**ESRC-DFID Energy Scarcity, Food Supply Chain Transformation, and Poverty Reduction(Reference: ES/J017841/1)**

**Database Introduction**

**Energy Costs and Transforming Agri-food Value Chains in Emerging Economies: the Cases of Dairy and Potato from Brazil, China, and India**

Submitted by

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Introduction

This database is based on research “Energy Scarcity, Food Supply Chain Transformation, and Poverty Reduction: the Cases of Brazil, China, and India,” supported under the Economic and Social Research Council (ESRC) and Department for International Development (DFID) for the period from January, 2013 to December, 2015.

The research is typically based on small samples of key informants along the chains. While such approach can generate useful insights, it is subject to usual small sample bias. In order to generate a more reliable value chain actors’ data, we use stratified random sampling in each of the value chain segments to the extent possible. The data come from 3,253 interviews of economic actors from 6 sets of surveys, using comparable questionnaires covering all the segments of the diary and potato value chains in Brazil, China, and India. The initial set of questionnaires for all segments including farmers, wholesale/logistics, processors, and retailers were developed in English and then adapted and translated into Chinese, Portugal and Hindi. Detailed information on input use and technologies, output, logistical interface, energy costs, procurement systems, and institutional arrangements of each actors were collected. There is no such comparable data base in the developing country literature. Table 1 show a combined sample of 3,253 dairy and potato value chain actors interviewed from all segments.

**Table 1 Samples of Dairy and Potato Value Chain Surveys**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Agent | Brazil | China | India | Total |
| Feed mills  Farmers | 7  324 | 486 | 301 | 7  1,111 |
| Milk Collection Stations or Chillers or Rural Traders or Cooperatives  Processors  Traders  Retailers  Village leaders  Total | 60  25  54  4  467 | 32  28  23  144  713 | 54  12  15  75  457 | 146  65  38  273  4  1,637 |
|  |  |  |  |  |
| Farmers | 140 | 502 | 300 | 942 |
| Rural Traders and Cold Storage  Processors  Urban Traders  Retailers  Village leaders  Total | 23  3  20  34  3  223 | 102  /  61  181  50  895 | 43  /  20  75  60  498 | 168  3  101  290  113  1,616 |
|  |  |  |  |  |

The dairy data come from major milk supplying regions to three major cities of Brazil, China and India – to wit: (1) from San Paulo and Minas Gerais to Sao Paulo and Belo Horizonte; (2) from IMAR to Beijing; and 3) from Haryana to Delhi. The potato data come from major potato supplying regions to three major cities of Brazil, China and India – to wit: (1) from San Paulo and Minas Gerais to Sao Paulo and Belo Horizonte; (2) from IMAR and Hebei to Beijing; and 3) from West Uttar Pradesh (UP) to Delhi. Together, these zones are not, strictly speaking, nationally representative of the three countries; rather, they were selected by “reasoned choice sampling” to represent more advanced and less advanced production zones, for comparison.

The database structure shows as following: