

on the market. The application of our FGA immediately leads us to the First Fundamental Equation of ELINT, F_1 :

$$\frac{p_t}{p_b} \times \frac{q_t}{q_b} = \frac{v_t}{v_b} \quad (1)$$

with $t=0, 1, \dots, T$ and $U(A)$ as reference collective of (1).

There is no difficulty in calculating the average price, the total quantity of units and their total value, even when the market consists of submarkets h , where $h = 1, 2, \dots, H$, provided one and the same commodity is offered on the market. However, the market usually offers different commodities h , where $h = 1, 2, \dots, H$, whose units defy direct summation. Thus we are facing the problem of how to reduce the given multi-commodity market to one homogeneous collective of utility units so as to make our generating algorithm workable. Fortunately, we needn't search an approach for the purpose since statistical agencies around the world routinely exploit even two approaches for the purpose.

3. REDUCING MULTI-COMMODITY MARKET TO ONE-COMMODITY MARKET: FIRST APPROACH

This way of reducing the market to one-commodity market presupposes stability of the constituent proportions of the market $q_{1t} : q_{2t} : \dots : q_{ht}$; only the

absolute values q_{ht} of the market are allowed to change over time. As this is a restrictive condition, the applicability of the approach is usually limited to a validity time range ($O.T$) of, say, 5 to 10 years. Bearing this in mind, we can focus on the market situation in a period a (where a is a more or less arbitrarily chosen particular year within ($O.T$)), next declare the market assortment in that year ($q_{1a} : q_{2a} : \dots : q_{ha}$) as constituting a fixed compound utility unit C_a , and then express the volumes of the market in the remaining years of ($O.T$) in terms of C_a . The particular year a will be hereinafter called "utility unit calibrating year". Hence, the volume $q(C_a)$ of the reference collective $U(C_a)$ will be 1 in a , and a more or less different quantity in b (the base year) and in t (the current year). For the sake of brevity only, we will write K_a , K_b and K_t instead of $q_a(C_a)$, $q_b(C_a)$ and $q_t(C_a)$, respectively. Table 1 illustrates the approach.