

APPENDICIES

S1 Appendix. Study Countries.

| | | | |
|------------------------|---------------------------|---------------|-----------------|
| A | Canada | F | Japan |
| Afghanistan | Central African Republic | Fiji | Jordan |
| Albania | Chad | Finland | |
| Algeria | Chile | France | K |
| Angola | China | | Kazakhstan |
| Argentina | Colombia | G | Kenya |
| Armenia | Comoros | Gabon | Kiribati |
| Australia | Congo | Georgia | Korea |
| Austria | Costa Rica | Germany | Kuwait |
| Azerbaijan | Côte d'Ivoire | Ghana | Kyrgyz Republic |
| | Croatia | Greece | |
| B | Cuba | Grenada | L |
| Bahrain | Cyprus | Guatemala | Lao PDR |
| Bangladesh | Czech Republic | Guinea | Latvia |
| Barbados | | Guinea-Bissau | Lebanon |
| Belarus | D | Guyana | Lesotho |
| Belgium | Democratic Republic Congo | | Liberia |
| Belize | Denmark | H | Libya |
| Benin | Djibouti | Haiti | Lithuania |
| Bhutan | Dominican Republic | Honduras | Luxembourg |
| Bolivia | | Hungary | |
| Bosnia and Herzegovina | E | I | M |
| Botswana | Ecuador | Iceland | Madagascar |
| Brazil | Egypt | India | Malawi |
| Brunei | El Salvador | Indonesia | Malaysia |
| Bulgaria | Equatorial Guinea | Iran | Maldives |
| Burkina Faso | Eritrea | Iraq | Mali |
| Burundi | Estonia | Ireland | Malta |
| | Eswatini | Israel | Mauritania |
| C | Ethiopia | Italy | Mauritius |
| Cabo Verde | | | Mexico |
| Cambodia | | J | Micronesia |
| Cameroon | | Jamaica | Moldova |
| | | | Mongolia |

| | | |
|------------------|--------------------------------|----------------------|
| Montenegro | Russia | Togo |
| Morocco | Rwanda | Tonga |
| Mozambique | | Trinidad and Tobago |
| Myanmar | S | Tunisia |
| | Samoa | Turkey |
| N | São Tomé and Príncipe | Turkmenistan |
| Namibia | Saudi Arabia | |
| Nepal | Senegal | U |
| Netherlands | Serbia | Uganda |
| New Zealand | Sierra Leone | Ukraine |
| Nicaragua | Singapore | United Arab Emirates |
| Niger | Slovak Republic | United Kingdom |
| Nigeria | Slovenia | United States |
| North Macedonia | Solomon Islands | Uruguay |
| Norway | South Africa | Uzbekistan |
| | Spain | |
| O | Sri Lanka | |
| Oman | St. Lucia | V |
| | St. Vincent and the Grenadines | Vanuatu |
| P | Sudan | Venezuela |
| Pakistan | Suriname | Vietnam |
| Panama | Sweden | Yemen |
| Papua New Guinea | Switzerland | |
| Paraguay | Syrian Arab Republic | Z |
| Peru | | Zambia |
| Philippines | | |
| Poland | | |
| Portugal | T | |
| | Tajikistan | |
| Q | Tanzania | |
| Qatar | Thailand | |
| | The Bahamas | |
| R | The Gambia | |
| Romania | Timor-Leste | |

Note: Selection based on data availability and countries with no missing data.

S2 Appendix. Descriptive statistics of the 177 countries.

| Statistics | IMR | lnIMR | CHE | lnCHE | MMR | lnMMR |
|-------------|---------|---------|---------|---------|----------|---------|
| Mean | 30.6526 | 2.9308 | 6.0909 | 1.7184 | 206.9209 | 4.2167 |
| Median | 19.75 | 2.9832 | 5.7443 | 1.7482 | 62.00 | 4.1271 |
| Maximum | 142.00 | 4.9558 | 20.4146 | 3.0163 | 2650.00 | 7.8823 |
| Minimum | 1.70 | 0.5306 | 1.0250 | 0.0247 | 3.00 | 1.0986 |
| Std. Dev. | 27.8432 | 1.0755 | 2.4921 | 0.4351 | 291.7327 | 1.6521 |
| Skewness | 1.0802 | -0.2317 | 0.7102 | -0.4806 | 2.3117 | -0.0076 |
| Kurtosis | 3.3592 | 1.9486 | 3.9102 | 3.1905 | 11.2755 | 1.8434 |
| Jarque-Bera | 563.184 | 154.996 | 334.145 | 112.747 | 10551.16 | 157.102 |
| Probability | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 | <0.0001 |

S3 Appendix. Panel unit root tests.

| Variables | Level | | First-difference | |
|-----------|--------|---------|------------------|-----------|
| | Fisher | IPS | Fisher | IPS |
| lnCHE | 0.6707 | -1.1008 | -9.6011* | -21.6950* |
| lnMMR | 1.7899 | - | -29.7252* | - |
| lnIMR | 6.3858 | 17.1666 | -1.3830*** | -1.7446** |

Note: *, **, *** represent 1% , 5% and 10% significance level

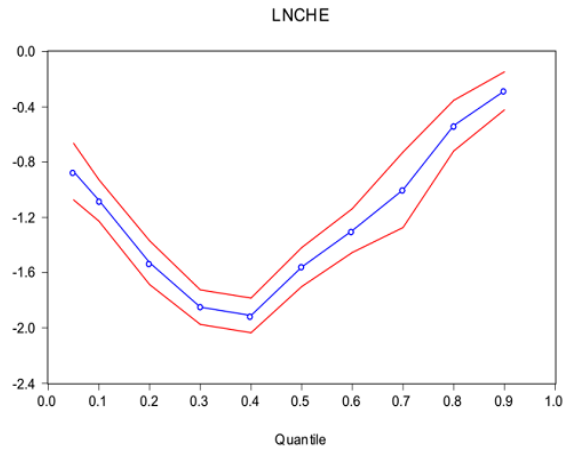
S4 Appendix. Modified Wald test for groupwise heteroskedasticity in fixed-effect regression model

| Results | lnIMR | lnMMR |
|--------------------|----------|----------|
| lnCHE | -0.2973* | -0.1286* |
| | [0.0241] | [0.0238] |
| _cons | 3.4417* | 4.4377* |
| | [0.0416] | [0.0411] |
| sigma_u | 1.0194 | 1.6281 |
| sigma_e | 0.1922 | 0.1945 |
| rho | 0.9657 | 0.9859 |
| Obs | 2,818 | 2,818 |
| Groups | 177 | 177 |
| <i>Diagnostics</i> | | |
| Prob > F | <0.0001* | <0.0001* |
| R^2 | 0.13 | 0.10 |
| χ^2 | 2.1e+05 | 8.5e+05 |
| Prob > χ^2 | <0.0001* | <0.0001* |

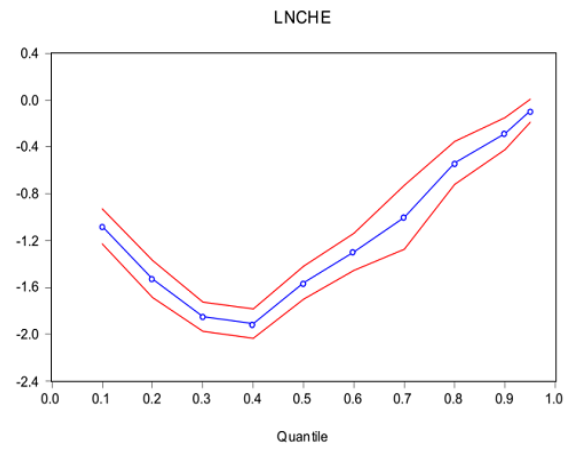
Note: *, **, *** represent 1% , 5% and 10% significance level

S5 Appendix. Quantile Process Estimation.

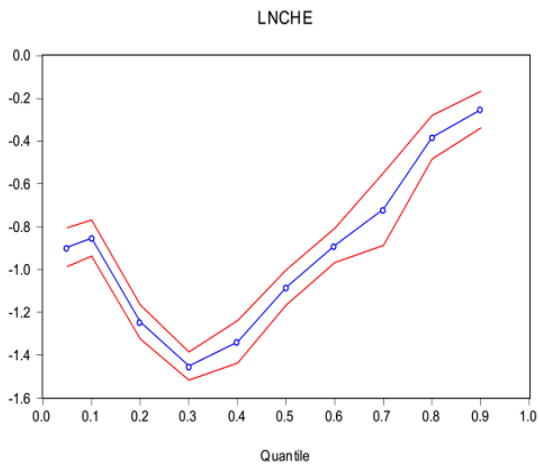
5th mmr



95th mmr



5th imr



95th imr

