

Table A-1 Description of variables

| Variable | Description | Unit | Source |
|-------------------------------------|---|------|--------|
| Panel A: Dependent variables | | | |
| Reserve ratio | $Reserve\ ratio = 100 * Beginning\ stocks / Domestic\ consumption$, where Beginning stocks and domestic consumption are calculated by using five staple foods (rice, wheat and three kinds of coarse grains). | - | PSD |
| Production | Amount of production for five staple foods (rice, wheat and three kinds of coarse grains) | MT | PSD |
| Total consumption | Amount of domestic consumption plus FSI (Food, Seed and Industrial) consumption for five staple foods (rice, wheat and three kinds of coarse grains) | MT | PSD |
| Imports | Amount of imports for five staple foods (rice, wheat and three kinds of coarse grains) | MT | PSD |
| Exports | Amount of exports for five staple foods (rice, wheat and three kinds of coarse grains) | MT | PSD |
| Panel B: Key variables | | | |
| Political risk | $Political\ risk = 100 - Political\ risk_{ICRG}$, where $Political\ risk_{ICRG}$ is from ICRG. This variable is an assessment of the political stability of the countries covered by ICRG on a comparable basis, which is done by assigning score to a preset group of factors, named as political risk components. Each component has a minimum score of 0, and maximum score fixed (4,6 or 12). Specifically, there are 12 subcomponents including government stability (12), socioeconomic conditions (12), investment profile (12), internal conflict (12), external conflict (12), corruption (6), military in politics (6), religious tensions (6), law and order (6), ethnic tensions (6), democratic accountability (6), bureaucracy quality (4). Hence, political risk is scored on a scale from 0 (very low risk) to 100 (very high risk). | - | ICRG |
| External risk | $External\ risk = 12 - External\ conflict_{ICRG}$, where $External\ conflict_{ICRG}$ is from ICRG. This is an assessment of risk to the incumbent government from foreign action, ranging from non-violent external pressure (diplomatic pressures, withholding of aid, trade restrictions, territorial disputes, sanctions, etc.) to violent external pressure (cross-border conflicts to all-out war). The risk rating assigned is the sum of three subcomponents (including war, cross-border conflict, and foreign pressures), each with a maximum score of 4 and a minimum score of 0. Hence, external risk is scored on a scale from 0 (very low risk) to 12 (very high risk). | - | ICRG |
| Internal risk | $Internal\ risk = 12 - Internal\ conflict_{ICRG}$, where $Internal\ conflict_{ICRG}$ is from ICRG. This is an assessment of political violence in the country and its actual or potential impact on governance, and there are three subcomponents including civil war/coup threat, terrorism/political violence, and civil disorder. The risk rating assigned is the sum of three subcomponents, each with a maximum score of 4 and a minimum score of 0. Hence, internal risk is scored on a scale from 0 (very low risk) to 12 (very high risk). | - | ICRG |

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|------------------------------------|---|----------------------|---------|
| Panel C: Control variables | | | |
| Inland water | Area occupied by major rivers, lakes and reservoirs | 1000 hm ² | FAOSTAT |
| Area harvested | Area harvested for five staple foods (rice, wheat and three kinds of coarse grains) | 1000 hm ² | PSD |
| Population | Number of persons | Person | WBO |
| Yield | Harvested production per unit of harvested area for five staple foods (rice, wheat and three kinds of coarse grains) | MT/hm ² | PSD |
| Producer price index | The agricultural producer prices measure the average annual change over time in the selling prices received by farmers (Prices at the farm-gate or at the first point of sale). We use a composite producer price index by summing the index value for five staple foods (rice, wheat and three kinds of coarse grains). | - | FAOSTAT |
| Disasters | Number of disasters | - | WDR |
| Droughts | Number of droughts | - | WDR |
| Floods | Number of floods | - | WDR |
| Panel D: Grouping variables | | | |
| Machinery | This includes 8 kinds of agricultural machinery in total: 1. Agricultural tractors, total; 2. Ploughs (e.g., reversible and non-reversible ploughs); 3. Seeders, planters and trans planters; 4. Manure spreaders and Fertilizer distributors; 5. Combine harvesters - threshers; 6. Balers (straw and fodder balers including pick-up balers); 7. Root or tuber harvesting machines; 8. Threshing machines. | - | FAOSTAT |
| GDP per capita | Gross Domestic Product per capita | USD / person | WBO |
| Import dependency ratio | Import dependency ratio = Imports / (domestic consumption + FSI consumption) | - | PSD |
| Self-sufficiency ratio | Self-sufficiency ratio = productions × 100 / (productions + imports - exports + ending stocks - beginning stocks) | - | PSD |

Note: The calculation of self-sufficiency ratio is followed by Michael et al. (2015).