PROTEqIN Survey – Description and Methodological Brief

The relationship between firm level productivity and firm specific as well as context variables has traditionally not been well understood in the Caribbean, due largely to unavailability of data. Until 2011, the region did not have firm-level, internationally comparable data that could shed light on the variables that affected productivity. Compete Caribbean – a Program funded by the Inter-American Development Bank (IDB), the UK's Department for International Development (DFID) and the Government of Canada – funded a Caribbean Enterprise and Indicator Survey that was conducted as part of the World Bank's 2010 Latin American and Caribbean Enterprise Surveys (LACES) to fill this gap. In 2014, Compete Caribbean generated a new round of data by repeating the survey, updating the data on enterprises and including additional variables linked to productivity, technology, and innovation (PROTEqIN) at the firm level. This brief describes the methodology employed by the PROTEqIN survey, which is essentially similar to the LACES exercise of 2011.

The sampling methodology for PROTEqIN is stratified random sampling. For this kind of sample, all members of the population have the same probability of being selected and no weighting of the observations is necessary. All population units are grouped within homogeneous groups and simple random samples are selected within each group. This method allows computing estimates for each of the strata with a specified level of precision while population estimates can also be estimated by properly weighting individual observations. The sampling weights take care of the varying probabilities of selection across different strata. Under certain conditions, estimates' precision under stratified random sampling will be higher than under simple random sampling (lower standard errors may result from the estimation procedure).

The sampling methodology is designed to attain two key objectives: 1) benchmarking of individual economies' business and investment climate across the world; and 2) to assess the effects of conditions and changes in business environment constraints on firm-level productivity and performance. As such, the sample is representative of the whole non-agricultural private sector and can generate statistically robust analyses with a minimum precision of 7.5% for 90% confidence intervals for: i) estimates of population percentages at the industry level; and ii) estimates of the mean log of sales at the industry level. Firms with 100% state ownership were not selected to participate in the survey. The sample was selected from the non-agricultural universe of eligible formally-registered firms with more than 5 employees obtained from the country's statistical office or other government agencies.

PROTEqIN conducted 1966 interviews across 13 countries: Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St Lucia, St .Kitts and Nevis, St Vincent and the Grenadines, Suriname and Trinidad and Tobago from a sample of formal establishments with five or more employees distributed as follows: Antigua and Barbuda (131), The Bahamas (127), Barbados (123), Belize (122), Dominica (126), Grenada (129), Guyana (120), Jamaica (242), St. Lucia (128), St. Kitts and Nevis (125), St. Vincent and the Grenadines (133), Suriname (120) and Trinidad and Tobago (340). The size of the sample is representative of the whole non-agricultural private sector and it includes selected manufacturing and service industries.

Firms are stratified based on size, business sector, and geographic region within a country.
- **Business sector:** The survey sample has been classified under the ISIC 3.1 nomenclature.
  - **The manufacturing stratum** comprises all manufacturing sectors group classification (group D),
  - **The retail stratum** includes the retail group (ISIC 52),
  - **The other services stratum** includes construction (group F), wholesale trade (group G excluding sector 52), hotels and restaurants (group H), and transport, storage, and communications sector (group I).
- **Size:** The standardized definition used for size stratification PROTEqIN is: i) small (5 to 19 employees); ii) medium (20 to 99 employees); and iii) large (more than 99 employees).
- **Geographic region:** In this case, the firms have been grouped geographically at the national and sub-national level in order to ensure proper representativeness of the non-agricultural private sector.