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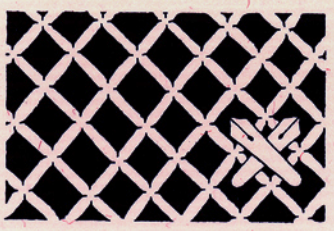

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# European Financial Integration in the Perspective of Global Flow of Funds

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# European Financial Integration in the Perspective of Global Flow of Funds

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Abstract

The first purpose of this paper is to present the country-by-country asset-liability-matrix (ALM) by which we can grasp the international financial transactions on the whole. We drew up ALM using external assets and liabilities data obtained from IFS for 1996 and 1999. The second purpose of this article is to examine the role of three major currency blocks, especially the newly integrated euro area, in the context of the global flow of funds. As a conclusion, it can be said that a big player in the global capital market does not necessarily have huge amount of excess assets by their own. It is surely an advantage to have surplus in assets, but it is not a necessary or sufficient condition to play a leading role. The big players draw huge amount of money from wealthier countries and let it to the countries that need it. In a sense, most valuable ability to be a big player is to find the money whenever required and lend it to whomever in want. All of the euro countries are surely big players in the cross-border financial transactions. And they gained power in the course of the financial integration. The best way for advancing further is that to maintain the economical as well as cultural and political linkage with the countries of the world and deepen it whenever possible.

Key Words

Flow of Funds, Asset-Liability-Matrix, External Assets and Liabilities, Leontief-Inverse

## 1. Introduction

The long-waited financial integration of Europe has been reached and the euro-area countries are enjoying its fruit of regional prosperity. However, the effects of the introduction of euro to the world economy especially in terms of the international flow of funds are unknown. The purpose of this study is to find out how the role of Europe in the global financial system has changed in the course of the integration. With the advance of economic globalisation, there is a bitter competition among the industrialized countries to grasp the leading role in the cross-border capital market, to shift their resources from traditional goods-production to financial services. However, the stereotype textbooks do not teach the strategy to get into the premier league. It is essential to have a bird-view of the global flow of funds to understand what kind of qualification is required to move into the lead.

Flow of funds (FOF) analysis has been stem from "Social Accounting for Money flows" authored by Morris Copeland in 1949. Since then it has developed as an accounting system describing the inter-sectoral financial transactions between the economic actors. There have been a number of analyses using FOF, as Cohen (1972,1987) and Bain (1973) review the literature on flow of funds. Some of them tried to apply the method borrowed from input-output analysis on FOF assuming that stable relationships may exist among the flows within the financial system. Bain(1973) demonstrated that the portfolio selection of each sector was not sensitive to changes in relative interest rates, rather governed by the historical elements particular to the country. Chipman (1950) carried out a major theoretical study of inter-sectoral money flows and income formation using these ideas. Then Stone (1966) developed models of the financial system based upon the social accounting matrix. Cohen (1963) has employed the notion of fixed technical coefficients. Tsujimura and Mizoshita (2002a,b) successfully demonstrated that the combination of Asset-Liability-Matrix compiled from FOF Accounts consist of balance sheets and the various techniques developed in Input-Output Analysis is a powerful tool to analyse domestic financial market. If we could apply this scheme to the international flow of funds, it must be a powerful weapon for understanding the structure of global financial system, so that the authors have produced country-by-country ALMs based on the information available in the International Financial Statistics (IFS) published by the International Monetary Funds (IMF). The first approximation is that there is only one worldwide pool of funds for each form of financial transactions and every supplier of funds throw money into that pool and every user of funds draw money from it. We call this supply-and-use method, which was shown in Stone (1966). As the second step, we have revised the table taking geographical and other factors into account in addition to the volume of external assets and liabilities of a country. We name it gravity method after

famous attempts by Wassily Leontief (1966) in his inter-regional input-output table.

The main theme of this tract is to examine the role of three major currency blocks, especially the newly integrated euro area, in the context of the global flow of funds. The matrices are triangulated so that the countries listed at the bottom are the primary supplier of the funds while the countries at the top of the table are the final user of the funds. Those countries tabulated in the middle are either net supplier or net user but also acting as intermediaries of the funds between the lenders and the borrowers. In the triangulated asset-liability-matrices on the supply-and-use method, Japan and Switzerland are situated right at the bottom of the table, proving that they are the ultimate source of the fund-supply. However, in the more intuitive gravity-method, it is demonstrated that the euro countries including Germany, France and Belgium take over these places.

Another powerful devices to demonstrate the fundamental structure of the ALM are the dispersion indices. Unlike the triangulation, which illustrates only the direct linkage between the countries, dispersion indices account for the indirect transactions as well. In this sense, dispersion indices are superior to triangulation to single out the most valuable player of the international financial market. The United States and The United Kingdom have the largest dispersion sensitivity index indicating that they are the most valuable players of the all. Japan, Germany and Switzerland are just behind the leaders. Also the euro countries including Italy, France, The Netherlands, Belgium and Spain plays leading roles in this directory of power players. Other countries of the world depend on them directly or indirectly whenever they seek money. It is surely an advantage to have surplus in assets, but it is not a necessary or sufficient condition to play a leading role. As a conclusion, it can be said that most valuable ability to be a big player is to find the money whenever required and lend it to whomever in want.

## 2. Data

### 2.1 Assets-Liability- Matrices

The fundamental data used for analysis of the international financial transactions between countries are obtained from the International Financial Statistics (IFS) published by IMF. Table1 presents the balance sheet of international investment position reported in IFS, which shows what amount of external liabilities and assets the particular country have.

Table1: International Investment Position

| Assets | Liabilities |
|---|---|
| Direct Investment Abroad | Dir. Invest. in Rep. Economy |
| Portfolio Investment | Portfolio Investment |
| Equity Securities | Equity Securities |
| Debt Securities | Debt Securities |
| Financial Derivatives | Financial Derivatives |
| Other Investment | Other Investment |
| Monetary Authorities | Monetary Authorities |
| General Government | General Government |
| Banks | Banks |
| Other Sectors | |

By collecting this kind of balance sheets, we can compile worldwide flow-of-funds matrix as the first step. This format of FOF describes the portfolio selection activity of the countries as well as the final balance of object-economy. As the second step, it is necessary to build an asset-liability-matrix (ALM) to examine the international financial transactions on the whole. We start with the compilation of ALM named Y-table. Fig.1 shows the components of Y-table. Y is a m × m matrix whose elements $y_{ij}$ are the amount of funds provided from country i to country j. $\varepsilon_i^Y$ are elements of m× 1 vector $\varepsilon^Y$, which represent excess liabilities, and $\rho_j^Y$ are elements of m× 1 vector $\rho^Y$, which represent excess assets. $T^Y$ is an m× 1 vector that consist of $t_j^Y$; either the sum of assets or liabilities whichever is greater.

$$\begin{array}{ccccc} y_{11} & y_{12} & \cdots & y_{1m} & \varepsilon_1^Y \quad t_1^Y \\ y_{21} & y_{22} & \cdots & y_{2m} & \varepsilon_2^Y \quad t_2^Y \\ \vdots & \vdots & \ddots & \vdots & \vdots \quad \vdots \\ y_{m1} & y_{m2} & \cdots & y_{mm} & \varepsilon_m^Y \quad t_m^Y \\ \rho_1^Y & \rho_2^Y & \cdots & \rho_m^Y & \\ t_1^Y & t_2^Y & \cdots & t_m^Y & \end{array}$$

Figure 1: Y-table

In next section, we describe two methods for compilation of Y-table from the balance sheet format data – Supply-and-Use method and Gravity method. The former assume that every country raises funds from the same one market without any restrictions. On the other hand the latter stems from the simple fact that country tends to raise funds from

nearby countries with which it has close relations. The present analysis is conducted for 60 countries for the year 1996 and 72 countries for the year 1999.

### 2.2 Supply-and-Use method

If one country could raise funds from any other countries without restriction, it could be described as that there is only one worldwide market on the globe.

#### 2.2.1 E- and R-tables

The first step to draw up ALM is to pick out the assets and liabilities vectors separately from the balance sheets of IFS to make out two matrices E and R. E is a matrix to show the portfolio of fund-employment of each country, $\varepsilon$ and $T^E$ are vectors that represent excess liabilities, and sum of each row respectively. Likewise, R is a matrix to show the portfolio of fund-raising of each country, $\rho$ and $T^R$ are vectors that represent excess assets, and sum of each row respectively. T is the vector that consist of either the sum of assets or liabilities whichever are greater. n and m denote the number of financial instruments and the number of countries. The structure of E and R tables in terms of their components are depicted below.

$$\begin{array}{ccccc} e_{11} & e_{12} & \cdots & e_{1m} & t_1^E \\ e_{21} & e_{22} & \cdots & e_{2m} & t_2^E \\ \vdots & \vdots & \ddots & \vdots & \vdots \\ e_{n1} & e_{n2} & \cdots & e_{nm} & t_n^E \\ \varepsilon_1 & \varepsilon_2 & \cdots & \varepsilon_m & \\ t_1 & t_2 & \cdots & t_m & \end{array}$$

Figure 2: E-table

$$\begin{array}{ccccc} r_{11} & r_{12} & \cdots & r_{1m} & t_1^R \\ r_{21} & r_{22} & \cdots & r_{2m} & t_2^R \\ \vdots & \vdots & \ddots & \vdots & \vdots \\ r_{n1} & r_{n2} & \cdots & r_{nm} & t_n^R \\ \rho_1 & \rho_2 & \cdots & \rho_m & \\ t_1 & t_2 & \cdots & t_m & \end{array}$$

Figure 3: R-table

#### 2.2.2 Y-table

It is commonly known that the E- and R- tables do not have to be square. In fact, the number of products may be more than the number of countries and vice versa. In these cases both E- and R- tables are rectangular. The method that could be used to convert two rectangular tables into a square one is described in United Nations (1999), in which the use and supply matrices are multiplied each other to derive the traditional symmetric I/O table based on either the industry-technology assumption or the commodity-technology assumption. After these methods, we compile Y-table in accordance with fund-raising portfolio, assuming that a country always raises funds in the same proportions of each financial instrument. First, R matrix is substituted for U

matrix (financial instrument by country) and transposed E matrix for V matrix (country by financial instrument):

$$\mathbf{U} \equiv \mathbf{R}, \tag{1}$$

$$\mathbf{V} \equiv \mathbf{E}'. \tag{2}$$

The coefficient matrix, B is constructed from U and T by dividing the cells in each column of U by the column sums T:

$$b_{ij} = \frac{u_{ij}}{t_j}. \tag{3}$$

In the same manner, coefficient matrices D corresponding to V is defined as follows:

$$d_{ij} = \frac{v_{ij}}{t_j^E}, \tag{4}$$

where $t^E_j$ is the sum of assets for financial instrument j. That is, $d_{ij}$ is regarded as i country's share of assets for j financial instrument. The m x m coefficient matrix C corresponding to Y is estimated using country-portfolio assumption, which is equivalent of the industry-technology assumption in the scheme of I/O analysis:

$$\mathbf{C} = \mathbf{DB}. \tag{5}$$

Using this matrix C, transaction-quantity matrices Y is reduced in the following manner:

$$y_{ij} = c_{ij} t_j, \tag{6}$$

where $y_{ij}$ is the amount of funds provided from country i to country j. This matrix is shown in Fig.3. As mentioned above, square ALM is drawn up in compliance with the behavioural pattern of fund raising – Supply-and-Use method.

### 2.3 Gravity method

Supply-and-Use method presented in section 2.2 assumed that every country raises funds from any countries holding excess assets. However, taking the prevailing economic situation into consideration, there could be many factors that prevent free transaction such as long distance, imperfect information, ill diplomatic relations, etc. The gravity method is based on an assumption that most countries raise funds from familiar countries situated in their neighbourhood, the idea originated in gravity model introduced by Leontief and Strout (1963). Some people might say that more realistic ALM is compiled on gravity method than on Supply-and-Use method.

In a worldwide economy subdivided into m separate countries, the international flow of funds must satisfy balance of the following kind:

$$y_{go} = \sum_{h=1}^{m} y_{gh} \quad (g = 1,\ldots,m), \tag{7}$$

$$y_{oh} = \sum_{g=1}^{m} y_{gh} \quad (h = 1,\ldots,m), \tag{8}$$

where $y_{go}$, $y_{oh}$ and $y_{gh}$ represent the supply pool of funds in country g, the demand pool of funds in country h, and the amount of funds country h raised from country g, respectively. Summing each of these two sets of equations over all countries, we see that the aggregate supply of funds for the world wide economy as a whole equals the aggregate demand for funds:

$$\sum_{g=1}^{m}\sum_{h=1}^{m} y_{gh} = \sum_{g=1}^{m} y_{go} = \sum_{h=1}^{m} y_{oh} = y_{oo}. \tag{9}$$

The structural equations that we are to use in explaining the magnitude of international flow of funds are of the following general form:

$$y_{gh}^{0} = \frac{y_{go}\, y_{oh}}{y_{oo}} Q_{gh} \qquad (g = 1,2,\cdots,m)\ (h = 1,2,\cdots,m)\ (g \neq h). \tag{10}$$

The flow of funds from country g to any other country h is assumed to be directly proportional to its total fund-employment in country g and to its total fund-raising in country h, and inversely proportional to the aggregate amount of funds. The coefficients $Q_{gh}$ are empirical constants that represent the relationship between country g and country h. We have adopted OAG's air flight miles as proxy for the weight $Q_{gh}$, because the state of relation between two countries is not a little reflected in it regardless of geographical distance. Air flight miles matrix given in Fig.4 is drawn up making use of data obtained from OAG, that is m × m matrix composed of $w_{gh}$, the air flight miles between country g and country h.

| | 1 | 2 | ⋯ | m |
|---|---|---|---|---|
| 1 | $w_{11}$ | $w_{12}$ | ⋯ | $w_{1m}$ |
| 2 | $w_{21}$ | $w_{22}$ | ⋯ | $w_{2m}$ |
| ⋮ | ⋮ | ⋮ | ⋱ | ⋮ |
| m | $w_{m1}$ | $w_{m2}$ | ⋯ | $w_{mm}$ |

Figure4: air fright miles matrix

We substituted the reciprocals of OAG's air flight miles for $Q_{gh}$ in order to give priority to familiar countries over remote countries. If there is no flight between country g and country h, that means two countries do not have close relationship, so that $Q_{gh}$ equal zero, as follows:

$$Q_{gh} = \frac{1}{w_{gh}} \quad (if\ w_{gh} \neq 0), \qquad Q_{gh} = 0 \quad (if\ w_{gh} = 0). \tag{11}$$

A problem that occurs in calculation of $y_{gh}^0$ is to adjust the raw and column totals to be equal to $y_{go}$ and $y_{og}$ respectively. This problem is known as balancing the matrix, and the RAS method is widely used to solve it. Following is the modified RAS algorithm we have adopted for our analysis. From equation (10), set the initial value to $y_{gh}^0$.

(a) As initial value, set k=0; that is $y_{gh}=y_{gh}^0$.

(b) The first step of iteration is to calculate the row multipliers $\mu_g^k$:

$$\mu_g^k = \frac{y_{go}}{\sum_{h=1}^{m} y_{gh}^k} \quad (g = 1,...,m), \tag{12}$$

$$\nu = \prod_{g=1}^{m} \mu_g^k . \tag{13}$$

And then to update $y_{gh}^k$ by

$$y_{gh}^k \leftarrow c_r \mu_g^k y_{gh}^k, \quad (g = 1,2,\cdots,m)\ (h = 1,2,\cdots,m)$$

where $c_r$ is positive constant.

(c) The second step is to calculate the column multipliers $\sigma_g^k$:

$$\sigma_h^k = \frac{y_{og}}{\sum_{g=1}^{m} y_{gh}^k} \quad (h = 1,...,m), \tag{14}$$

$$\varsigma = \prod_{h=1}^{m} \sigma_h^k . \tag{15}$$

And define $y_{gh}^{k+1}$ as

$$y_{gh}^{k+1} \leftarrow y_{gh}^k c_c \sigma_h^k, \quad (g = 1,2,\cdots,m)\ (h = 1,2,\cdots,m)$$

where $c_c$ is positive constant.

As a result of this step in the iteration, the row total is no longer $y_{go}$. A second set of

multipliers $\mu_g^{k+1}$ must now be applied to the rows so that they sum up again to $y_{go}$. The column sums will then require further adjustment and this process will continue until no further adjustment is necessary.

(d) If $\nu$ and $\varsigma$ converge to 1, then we stop the iteration process; else replace k←k+1, and return to Step(b).

Although, in the traditional algorithm, $c_r$ and $c_c$ are defined as 1, we substitute constants 0.05 through 1.00 at intervals of 0.05 for $c_r$ and $c_c$, so as to minimize errors of row and column sums from $y_{go}$ and $y_{og}$ respectively. The optimal solution is combination that minimize $\theta$, where $\theta$ is given by

$$\theta = max\{(1-\nu)^2, (1-\varsigma)^2\}. \quad (16)$$

Table2 describes the results of iteration using IFS data of 1996 and 1999, with which balanced Y matrix is made.

Table2: Results of iteration

| Year | $c_r$ | $c_c$ | $\theta$ |
|---|---|---|---|
| 1996 | 0.90 | 0.10 | 0.207 |
| 1999 | 0.45 | 0.45 | 0.976 |

### 2.4 Comparison of Supply-and-Use method and gravity method

In the previous sections, two methods of making Y-table are presented. One is Supply-and-Use method, which assumes that there is only one worldwide pool of funds for each form of financial transactions. The other is gravity method based on the idea that countries tend to borrow money from familiar countries. Though in accordance with these methodologies, two kinds of Y-table are drawn, a problem awaiting solution is which Y-table is more appropriate than the other. If data of each country's investment position by country were available, it could be possible to judge which is better method by measuring error. But it is impossible to gain such data across the world. Table3 shows Japanese investment position by country obtained from *Ministry of Finance Statistics Monthly*.

Table3: Japanese investment position, 1990(millions of U.S. dollars)

| Country | Assets | Liabilities |
|---|---|---|
| Australia | 26973 | 13028 |
| Belgium | 45178 | 47101 |
| Canada | 28982 | 8158 |
| France | 58032 | 31112 |
| Germany | 108516 | 33567 |
| Italy | 26923 | 18018 |
| Netherlands | 69051 | 21849 |
| New Zealand | 3527 | 1178 |
| Russia | 178 | 41 |
| South Africa | 1204 | 163 |
| Spain | 10876 | 398 |
| Sweden | 22394 | 5723 |
| Switzerland | 9069 | 38257 |
| Thailand | 6202 | 5723 |
| United Kingdom | 117749 | 363842 |
| United States | 486067 | 340574 |

Source: *Ministry of Finance Statistics Monthly.*

The approach we have adopted is to compare the similarities between observed value and estimated value in terms of correlation. These results are given in table4, which show that supply-and-use method is better than gravity method. Although correlation coefficients for both methods are almost same as far as assets are concerned, as for gravity method, the coefficient of liabilities is a little too low. In a sense, it is fortunate because supply-and-use method is technically easier to handle than gravity method is. However it must be too much haste if we jump into the conclusion that supply-and-use method is superior to gravity method because there is only one country available to prove it. So, we are to use both tables, which have been compiled as two alternative methods in the following discussion.

Table4: Correlation coefficients of observed and estimated values

| | Assets | Liabilities |
|---|---|---|
| Supply-and-Use method | 0.9633 | 0.9059 |
| Gravity method | 0.9666 | 0.7074 |

## 3 Methodologies

Having presented the procedure to compile Y-table, which forms the foundation of our analysis, we will describe methodologies of quantitative analysis making use of it in this section. The object of this paper is to analyse the structure of interdependence as revealed by the pattern of international flow of funds and compare the role of each country in the global market. The approach that we have adopted is to revile ranking of countries by using two indices and the triangulation of ALM, applying the methods widely used in I/O analysis.

### 3.1 Leontief Inverse

We will apply the Leontief Inverse, namely the indices of the power and the sensitivity of dispersion to ALM. First, let us denote $c_{ij}$ as follows:

$$c_{ij} = \frac{y_{ij}}{t_j^Y}. \tag{17}$$

As Fig.1 shows, the fundamental equations respect to Y table is expressed as follows:

$$\sum_{i=1}^{m} y_{ij} + \varepsilon_i^Y = t_i^Y, \tag{18}$$

or in matrix terms:

$$\mathbf{C} \cdot \mathbf{T}^Y + \boldsymbol{\varepsilon}^Y = \mathbf{T}^Y. \tag{19}$$

Solving each equation for $T^Y$ yields

$$\mathbf{T}^Y = (\mathbf{I} - \mathbf{C})^{-1} \boldsymbol{\varepsilon}^Y \tag{20}$$

where I denotes the m × m unit matrix, $(I\text{-}C)^{-1}$ is the m × m Leontief inverse matrix by which how much demand for funds would be induced to each country can be calculated. Matrix Γ is denoted as follows;

$$\boldsymbol{\Gamma} = (\mathbf{I} - \mathbf{C})^{-1} = \begin{bmatrix} \gamma_{11} & \gamma_{12} & \cdots & \gamma_{1m} \\ \gamma_{21} & \gamma_{22} & \cdots & \gamma_{2m} \\ \vdots & \vdots & \ddots & \vdots \\ \gamma_{m1} & \gamma_{m2} & \cdots & \gamma_{mm} \end{bmatrix} \tag{21}$$

where $\gamma_{ij}$ describes the amount of increase in demand for i country's funds when the demand for j country's demand for funds rise. We can calculate both indices of the power of dispersion and of the sensitivity of dispersion using $\gamma_{ij}$. Two distinct indices are defined as follows:

$$w^{Y}{}_{j} = \frac{\sum_{i=1}^{m} r_{ij}}{\frac{1}{m}\sum_{j=1}^{m}\sum_{i=1}^{m} r_{ij}}, \tag{22}$$

$$z^{Y}{}_{i} = \frac{\sum_{j=1}^{m} r_{ij}}{\frac{1}{m}\sum_{i=1}^{m}\sum_{j=1}^{m} r_{ij}}, \tag{23}$$

where $w^{Y}{}_{j}$ is index of the power of dispersion and $z^{Y}{}_{i}$ is index of the sensitivity of dispersion.

### 3.2 The triangulation of ALM

Since countries posted in ALM are in alphabetical order, one glance is not enough to grasp the mutual relations within the system. So that we rearrange the rows and columns of the original ALM to reveal the causal sequence and ranking within the worldwide financial economy. There are two patterns of funds interdependence, one is sequential relation like household-bank-company, and the other is circular relation like household-bank-household. If there were no circular relations found in the worldwide economy, it would be possible to arrange the Y matrix in a triangular form having only zeros on the upper side of the diagonal. The number of transactions that fall above the diagonal of the optimally arranged matrix means the extent to which the actual economy departs from one-way interdependence.

In case of triangulation of ALM, first, we net out the symmetrical elements of Y matrix. Then sorting countries of Y matrix to minimize the number of upper right elements of Y matrix as depicted in Fig.5, it would prove that there are one-way flow of funds and clear relation of cause and effect in ALM.

In order to minimize the above-diagonal totals by revising the order of countries, it have to be computed for every possible sort of matrix. Let M denote the every possible order of the first m positive integers, and let each element of the set M denote, $\mu = (\mu(1), \mu(2), \cdots, \mu(m)) \in M$, thus there are m! elements in the set M. Let $Y^{tr}(\mu)$ denote a matrix constructed by rearrangement of rows and columns by $\mu$, and denote function $T(Y^{tr}(\mu))$ as follows:

$$T(Y^{tr}(\mu)) = \sum_{i<j} y^{tr}_{\mu(i)\mu(j)}. \tag{24}$$

Thus the triangulation problem is finding the $\mu^*$ in which $T(Y^{tr}(\mu))$ is minimized:

$$T(Y^{tr}(\mu^*)) = \min_{\mu \in M} T(Y^{tr}(\mu)). \tag{25}$$

We have reached the optimum solution of $T(Y^{tr}(\mu))$ by way of iteration method.

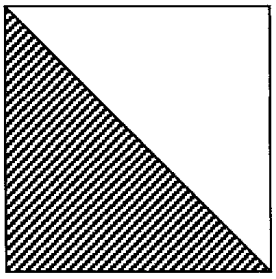

Figure 5: Triangulation of ALM

## 4. Results

### 4.1. The implications of Triangulation

As it is shown in Table5 for 1996 and Table6 for 1999 respectively, each country has surplus either in assets or in liabilities. In both years, Japan has the largest surplus in assets and Switzerland stands second among the countries providing the asset/liability figures in the IFS. France, which took the third place in 1996, fell into the red in 1999 making way for Germany. Although there are some alterations, the numbers of the countries with excess assets are 11 in both years. In 1996, the country with the largest excess liabilities was the U.S. and it retained the place in 1999 as well. While Canada, which had the second largest excess debt in 1996, retreated to the fifth place in 1999, Australia shifted its position from third to second. That means only a handful of countries supply the funds required by the majority of the countries of the world. It is worth notice that many of the net fund suppliers are euro countries, namely Germany and Belgium in both years, France and the Netherlands in1996, and Italy in 1999.

However it is a hasty conclusion if one judges the importance of a country by net assets alone. To get deeper insight, it is indispensable to have a bird's-eye view of the cross-border flow of funds from the worldwide perspective. The country-by-country consolidated asset-liability-matrices for 1996 and 1999 on supply-and-use method are presented in Table7 and Table8. In this method it is assumed that there is only one worldwide pool of funds for each form of financial transactions and every supplier of funds throw money into that pool and every user of funds draw money from it. These matrices are triangulated so that the countries listed at the bottom are the primary supplier of the funds while the countries at the top of the table are the final user of the funds. Those countries tabulated in the middle are either net supplier or net user but also acting as intermediaries of the funds between the lenders and the borrowers.

In case of 1996, Switzerland, Japan, France, Belgium and Germany hold the bottom of the table in that order. As for 1999, the order was unaltered except for Italy

that replaced France. All of these countries had surplus in assets by then. However, it should be noted that the United States, which has the largest excess liabilities, is in the 10th place from the bottom of the triangle in both years. This could be explained by the fact that the United States has massive external assets as well as liabilities in the gross term. Same logic applies to the United Kingdom. These countries act as financial intermediaries in the global market. In Table9 only 59 countries common to both 1996 and 1999 IFS data are picked so that we can compare the relative position of each country in the triangles. There are not too many countries that shifted its place. Among them, France and Finland moved up their positions by 4 and 6 respectively, somewhat loosing their grounds in the global financial market. On the other hand, Italy and Spain moved their positions downwards by 6 and 5, increasing their presence in the economy. As for non-euro EU countries, Sweden shifted down its position by 12, becoming more important player in the worldwide perspective.

The country-by-country triangulated asset-liability-matrices for 1996 and 1999 on gravity method are presented in Table10. In this method, geological, historical, religious, and cultural as well as political and economic linkages implied in the air transportation are taken into account along side the distances between the countries, in addition to the volume of external assets and liabilities of a country. Roughly speaking, there are three main economic blocks in the world, namely Euro-African block, American block and Asia-Oceania block. Each block has its hub state(s) with one of the major currency of the world, euro, U.S. dollar or yen. The funds flow between these three hubs as well as between each hub and the spoke countries of the region. Although there are some financial transactions between the hub country of a block and some local hub country of another, flow of funds between small countries belonging to different economic blocks is almost nil. That means there are not few zero-cells in the asset-liability-matrix. In this case, those countries situated at the bottom of the triangle are not just wealthy in assets but also easily accessible by the borrowers.

Fifty-nine countries common to both supply-and-use method and gravity method are picked from gravity-method triangles and depicted in Table9 and Table10 so that we can compare the relative position of each country in the triangles. In 1996, France held the first place from the bottom while diamond-rich Botswana occupied the second. The order had been a little altered in 1999; Botswana led the league and Germany was just behind it. In both years Japan, which has the largest excess assets, is placed 6th from the bottom in the gravity-method triangle, though it held the second place in the supply-and-use method triangles. It does mean that however rich Japan is, not too many countries directly approach Japan for funds. Instead, they seek money somewhere else, most probably in the United States or in the United Kingdom because of the geographical

or political reasons. Among the 10 most financially dependable countries of the world, there are not a few euro-area countries including France, Germany, Belgium, the Netherlands and Italy. It should also be noted that most of euro countries with a few marked exceptions increased their presence in the international capital market in the course of the financial integration.

### 4.2. The Dispersion Indices Results

Another powerful devices to demonstrate the fundamental structure of the ALM are the dispersion indices. While the triangulation is a tool to reveal the construction of an ALM itself, dispersion indices characterize the configuration of the Leontief-inverse matrix of the ALM. The dispersion power index indicates how much funds are drawn from the countries of the world in total, if the country specified in the column increase borrowing by one unit. The dispersion sensitivity index implies how much funds are drawn from the country designated in the row if every country of the world increases borrowing by one unit. Unlike the triangulation, which illustrates only the direct linkage between the countries, dispersion indices account for the indirect transactions as well. In this sense, dispersion indices are superior to triangulation to single out the most valuable player of the international financial market.

Table11 is the table of dispersion indices obtained from the Leontief-inverse of the ALM on the supply-and-use method. The countries with largest dispersion power index are Tunisia, Cambodia, Estonia and so on. They are final user of the funds, but also too small to directly tap the global market for funds, so that they depend on the regional hub countries to satisfy their requirements. In contrast with this, the countries with smallest dispersion power index are Botswana, Switzerland, Japan and Russia. These countries are not only self-sufficient in funds, but also are bystanders of the international capital market. Those countries like the United States and the United Kingdom situated in the middle of the table are the active participants of the cross-border financial transactions as intermediaries. Almost all euro countries including Spain, Austria and Portugal belong to this category. During the financial integration period, the European countries shifted their positions quite dramatically. The Netherlands and Finland moved away from the mainstream and placed them on the sideline. By sacrificing its excess assets status, France successfully went into the limelight.

The dispersion indices obtained by the gravity method presented in Table12 give slightly different view of the world. Just as in case of supply-and-use method, Japan and Switzerland have reserved seats at the bottom of the table. The United States, which is drifting upper-middle in the former table, stabilizes quarter way from the bottom in the latter. Most of the euro countries hold middle position in both cases. The only difference

is that the Netherlands and Finland play more active role in the gravity-method table, most probably because their political neutrality and the introduction of the new currency have reworded them right.

According to the dispersion sensitivity index shown in Table13 obtained by means of supply-and-use method, the United States, the United Kingdom, Japan and Germany lead the league. Among them, the former two have net liabilities while the latter two have net assets. In any case, the countries of the world consider that these countries are most dependable when they seek money. On the other hand, Maldives, Lesotho and Kyrgyz Republic hold the last places on the table. The Republic of Maldives is a group of atolls in the midst of the Indian Ocean. Lesotho is totally surrounded by the Republic of South Africa. Kyrgyz Republic is a country with the Tien Shan mountain range covering almost the whole territory. In other words, they are geographically isolated countries with practically no one depending on them for financial transactions. You will find Botswana, the wealthiest African country with diamonds, quarter way from the bottom also because of its geographically isolated position in the Kalahari Desert.

On Table14, the dispersion sensitivity index on gravity method is tabulated. In the case of dispersion sensitivity index, there is not too much difference between the two methods of estimation. The interesting thing is that supply-and-use method has successfully picked out the most isolated countries of the world without any a priori information concerning to the geography. Actually, there are some trivial discrepancies between the indices on the alternative methods; the dissimilarity between the two periods remains minimal. As for the West European countries including the euro area, almost all of them are situated in the upper quarter of the table both in 1996 and 1999. Spain and the Netherlands moved slightly upward in the ranking between the years proving that the European financial integration has benefited them right.

## 5 Conclusions

In this tract, we have examined the role of three major currency blocks, especially the newly integrated euro area, in the context of the global flow of funds. The fundamental situation is that only small number of countries of the world possesses excess assets and rest of them are net borrowers. Japan and Switzerland have the largest surplus in assets while The United States bears the largest debt. Among the European nations, Germany and Belgium are the principal creditors, and Italy joined the rich-man-club lately. By contrast, The United Kingdom and Sweden are the pre-eminent obligors, and Finland and Spain among euro countries belong to this group.

Actually, in the triangulated asset-liability-matrices on the supply-and-use method, Japan and Switzerland are situated right at the bottom of the table, proving that they

are the fundamental source of the fund-supply. However, in the gravity-method, which takes geographical and political linkages between the countries into consideration, it is demonstrated that the euro countries including Germany, France and Belgium take over these places. Moreover, in either case, The United States and The United Kingdom do not place themselves at the top of the triangle. Rather, they are situated just above the countries with excess assets aforementioned. These facts imply that The United States and The United Kingdom are not just countries of huge debt, but are great intermediates of the global capital market. They borrow money a lot, but they lend most of it somewhere else. Many of the small countries access them first for money, few countries access directly to the net creditors like Japan or Switzerland though they are the last resorts. Usually small debtors seeking new money reach the hub states of the region. There are three main economic blocks in the world with their own hub-countries corresponding to three major currencies. There is enormous volume of capital-flow between those hub-countries, and they are the financial centres of the block with some local hubs to assist them. Those countries placed at the bottom of the triangle inclusive of the euro countries mentioned above are supposed to be the countries that act as hub countries of the economic block they belong to.

The triangulation is a prominent technique to reveal the structure of ALM, though another powerful tool is the Leontief-inverse that produces dispersion indices. Among which, the dispersion power index indicates how much funds are drawn from the countries of the world in total, if the country in question increase borrowing by one unit. Japan and Switzerland have the smallest dispersion power index, if it is allowed to make an exception of Botswana, the diamond-rich African country. Both The United States and The United Kingdom, and some of the euro countries including Germany, Italy and Belgium have indicators around one, tabulated quarter way from the bottom. Most of the European nations not listed above find their positions in the middle of the table. Since the dispersion index covers indirect transactions as well as the direct ones taken into account in the triangulation, the busy transactions between the European countries result in larger power index for them. Especially, France and The Netherlands gained a lot from the financial integration.

In contrast to the dispersion power index, the dispersion sensitivity index displays how much funds are drawn from the country in question if every country of the world increases borrowing by one unit. In this list, The United States and The United Kingdom shoot out just to the top of the table indicating that they are the most valuable players of all. Japan, Germany and Switzerland are just behind the leaders. Also the euro countries including Italy, France, The Netherlands, Belgium and Spain plays leading roles in this directory of power players. Other countries of the world depend on them directly or

indirectly whenever they seek money.

As a conclusion, it can be said that a big players in the global capital market do not necessarily have huge amount of excess assets by their own. It is surely an advantage to have surplus in assets, but it is not a necessary or sufficient condition to play a leading role. The big players draw huge amount of money from wealthier countries and let it to the countries that need it. In a sense, most valuable ability to be a big player is to find the money whenever required and lend it to whomever in want. All of the euro countries are surely big players in the cross-border financial transactions. And they gained power in the course of the financial integration. The best way for advancing further is that to maintain the economical as well as cultural and political linkage with the countries of the world and deepen it whenever possible.

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Table5: International Investment Position, 1996 (Millions of U.S. dollars)

| Country | Assets (A) | Liabilities (L) | Excess Assts or Liabilities (A)-(L) |
|---|---|---|---|
| Japan | 2652610 | 1761590 | 891020 |
| Switzerland | 924354 | 587559 | 336795 |
| France | 1470160 | 1284360 | 185800 |
| Germany | 1699680 | 1610140 | 89540 |
| Belgium | 580689 | 539010 | 41679 |
| Netherlands | 696816 | 658739 | 38077 |
| Russia | 29041 | 22162 | 6879 |
| Bahrain | 69519 | 65188 | 4331 |
| Botswana | 6001 | 1942 | 4059 |
| Slovak Republic | 10311 | 9769 | 542 |
| Swaziland | 922 | 895 | 28 |
| Lesotho | 522 | 536 | -13 |
| Maldives | 100 | 178 | -78 |
| Mauritius | 1243 | 1427 | -184 |
| Latvia | 2366 | 2717 | -351 |
| Paraguay | 2567 | 2954 | -388 |
| Slovenia | 7126 | 7625 | -500 |
| Cambodia | 711 | 1351 | -640 |
| Estonia | 1344 | 2008 | -664 |
| Moldova | 612 | 1290 | -677 |
| Belarus | 1335 | 2065 | -729 |
| Macedonia | 497 | 1243 | -746 |
| Kyrgyz Republic | 203 | 1070 | -867 |
| Lithuania | 1693 | 2813 | -1121 |
| Benin | 613 | 1803 | -1189 |
| Costa rica | 1421 | 3268 | -1847 |
| Jordan | 7827 | 9833 | -2006 |
| Romania | 9084 | 11468 | -2384 |
| Venezuela | 24926 | 27324 | -2398 |
| Czech Rebublic | 30629 | 33151 | -2522 |
| El Salvador | 1771 | 4336 | -2564 |
| Urugay | 8718 | 11604 | -2886 |
| Iceland | 1319 | 4719 | -3400 |
| Senegal | 641 | 4101 | -3460 |
| Panama | 24677 | 30082 | -5405 |
| Portugal | 86425 | 93951 | -7526 |
| Tanzania | 744 | 9966 | -9222 |
| Chile | 16257 | 27785 | -11528 |
| Bangladesh | 2614 | 15510 | -12896 |
| Cote d ivoire | 875 | 16101 | -15226 |
| Tunisia | 3112 | 23382 | -20271 |
| Israel | 34162 | 57817 | -23655 |
| South Africa | 35056 | 60449 | -25393 |
| Colombia | 16769 | 43233 | -26464 |
| Austria | 161785 | 189264 | -27479 |
| Peru | 14869 | 43611 | -28742 |
| Poland | 28746 | 58515 | -29769 |
| Italy | 727498 | 761656 | -34158 |
| Denmark | 145614 | 187737 | -42123 |
| New Zealand | 23573 | 71631 | -48058 |
| Turkey | 27613 | 79643 | -52030 |
| Finland | 65386 | 118245 | -52860 |
| Thailand | 46005 | 108742 | -62737 |
| Sweden | 248580 | 352787 | -104207 |
| Spain | 290877 | 399970 | -109093 |
| United Kingdom | 2764530 | 2882360 | -117830 |
| Australia | 161821 | 388362 | -226541 |
| Canada | 371736 | 599081 | -227345 |
| United States | 4549180 | 5091420 | -542240 |

Source: IFS

Table6: International Investment Position, 1999 (Millions of U.S. dollars)

| Country | Assets (A) | Liabilities (L) | Excess Assts or Liabilities (A)-(L) |
|---|---|---|---|
| Japan | 3013600 | 2184480 | 829120 |
| Switzerland | 1238940 | 887117 | 351823 |
| Germany | 2392770 | 2302170 | 90600 |
| Belgium | 655973 | 594723 | 61250 |
| Italy | 1081100 | 1027730 | 53370 |
| Botswana | 7356 | 2515 | 4841 |
| Bahrain | 92459 | 88016 | 4443 |
| Russia | 28393 | 24086 | 4307 |
| Venezuela | 26812 | 24949 | 1863 |
| Swaziland | 1134 | 1058 | 76 |
| Lesotho | 579 | 559 | 20 |
| Maldives | 148 | 214 | -66 |
| Mauritius | 1396 | 1601 | -206 |
| Cambodia | 1109 | 1455 | -346 |
| Macedonia | 904 | 1604 | -700 |
| Benin | 726 | 1748 | -1022 |
| Moldova | 597 | 1924 | -1327 |
| Paraguay | 2514 | 3929 | -1415 |
| Costa rica | 1919 | 3341 | -1422 |
| Kyrgyz Republic | 398 | 1868 | -1470 |
| Urugay | 12747 | 14512 | -1764 |
| Latvia | 3262 | 5235 | -1973 |
| Slovenia | 7787 | 9790 | -2002 |
| Belarus | 1004 | 3420 | -2415 |
| Jordan | 8222 | 10830 | -2608 |
| Estonia | 2415 | 5225 | -2810 |
| Czech Rebublic | 37465 | 40549 | -3083 |
| Senegal | 890 | 4223 | -3333 |
| Lithuania | 2453 | 6114 | -3661 |
| Iceland | 3370 | 7597 | -4227 |
| Slovak Republic | 8652 | 13201 | -4548 |
| El Salvador | 3875 | 9408 | -5534 |
| Tanzania | 1153 | 7648 | -6495 |
| Romania | 9718 | 16761 | -7044 |
| Netherlands | 1077480 | 1085950 | -8470 |
| Panama | 24395 | 32997 | -8603 |
| Bangladesh | 2535 | 15267 | -12732 |
| Cote d ivoire | 2641 | 16581 | -13940 |
| Chile | 19235 | 38005 | -18771 |
| France | 981440 | 1001690 | -20250 |
| Tunisia | 3359 | 24295 | -20936 |
| Denmark | 213446 | 237097 | -23651 |
| South Africa | 98507 | 122921 | -24415 |
| Peru | 14293 | 40553 | -26259 |
| Colombia | 19824 | 50889 | -31065 |
| Portugal | 125052 | 156473 | -31421 |
| Austria | 225924 | 262994 | -37070 |
| New Zealand | 21320 | 67651 | -46331 |
| Thailand | 48360 | 95051 | -46691 |
| Israel | 57616 | 105061 | -47445 |
| Poland | 40101 | 89257 | -49156 |
| Turkey | 37604 | 103847 | -66243 |
| Sweden | 353559 | 430625 | -77066 |
| Spain | 452063 | 567505 | -115442 |
| Canada | 484282 | 671838 | -187556 |
| United Kingdom | 3852010 | 4067640 | -215630 |
| Finland | 109694 | 327260 | -217566 |
| Australia | 219854 | 441936 | -222082 |
| United States | 7206360 | 8731670 | -1525310 |

Source: IFS

## Table7: Y-table,1996 (Supply-and-Use Method) (Millions of U.S. dollars)

| | Australia | Austria | Bahrain | Bangladesh | Belarus | Belgium | Benin | Botswana | Cambodia | Canada | Chile | Colombia | Costa rica | Cote d ivoire | Czech Republic | Denmark | El Salvador | Estonia | Finland | France | Germany | Iceland | Israel | Italy | Japan | Jordan | Kyrgyz Republic | Latvia | Lesotho | Lithuania |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Australia | 4478 | 1042 | 302 | 57 | 10 | 4030 | 6 | 23 | 14 | 4361 | 154 | 331 | 12 | 59 | 274 | 1113 | 22 | 20 | 857 | 14472 | 8665 | 27 | 289 | 4076 | 10270 | 36 | 7 | 23 | 2 | 20 |
| Austria | 2513 | 1753 | 709 | 178 | 22 | 4769 | 20 | 13 | 10 | 4782 | 270 | 378 | 36 | 184 | 274 | 1650 | 46 | 15 | 951 | 9822 | 15062 | 47 | 568 | 7153 | 16604 | 113 | 11 | 23 | 6 | 25 |
| Behrain | 784 | 838 | 462 | 117 | 14 | 2625 | 13 | 7 | 5 | 1867 | 165 | 212 | 21 | 122 | 154 | 721 | 29 | 8 | 389 | 4655 | 7569 | 23 | 318 | 3490 | 9510 | 74 | 7 | 14 | 4 | 15 |
| Bangladesh | 4 | 8 | 6 | 2 | 0 | 31 | 0 | 0 | 0 | 14 | 2 | 3 | 0 | 2 | 2 | 6 | 0 | 0 | 3 | 50 | 79 | 0 | 4 | 35 | 115 | 1 | 0 | 0 | 0 | 0 |
| Belarus | 6 | 9 | 7 | 2 | 0 | 34 | 0 | 0 | 0 | 17 | 2 | 3 | 0 | 2 | 2 | 7 | 0 | 0 | 4 | 57 | 90 | 0 | 4 | 40 | 128 | 1 | 0 | 0 | 0 | 0 |
| Belgium | 12995 | 7105 | 2268 | 553 | 72 | 18110 | 64 | 55 | 40 | 21838 | 947 | 1424 | 123 | 574 | 1055 | 7058 | 151 | 61 | 4301 | 42038 | 59570 | 184 | 2090 | 28590 | 61199 | 351 | 36 | 85 | 19 | 94 |
| Benin | 6 | 5 | 2 | 1 | 0 | 13 | 0 | 0 | 0 | 13 | 1 | 1 | 0 | 1 | 1 | 5 | 0 | 0 | 2 | 25 | 42 | 0 | 2 | 20 | 45 | 0 | 0 | 0 | 0 | 0 |
| Botswana | 24 | 7 | 3 | 1 | 0 | 32 | 0 | 0 | 0 | 30 | 1 | 3 | 0 | 1 | 2 | 7 | 0 | 0 | 4 | 74 | 54 | 0 | 2 | 27 | 60 | 0 | 0 | 0 | 0 | 0 |
| Cambodia | 1 | 2 | 2 | 0 | 0 | 8 | 0 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 13 | 21 | 0 | 1 | 9 | 31 | 0 | 0 | 0 | 0 | 0 |
| Canada | 7859 | 2782 | 1238 | 277 | 39 | 10949 | 32 | 53 | 36 | 9637 | 530 | 921 | 49 | 287 | 745 | 2724 | 81 | 50 | 1817 | 25625 | 24582 | 58 | 950 | 11264 | 31856 | 175 | 22 | 64 | 10 | 59 |
| Chile | 3 | 6 | 5 | 1 | 0 | 24 | 0 | 0 | 0 | 11 | 2 | 2 | 0 | 1 | 1 | 5 | 0 | 0 | 3 | 39 | 61 | 0 | 3 | 27 | 89 | 1 | 0 | 0 | 0 | 0 |
| Colombia | 184 | 106 | 27 | 7 | 1 | 236 | 1 | 1 | 0 | 339 | 10 | 18 | 2 | 7 | 12 | 108 | 2 | 1 | 60 | 528 | 837 | 3 | 27 | 425 | 700 | 4 | 0 | 1 | 0 | 1 |
| Costa rica | 2 | 4 | 3 | 1 | 0 | 16 | 0 | 0 | 0 | 8 | 1 | 1 | 0 | 1 | 1 | 3 | 0 | 0 | 2 | 27 | 42 | 0 | 2 | 19 | 62 | 1 | 0 | 0 | 0 | 0 |
| Cote d ivoire | 2 | 3 | 2 | 1 | 0 | 11 | 0 | 0 | 0 | 5 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 17 | 28 | 0 | 1 | 12 | 40 | 0 | 0 | 0 | 0 | 0 |
| Czech Republic | 161 | 195 | 127 | 32 | 4 | 691 | 3 | 2 | 1 | 387 | 46 | 57 | 5 | 34 | 43 | 159 | 8 | 2 | 89 | 1208 | 1851 | 5 | 83 | 820 | 2599 | 20 | 2 | 4 | 1 | 4 |
| Denmark | 2429 | 1345 | 602 | 145 | 19 | 4359 | 16 | 16 | 11 | 3897 | 242 | 356 | 27 | 151 | 276 | 1266 | 39 | 17 | 784 | 9384 | 11898 | 33 | 465 | 5484 | 14540 | 92 | 10 | 23 | 5 | 24 |
| El Salvador | 5 | 7 | 5 | 1 | 0 | 27 | 0 | 0 | 0 | 13 | 2 | 2 | 0 | 1 | 2 | 5 | 0 | 0 | 3 | 45 | 65 | 0 | 3 | 29 | 93 | 1 | 0 | 0 | 0 | 0 |
| Estonia | 12 | 8 | 4 | 1 | 0 | 25 | 0 | 0 | 0 | 22 | 1 | 2 | 0 | 1 | 2 | 8 | 0 | 0 | 4 | 50 | 71 | 0 | 3 | 34 | 83 | 1 | 0 | 0 | 0 | 0 |
| Finland | 1095 | 597 | 270 | 64 | 8 | 2077 | 7 | 8 | 6 | 1830 | 94 | 171 | 12 | 66 | 125 | 560 | 18 | 8 | 302 | 4206 | 5046 | 15 | 189 | 2457 | 5669 | 40 | 4 | 12 | 2 | 11 |
| France | 34542 | 14595 | 5658 | 1305 | 179 | 48627 | 153 | 202 | 140 | 47807 | 2039 | 3948 | 260 | 1355 | 2903 | 14174 | 376 | 196 | 8827 | 124071 | 120475 | 393 | 4279 | 59268 | 129138 | 827 | 97 | 264 | 45 | 256 |
| Germany | 30194 | 18163 | 7725 | 1898 | 242 | 54187 | 213 | 175 | 127 | 51204 | 3128 | 4374 | 367 | 1970 | 3343 | 17146 | 496 | 194 | 10549 | 116067 | 159757 | 457 | 6177 | 73930 | 189448 | 1203 | 120 | 277 | 66 | 291 |
| Iceland | 28 | 7 | 2 | 1 | 0 | 23 | 0 | 0 | 0 | 24 | 1 | 2 | 0 | 1 | 2 | 7 | 0 | 0 | 6 | 105 | 60 | 0 | 2 | 27 | 75 | 0 | 0 | 0 | 0 | 0 |
| Israel | 346 | 259 | 129 | 32 | 4 | 835 | 4 | 3 | 2 | 674 | 46 | 68 | 6 | 33 | 50 | 232 | 8 | 3 | 126 | 1589 | 2264 | 7 | 90 | 1059 | 2597 | 20 | 2 | 4 | 1 | 5 |
| Italy | 15322 | 9027 | 2852 | 694 | 90 | 22848 | 81 | 69 | 50 | 27840 | 1066 | 1793 | 157 | 721 | 1257 | 8934 | 191 | 75 | 5023 | 49279 | 78723 | 238 | 2510 | 36523 | 70056 | 440 | 45 | 108 | 24 | 118 |
| Japan | 61302 | 35824 | 9907 | 2453 | 315 | 80651 | 288 | 207 | 153 | 110403 | 4043 | 6183 | 594 | 2546 | 4361 | 36050 | 673 | 241 | 21217 | 185565 | 292822 | 957 | 9795 | 143855 | 272378 | 1555 | 152 | 349 | 85 | 408 |
| Jordan | 41 | 64 | 44 | 11 | 1 | 230 | 1 | 1 | 0 | 116 | 16 | 19 | 2 | 12 | 14 | 50 | 3 | 1 | 27 | 385 | 609 | 2 | 28 | 269 | 869 | 7 | 1 | 1 | 0 | 1 |
| Kyrgyz Republic | 0 | 1 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 8 | 0 | 0 | 3 | 11 | 0 | 0 | 0 | 0 | 0 |
| Latvia | 25 | 19 | 9 | 2 | 0 | 60 | 0 | 0 | 0 | 50 | 3 | 5 | 0 | 2 | 3 | 17 | 1 | 0 | 9 | 113 | 167 | 1 | 7 | 79 | 194 | 1 | 0 | 0 | 0 | 0 |
| Lesotho | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 6 | 0 | 0 | 3 | 9 | 0 | 0 | 0 | 0 | 0 |
| Lithuania | 7 | 10 | 6 | 2 | 0 | 34 | 0 | 0 | 0 | 18 | 2 | 3 | 0 | 2 | 2 | 8 | 0 | 0 | 4 | 57 | 91 | 0 | 4 | 41 | 126 | 1 | 0 | 0 | 0 | 0 |
| Macedonia | 1 | 2 | 2 | 0 | 0 | 9 | 0 | 0 | 0 | 4 | 1 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 15 | 24 | 0 | 1 | 10 | 34 | 0 | 0 | 0 | 0 | 0 |
| Maldives | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 |
| Mauritius | 2 | 4 | 3 | 1 | 0 | 14 | 0 | 0 | 0 | 6 | 1 | 1 | 0 | 1 | 1 | 3 | 0 | 0 | 1 | 22 | 35 | 0 | 2 | 15 | 51 | 0 | 0 | 0 | 0 | 0 |
| Moldova | 2 | 3 | 2 | 1 | 0 | 12 | 0 | 0 | 0 | 6 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 20 | 29 | 0 | 1 | 13 | 42 | 0 | 0 | 0 | 0 | 0 |
| Namibia | 15 | 21 | 14 | 3 | 0 | 73 | 0 | 0 | 0 | 39 | 5 | 6 | 1 | 4 | 5 | 17 | 1 | 0 | 9 | 125 | 196 | 1 | 9 | 86 | 278 | 2 | 0 | 0 | 0 | 0 |
| Netherlands | 15460 | 6690 | 2230 | 511 | 71 | 20295 | 61 | 84 | 57 | 22623 | 986 | 1650 | 108 | 531 | 1293 | 6760 | 151 | 82 | 4349 | 48812 | 56821 | 157 | 2011 | 26834 | 62766 | 324 | 39 | 107 | 18 | 106 |
| New Zealand | 490 | 143 | 43 | 8 | 1 | 542 | 1 | 3 | 2 | 593 | 22 | 46 | 2 | 9 | 36 | 153 | 3 | 3 | 108 | 1433 | 1211 | 3 | 41 | 565 | 1419 | 5 | 1 | 3 | 0 | 3 |
| Panama | 201 | 273 | 172 | 44 | 5 | 925 | 5 | 2 | 2 | 540 | 61 | 75 | 8 | 46 | 56 | 223 | 11 | 3 | 119 | 1569 | 2542 | 7 | 113 | 1146 | 3437 | 28 | 2 | 5 | 2 | 5 |
| Paraguay | 14 | 15 | 10 | 3 | 0 | 59 | 0 | 0 | 0 | 31 | 4 | 5 | 0 | 3 | 4 | 12 | 1 | 0 | 6 | 101 | 141 | 0 | 6 | 63 | 198 | 2 | 0 | 0 | 0 | 0 |
| Peru | 53 | 51 | 35 | 9 | 1 | 197 | 1 | 1 | 0 | 105 | 13 | 16 | 1 | 9 | 13 | 41 | 2 | 1 | 24 | 358 | 490 | 1 | 22 | 214 | 718 | 6 | 1 | 1 | 0 | 1 |
| Poland | 141 | 128 | 66 | 17 | 2 | 399 | 2 | 1 | 1 | 308 | 24 | 32 | 3 | 17 | 23 | 113 | 4 | 1 | 61 | 731 | 1138 | 3 | 46 | 532 | 1382 | 11 | 1 | 2 | 1 | 2 |
| Portugal | 1241 | 824 | 331 | 83 | 10 | 2218 | 9 | 6 | 4 | 2233 | 131 | 175 | 17 | 86 | 129 | 776 | 21 | 7 | 466 | 4849 | 7139 | 22 | 271 | 3350 | 8047 | 53 | 5 | 11 | 3 | 12 |
| Romania | 72 | 71 | 48 | 12 | 1 | 256 | 1 | 1 | 1 | 135 | 19 | 21 | 2 | 13 | 17 | 58 | 3 | 1 | 39 | 491 | 708 | 2 | 33 | 294 | 1086 | 8 | 1 | 1 | 0 | 1 |
| Russia | 203 | 149 | 79 | 19 | 2 | 518 | 2 | 2 | 1 | 389 | 27 | 43 | 3 | 20 | 31 | 132 | 5 | 2 | 69 | 969 | 1307 | 4 | 53 | 619 | 1591 | 12 | 1 | 3 | 1 | 3 |
| Senegal | 4 | 4 | 2 | 1 | 0 | 14 | 0 | 0 | 0 | 9 | 1 | 1 | 0 | 1 | 1 | 4 | 0 | 0 | 2 | 24 | 38 | 0 | 2 | 17 | 49 | 0 | 0 | 0 | 0 | 0 |
| Slovak Republic | 50 | 68 | 46 | 12 | 1 | 248 | 1 | 1 | 1 | 128 | 17 | 20 | 2 | 12 | 15 | 54 | 3 | 1 | 29 | 423 | 646 | 2 | 30 | 286 | 924 | 7 | 1 | 1 | 0 | 1 |
| Slovenia | 43 | 50 | 34 | 8 | 1 | 189 | 1 | 1 | 0 | 102 | 12 | 16 | 1 | 9 | 12 | 40 | 2 | 1 | 21 | 324 | 466 | 1 | 21 | 210 | 652 | 5 | 1 | 1 | 0 | 1 |
| South Africa | 852 | 185 | 65 | 9 | 2 | 1056 | 1 | 7 | 5 | 1005 | 18 | 92 | 2 | 10 | 70 | 203 | 5 | 6 | 105 | 2488 | 1334 | 3 | 35 | 752 | 1222 | 6 | 2 | 7 | 0 | 6 |
| Spain | 3200 | 2454 | 1360 | 335 | 42 | 8640 | 37 | 29 | 22 | 6180 | 479 | 711 | 59 | 348 | 524 | 2145 | 85 | 32 | 1154 | 16107 | 21907 | 63 | 907 | 10217 | 27640 | 213 | 21 | 48 | 12 | 48 |
| Swaziland | 7 | 6 | 4 | 1 | 0 | 25 | 0 | 0 | 0 | 14 | 1 | 2 | 0 | 1 | 2 | 5 | 0 | 0 | 3 | 44 | 59 | 0 | 3 | 27 | 81 | 1 | 0 | 0 | 0 | 0 |
| Sweden | 6479 | 1783 | 779 | 177 | 25 | 6839 | 21 | 31 | 20 | 5846 | 336 | 552 | 32 | 184 | 446 | 1707 | 51 | 29 | 1329 | 25231 | 15663 | 57 | 608 | 7106 | 20900 | 112 | 14 | 38 | 6 | 35 |
| Switzerland | 21979 | 11116 | 3076 | 743 | 98 | 26696 | 88 | 82 | 58 | 35563 | 1426 | 2083 | 176 | 772 | 1589 | 11333 | 210 | 89 | 7227 | 65525 | 93111 | 281 | 3186 | 44357 | 94265 | 471 | 49 | 121 | 26 | 135 |
| Tanzania | 2 | 3 | 2 | 1 | 0 | 12 | 0 | 0 | 0 | 6 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 0 | 1 | 20 | 31 | 0 | 1 | 14 | 46 | 0 | 0 | 0 | 0 | 0 |
| Thailand | 54 | 75 | 54 | 14 | 2 | 292 | 1 | 1 | 1 | 142 | 19 | 24 | 2 | 14 | 18 | 59 | 3 | 1 | 80 | 486 | 718 | 2 | 33 | 320 | 1033 | 9 | 1 | 2 | 0 | 2 |
| Tunisia | 8 | 11 | 8 | 2 | 0 | 43 | 0 | 0 | 0 | 21 | 3 | 4 | 0 | 2 | 3 | 9 | 0 | 0 | 5 | 74 | 111 | 0 | 5 | 48 | 163 | 1 | 0 | 0 | 0 | 0 |
| Turkey | 56 | 105 | 77 | 20 | 2 | 396 | 2 | 1 | 1 | 180 | 27 | 33 | 3 | 20 | 24 | 81 | 5 | 1 | 42 | 643 | 1016 | 3 | 48 | 447 | 1483 | 12 | 1 | 2 | 1 | 2 |
| United Kingdom | 57583 | 32635 | 11600 | 2860 | 366 | 86141 | 326 | 257 | 185 | 95987 | 5063 | 6825 | 599 | 2959 | 5258 | 31909 | 758 | 291 | 20818 | 197164 | 282786 | 826 | 10452 | 131453 | 316956 | 1818 | 179 | 412 | 99 | 451 |
| United States | 105079 | 38475 | 12591 | 2759 | 403 | 126793 | 334 | 594 | 392 | 139327 | 6245 | 10467 | 567 | 2865 | 8636 | 39757 | 861 | 560 | 27801 | 325633 | 333619 | 827 | 11932 | 153040 | 394946 | 1749 | 233 | 693 | 95 | 659 |
| Uruguay | 38 | 66 | 47 | 12 | 1 | 244 | 1 | 1 | 1 | 116 | 17 | 20 | 2 | 12 | 15 | 51 | 3 | 1 | 27 | 399 | 632 | 2 | 29 | 279 | 912 | 8 | 1 | 1 | 0 | 1 |
| Venezuela | 163 | 62 | 33 | 7 | 1 | 299 | 1 | 2 | 1 | 231 | 10 | 26 | 1 | 7 | 19 | 59 | 2 | 1 | 28 | 507 | 506 | 1 | 19 | 260 | 578 | 4 | 1 | 2 | 0 | 2 |

## (Continued) Table7: Y-table,1996 (Supply-and-Use Method) (Millions of U.S. dollars)

| Macedonia | Maldives | Mauritius | Moldova | Namibia | Netherlands | New Zealand | Panama | Paraguay | Peru | Poland | Portugal | Romania | Russia | Senegal | Slovak Republic | Slovenia | South Africa | Spain | Swaziland | Sweden | Switzerland | Tanzania | Thailand | Tunisia | Turkey | United Kingdom | United States | Uruguay | Venezuela |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 1 | 5 | 6 | 31 | 5946 | 728 | 161 | 22 | 284 | 396 | 672 | 69 | 89 | 16 | 65 | 57 | 539 | 3332 | 9 | 4252 | 4653 | 42 | 465 | 252 | 292 | 17955 | 42110 | 42 | 123 |
| 14 | 2 | 16 | 14 | 13 | 4706 | 495 | 305 | 27 | 416 | 587 | 827 | 109 | 248 | 46 | 93 | 67 | 442 | 3148 | 7 | 2937 | 4685 | 111 | 1184 | 166 | 882 | 26515 | 38403 | 128 | 249 |
| 9 | 1 | 10 | 9 | 5 | 2230 | 204 | 183 | 16 | 258 | 304 | 451 | 64 | 162 | 30 | 56 | 37 | 209 | 1524 | 4 | 1614 | 2589 | 73 | 742 | 89 | 538 | 14894 | 16159 | 77 | 96 |
| 0 | 0 | 0 | 0 | 0 | 25 | 2 | 2 | 0 | 3 | 4 | 5 | 1 | 2 | 0 | 1 | 0 | 2 | 16 | 0 | 20 | 33 | 1 | 9 | 1 | 7 | 178 | 147 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 28 | 2 | 2 | 0 | 4 | 4 | 6 | 1 | 2 | 0 | 1 | 0 | 3 | 19 | 0 | 22 | 36 | 1 | 10 | 1 | 7 | 198 | 173 | 1 | 1 |
| 44 | 6 | 52 | 45 | 65 | 20871 | 2297 | 1058 | 95 | 1439 | 1987 | 3171 | 394 | 787 | 146 | 326 | 254 | 1940 | 13270 | 26 | 11424 | 18670 | 351 | 3899 | 682 | 2953 | 99260 | 174078 | 432 | 1107 |
| 0 | 0 | 0 | 0 | 0 | 12 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 8 | 0 | 8 | 12 | 0 | 3 | 0 | 3 | 72 | 98 | 0 | 1 |
| 0 | 0 | 0 | 0 | 0 | 37 | 6 | 1 | 0 | 2 | 3 | 5 | 0 | 1 | 0 | 1 | 0 | 3 | 24 | 0 | 15 | 27 | 0 | 4 | 2 | 2 | 120 | 284 | 0 | 1 |
| 0 | 0 | 0 | 0 | 0 | 7 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 4 | 0 | 5 | 9 | 0 | 3 | 0 | 2 | 48 | 40 | 0 | 0 |
| 22 | 3 | 23 | 24 | 66 | 14384 | 1607 | 553 | 67 | 920 | 1161 | 1874 | 219 | 398 | 74 | 203 | 159 | 1298 | 8219 | 23 | 6856 | 12784 | 184 | 1901 | 516 | 1256 | 54035 | 96435 | 180 | 281 |
| 0 | 0 | 0 | 0 | 0 | 19 | 1 | 2 | 0 | 3 | 3 | 4 | 1 | 2 | 0 | 1 | 0 | 2 | 13 | 0 | 15 | 25 | 1 | 7 | 1 | 5 | 138 | 114 | 1 | 1 |
| 1 | 0 | 1 | 1 | 1 | 224 | 33 | 14 | 1 | 16 | 25 | 40 | 5 | 9 | 2 | 4 | 3 | 22 | 174 | 0 | 119 | 176 | 4 | 49 | 8 | 39 | 1192 | 2406 | 6 | 18 |
| 0 | 0 | 0 | 0 | 0 | 13 | 1 | 1 | 0 | 2 | 2 | 3 | 0 | 1 | 0 | 0 | 0 | 1 | 9 | 0 | 11 | 17 | 1 | 5 | 1 | 4 | 95 | 79 | 1 | 0 |
| 0 | 0 | 0 | 0 | 0 | 9 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 6 | 0 | 7 | 11 | 0 | 3 | 0 | 2 | 62 | 51 | 0 | 0 |
| 3 | 0 | 3 | 2 | 1 | 628 | 48 | 49 | 5 | 72 | 81 | 120 | 17 | 44 | 8 | 15 | 10 | 57 | 392 | 1 | 453 | 758 | 20 | 200 | 25 | 141 | 4015 | 3854 | 20 | 18 |
| 12 | 2 | 13 | 12 | 18 | 5019 | 511 | 258 | 26 | 387 | 482 | 756 | 97 | 205 | 38 | 85 | 62 | 457 | 3020 | 7 | 2764 | 4842 | 93 | 966 | 193 | 686 | 23532 | 35539 | 99 | 164 |
| 0 | 0 | 0 | 0 | 0 | 22 | 2 | 2 | 0 | 3 | 3 | 5 | 1 | 2 | 0 | 1 | 0 | 2 | 15 | 0 | 16 | 27 | 1 | 8 | 1 | 5 | 146 | 136 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 24 | 3 | 2 | 0 | 2 | 3 | 4 | 1 | 1 | 0 | 1 | 0 | 2 | 16 | 0 | 15 | 24 | 1 | 6 | 1 | 4 | 135 | 188 | 1 | 1 |
| 5 | 1 | 6 | 5 | 10 | 1961 | 273 | 118 | 13 | 172 | 223 | 344 | 41 | 90 | 17 | 40 | 30 | 188 | 1390 | 4 | 1093 | 1781 | 41 | 430 | 99 | 301 | 9787 | 15869 | 43 | 67 |
| 105 | 15 | 117 | 112 | 244 | 48902 | 6911 | 2599 | 281 | 3764 | 5086 | 7990 | 920 | 1866 | 346 | 888 | 691 | 4689 | 33949 | 92 | 34787 | 41706 | 852 | 9140 | 2347 | 6434 | 223567 | 406412 | 933 | 1794 |
| 152 | 22 | 167 | 148 | 189 | 61555 | 5997 | 3310 | 315 | 4824 | 6059 | 9479 | 1236 | 2662 | 494 | 1054 | 769 | 5615 | 37294 | 85 | 34828 | 60268 | 1200 | 12607 | 2185 | 9151 | 302446 | 448465 | 1323 | 2409 |
| 0 | 0 | 0 | 0 | 0 | 33 | 3 | 1 | 0 | 2 | 2 | 4 | 0 | 1 | 0 | 0 | 0 | 3 | 18 | 0 | 37 | 29 | 0 | 4 | 1 | 3 | 118 | 226 | 0 | 1 |
| 3 | 0 | 3 | 2 | 3 | 752 | 86 | 53 | 5 | 76 | 93 | 141 | 19 | 44 | 8 | 17 | 12 | 71 | 522 | 1 | 481 | 777 | 20 | 207 | 33 | 148 | 4387 | 5799 | 21 | 30 |
| 56 | 8 | 66 | 57 | 81 | 22305 | 2980 | 1346 | 120 | 1737 | 2480 | 3896 | 471 | 988 | 183 | 412 | 321 | 2162 | 16144 | 33 | 12297 | 19279 | 441 | 4939 | 841 | 3761 | 117199 | 210340 | 551 | 1403 |
| 197 | 28 | 243 | 200 | 246 | 86657 | 10324 | 4810 | 392 | 6015 | 8650 | 14120 | 1738 | 3502 | 647 | 1408 | 1121 | 8254 | 59355 | 102 | 47713 | 74759 | 1544 | 17777 | 2595 | 13988 | 443261 | 816274 | 2063 | 6044 |
| 1 | 0 | 1 | 1 | 0 | 196 | 14 | 17 | 2 | 24 | 27 | 40 | 6 | 15 | 3 | 5 | 3 | 18 | 125 | 0 | 149 | 246 | 7 | 69 | 8 | 49 | 1338 | 1177 | 7 | 6 |
| 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 3 | 0 | 1 | 0 | 1 | 17 | 14 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 53 | 6 | 4 | 0 | 5 | 7 | 10 | 1 | 3 | 1 | 1 | 1 | 5 | 37 | 0 | 34 | 54 | 1 | 15 | 2 | 11 | 315 | 418 | 2 | 2 |
| 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 0 | 1 | 0 | 1 | 14 | 12 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 28 | 2 | 2 | 0 | 4 | 4 | 6 | 1 | 2 | 0 | 1 | 0 | 3 | 19 | 0 | 21 | 35 | 1 | 10 | 1 | 7 | 194 | 178 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 7 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 5 | 0 | 6 | 10 | 0 | 3 | 0 | 2 | 53 | 44 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 5 | 4 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 11 | 1 | 1 | 0 | 1 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 7 | 0 | 9 | 14 | 0 | 4 | 0 | 3 | 79 | 66 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 10 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 6 | 0 | 7 | 12 | 0 | 3 | 0 | 2 | 66 | 60 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 65 | 5 | 5 | 0 | 8 | 9 | 13 | 2 | 5 | 1 | 2 | 1 | 6 | 41 | 0 | 48 | 80 | 2 | 21 | 3 | 15 | 427 | 394 | 2 | 2 |
| 41 | 6 | 47 | 45 | 106 | 26408 | 2968 | 1058 | 112 | 1600 | 2167 | 3528 | 414 | 740 | 137 | 360 | 289 | 2410 | 15640 | 37 | 12607 | 22709 | 335 | 3671 | 986 | 2626 | 104851 | 198881 | 383 | 935 |
| 1 | 0 | 1 | 1 | 4 | 823 | 98 | 23 | 3 | 40 | 55 | 93 | 10 | 13 | 2 | 9 | 8 | 74 | 457 | 1 | 336 | 653 | 6 | 67 | 34 | 42 | 2522 | 5759 | 6 | 17 |
| 4 | 1 | 4 | 3 | 2 | 771 | 62 | 56 | 6 | 96 | 108 | 159 | 23 | 60 | 11 | 21 | 13 | 71 | 514 | 1 | 585 | 949 | 27 | 272 | 32 | 195 | 5327 | 5051 | 28 | 27 |
| 0 | 0 | 0 | 0 | 0 | 49 | 5 | 4 | 0 | 6 | 7 | 10 | 1 | 4 | 1 | 1 | 1 | 5 | 33 | 0 | 35 | 58 | 2 | 16 | 2 | 11 | 316 | 315 | 2 | 1 |
| 1 | 0 | 1 | 1 | 1 | 194 | 15 | 13 | 1 | 20 | 23 | 34 | 5 | 12 | 2 | 4 | 3 | 17 | 116 | 0 | 130 | 224 | 5 | 54 | 8 | 37 | 1119 | 1132 | 5 | 4 |
| 1 | 0 | 1 | 1 | 1 | 346 | 35 | 27 | 2 | 38 | 46 | 68 | 9 | 23 | 4 | 8 | 6 | 33 | 240 | 1 | 238 | 381 | 10 | 107 | 14 | 78 | 2198 | 2619 | 11 | 15 |
| 7 | 1 | 7 | 6 | 6 | 2327 | 225 | 142 | 12 | 196 | 251 | 388 | 52 | 116 | 22 | 43 | 31 | 215 | 1482 | 3 | 1515 | 2332 | 52 | 553 | 76 | 413 | 12679 | 18236 | 60 | 118 |
| 1 | 0 | 1 | 1 | 1 | 300 | 16 | 18 | 2 | 28 | 30 | 46 | 7 | 17 | 3 | 6 | 4 | 26 | 155 | 0 | 196 | 354 | 8 | 74 | 10 | 52 | 1627 | 1566 | 7 | 7 |
| 2 | 0 | 2 | 2 | 2 | 452 | 55 | 33 | 3 | 47 | 57 | 87 | 11 | 27 | 5 | 11 | 7 | 43 | 320 | 1 | 289 | 465 | 12 | 125 | 22 | 89 | 2626 | 3442 | 13 | 16 |
| 0 | 0 | 0 | 0 | 0 | 12 | 1 | 1 | 0 | 1 | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 8 | 0 | 8 | 14 | 0 | 4 | 0 | 3 | 77 | 81 | 0 | 0 |
| 1 | 0 | 1 | 1 | 0 | 217 | 17 | 18 | 2 | 25 | 29 | 43 | 6 | 16 | 3 | 6 | 4 | 20 | 138 | 0 | 161 | 267 | 7 | 72 | 9 | 51 | 1429 | 1308 | 7 | 6 |
| 1 | 0 | 1 | 1 | 0 | 159 | 15 | 13 | 1 | 19 | 22 | 32 | 5 | 12 | 2 | 4 | 3 | 15 | 106 | 0 | 115 | 189 | 5 | 52 | 7 | 37 | 1032 | 1015 | 5 | 4 |
| 1 | 0 | 1 | 1 | 10 | 1147 | 228 | 37 | 7 | 66 | 98 | 161 | 13 | 15 | 3 | 17 | 16 | 113 | 832 | 3 | 409 | 715 | 8 | 88 | 79 | 41 | 3157 | 9602 | 6 | 9 |
| 27 | 4 | 28 | 26 | 28 | 7748 | 867 | 552 | 55 | 805 | 967 | 1456 | 193 | 465 | 87 | 179 | 124 | 729 | 5295 | 14 | 5016 | 8196 | 212 | 2147 | 361 | 1514 | 44996 | 56212 | 217 | 250 |
| 0 | 0 | 0 | 0 | 0 | 21 | 2 | 2 | 0 | 2 | 3 | 4 | 1 | 1 | 0 | 1 | 0 | 2 | 14 | 0 | 15 | 24 | 1 | 7 | 1 | 5 | 131 | 140 | 1 | 1 |
| 14 | 2 | 15 | 15 | 37 | 8694 | 925 | 344 | 40 | 565 | 707 | 1139 | 136 | 254 | 47 | 123 | 95 | 785 | 4917 | 13 | 8768 | 7853 | 117 | 1208 | 356 | 813 | 33680 | 57975 | 117 | 188 |
| 60 | 9 | 73 | 62 | 104 | 34983 | 3598 | 1500 | 133 | 2057 | 2923 | 4779 | 585 | 1071 | 198 | 461 | 373 | 3197 | 20868 | 38 | 17329 | 30406 | 474 | 5418 | 1013 | 4173 | 151645 | 285105 | 614 | 1837 |
| 0 | 0 | 0 | 0 | 0 | 10 | 1 | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 6 | 0 | 8 | 13 | 0 | 4 | 0 | 3 | 70 | 58 | 0 | 0 |
| 1 | 0 | 1 | 1 | 1 | 240 | 21 | 21 | 2 | 30 | 34 | 50 | 7 | 19 | 3 | 7 | 4 | 22 | 160 | 0 | 181 | 297 | 8 | 84 | 11 | 58 | 1620 | 1470 | 8 | 6 |
| 0 | 0 | 0 | 0 | 0 | 39 | 3 | 3 | 0 | 5 | 5 | 7 | 1 | 3 | 1 | 1 | 1 | 4 | 24 | 0 | 29 | 48 | 1 | 13 | 2 | 9 | 251 | 224 | 1 | 1 |
| 2 | 0 | 2 | 1 | 1 | 323 | 24 | 29 | 3 | 43 | 47 | 68 | 10 | 27 | 5 | 9 | 6 | 30 | 211 | 1 | 255 | 418 | 12 | 120 | 14 | 84 | 2285 | 1894 | 12 | 8 |
| 229 | 33 | 262 | 226 | 291 | 107153 | 9950 | 5182 | 466 | 7376 | 9641 | 15387 | 1992 | 4042 | 748 | 1605 | 1211 | 9701 | 62781 | 124 | 57710 | 101297 | 1804 | 19551 | 3244 | 14614 | 500736 | 806767 | 2128 | 4914 |
| 221 | 32 | 251 | 255 | 784 | 189111 | 19893 | 6098 | 711 | 10043 | 13392 | 22321 | 2560 | 4060 | 748 | 2201 | 1817 | 16892 | 103198 | 257 | 84493 | 160840 | 1852 | 20219 | 6917 | 13911 | 659552 | 1313147 | 2022 | 5131 |
| 1 | 0 | 1 | 1 | 0 | 200 | 15 | 18 | 2 | 26 | 29 | 42 | 6 | 16 | 3 | 6 | 3 | 18 | 131 | 0 | 156 | 256 | 7 | 73 | 9 | 52 | 1407 | 1191 | 7 | 5 |
| 1 | 0 | 1 | 1 | 2 | 268 | 48 | 15 | 2 | 23 | 30 | 47 | 5 | 10 | 2 | 6 | 4 | 27 | 204 | 1 | 133 | 215 | 5 | 49 | 18 | 31 | 1141 | 2183 | 4 | 4 |

# Table8: Y-table,1999 (Supply-and-Use Method) (Millions of U.S. dollars)

| | Armenia | Australia | Austria | Azerbaijan | Bahrain | Bangladesh | Belarus | Belgium | Benin | Bolivia | Botswana | Bulgaria | Cambodia | Canada | Chile | HongKong | Colombia | Costa rica | Cote d Ivoire | Croatia | Czech Republic | Denmark | El Salvador | Estonia | Finland | France | Germany | Hungary | Iceland | Israel | Italy | Japan | Jordan | Kazakhstan | Kyrgyz Republic | Latvia |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Armenia | 0 | 1 | 2 | 0 | 2 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 9 | 20 | 0 | 0 | 1 | 8 | 21 | 0 | 0 | 0 | 0 |
| Australia | 11 | 4723 | 1312 | 52 | 430 | 65 | 26 | 4695 | 9 | 88 | 25 | 72 | 14 | 4583 | 197 | 5910 | 388 | 13 | 90 | 78 | 369 | 2248 | 65 | 51 | 3200 | 8595 | 14192 | 439 | 36 | 783 | 5547 | 14975 | 46 | 16 | 12 | 42 |
| Austria | 14 | 4092 | 3253 | 28 | 901 | 163 | 28 | 5392 | 18 | 74 | 17 | 142 | 10 | 7336 | 401 | 1387 | 478 | 40 | 164 | 124 | 303 | 2540 | 84 | 37 | 2589 | 9567 | 24758 | 442 | 94 | 969 | 12646 | 20964 | 116 | 41 | 17 | 43 |
| Azerbaijan | 0 | 3 | 4 | 0 | 4 | 1 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 7 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 2 | 19 | 42 | 1 | 0 | 2 | 16 | 43 | 0 | 0 | 0 | 0 |
| Bahrain | 11 | 1043 | 1234 | 15 | 731 | 135 | 20 | 2972 | 14 | 50 | 10 | 57 | 7 | 2262 | 256 | 118 | 276 | 24 | 129 | 68 | 174 | 1014 | 60 | 19 | 528 | 4595 | 10480 | 162 | 44 | 439 | 4640 | 9706 | 95 | 28 | 13 | 26 |
| Bangladesh | 0 | 7 | 10 | 0 | 9 | 2 | 0 | 32 | 0 | 1 | 0 | 1 | 0 | 17 | 3 | 0 | 3 | 0 | 2 | 1 | 2 | 9 | 1 | 0 | 4 | 46 | 99 | 1 | 0 | 4 | 38 | 102 | 1 | 0 | 0 | 0 |
| Belarus | 0 | 7 | 9 | 0 | 6 | 1 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 16 | 2 | 0 | 2 | 0 | 1 | 1 | 1 | 8 | 0 | 0 | 4 | 35 | 79 | 1 | 0 | 3 | 34 | 76 | 1 | 0 | 0 | 0 |
| Belgium | 42 | 13317 | 9176 | 116 | 2360 | 412 | 89 | 16863 | 46 | 253 | 63 | 419 | 37 | 22514 | 1047 | 9472 | 1457 | 106 | 444 | 367 | 1040 | 7591 | 250 | 132 | 7597 | 29308 | 70689 | 1471 | 259 | 2874 | 36035 | 57143 | 292 | 109 | 49 | 138 |
| Benin | 0 | 5 | 5 | 0 | 2 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 2 | 17 | 40 | 1 | 0 | 2 | 20 | 34 | 0 | 0 | 0 | 0 |
| Bolivia | 0 | 32 | 29 | 0 | 5 | 1 | 0 | 37 | 0 | 0 | 0 | 1 | 0 | 65 | 3 | 2 | 3 | 0 | 1 | 1 | 2 | 21 | 0 | 0 | 11 | 69 | 192 | 3 | 1 | 6 | 116 | 124 | 1 | 0 | 0 | 0 |
| Botswana | 0 | 19 | 8 | 0 | 4 | 1 | 0 | 33 | 0 | 1 | 0 | 0 | 0 | 27 | 1 | 40 | 3 | 0 | 1 | 1 | 3 | 9 | 1 | 0 | 9 | 47 | 83 | 3 | 0 | 5 | 32 | 70 | 0 | 0 | 0 | 0 |
| Bulgaria | 1 | 65 | 79 | 1 | 46 | 9 | 1 | 193 | 1 | 3 | 1 | 4 | 0 | 143 | 17 | 6 | 18 | 2 | 6 | 4 | 11 | 65 | 4 | 1 | 31 | 295 | 672 | 10 | 3 | 28 | 297 | 622 | 6 | 2 | 1 | 2 |
| Cambodia | 0 | 2 | 3 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 11 | 24 | 0 | 0 | 1 | 9 | 25 | 0 | 0 | 0 | 0 |
| Canada | 33 | 7692 | 3392 | 124 | 1550 | 256 | 74 | 11668 | 29 | 230 | 62 | 184 | 35 | 10580 | 615 | 12639 | 965 | 46 | 303 | 216 | 926 | 3484 | 191 | 123 | 6140 | 17927 | 36159 | 989 | 99 | 1944 | 13283 | 37174 | 191 | 57 | 38 | 113 |
| Chile | 1 | 34 | 51 | 1 | 42 | 8 | 1 | 155 | 1 | 3 | 1 | 2 | 0 | 81 | 14 | 0 | 15 | 1 | 7 | 3 | 9 | 45 | 3 | 1 | 20 | 227 | 487 | 7 | 2 | 22 | 188 | 498 | 6 | 2 | 1 | 2 |
| HongKong | 23 | 6597 | 1291 | 167 | 291 | 0 | 62 | 9982 | 4 | 236 | 75 | 129 | 39 | 9199 | 0 | 21806 | 751 | 0 | 103 | 148 | 944 | 1969 | 194 | 133 | 996 | 13063 | 14760 | 1034 | 26 | 1047 | 5848 | 24811 | 0 | 6 | 23 | 101 |
| Colombia | 1 | 247 | 196 | 2 | 49 | 9 | 2 | 945 | 1 | 5 | 1 | 9 | 1 | 472 | 20 | 183 | 30 | 2 | 9 | 8 | 20 | 163 | 5 | 3 | 80 | 592 | 1387 | 29 | 8 | 52 | 770 | 909 | 6 | 2 | 1 | 3 |
| Costa rica | 0 | 3 | 4 | 0 | 3 | 1 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 7 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 2 | 18 | 39 | 1 | 0 | 2 | 15 | 40 | 0 | 0 | 0 | 0 |
| Cote d ivoire | 0 | 20 | 26 | 0 | 17 | 3 | 0 | 67 | 0 | 1 | 0 | 1 | 0 | 45 | 6 | 0 | 6 | 1 | 3 | 2 | 4 | 22 | 1 | 0 | 10 | 102 | 229 | 3 | 1 | 10 | 97 | 220 | 2 | 1 | 0 | 1 |
| Croatia | 0 | 34 | 26 | 1 | 19 | 3 | 1 | 96 | 0 | 2 | 0 | 1 | 0 | 62 | 6 | 62 | 8 | 1 | 4 | 2 | 7 | 25 | 2 | 1 | 13 | 136 | 256 | 6 | 1 | 13 | 99 | 229 | 2 | 1 | 0 | 1 |
| Czech Republic | 3 | 248 | 282 | 4 | 199 | 37 | 6 | 778 | 4 | 14 | 3 | 13 | 2 | 498 | 70 | 47 | 72 | 6 | 35 | 17 | 48 | 244 | 16 | 5 | 192 | 1188 | 2647 | 40 | 10 | 119 | 1048 | 2752 | 26 | 7 | 4 | 8 |
| Denmark | 12 | 4113 | 1782 | 33 | 716 | 126 | 26 | 4537 | 15 | 74 | 18 | 82 | 11 | 4447 | 315 | 2601 | 369 | 25 | 133 | 88 | 303 | 2343 | 72 | 39 | 3257 | 8595 | 17231 | 361 | 54 | 834 | 7135 | 19125 | 89 | 28 | 15 | 39 |
| El Salvador | 0 | 11 | 12 | 0 | 10 | 2 | 0 | 40 | 0 | 1 | 0 | 1 | 0 | 23 | 3 | 10 | 4 | 0 | 2 | 1 | 3 | 11 | 1 | 0 | 5 | 58 | 119 | 2 | 0 | 6 | 46 | 115 | 1 | 0 | 0 | 0 |
| Estonia | 0 | 24 | 21 | 0 | 9 | 2 | 0 | 49 | 0 | 1 | 0 | 1 | 0 | 47 | 3 | 19 | 4 | 0 | 2 | 1 | 3 | 18 | 1 | 0 | 9 | 77 | 171 | 3 | 1 | 7 | 83 | 137 | 1 | 0 | 0 | 0 |
| Finland | 7 | 2312 | 1142 | 23 | 318 | 53 | 14 | 2669 | 7 | 44 | 12 | 56 | 7 | 3115 | 135 | 2295 | 228 | 13 | 62 | 52 | 180 | 1261 | 39 | 24 | 1199 | 4740 | 9418 | 236 | 32 | 420 | 4602 | 7769 | 38 | 14 | 7 | 23 |
| France | 67 | 16062 | 10332 | 223 | 5089 | 892 | 179 | 28376 | 99 | 506 | 122 | 518 | 73 | 24740 | 1775 | 16840 | 2511 | 169 | 929 | 581 | 1879 | 10675 | 499 | 230 | 6874 | 45564 | 89277 | 2006 | 338 | 4024 | 40417 | 75815 | 632 | 193 | 102 | 264 |
| Germany | 184 | 40271 | 26707 | 397 | 9764 | 1737 | 336 | 57440 | 193 | 934 | 224 | 1216 | 133 | 85997 | 4208 | 27880 | 4992 | 366 | 1797 | 1225 | 3774 | 22801 | 954 | 475 | 33742 | 97023 | 235422 | 4564 | 790 | 10605 | 103192 | 234810 | 1232 | 404 | 193 | 507 |
| Hungary | 1 | 183 | 80 | 2 | 54 | 10 | 2 | 269 | 1 | 5 | 1 | 4 | 1 | 167 | 18 | 101 | 25 | 2 | 10 | 5 | 16 | 142 | 5 | 2 | 60 | 494 | 738 | 16 | 3 | 34 | 327 | 699 | 7 | 2 | 1 | 2 |
| Iceland | 0 | 55 | 19 | 0 | 5 | 1 | 0 | 42 | 0 | 1 | 0 | 1 | 0 | 53 | 4 | 31 | 3 | 0 | 1 | 1 | 3 | 20 | 1 | 0 | 86 | 87 | 244 | 4 | 0 | 14 | 72 | 377 | 1 | 0 | 0 | 0 |
| Israel | 4 | 475 | 406 | 8 | 218 | 39 | 7 | 1072 | 4 | 19 | 4 | 20 | 3 | 892 | 76 | 455 | 96 | 7 | 39 | 23 | 70 | 350 | 20 | 8 | 231 | 1639 | 3525 | 70 | 14 | 156 | 1551 | 3110 | 28 | 9 | 4 | 10 |
| Italy | 54 | 23029 | 15381 | 151 | 3054 | 531 | 116 | 24439 | 65 | 326 | 82 | 675 | 47 | 37752 | 1599 | 12327 | 2094 | 158 | 580 | 543 | 1454 | 12400 | 330 | 189 | 15791 | 45243 | 117615 | 2322 | 415 | 4719 | 60477 | 100338 | 377 | 157 | 63 | 186 |
| Japan | 185 | 56202 | 46919 | 357 | 11985 | 2149 | 370 | 72691 | 246 | 967 | 215 | 2007 | 133 | 103193 | 5278 | 16863 | 6465 | 555 | 2168 | 1697 | 3936 | 35607 | 1106 | 478 | 31064 | 130218 | 337218 | 6024 | 1322 | 12710 | 178987 | 258677 | 1525 | 581 | 221 | 568 |
| Jordan | 1 | 68 | 96 | 1 | 74 | 14 | 2 | 274 | 1 | 5 | 1 | 5 | 1 | 157 | 25 | 0 | 26 | 2 | 13 | 6 | 17 | 82 | 6 | 2 | 41 | 408 | 889 | 13 | 4 | 40 | 358 | 906 | 10 | 3 | 1 | 3 |
| Kazakhstan | 0 | 5 | 7 | 0 | 6 | 1 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 11 | 2 | 0 | 2 | 0 | 1 | 0 | 1 | 6 | 0 | 0 | 3 | 30 | 65 | 1 | 0 | 3 | 25 | 66 | 1 | 0 | 0 | 0 |
| Kyrgyz Republic | 0 | 2 | 2 | 0 | 1 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 7 | 14 | 0 | 0 | 1 | 6 | 14 | 0 | 0 | 0 | 0 |
| Latvia | 0 | 36 | 35 | 0 | 15 | 3 | 0 | 73 | 0 | 1 | 0 | 2 | 0 | 72 | 6 | 15 | 7 | 1 | 3 | 2 | 4 | 26 | 1 | 0 | 15 | 117 | 274 | 5 | 1 | 11 | 133 | 227 | 2 | 1 | 0 | 1 |
| Lesotho | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 9 | 0 | 0 | 0 | 3 | 9 | 0 | 0 | 0 | 0 |
| Lithuania | 0 | 10 | 14 | 0 | 11 | 2 | 0 | 41 | 0 | 1 | 0 | 1 | 0 | 24 | 4 | 2 | 4 | 0 | 2 | 1 | 3 | 12 | 1 | 0 | 6 | 61 | 131 | 2 | 1 | 6 | 52 | 131 | 1 | 0 | 0 | 0 |
| Macedonia | 0 | 3 | 5 | 0 | 4 | 1 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 2 | 22 | 46 | 1 | 0 | 2 | 18 | 47 | 1 | 0 | 0 | 0 |
| Maldives | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 |
| Mauritius | 0 | 5 | 7 | 0 | 6 | 1 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 12 | 2 | 0 | 2 | 0 | 1 | 1 | 1 | 6 | 1 | 0 | 3 | 33 | 71 | 1 | 0 | 3 | 27 | 72 | 1 | 0 | 0 | 0 |
| Moldova | 0 | 3 | 5 | 0 | 4 | 1 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 2 | 20 | 43 | 1 | 0 | 2 | 17 | 43 | 0 | 0 | 0 | 0 |
| Netherlands | 50 | 24606 | 11652 | 193 | 3087 | 525 | 130 | 24952 | 65 | 366 | 101 | 537 | 57 | 30649 | 1495 | 17938 | 2142 | 129 | 593 | 494 | 1648 | 13168 | 353 | 216 | 17183 | 47369 | 100616 | 2252 | 324 | 4662 | 46818 | 97320 | 373 | 138 | 69 | 203 |
| New Zealand | 1 | 347 | 156 | 4 | 40 | 6 | 2 | 411 | 1 | 8 | 2 | 8 | 1 | 486 | 20 | 486 | 33 | 2 | 8 | 8 | 32 | 147 | 6 | 4 | 271 | 675 | 1476 | 40 | 4 | 74 | 618 | 1424 | 4 | 2 | 1 | 4 |
| Panama | 3 | 244 | 306 | 4 | 188 | 35 | 5 | 744 | 4 | 13 | 3 | 14 | 2 | 548 | 65 | 0 | 69 | 6 | 33 | 17 | 43 | 251 | 15 | 5 | 120 | 1145 | 2608 | 39 | 11 | 109 | 1149 | 2429 | 25 | 7 | 3 | 7 |
| Paraguay | 0 | 15 | 16 | 0 | 12 | 2 | 0 | 51 | 0 | 1 | 0 | 1 | 0 | 31 | 4 | 14 | 5 | 0 | 2 | 1 | 3 | 14 | 1 | 0 | 7 | 75 | 153 | 3 | 1 | 7 | 60 | 146 | 2 | 0 | 0 | 1 |
| Peru | 1 | 67 | 51 | 1 | 34 | 6 | 1 | 149 | 1 | 3 | 1 | 2 | 0 | 105 | 13 | 44 | 13 | 1 | 6 | 3 | 10 | 47 | 3 | 1 | 69 | 233 | 525 | 9 | 2 | 26 | 191 | 598 | 4 | 1 | 1 | 1 |
| Poland | 2 | 143 | 161 | 2 | 101 | 19 | 3 | 424 | 2 | 7 | 2 | 8 | 1 | 304 | 35 | 69 | 39 | 3 | 18 | 9 | 26 | 136 | 9 | 3 | 65 | 640 | 1399 | 23 | 6 | 60 | 604 | 1284 | 13 | 4 | 2 | 4 |
| Portugal | 9 | 2218 | 1795 | 16 | 571 | 104 | 17 | 3155 | 12 | 45 | 10 | 77 | 6 | 3792 | 231 | 700 | 295 | 24 | 108 | 72 | 175 | 1520 | 52 | 21 | 1079 | 5588 | 13126 | 236 | 53 | 509 | 6776 | 10695 | 74 | 25 | 11 | 26 |
| Romania | 1 | 75 | 69 | 1 | 52 | 10 | 1 | 201 | 1 | 4 | 1 | 3 | 0 | 120 | 19 | 9 | 16 | 2 | 9 | 4 | 13 | 63 | 4 | 1 | 98 | 313 | 730 | 11 | 3 | 36 | 253 | 887 | 7 | 2 | 1 | 2 |
| Russia | 2 | 159 | 191 | 3 | 133 | 24 | 4 | 536 | 3 | 10 | 2 | 9 | 1 | 347 | 45 | 79 | 50 | 4 | 24 | 12 | 33 | 164 | 11 | 4 | 75 | 799 | 1720 | 28 | 7 | 76 | 714 | 1635 | 17 | 5 | 2 | 5 |
| Rwanda | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 6 | 0 | 0 | 0 | 2 | 6 | 0 | 0 | 0 | 0 |
| Senegal | 0 | 7 | 7 | 0 | 4 | 1 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 13 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 6 | 0 | 0 | 3 | 24 | 57 | 1 | 0 | 2 | 26 | 51 | 0 | 0 | 0 | 0 |
| Slovak Republic | 1 | 45 | 56 | 1 | 42 | 8 | 1 | 166 | 1 | 3 | 1 | 3 | 0 | 99 | 14 | 23 | 15 | 1 | 7 | 4 | 10 | 49 | 4 | 1 | 23 | 244 | 518 | 8 | 2 | 23 | 207 | 508 | 5 | 2 | 1 | 2 |
| Slovenia | 1 | 44 | 49 | 1 | 38 | 7 | 1 | 156 | 1 | 3 | 1 | 2 | 0 | 91 | 12 | 41 | 14 | 1 | 7 | 3 | 10 | 44 | 3 | 1 | 21 | 227 | 464 | 8 | 2 | 22 | 181 | 451 | 5 | 1 | 1 | 2 |
| South Africa | 3 | 1725 | 485 | 18 | 90 | 11 | 8 | 1470 | 2 | 28 | 9 | 22 | 5 | 1779 | 82 | 2236 | 110 | 3 | 21 | 24 | 137 | 534 | 19 | 20 | 2221 | 2637 | 6344 | 168 | 9 | 385 | 1814 | 9034 | 8 | 4 | 3 | 13 |
| Spain | 33 | 7464 | 5335 | 90 | 1867 | 327 | 69 | 11801 | 37 | 198 | 49 | 255 | 29 | 13086 | 726 | 7246 | 1025 | 72 | 349 | 250 | 768 | 4464 | 193 | 96 | 3795 | 19059 | 43037 | 937 | 160 | 1835 | 20765 | 34848 | 232 | 78 | 39 | 105 |
| Swaziland | 0 | 7 | 8 | 0 | 6 | 1 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 15 | 2 | 7 | 2 | 0 | 1 | 1 | 2 | 7 | 1 | 0 | 3 | 37 | 77 | 1 | 0 | 4 | 30 | 74 | 1 | 0 | 0 | 0 |
| Sweden | 17 | 7776 | 2668 | 68 | 784 | 127 | 39 | 7268 | 16 | 123 | 34 | 128 | 19 | 7978 | 409 | 7114 | 608 | 28 | 156 | 130 | 540 | 3760 | 101 | 74 | 6467 | 13963 | 27394 | 681 | 72 | 1418 | 10916 | 31209 | 90 | 32 | 20 | 62 |
| Switzerland | 81 | 22019 | 15009 | 191 | 4851 | 864 | 186 | 29472 | 97 | 456 | 106 | 672 | 65 | 35504 | 2165 | 13043 | 2564 | 194 | 893 | 640 | 1872 | 12483 | 473 | 236 | 17771 | 50949 | 127060 | 2415 | 435 | 5533 | 58173 | 122703 | 613 | 209 | 95 | 252 |
| Tanzania | 0 | 3 | 4 | 0 | 4 | 1 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 7 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 4 | 0 | 0 | 2 | 19 | 41 | 1 | 0 | 2 | 16 | 42 | 0 | 0 | 0 | 0 |
| Thailand | 2 | 108 | 152 | 3 | 124 | 23 | 3 | 467 | 2 | 9 | 2 | 7 | 1 | 250 | 41 | 28 | 44 | 4 | 22 | 10 | 29 | 133 | 10 | 3 | 60 | 682 | 1446 | 22 | 6 | 66 | 559 | 1466 | 16 | 4 | 2 | 5 |
| Togo | 0 | 2 | 3 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | -1 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 12 | 27 | 0 | 0 | 1 | 11 | 28 | 0 | 0 | 0 | 0 |
| Tunisia | 0 | 3 | 11 | 0 | 3 | 2 | 0 | 33 | 0 | 1 | 0 | 1 | 0 | 18 | 3 | 2 | 3 | 0 | 2 | 1 | 2 | 9 | 1 | 0 | 6 | 48 | 104 | 2 | 0 | 5 | 39 | 110 | 1 | 0 | 0 | 0 |
| Turkey | 2 | 99 | 152 | 2 | 125 | 23 | 3 | 468 | 2 | 8 | 2 | 7 | 1 | 240 | 42 | 0 | 43 | 4 | 22 | 10 | 28 | 132 | 10 | 3 | 58 | 671 | 1436 | 21 | 6 | 65 | 556 | 1472 | 16 | 4 | 2 | 5 |
| Uganda | 0 | 7 | 6 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 2 | 11 | 35 | 1 | 0 | 1 | 25 | 17 | 0 | 0 | 0 | 0 |
| United Kingdom | 299 | 64714 | 46079 | 704 | 17995 | 3209 | 609 | 101821 | 354 | 1683 | 398 | 2132 | 239 | 107768 | 7297 | 47584 | 8922 | 663 | 3298 | 2188 | 6594 | 39027 | 1739 | 618 | 47135 | 187989 | 396206 | 7754 | 1400 | 17505 | 177855 | 373868 | 2277 | 732 | 353 | 911 |
| United States | 436 | 129698 | 56050 | 1697 | 19854 | 3236 | 984 | 164719 | 381 | 3095 | 850 | 2846 | 472 | 171781 | 9116 | 177132 | 13472 | 652 | 3928 | 3070 | 13005 | 55475 | 2536 | 1752 | 116809 | 267030 | 583552 | 14973 | 1525 | 30717 | 220127 | 629685 | 2295 | 776 | 492 | 1530 |
| Uruguay | 1 | 98 | 126 | 2 | 82 | 15 | 2 | 320 | 2 | 6 | 1 | 6 | 1 | 221 | 28 | 3 | 30 | 3 | 14 | 7 | 19 | 105 | 7 | 2 | 48 | 488 | 1094 | 16 | 5 | 46 | 471 | 1095 | 11 | 3 | 1 | 3 |
| Vanuatu | 0 | 2 | 3 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 11 | 24 | 0 | 0 | 1 | 9 | 25 | 0 | 0 | 0 | 0 |
| Venezuela | 1 | 179 | 97 | 4 | 46 | 7 | 2 | 342 | 1 | 7 | 2 | 6 | 1 | 300 | 14 | 387 | 29 | 1 | 9 | 6 | 26 | 94 | 6 | 3 | 47 | 491 | 867 | 28 | 3 | 43 | 382 | 586 | 5 | 2 | 1 | 3 |
| Yemen Republic of | 0 | 12 | 19 | 0 | 15 | 3 | 0 | 56 | 0 | 1 | 0 | 1 | 0 | 29 | 5 | 0 | 5 | 0 | 3 | 1 | 3 | 16 | 1 | 0 | 7 | 82 | 176 | 3 | 1 | 8 | 68 | 180 | 2 | 1 | 0 | 1 |

## (continued) Table8: Y-table,1999 (Supply-and-Use Method) (Millions of U.S. dollars)

| Lesotho | Lithuania | Macedonia | Maldives | Mauritius | Moldova | Netherlands | New Zealand | Panama | Paraguay | Peru | Poland | Portugal | Romania | Russia | Rwanda | Senegal | Slovak Republic | Slovenia | South Africa | Spain | Swaziland | Sweden | Switzerland | Tanzania | Thailand | Togo | Tunisia | Turkey | Uganda | United Kingdom | United States | Uruguay | Vanuatu | Venezuela | Yemen Republic of |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 2 | 10 | 0 | 2 | 0 | 0 | 2 | 0 | 49 | 43 | 0 | 0 | 0 | 0 |
| 2 | 47 | 7 | 1 | 7 | 11 | 11621 | 615 | 207 | 28 | 278 | 669 | 1115 | 136 | 110 | 6 | 22 | 89 | 68 | 1249 | 4016 | 10 | 4521 | 6514 | 40 | 463 | 8 | 229 | 421 | 17 | 26372 | 73098 | 77 | 2 | 95 | 37 |
| 6 | 54 | 17 | 2 | 18 | 19 | 9038 | 574 | 324 | 33 | 378 | 794 | 1588 | 137 | 253 | 13 | 43 | 126 | 93 | 875 | 5483 | 7 | 4082 | 7857 | 77 | 1019 | 18 | 171 | 1205 | 43 | 39374 | 78872 | 155 | 3 | 367 | 60 |
| 0 | 0 | 0 | 0 | 0 | 0 | 15 | 1 | 1 | 0 | 1 | 2 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 11 | 0 | 4 | 21 | 0 | 3 | 0 | 1 | 4 | 0 | 101 | 89 | 0 | 0 | 0 | 0 |
| 5 | 31 | 14 | 2 | 13 | 14 | 3565 | 202 | 209 | 25 | 233 | 465 | 806 | 78 | 205 | 11 | 34 | 76 | 54 | 269 | 2560 | 5 | 1190 | 4328 | 62 | 722 | 15 | 108 | 812 | 35 | 22024 | 25569 | 99 | 2 | 81 | 47 |
| 0 | 0 | 0 | 0 | 0 | 0 | 36 | 2 | 2 | 0 | 3 | 5 | 8 | 1 | 2 | 0 | 0 | 1 | 1 | 2 | 26 | 0 | 9 | 49 | 1 | 8 | 0 | 1 | 9 | 0 | 240 | 213 | 1 | 0 | 0 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 27 | 1 | 2 | 0 | 2 | 4 | 6 | 1 | 2 | 0 | 0 | 1 | 0 | 2 | 20 | 0 | 9 | 35 | 1 | 6 | 0 | 1 | 6 | 0 | 174 | 188 | 1 | 0 | 1 | 0 |
| 15 | 171 | 43 | 6 | 45 | 52 | 27570 | 2026 | 938 | 102 | 1112 | 2446 | 4579 | 436 | 652 | 35 | 113 | 373 | 281 | 3120 | 16295 | 26 | 12527 | 21347 | 204 | 2723 | 46 | 604 | 3125 | 108 | 109927 | 254926 | 428 | 7 | 1024 | 166 |
| 0 | 0 | 0 | 0 | 0 | 0 | 13 | 1 | 1 | 0 | 1 | 2 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 9 | 0 | 5 | 14 | 0 | 2 | 0 | 0 | 3 | 0 | 74 | 106 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 51 | 4 | 2 | 0 | 2 | 5 | 11 | 1 | 2 | 0 | 0 | 1 | 1 | 5 | 38 | 0 | 30 | 36 | 0 | 7 | 0 | 1 | 9 | 0 | 244 | 579 | 1 | 0 | 4 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 44 | 4 | 2 | 0 | 2 | 5 | 6 | 1 | 1 | 0 | 0 | 1 | 1 | 7 | 25 | 0 | 15 | 38 | 0 | 4 | 0 | 2 | 4 | 0 | 167 | 424 | 1 | 0 | 0 | 0 |
| 0 | 2 | 1 | 0 | 1 | 1 | 227 | 13 | 14 | 2 | 15 | 30 | 52 | 5 | 13 | 1 | 2 | 5 | 3 | 17 | 165 | 0 | 75 | 279 | 4 | 47 | 1 | 7 | 53 | 2 | 1425 | 1616 | 6 | 0 | 5 | 3 |
| 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 2 | 12 | 0 | 2 | 0 | 0 | 2 | 0 | 59 | 52 | 0 | 0 | 0 | 0 |
| 9 | 124 | 27 | 4 | 25 | 36 | 20347 | 1422 | 608 | 83 | 774 | 1787 | 2629 | 356 | 411 | 23 | 76 | 250 | 186 | 2777 | 10207 | 26 | 7052 | 17038 | 136 | 1578 | 30 | 579 | 1539 | 67 | 72106 | 186912 | 242 | 6 | 198 | 120 |
| 0 | 2 | 1 | 0 | 1 | 1 | 174 | 8 | 11 | 1 | 13 | 25 | 41 | 4 | 12 | 1 | 2 | 4 | 3 | 12 | 127 | 0 | 46 | 241 | 4 | 40 | 1 | 6 | 44 | 2 | 1178 | 1042 | 5 | 0 | 2 | 3 |
| 0 | 111 | 0 | 0 | 0 | 17 | 10180 | 1805 | 373 | 63 | 476 | 1403 | 1228 | 294 | 39 | 3 | 18 | 172 | 143 | 2785 | 6198 | 30 | 3661 | 4191 | 38 | 388 | 3 | 617 | 0 | 0 | 22428 | 150916 | 96 | 4 | 0 | 53 |
| 0 | 4 | 1 | 0 | 1 | 1 | 436 | 43 | 20 | 2 | 22 | 49 | 90 | 8 | 14 | 1 | 2 | 8 | 6 | 53 | 314 | 1 | 216 | 380 | 4 | 57 | 1 | 12 | 66 | 2 | 2007 | 4859 | 9 | 0 | 22 | 3 |
| 0 | 0 | 0 | 0 | 0 | 0 | 14 | 1 | 1 | 0 | 1 | 2 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 10 | 0 | 4 | 19 | 0 | 3 | 0 | 0 | 4 | 0 | 95 | 84 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 0 | 0 | 0 | 78 | 4 | 5 | 1 | 5 | 11 | 18 | 2 | 5 | 0 | 1 | 2 | 2 | 13 | 73 | 0 | 31 | 118 | 2 | 19 | 0 | 4 | 19 | 1 | 581 | 890 | 3 | 0 | 1 | 1 |
| 0 | 1 | 0 | 0 | 0 | 0 | 107 | 9 | 5 | 1 | 7 | 15 | 21 | 3 | 5 | 0 | 1 | 2 | 2 | 13 | 73 | 0 | 31 | 118 | 2 | 19 | 0 | 4 | 19 | 1 | 581 | 890 | 3 | 0 | 1 | 1 |
| 1 | 8 | 4 | 1 | 4 | 4 | 1023 | 48 | 55 | 7 | 63 | 124 | 210 | 22 | 58 | 3 | 9 | 20 | 14 | 78 | 672 | 1 | 306 | 1265 | 17 | 192 | 4 | 30 | 213 | 10 | 6031 | 6435 | 26 | 1 | 13 | 13 |
| 5 | 44 | 13 | 2 | 13 | 15 | 11298 | 444 | 248 | 30 | 313 | 671 | 1297 | 129 | 197 | 11 | 34 | 99 | 72 | 951 | 4314 | 8 | 4385 | 7813 | 62 | 742 | 14 | 182 | 804 | 33 | 33226 | 63922 | 109 | 2 | 150 | 50 |
| 0 | 0 | 0 | 0 | 0 | 0 | 46 | 3 | 3 | 0 | 3 | 6 | 10 | 1 | 3 | 0 | 0 | 1 | 1 | 6 | 42 | 0 | 23 | 59 | 1 | 10 | 0 | 2 | 11 | 0 | 315 | 536 | 1 | 0 | 2 | 1 |
| 0 | 1 | 0 | 0 | 0 | 0 | 59 | 5 | 3 | 0 | 3 | 7 | 12 | 1 | 3 | 0 | 0 | 1 | 1 | 6 | 42 | 0 | 23 | 59 | 1 | 10 | 0 | 2 | 11 | 0 | 315 | 536 | 1 | 0 | 2 | 1 |
| 2 | 27 | 6 | 1 | 6 | 7 | 5037 | 334 | 136 | 16 | 165 | 378 | 671 | 71 | 86 | 5 | 15 | 55 | 42 | 545 | 2348 | 5 | 2151 | 3113 | 28 | 360 | 6 | 109 | 387 | 14 | 15301 | 39062 | 58 | 1 | 115 | 24 |
| 33 | 295 | 94 | 12 | 90 | 104 | 40634 | 2626 | 1686 | 210 | 1948 | 4226 | 6932 | 756 | 1383 | 75 | 237 | 647 | 473 | 4223 | 23199 | 52 | 15292 | 34294 | 435 | 5124 | 99 | 1173 | 5517 | 233 | 172917 | 313065 | 744 | 15 | 733 | 351 |
| 64 | 590 | 182 | 24 | 180 | 203 | 106411 | 5900 | 3376 | 395 | 4126 | 8789 | 15929 | 1629 | 2702 | 145 | 465 | 1328 | 969 | 11165 | 56824 | 95 | 41285 | 94726 | 839 | 10343 | 194 | 2241 | 11528 | 454 | 429644 | 817830 | 1532 | 29 | 2499 | 573 |
| 0 | 3 | 1 | 0 | 1 | 1 | 524 | 20 | 18 | 2 | 18 | 39 | 71 | 7 | 15 | 1 | 3 | 6 | 4 | 30 | 198 | 0 | 197 | 329 | 5 | 53 | 1 | 10 | 57 | 3 | 1633 | 2203 | 7 | 0 | 3 | 4 |
| 0 | 0 | 0 | 0 | 0 | 0 | 180 | 4 | 2 | 0 | 3 | 7 | 15 | 2 | 1 | 0 | 0 | 1 | 1 | 18 | 60 | 0 | 65 | 146 | 0 | 6 | 0 | 2 | 6 | 0 | 483 | 995 | 1 | 0 | 2 | 0 |
| 1 | 11 | 4 | 1 | 4 | 4 | 1342 | 96 | 68 | 8 | 78 | 165 | 257 | 29 | 60 | 3 | 10 | 26 | 19 | 142 | 901 | 2 | 467 | 1413 | 19 | 218 | 4 | 43 | 236 | 10 | 7099 | 11065 | 31 | 1 | 27 | 15 |
| 19 | 243 | 56 | 7 | 62 | 69 | 47990 | 3080 | 1314 | 132 | 1606 | 3519 | 7194 | 695 | 851 | 45 | 148 | 533 | 405 | 5148 | 26012 | 34 | 22318 | 35071 | 263 | 3772 | 60 | 805 | 4484 | 139 | 173508 | 423946 | 614 | 9 | 1879 | 215 |
| 79 | 729 | 226 | 30 | 237 | 246 | 116438 | 7928 | 4354 | 438 | 5013 | 10544 | 21454 | 1783 | 3346 | 176 | 560 | 1685 | 1253 | 11133 | 73407 | 93 | 55104 | 95333 | 1007 | 13698 | 237 | 2197 | 16371 | 562 | 514956 | 1063655 | 2100 | 33 | 5343 | 789 |
| 1 | 3 | 1 | 0 | 1 | 1 | 316 | 16 | 20 | 2 | 22 | 44 | 78 | 7 | 21 | 1 | 3 | 7 | 5 | 22 | 226 | 0 | 88 | 426 | 6 | 79 | 1 | 11 | 76 | 4 | 2091 | 1960 | 9 | 0 | 4 | 5 |
| 0 | 0 | 0 | 0 | 0 | 0 | 23 | 1 | 2 | 0 | 2 | 3 | 5 | 1 | 2 | 0 | 0 | 1 | 0 | 2 | 17 | 0 | 6 | 32 | 0 | 5 | 0 | 1 | 6 | 0 | 156 | 139 | 1 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 2 | 7 | 0 | 1 | 0 | 0 | 1 | 0 | 34 | 42 | 0 | 0 | 0 | 0 |
| 0 | 1 | 0 | 0 | 0 | 0 | 91 | 6 | 5 | 1 | 5 | 11 | 20 | 2 | 4 | 0 | 1 | 2 | 1 | 8 | 65 | 0 | 36 | 95 | 1 | 16 | 0 | 3 | 18 | 1 | 506 | 779 | 2 | 0 | 3 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 4 | 0 | 1 | 0 | 0 | 1 | 0 | 21 | 18 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 47 | 2 | 3 | 0 | 3 | 7 | 11 | 1 | 3 | 0 | 1 | 1 | 1 | 3 | 34 | 0 | 13 | 63 | 1 | 10 | 0 | 2 | 12 | 1 | 308 | 297 | 1 | 0 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 16 | 1 | 1 | 0 | 1 | 2 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 12 | 0 | 4 | 23 | 0 | 4 | 0 | 1 | 4 | 0 | 112 | 99 | 1 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 4 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 25 | 1 | 2 | 0 | 2 | 4 | 6 | 1 | 2 | 0 | 0 | 1 | 0 | 2 | 18 | 0 | 7 | 35 | 1 | 6 | 0 | 1 | 6 | 0 | 171 | 151 | 1 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 16 | 1 | 1 | 0 | 1 | 2 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 11 | 0 | 4 | 21 | 0 | 3 | 0 | 1 | 4 | 0 | 103 | 99 | 0 | 0 | 0 | 0 |
| 19 | 245 | 55 | 7 | 57 | 71 | 58428 | 2958 | 1270 | 147 | 1605 | 3581 | 6979 | 684 | 842 | 45 | 150 | 520 | 391 | 5607 | 24246 | 42 | 24514 | 37431 | 270 | 3506 | 61 | 968 | 3869 | 137 | 168054 | 395788 | 557 | 10 | 1231 | 227 |
| 0 | 4 | 1 | 0 | 1 | 1 | 603 | 57 | 20 | 3 | 26 | 61 | 97 | 12 | 10 | 1 | 2 | 8 | 6 | 111 | 389 | 1 | 315 | 592 | 4 | 46 | 1 | 20 | 46 | 2 | 2521 | 6997 | 8 | 0 | 15 | 3 |
| 1 | 8 | 4 | 0 | 3 | 4 | 873 | 48 | 53 | 6 | 59 | 117 | 202 | 20 | 53 | 3 | 9 | 19 | 13 | 62 | 637 | 1 | 286 | 1060 | 16 | 185 | 4 | 27 | 208 | 9 | 5557 | 6127 | 25 | 0 | 19 | 12 |
| 0 | 1 | 0 | 0 | 0 | 0 | 58 | 4 | 4 | 0 | 4 | 8 | 13 | 1 | 3 | 0 | 1 | 1 | 1 | 5 | 41 | 0 | 16 | 73 | 1 | 12 | 0 | 2 | 13 | 1 | 357 | 410 | 2 | 0 | 1 | 1 |
| 0 | 2 | 1 | 0 | 1 | 1 | 248 | 11 | 10 | 1 | 12 | 24 | 40 | 4 | 9 | 1 | 2 | 4 | 3 | 23 | 136 | 0 | 77 | 269 | 3 | 33 | 1 | 6 | 36 | 2 | 1182 | 1564 | 4 | 0 | 2 | 2 |
| 1 | 4 | 2 | 0 | 2 | 2 | 490 | 31 | 29 | 4 | 33 | 66 | 110 | 11 | 28 | 2 | 5 | 11 | 8 | 41 | 353 | 1 | 157 | 593 | 9 | 99 | 2 | 16 | 110 | 5 | 3006 | 3616 | 14 | 0 | 9 | 7 |
| 4 | 32 | 11 | 1 | 11 | 12 | 5015 | 309 | 194 | 21 | 220 | 460 | 904 | 78 | 160 | 9 | 27 | 74 | 54 | 423 | 2960 | 4 | 2225 | 4057 | 48 | 623 | 11 | 101 | 726 | 27 | 21741 | 39885 | 92 | 2 | 182 | 38 |
| 0 | 2 | 1 | 0 | 1 | 1 | 340 | 11 | 14 | 2 | 17 | 33 | 57 | 6 | 15 | 1 | 2 | 5 | 4 | 26 | 187 | 0 | 100 | 399 | 4 | 50 | 1 | 8 | 55 | 3 | 1738 | 1951 | 7 | 0 | 3 | 3 |
| 1 | 6 | 3 | 0 | 2 | 3 | 610 | 36 | 38 | 5 | 42 | 86 | 139 | 14 | 37 | 2 | 6 | 14 | 10 | 49 | 441 | 1 | 182 | 771 | 11 | 129 | 3 | 21 | 142 | 6 | 3859 | 4264 | 17 | 0 | 9 | 9 |
| 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 3 | 0 | 1 | 0 | 0 | 1 | 0 | 15 | 13 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 19 | 1 | 1 | 0 | 1 | 2 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 14 | 0 | 7 | 22 | 0 | 4 | 0 | 1 | 4 | 0 | 112 | 147 | 1 | 0 | 1 | 0 |
| 0 | 2 | 1 | 0 | 1 | 1 | 189 | 11 | 12 | 1 | 13 | 26 | 43 | 5 | 12 | 1 | 2 | 4 | 3 | 15 | 135 | 0 | 53 | 244 | 4 | 40 | 1 | 7 | 44 | 2 | 1203 | 1265 | 5 | 0 | 2 | 3 |
| 0 | 2 | 1 | 0 | 1 | 1 | 176 | 11 | 11 | 1 | 12 | 25 | 39 | 4 | 10 | 1 | 2 | 4 | 3 | 16 | 125 | 0 | 48 | 222 | 3 | 36 | 1 | 6 | 39 | 2 | 1088 | 1229 | 5 | 0 | 2 | 3 |
| 0 | 15 | 1 | 0 | 1 | 3 | 4909 | 215 | 56 | 8 | 97 | 234 | 393 | 55 | 21 | 1 | 5 | 29 | 21 | 619 | 1732 | 3 | 1765 | 3685 | 9 | 103 | 2 | 82 | 78 | 3 | 12294 | 33438 | 20 | 1 | 39 | 9 |
| 12 | 123 | 34 | 5 | 34 | 40 | 16594 | 1326 | 682 | 80 | 797 | 1750 | 2971 | 313 | 513 | 28 | 88 | 267 | 198 | 1993 | 10525 | 21 | 6857 | 14382 | 161 | 2012 | 37 | 465 | 2225 | 86 | 73813 | 156380 | 305 | 6 | 505 | 132 |
| 0 | 0 | 0 | 0 | 0 | 0 | 23 | 2 | 2 | 0 | 2 | 4 | 6 | 1 | 2 | 0 | 0 | 1 | 0 | 3 | 21 | 0 | 8 | 36 | 1 | 6 | 0 | 1 | 6 | 0 | 179 | 203 | 1 | 0 | 0 | 0 |
| 5 | 71 | 13 | 2 | 13 | 19 | 20102 | 882 | 340 | 43 | 463 | 1060 | 1981 | 218 | 208 | 11 | 39 | 145 | 109 | 1982 | 7090 | 14 | 7912 | 12608 | 70 | 859 | 15 | 324 | 872 | 33 | 50135 | 121697 | 138 | 3 | 244 | 62 |
| 32 | 300 | 91 | 12 | 91 | 102 | 55313 | 3113 | 1722 | 194 | 2097 | 4463 | 8382 | 818 | 1347 | 72 | 231 | 679 | 498 | 5722 | 29846 | 46 | 22440 | 47896 | 416 | 5271 | 97 | 1093 | 5981 | 226 | 221473 | 436765 | 791 | 14 | 1526 | 333 |
| 0 | 0 | 0 | 0 | 0 | 0 | 15 | 1 | 1 | 0 | 1 | 2 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 11 | 0 | 4 | 20 | 0 | 3 | 0 | 1 | 4 | 0 | 99 | 88 | 0 | 0 | 0 | 0 |
| 1 | 5 | 2 | 0 | 2 | 2 | 524 | 27 | 34 | 4 | 38 | 76 | 121 | 13 | 35 | 2 | 6 | 12 | 8 | 38 | 379 | 1 | 139 | 711 | 10 | 118 | 2 | 18 | 130 | 6 | 3476 | 3252 | 16 | 0 | 5 | 8 |
| 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 3 | 13 | 0 | 2 | 0 | 0 | 2 | 0 | 64 | 57 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 40 | 2 | 2 | 0 | 3 | 5 | 9 | 1 | 2 | 0 | 0 | 1 | 1 | 3 | 27 | 0 | 11 | 52 | 1 | 8 | 0 | 1 | 9 | 0 | 250 | 243 | 1 | 0 | 0 | 1 |
| 1 | 5 | 2 | 0 | 2 | 2 | 514 | 25 | 34 | 4 | 37 | 74 | 121 | 13 | 35 | 2 | 6 | 12 | 8 | 35 | 374 | 1 | 134 | 710 | 11 | 119 | 3 | 18 | 131 | 6 | 3478 | 3077 | 16 | 0 | 5 | 8 |
| 0 | 0 | 0 | 0 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 7 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 26 | 119 | 0 | 0 | 1 | 0 |
| 118 | 1053 | 337 | 45 | 331 | 371 | 168027 | 10267 | 6108 | 718 | 7282 | 15502 | 27409 | 2816 | 4978 | 267 | 851 | 2373 | 1730 | 17760 | 98257 | 170 | 65050 | 153691 | 1543 | 19881 | 357 | 3980 | 21011 | 839 | 726582 | 1344631 | 2775 | 53 | 4153 | 1233 |
| 119 | 1722 | 340 | 45 | 332 | 476 | 336104 | 20782 | 9291 | 1094 | 10934 | 25216 | 39875 | 5108 | 5258 | 288 | 981 | 3476 | 2605 | 43610 | 156943 | 351 | 122713 | 269959 | 1779 | 21028 | 382 | 7958 | 20850 | 846 | 1102602 | 2855443 | 3923 | 74 | 4402 | 1560 |
| 1 | 3 | 2 | 0 | 2 | 2 | 371 | 20 | 23 | 3 | 25 | 51 | 86 | 9 | 23 | 1 | 4 | 8 | 5 | 27 | 271 | 1 | 116 | 473 | 7 | 80 | 2 | 12 | 90 | 4 | 2392 | 2540 | 11 | 0 | 7 | 5 |
| 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 1 | 0 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 2 | 12 | 0 | 2 | 0 | 0 | 2 | 0 | 58 | 53 | 0 | 0 | 0 | 0 |
| 0 | 4 | 1 | 0 | 1 | 1 | 378 | 44 | 18 | 2 | 21 | 50 | 67 | 9 | 12 | 1 | 2 | 7 | 5 | 64 | 254 | 1 | 135 | 310 | 4 | 47 | 1 | 17 | 46 | 2 | 1620 | 4148 | 7 | 0 | 6 | 4 |
| 0 | 1 | 0 | 0 | 0 | 0 | 63 | 3 | 4 | 1 | 5 | 9 | 15 | 2 | 4 | 0 | 1 | 1 | 1 | 4 | 46 | 0 | 16 | 87 | 1 | 15 | 0 | 2 | 16 | 1 | 425 | 376 | 2 | 0 | 1 | 1 |

Table9: Ordering of countries in triangulation (Supply-and-Use Method)

| 1996 | | 1999 | |
|---|---|---|---|
| ranking | Country | ranking | Country |
| 1 | Cote d ivoire | 1 | Tanzania |
| 2 | Chile | 2 | Bangladesh |
| 3 | Tanzania | 3 | Tunisia |
| 4 | Bangladesh | 4 | Senegal |
| 5 | Thailand | 5 | Kyrgyz Republic |
| 6 | Senegal | 6 | Maldives |
| 7 | Kyrgyz Republic | 7 | Cote d ivoire |
| 8 | Tunisia | 8 | Costa rica |
| 9 | Lesotho | 9 | Lesotho |
| 10 | Maldives | 10 | Peru |
| 11 | Peru | 11 | Turkey |
| 12 | Turkey | 12 | El Salvador |
| 13 | Colombia | 13 | Chile |
| 14 | Costa rica | 14 | Benin |
| 15 | Iceland | 15 | Thailand |
| 16 | El Salvador | 16 | Poland |
| 17 | Macedonia | 17 | Iceland |
| 18 | Benin | 18 | Moldova |
| 19 | Poland | 19 | Cambodia |
| 20 | Cambodia | 20 | Belarus |
| 21 | Moldova | 21 | Colombia |
| 22 | New Zealand | 22 | Macedonia |
| 23 | Lithuania | 23 | New Zealand |
| 24 | Mauritius | 24 | Lithuania |
| 25 | Estonia | 25 | Estonia |
| 26 | Belarus | 26 | Paraguay |
| 27 | Australia | 27 | Slovak Republic |
| 28 | Israel | 28 | Mauritius |
| 29 | Paraguay | 29 | Israel |
| 30 | Botswana | 30 | Latvia |
| 31 | Russia | 31 | Botswana |
| 32 | South Africa | 32 | Romania |
| 33 | Latvia | 33 | Slovenia |
| 34 | Jordan | 34 | Russia |
| 35 | Czech Rebublic | 35 | South Africa |
| 36 | Sweden | 36 | Australia |
| 37 | Urugay | 37 | Urugay |
| 38 | Venezuela | 38 | Jordan |
| 39 | Romania | 39 | Finland |
| 40 | Slovak Republic | 40 | Czech Rebublic |
| 41 | Slovenia | 41 | Panama |
| 42 | Spain | 42 | Venezuela |
| 43 | Swaziland | 43 | Swaziland |
| 44 | Panama | 44 | Canada |
| 45 | Finland | 45 | Portugal |
| 46 | Portugal | 46 | Denmark |
| 47 | Canada | 47 | Spain |
| 48 | Denmark | 48 | Sweden |
| 49 | Austria | 49 | Austria |
| 50 | United States | 50 | United States |
| 51 | Italy | 51 | United Kingdom |
| 52 | United Kingdom | 52 | Bahrain |
| 53 | Netherlands | 53 | France |
| 54 | Bahrain | 54 | Netherlands |
| 55 | Germany | 55 | Germany |
| 56 | Belgium | 56 | Belgium |
| 57 | France | 57 | Italy |
| 58 | Japan | 58 | Japan |
| 59 | Switzerland | 59 | Switzerland |

Table10: Ordering of countries in triangulation (Gravity Method)

| 1996 | | 1999 | |
|---|---|---|---|
| ranking | Country | ranking | Country |
| 1 | Turkey | 1 | Finland |
| 2 | Poland | 2 | Turkey |
| 3 | Peru | 3 | Peru |
| 4 | Colombia | 4 | Tunisia |
| 5 | Australia | 5 | Colombia |
| 6 | Tunisia | 6 | Chile |
| 7 | Finland | 7 | Australia |
| 8 | Thailand | 8 | Poland |
| 9 | New Zealand | 9 | Tanzania |
| 10 | Chile | 10 | New Zealand |
| 11 | Lithuania | 11 | Lithuania |
| 12 | Tanzania | 12 | Estonia |
| 13 | Moldova | 13 | Belarus |
| 14 | Estonia | 14 | Moldova |
| 15 | South Africa | 15 | Bangladesh |
| 16 | Bangladesh | 16 | Romania |
| 17 | Maldives | 17 | Latvia |
| 18 | Macedonia | 18 | Israel |
| 19 | Iceland | 19 | El Salvador |
| 20 | Israel | 20 | Portugal |
| 21 | Canada | 21 | Macedonia |
| 22 | Cote d ivoire | 22 | Maldives |
| 23 | Belarus | 23 | Iceland |
| 24 | El Salvador | 24 | Thailand |
| 25 | Cambodia | 25 | Cote d ivoire |
| 26 | Costa rica | 26 | Canada |
| 27 | Urugay | 27 | Jordan |
| 28 | Romania | 28 | South Africa |
| 29 | Senegal | 29 | Cambodia |
| 30 | Latvia | 30 | Costa rica |
| 31 | Kyrgyz Republic | 31 | Mauritius |
| 32 | Mauritius | 32 | Benin |
| 33 | Benin | 33 | Kyrgyz Republic |
| 34 | Spain | 34 | Senegal |
| 35 | Jordan | 35 | Urugay |
| 36 | Sweden | 36 | Slovak Republic |
| 37 | Lesotho | 37 | Slovenia |
| 38 | Paraguay | 38 | Paraguay |
| 39 | Slovak Republic | 39 | Panama |
| 40 | Swaziland | 40 | Swaziland |
| 41 | Venezuela | 41 | Lesotho |
| 42 | Panama | 42 | Spain |
| 43 | Slovenia | 43 | Venezuela |
| 44 | Portugal | 44 | Bahrain |
| 45 | Denmark | 45 | Sweden |
| 46 | Bahrain | 46 | Austria |
| 47 | Austria | 47 | Czech Rebublic |
| 48 | Czech Rebublic | 48 | Denmark |
| 49 | United States | 49 | United States |
| 50 | Italy | 50 | United Kingdom |
| 51 | United Kingdom | 51 | Italy |
| 52 | Russia | 52 | Russia |
| 53 | Netherlands | 53 | Netherlands |
| 54 | Japan | 54 | Japan |
| 55 | Belgium | 55 | France |
| 56 | Germany | 56 | Switzerland |
| 57 | Switzerland | 57 | Belgium |
| 58 | Botswana | 58 | Germany |
| 59 | France | 59 | Botswana |

Table11: Index of the power of dispersion (Supply-and-Use Method)

| 1996 | | 1999 | |
|---|---|---|---|
| Country | Index of the power of dispersion | Country | Index of the power of dispersion |
| 1 Tunisia | 1.0476 | 1 Tunisia | 1.0374 |
| 2 Cambodia | 1.0468 | 2 Cambodia | 1.0373 |
| 3 Estonia | 1.0445 | 3 Estonia | 1.0370 |
| 4 Latvia | 1.0414 | 4 South Africa | 1.0367 |
| 5 Czech Rebublic | 1.0405 | 5 Czech Rebublic | 1.0350 |
| 6 Paraguay | 1.0399 | 6 Finland | 1.0329 |
| 7 South Africa | 1.0390 | 7 Romania | 1.0314 |
| 8 Peru | 1.0383 | 8 Belarus | 1.0311 |
| 9 Sweden | 1.0381 | 9 Latvia | 1.0311 |
| 10 Kyrgyz Republic | 1.0367 | 10 Netherlands | 1.0305 |
| 11 Colombia | 1.0363 | 11 Paraguay | 1.0298 |
| 12 Chile | 1.0360 | 12 New Zealand | 1.0291 |
| 13 New Zealand | 1.0357 | 13 El Salvador | 1.0277 |
| 14 Lithuania | 1.0356 | 14 Poland | 1.0276 |
| 15 Slovenia | 1.0349 | 15 Lithuania | 1.0276 |
| 16 Spain | 1.0345 | 16 Kyrgyz Republic | 1.0273 |
| 17 Portugal | 1.0339 | 17 United States | 1.0264 |
| 18 Romania | 1.0336 | 18 Israel | 1.0258 |
| 19 Poland | 1.0335 | 19 Peru | 1.0254 |
| 20 Belarus | 1.0330 | 20 Australia | 1.0249 |
| 21 United Kingdom | 1.0328 | 21 Colombia | 1.0249 |
| 22 Tanzania | 1.0322 | 22 Slovenia | 1.0244 |
| 23 Moldova | 1.0322 | 23 Slovak Republic | 1.0244 |
| 24 El Salvador | 1.0320 | 24 Sweden | 1.0240 |
| 25 Senegal | 1.0312 | 25 Moldova | 1.0238 |
| 26 Bangladesh | 1.0311 | 26 France | 1.0238 |
| 27 Cote d ivoire | 1.0311 | 27 United Kingdom | 1.0236 |
| 28 Jordan | 1.0311 | 28 Spain | 1.0234 |
| 29 Lesotho | 1.0311 | 29 Panama | 1.0229 |
| 30 Macedonia | 1.0311 | 30 Cote d ivoire | 1.0227 |
| 31 Maldives | 1.0311 | 31 Tanzania | 1.0223 |
| 32 Australia | 1.0306 | 32 Senegal | 1.0219 |
| 33 Benin | 1.0306 | 33 Portugal | 1.0209 |
| 34 Panama | 1.0304 | 34 Chile | 1.0193 |
| 35 United States | 1.0304 | 35 Benin | 1.0192 |
| 36 Thailand | 1.0292 | 36 Bangladesh | 1.0189 |
| 37 Israel | 1.0273 | 37 Jordan | 1.0189 |
| 38 Mauritius | 1.0267 | 38 Macedonia | 1.0189 |
| 39 Turkey | 1.0249 | 39 Maldives | 1.0189 |
| 40 Urugay | 1.0241 | 40 Urugay | 1.0183 |
| 41 Finland | 1.0237 | 41 Thailand | 1.0182 |
| 42 Costa rica | 1.0227 | 42 Denmark | 1.0173 |
| 43 Canada | 1.0217 | 43 Mauritius | 1.0166 |
| 44 Italy | 1.0202 | 44 Canada | 1.0161 |
| 45 Austria | 1.0200 | 45 Turkey | 1.0136 |
| 46 Denmark | 1.0191 | 46 Costa rica | 1.0109 |
| 47 Swaziland | 1.0176 | 47 Iceland | 1.0088 |
| 48 Iceland | 1.0147 | 48 Austria | 1.0086 |
| 49 Venezuela | 1.0088 | 49 Lesotho | 0.9858 |
| 50 Netherlands | 0.9888 | 50 Germany | 0.9812 |
| 51 Slovak Republic | 0.9861 | 51 Bahrain | 0.9748 |
| 52 Bahrain | 0.9744 | 52 Swaziland | 0.9729 |
| 53 Germany | 0.9735 | 53 Italy | 0.9619 |
| 54 Belgium | 0.9660 | 54 Belgium | 0.9361 |
| 55 France | 0.9154 | 55 Venezuela | 0.9304 |
| 56 Russia | 0.8077 | 56 Russia | 0.8737 |
| 57 Japan | 0.7153 | 57 Japan | 0.7582 |
| 58 Switzerland | 0.6947 | 58 Switzerland | 0.7534 |
| 59 Botswana | 0.3989 | 59 Botswana | 0.3932 |

Table12: Index of the power of dispersion (Gravity Method)

| 1996 | | 1999 | |
|---|---|---|---|
| Country | Index of the power of dispersion | Country | Index of the power of dispersion |
| 1 Lesotho | 1.0844 | 1 Benin | 1.0765 |
| 2 Kyrgyz Republic | 1.0806 | 2 Cote d ivoire | 1.0647 |
| 3 Moldova | 1.0699 | 3 Kyrgyz Republic | 1.0552 |
| 4 Iceland | 1.0673 | 4 Moldova | 1.0424 |
| 5 Urugay | 1.0657 | 5 Iceland | 1.0422 |
| 6 Costa rica | 1.0650 | 6 Urugay | 1.0405 |
| 7 El Salvador | 1.0631 | 7 Paraguay | 1.0391 |
| 8 Paraguay | 1.0631 | 8 Costa rica | 1.0365 |
| 9 Colombia | 1.0622 | 9 Senegal | 1.0363 |
| 10 Senegal | 1.0605 | 10 Colombia | 1.0357 |
| 11 Panama | 1.0598 | 11 Lithuania | 1.0351 |
| 12 Lithuania | 1.0576 | 12 El Salvador | 1.0346 |
| 13 Canada | 1.0564 | 13 Panama | 1.0340 |
| 14 Romania | 1.0553 | 14 Canada | 1.0324 |
| 15 Swaziland | 1.0544 | 15 Romania | 1.0321 |
| 16 Belarus | 1.0522 | 16 Belarus | 1.0315 |
| 17 Mauritius | 1.0521 | 17 Netherlands | 1.0303 |
| 18 Macedonia | 1.0501 | 18 France | 1.0294 |
| 19 Venezuela | 1.0432 | 19 Mauritius | 1.0286 |
| 20 Portugal | 1.0395 | 20 Portugal | 1.0261 |
| 21 Cote d ivoire | 1.0390 | 21 Macedonia | 1.0253 |
| 22 Denmark | 1.0372 | 22 Denmark | 1.0252 |
| 23 Estonia | 1.0363 | 23 Estonia | 1.0247 |
| 24 Benin | 1.0363 | 24 Spain | 1.0238 |
| 25 Spain | 1.0359 | 25 Peru | 1.0236 |
| 26 Peru | 1.0324 | 26 Sweden | 1.0218 |
| 27 Poland | 1.0320 | 27 Chile | 1.0217 |
| 28 Sweden | 1.0314 | 28 Lesotho | 1.0211 |
| 29 Latvia | 1.0313 | 29 Finland | 1.0207 |
| 30 Czech Rebublic | 1.0311 | 30 Poland | 1.0206 |
| 31 Finland | 1.0302 | 31 United Kingdom | 1.0200 |
| 32 Austria | 1.0289 | 32 Latvia | 1.0199 |
| 33 Chile | 1.0282 | 33 Czech Rebublic | 1.0188 |
| 34 Turkey | 1.0239 | 34 Austria | 1.0171 |
| 35 Jordan | 1.0236 | 35 Jordan | 1.0163 |
| 36 Slovenia | 1.0231 | 36 Turkey | 1.0152 |
| 37 Tunisia | 1.0228 | 37 Slovenia | 1.0140 |
| 38 United Kingdom | 1.0224 | 38 Israel | 1.0130 |
| 39 Italy | 1.0206 | 39 Tunisia | 1.0076 |
| 40 Israel | 1.0191 | 40 Tanzania | 1.0065 |
| 41 Tanzania | 1.0041 | 41 South Africa | 1.0029 |
| 42 South Africa | 1.0036 | 42 Slovak Republic | 0.9978 |
| 43 Netherlands | 0.9943 | 43 New Zealand | 0.9942 |
| 44 New Zealand | 0.9822 | 44 Swaziland | 0.9889 |
| 45 United States | 0.9809 | 45 Australia | 0.9836 |
| 46 Belgium | 0.9768 | 46 United States | 0.9819 |
| 47 Germany | 0.9706 | 47 Bangladesh | 0.9783 |
| 48 Slovak Republic | 0.9688 | 48 Germany | 0.9769 |
| 49 Australia | 0.9661 | 49 Thailand | 0.9732 |
| 50 Bangladesh | 0.9598 | 50 Italy | 0.9685 |
| 51 Thailand | 0.9516 | 51 Cambodia | 0.9676 |
| 52 Bahrain | 0.9442 | 52 Venezuela | 0.9612 |
| 53 Cambodia | 0.9423 | 53 Bahrain | 0.9582 |
| 54 France | 0.9278 | 54 Belgium | 0.9465 |
| 55 Maldives | 0.9177 | 55 Maldives | 0.9352 |
| 56 Russia | 0.7999 | 56 Russia | 0.8706 |
| 57 Japan | 0.7330 | 57 Japan | 0.7649 |
| 58 Switzerland | 0.7013 | 58 Switzerland | 0.7600 |
| 59 Botswana | 0.4020 | 59 Botswana | 0.3950 |

Table13: Index of the sensitivity of dispersion (Supply-and-Use Method)

| 1996 | | 1999 | |
|---|---|---|---|
| Country | Index of the power of dispersion | Country | Index of the power of dispersion |
| 1 United States | 13.0890 | 1 United States | 19.1644 |
| 2 United Kingdom | 9.2332 | 2 United Kingdom | 11.3369 |
| 3 Japan | 8.7329 | 3 Japan | 8.7188 |
| 4 Germany | 5.4333 | 4 Germany | 6.8178 |
| 5 France | 4.4731 | 5 Switzerland | 3.6230 |
| 6 Switzerland | 3.0438 | 6 Italy | 3.2232 |
| 7 Italy | 2.3440 | 7 Netherlands | 3.0842 |
| 8 Netherlands | 2.1253 | 8 France | 2.7268 |
| 9 Belgium | 1.9744 | 9 Belgium | 1.9952 |
| 10 Canada | 1.1030 | 10 Spain | 1.2776 |
| 11 Spain | 0.8378 | 11 Canada | 1.2716 |
| 12 Sweden | 0.7583 | 12 Sweden | 0.9671 |
| 13 Austria | 0.5563 | 13 Austria | 0.7059 |
| 14 Denmark | 0.5055 | 14 Denmark | 0.5957 |
| 15 Australia | 0.4870 | 15 Australia | 0.5702 |
| 16 Bahrain | 0.3263 | 16 Portugal | 0.4043 |
| 17 Portugal | 0.3118 | 17 Finland | 0.3433 |
| 18 Finland | 0.2671 | 18 Bahrain | 0.3401 |
| 19 Panama | 0.1697 | 19 South Africa | 0.2838 |
| 20 South Africa | 0.1643 | 20 Israel | 0.1587 |
| 21 Israel | 0.1626 | 21 Czech Rebublic | 0.1319 |
| 22 Czech Rebublic | 0.1496 | 22 Panama | 0.1275 |
| 23 New Zealand | 0.1406 | 23 Russia | 0.1056 |
| 24 Russia | 0.1324 | 24 New Zealand | 0.1049 |
| 25 Poland | 0.1241 | 25 Thailand | 0.0984 |
| 26 Turkey | 0.1217 | 26 Turkey | 0.0978 |
| 27 Romania | 0.1127 | 27 Poland | 0.0963 |
| 28 Thailand | 0.1124 | 28 Colombia | 0.0938 |
| 29 Colombia | 0.1121 | 29 Urugay | 0.0872 |
| 30 Venezuela | 0.1101 | 30 Venezuela | 0.0862 |
| 31 Slovak Republic | 0.1096 | 31 Jordan | 0.0822 |
| 32 Urugay | 0.1088 | 32 Romania | 0.0788 |
| 33 Jordan | 0.1080 | 33 Peru | 0.0732 |
| 34 Peru | 0.1053 | 34 Slovak Republic | 0.0722 |
| 35 Slovenia | 0.1039 | 35 Chile | 0.0711 |
| 36 Latvia | 0.0933 | 36 Slovenia | 0.0710 |
| 37 Paraguay | 0.0928 | 37 Iceland | 0.0654 |
| 38 Tunisia | 0.0917 | 38 Latvia | 0.0648 |
| 39 Belarus | 0.0909 | 39 Cote d ivoire | 0.0637 |
| 40 Lithuania | 0.0908 | 40 Estonia | 0.0622 |
| 41 Bangladesh | 0.0905 | 41 Paraguay | 0.0620 |
| 42 Botswana | 0.0904 | 42 Lithuania | 0.0612 |
| 43 Iceland | 0.0904 | 43 El Salvador | 0.0609 |
| 44 Estonia | 0.0902 | 44 Tunisia | 0.0605 |
| 45 El Salvador | 0.0901 | 45 Botswana | 0.0604 |
| 46 Swaziland | 0.0900 | 46 Bangladesh | 0.0603 |
| 47 Chile | 0.0899 | 47 Swaziland | 0.0597 |
| 48 Costa rica | 0.0893 | 48 Belarus | 0.0596 |
| 49 Benin | 0.0891 | 49 Mauritius | 0.0595 |
| 50 Senegal | 0.0891 | 50 Senegal | 0.0590 |
| 51 Mauritius | 0.0891 | 51 Macedonia | 0.0588 |
| 52 Tanzania | 0.0889 | 52 Moldova | 0.0587 |
| 53 Moldova | 0.0889 | 53 Tanzania | 0.0586 |
| 54 Cote d ivoire | 0.0888 | 54 Costa rica | 0.0586 |
| 55 Macedonia | 0.0887 | 55 Benin | 0.0585 |
| 56 Cambodia | 0.0886 | 56 Cambodia | 0.0582 |
| 57 Kyrgyz Republic | 0.0881 | 57 Kyrgyz Republic | 0.0579 |
| 58 Lesotho | 0.0881 | 58 Lesotho | 0.0577 |
| 59 Maldives | 0.0880 | 59 Maldives | 0.0575 |

Table14: Index of the sensitivity of dispersion (Gravity Method)

| 1996 | | 1999 | |
|---|---|---|---|
| Country | Index of the power of dispersion | Country | Index of the power of dispersion |
| 1 United States | 13.7364 | 1 United States | 20.2471 |
| 2 United Kingdom | 8.6446 | 2 United Kingdom | 10.7562 |
| 3 Japan | 7.5228 | 3 Japan | 7.7536 |
| 4 Germany | 5.3771 | 4 Germany | 6.7627 |
| 5 France | 4.6494 | 5 Switzerland | 3.5367 |
| 6 Switzerland | 2.9565 | 6 Netherlands | 3.0932 |
| 7 Italy | 2.3033 | 7 Italy | 3.0127 |
| 8 Netherlands | 2.2284 | 8 France | 2.8560 |
| 9 Belgium | 1.8951 | 9 Belgium | 1.9369 |
| 10 Canada | 1.1054 | 10 Spain | 1.2703 |
| 11 Spain | 0.9575 | 11 Canada | 1.2599 |
| 12 Sweden | 0.8423 | 12 Sweden | 0.9964 |
| 13 Austria | 0.6478 | 13 Austria | 0.7318 |
| 14 Australia | 0.5451 | 14 Australia | 0.6830 |
| 15 Denmark | 0.5283 | 15 Denmark | 0.6418 |
| 16 South Africa | 0.3931 | 16 South Africa | 0.4655 |
| 17 Portugal | 0.3352 | 17 Portugal | 0.3880 |
| 18 Finland | 0.2857 | 18 Finland | 0.3600 |
| 19 Bahrain | 0.2841 | 19 Bahrain | 0.3035 |
| 20 Thailand | 0.2233 | 20 Israel | 0.2216 |
| 21 Israel | 0.1951 | 21 Thailand | 0.1951 |
| 22 Czech Rebublic | 0.1827 | 22 Poland | 0.1718 |
| 23 Russia | 0.1759 | 23 Turkey | 0.1669 |
| 24 Poland | 0.1751 | 24 Czech Rebublic | 0.1667 |
| 25 Turkey | 0.1730 | 25 Russia | 0.1389 |
| 26 Venezuela | 0.1565 | 26 Venezuela | 0.1344 |
| 27 Panama | 0.1561 | 27 Panama | 0.1278 |
| 28 New Zealand | 0.1472 | 28 Chile | 0.1243 |
| 29 Chile | 0.1347 | 29 New Zealand | 0.1193 |
| 30 Colombia | 0.1343 | 30 Colombia | 0.1171 |
| 31 Peru | 0.1290 | 31 Cote d ivoire | 0.1115 |
| 32 Slovak Republic | 0.1227 | 32 Peru | 0.1066 |
| 33 Romania | 0.1140 | 33 Urugay | 0.1033 |
| 34 Urugay | 0.1121 | 34 Romania | 0.0881 |
| 35 Jordan | 0.1103 | 35 Slovak Republic | 0.0877 |
| 36 Slovenia | 0.1097 | 36 Slovenia | 0.0847 |
| 37 Botswana | 0.1081 | 37 Jordan | 0.0831 |
| 38 Cote d ivoire | 0.0992 | 38 Botswana | 0.0825 |
| 39 Tunisia | 0.0963 | 39 Benin | 0.0749 |
| 40 Paraguay | 0.0941 | 40 El Salvador | 0.0714 |
| 41 Bangladesh | 0.0941 | 41 Tunisia | 0.0714 |
| 42 Latvia | 0.0938 | 42 Paraguay | 0.0712 |
| 43 Swaziland | 0.0929 | 43 Iceland | 0.0703 |
| 44 Lithuania | 0.0919 | 44 Latvia | 0.0702 |
| 45 El Salvador | 0.0917 | 45 Bangladesh | 0.0683 |
| 46 Mauritius | 0.0910 | 46 Lithuania | 0.0682 |
| 47 Costa rica | 0.0908 | 47 Estonia | 0.0675 |
| 48 Belarus | 0.0908 | 48 Costa rica | 0.0666 |
| 49 Estonia | 0.0907 | 49 Swaziland | 0.0663 |
| 50 Iceland | 0.0905 | 50 Mauritius | 0.0659 |
| 51 Benin | 0.0903 | 51 Tanzania | 0.0650 |
| 52 Lesotho | 0.0902 | 52 Cambodia | 0.0646 |
| 53 Tanzania | 0.0891 | 53 Belarus | 0.0644 |
| 54 Senegal | 0.0889 | 54 Macedonia | 0.0643 |
| 55 Cambodia | 0.0887 | 55 Senegal | 0.0643 |
| 56 Moldova | 0.0887 | 56 Lesotho | 0.0641 |
| 57 Macedonia | 0.0884 | 57 Moldova | 0.0634 |
| 58 Kyrgyz Republic | 0.0874 | 58 Kyrgyz Republic | 0.0629 |
| 59 Maldives | 0.0871 | 59 Maldives | 0.0622 |