Sq. Dev. | 3479.004 | 4847.923 | 242148.0 |
|  |  |  |  |
| Observations | 4910 | 4910 | 4910 |

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| Panel unit root test: Summary | | | |  |
| Series: D(IPM) | | |  |  |
| Date: 04/07/21 Time: 11:21 | | | |  |
| Sample: 2010 2019 | | |  |  |
| Exogenous variables: None | | |  |  |
| Automatic selection of maximum lags | | | |  |
| Automatic lag length selection based on SIC: 0 to 1 | | | | |
| Newey-West automatic bandwidth selection and Bartlett kernel | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | Cross- |  |
| Method | Statistic | Prob.\*\* | sections | Obs |
| Null: Unit root (assumes common unit root process) | | | | |
| Levin, Lin & Chu t\* | -12.0565 | 0.0000 | 491 | 3757 |
|  |  |  |  |  |
| Null: Unit root (assumes individual unit root process) | | | | |
| ADF - Fisher Chi-square | 992.196 | 0.4035 | 491 | 3757 |
| PP - Fisher Chi-square | 1037.43 | 0.1069 | 491 | 3928 |
|  |  |  |  |  |
|  |  |  |  |  |
| \*\* Probabilities for Fisher tests are computed using an asymptotic Chi | | | | |
| -square distribution. All other tests assume asymptotic normality. | | | | |

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| Panel unit root test: Summary | | | |  |
| Series: D(IPM) | | |  |  |
| Date: 04/07/21 Time: 11:22 | | | |  |
| Sample: 2010 2019 | | |  |  |
| Exogenous variables: Individual effects | | | | |
| Automatic selection of maximum lags | | | |  |
| Automatic lag length selection based on SIC: 0 to 1 | | | | |
| Newey-West automatic bandwidth selection and Bartlett kernel | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | Cross- |  |
| Method | Statistic | Prob.\*\* | sections | Obs |
| Null: Unit root (assumes common unit root process) | | | | |
| Levin, Lin & Chu t\* | -49.2844 | 0.0000 | 491 | 3798 |
|  |  |  |  |  |
| Null: Unit root (assumes individual unit root process) | | | | |
| Im, Pesaran and Shin W-stat | -22.1937 | 0.0000 | 491 | 3798 |
| ADF - Fisher Chi-square | 2347.81 | 0.0000 | 491 | 3798 |
| PP - Fisher Chi-square | 2879.62 | 0.0000 | 491 | 3928 |
|  |  |  |  |  |
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| \*\* Probabilities for Fisher tests are computed using an asymptotic Chi | | | | |
| -square distribution. All other tests assume asymptotic normality. | | | | |

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| Panel unit root test: Summary | | | |  |
| Series: D(IPM) | | |  |  |
| Date: 04/07/21 Time: 11:24 | | | |  |
| Sample: 2010 2019 | | |  |  |
| Exogenous variables: Individual effects, individual linear trends | | | | |
| Automatic selection of maximum lags | | | |  |
| Automatic lag length selection based on SIC: 0 to 1 | | | | |
| Newey-West automatic bandwidth selection and Bartlett kernel | | | | |
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|  |  |  |  |  |
|  |  |  | Cross- |  |
| Method | Statistic | Prob.\*\* | sections | Obs |
| Null: Unit root (assumes common unit root process) | | | | |
| Levin, Lin & Chu t\* | -54.9265 | 0.0000 | 491 | 3700 |
| Breitung t-stat | -9.05725 | 0.0000 | 491 | 3209 |
|  |  |  |  |  |
| Null: Unit root (assumes individual unit root process) | | | | |
| Im, Pesaran and Shin W-stat | -6.42616 | 0.0000 | 491 | 3700 |
| ADF - Fisher Chi-square | 1712.55 | 0.0000 | 491 | 3700 |
| PP - Fisher Chi-square | 2759.28 | 0.0000 | 491 | 3928 |
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| \*\* Probabilities for Fisher tests are computed using an asymptotic Chi | | | | |
| -square distribution. All other tests assume asymptotic normality. | | | | |

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| Panel unit root test: Summary | | | |  |
| Series: D(LNEDUC) | | |  |  |
| Date: 04/07/21 Time: 11:25 | | | |  |
| Sample: 2010 2019 | | |  |  |
| Exogenous variables: None | | |  |  |
| Automatic selection of maximum lags | | | |  |
| Automatic lag length selection based on SIC: 0 to 1 | | | | |
| Newey-West automatic bandwidth selection and Bartlett kernel | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | Cross- |  |
| Method | Statistic | Prob.\*\* | sections | Obs |
| Null: Unit root (assumes common unit root process) | | | | |
| Levin, Lin & Chu t\* | -92.5828 | 0.0000 | 491 | 3881 |
|  |  |  |  |  |
| Null: Unit root (assumes individual unit root process) | | | | |
| ADF - Fisher Chi-square | 6569.90 | 0.0000 | 491 | 3881 |
| PP - Fisher Chi-square | 8528.63 | 0.0000 | 491 | 3928 |
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| \*\* Probabilities for Fisher tests are computed using an asymptotic Chi | | | | |
| -square distribution. All other tests assume asymptotic normality. | | | | |

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| Panel unit root test: Summary | | | |  |
| Series: D(LNEDUC) | | |  |  |
| Date: 04/07/21 Time: 11:25 | | | |  |
| Sample: 2010 2019 | | |  |  |
| Exogenous variables: Individual effects | | | | |
| Automatic selection of maximum lags | | | |  |
| Automatic lag length selection based on SIC: 0 to 1 | | | | |
| Newey-West automatic bandwidth selection and Bartlett kernel | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | Cross- |  |
| Method | Statistic | Prob.\*\* | sections | Obs |
| Null: Unit root (assumes common unit root process) | | | | |
| Levin, Lin & Chu t\* | -88.7642 | 0.0000 | 491 | 3862 |
|  |  |  |  |  |
| Null: Unit root (assumes individual unit root process) | | | | |
| Im, Pesaran and Shin W-stat | -39.8926 | 0.0000 | 491 | 3862 |
| ADF - Fisher Chi-square | 3658.58 | 0.0000 | 491 | 3862 |
| PP - Fisher Chi-square | 6736.15 | 0.0000 | 491 | 3928 |
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| \*\* Probabilities for Fisher tests are computed using an asymptotic Chi | | | | |
| -square distribution. All other tests assume asymptotic normality. | | | | |

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| Panel unit root test: Summary | | | |  |
| Series: D(LNEDUC) | | |  |  |
| Date: 04/07/21 Time: 11:26 | | | |  |
| Sample: 2010 2019 | | |  |  |
| Exogenous variables: Individual effects, individual linear trends | | | | |
| Automatic selection of maximum lags | | | |  |
| Automatic lag length selection based on SIC: 0 to 1 | | | | |
| Newey-West automatic bandwidth selection and Bartlett kernel | | | | |
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|  |  |  |  |  |
|  |  |  | Cross- |  |
| Method | Statistic | Prob.\*\* | sections | Obs |
| Null: Unit root (assumes common unit root process) | | | | |
| Levin, Lin & Chu t\* | -80.5658 | 0.0000 | 491 | 3801 |
| Breitung t-stat | -56.7615 | 0.0000 | 491 | 3310 |
|  |  |  |  |  |
| Null: Unit root (assumes individual unit root process) | | | | |
| Im, Pesaran and Shin W-stat | -11.0982 | 0.0000 | 491 | 3801 |
| ADF - Fisher Chi-square | 2257.59 | 0.0000 | 491 | 3801 |
| PP - Fisher Chi-square | 5275.35 | 0.0000 | 491 | 3928 |
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|  |  |  |  |  |
| \*\* Probabilities for Fisher tests are computed using an asymptotic Chi | | | | |
| -square distribution. All other tests assume asymptotic normality. | | | | |
| Panel unit root test: Summary | | | |  |
| Series: D(LNHEALTH) | | |  |  |
| Date: 04/07/21 Time: 11:26 | | | |  |
| Sample: 2010 2019 | | |  |  |
| Exogenous variables: None | | |  |  |
| Automatic selection of maximum lags | | | |  |
| Automatic lag length selection based on SIC: 0 to 1 | | | | |
| Newey-West automatic bandwidth selection and Bartlett kernel | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | Cross- |  |
| Method | Statistic | Prob.\*\* | sections | Obs |
| Null: Unit root (assumes common unit root process) | | | | |
| Levin, Lin & Chu t\* | -80.5185 | 0.0000 | 491 | 3898 |
|  |  |  |  |  |
| Null: Unit root (assumes individual unit root process) | | | | |
| ADF - Fisher Chi-square | 5787.25 | 0.0000 | 491 | 3898 |
| PP - Fisher Chi-square | 6230.48 | 0.0000 | 491 | 3928 |
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| \*\* Probabilities for Fisher tests are computed using an asymptotic Chi | | | | |
| -square distribution. All other tests assume asymptotic normality. | | | | |

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| Panel unit root test: Summary | | | |  |
| Series: D(LNHEALTH) | | |  |  |
| Date: 04/07/21 Time: 11:27 | | | |  |
| Sample: 2010 2019 | | |  |  |
| Exogenous variables: Individual effects | | | | |
| Automatic selection of maximum lags | | | |  |
| Automatic lag length selection based on SIC: 0 to 1 | | | | |
| Newey-West automatic bandwidth selection and Bartlett kernel | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | Cross- |  |
| Method | Statistic | Prob.\*\* | sections | Obs |
| Null: Unit root (assumes common unit root process) | | | | |
| Levin, Lin & Chu t\* | -82.4297 | 0.0000 | 491 | 3807 |
|  |  |  |  |  |
| Null: Unit root (assumes individual unit root process) | | | | |
| Im, Pesaran and Shin W-stat | -38.4656 | 0.0000 | 491 | 3807 |
| ADF - Fisher Chi-square | 3564.38 | 0.0000 | 491 | 3807 |
| PP - Fisher Chi-square | 6426.37 | 0.0000 | 491 | 3928 |
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|  |  |  |  |  |
| \*\* Probabilities for Fisher tests are computed using an asymptotic Chi | | | | |
| -square distribution. All other tests assume asymptotic normality. | | | | |

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| Panel unit root test: Summary | | | |  |
| Series: D(LNHEALTH) | | |  |  |
| Date: 04/07/21 Time: 11:27 | | | |  |
| Sample: 2010 2019 | | |  |  |
| Exogenous variables: Individual effects, individual linear trends | | | | |
| Automatic selection of maximum lags | | | |  |
| Automatic lag length selection based on SIC: 0 to 1 | | | | |
| Newey-West automatic bandwidth selection and Bartlett kernel | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  | Cross- |  |
| Method | Statistic | Prob.\*\* | sections | Obs |
| Null: Unit root (assumes common unit root process) | | | | |
| Levin, Lin & Chu t\* | -70.5273 | 0.0000 | 491 | 3718 |
| Breitung t-stat | -50.0301 | 0.0000 | 491 | 3227 |
|  |  |  |  |  |
| Null: Unit root (assumes individual unit root process) | | | | |
| Im, Pesaran and Shin W-stat | -9.75487 | 0.0000 | 491 | 3718 |
| ADF - Fisher Chi-square | 2128.44 | 0.0000 | 491 | 3718 |
| PP - Fisher Chi-square | 5270.27 | 0.0000 | 491 | 3928 |
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|  |  |  |  |  |
| \*\* Probabilities for Fisher tests are computed using an asymptotic Chi | | | | |
| -square distribution. All other tests assume asymptotic normality. | | | | |

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| Johansen Fisher Panel Cointegration Test |  |  |  |  |
| Series: LNHEALTH LNEDUC IPM | | |  |  |
| Date: 04/07/21 Time: 11:28 | | |  |  |
| Sample: 2010 2019 | |  |  |  |
| Included observations: 4910 | | |  |  |
| Trend assumption: Linear deterministic trend | | | |  |
| Lags interval (in first differences): 0 1 | | | |  |
|  |  |  |  |  |
| Unrestricted Cointegration Rank Test (Trace and Maximum Eigenvalue) | | | | |
|  |  |  |  |  |
|  |  |  |  |  |
| Hypothesized | Fisher Stat.\* |  | Fisher Stat.\* |  |
| No. of CE(s) | (from trace test) | Prob. | (from max-eigen test) | Prob. |
|  |  |  |  |  |
|  |  |  |  |  |
| None | 4120. | 0.0000 | 3655. | 0.0000 |
| At most 1 | 1502. | 0.0000 | 1338. | 0.0000 |
| At most 2 | 1325. | 0.0000 | 1325. | 0.0000 |
|  |  |  |  |  |
|  |  |  |  |  |
| \* Probabilities are computed using asymptotic Chi-square distribution. |  |  |  |  |