

## The Structure of Intra-Muslim Countries Trade

Noor Aini Khalifah

### ABSTRAK

*Kertas ini meneliti struktur perdagangan antara 50 buah negara Islam bagi tahun 1986-1991. Analisis dibuat berdasarkan kedudukan geografi dan juga tingkat pendapatan negara Islam tersebut. Hubungan perdagangan antara negara Islam dan negara bukan Islam juga dikaji. Indeks intensiti perdagangan digunakan untuk menilai hubungan perdagangan antara negara. Negara Islam yang terletak di Timur Tengah merupakan penyumbang terbesar terhadap perdagangan antarabangsa negara Islam pada keseluruhannya dan juga kepada perdagangan antara negara Islam. Jika ditinjau dari segi tingkat pendapatan, negara Islam yang berpendapatan tinggi merupakan penyumbang terbesar perdagangan antara negara Islam sendiri diikuti oleh negara Islam berpendapatan pertengahan bawah dan pertengahan atas. Perdagangan antarabangsa Turki dan negara Islam di Timur Tengah dengan negara Islam lain mempunyai indeks intensiti perdagangan yang tinggi. Indeks intensiti perdagangan bagi perdagangan antara kumpulan negara Islam dan bukan Islam kesemuanya adalah kurang ataupun sama dengan satu.*

### ABSTRACT

*The structure of intra-Muslim countries trade among the 50 countries of the Muslim world was examined for the years 1986-1991. This analysis was based on geographical groups of Muslim countries as well as different income groups of Muslim countries. The trade relationship between the Muslim and non-Muslim countries was also examined. The trade intensity index was then used to quantify the different trade relationships of the Muslim countries. The Muslim countries located in the Middle East dominates the exports, imports and trade of the Muslim countries as well as intra-Muslim countries trade. Where income groups are concerned, the trade contribution of the high income Muslim countries toward intra-Muslim countries trade is dominant followed by the lower and upper middle income Muslim countries. Turkey and the Middle Eastern countries trade with the Muslim countries are characterized by high trade intensity indices. The trade intensity indices for trade between groups of Muslim and non-Muslim countries are all less than or equal to unity.*

## INTRODUCTION

The international trade field has always acknowledged the superiority of free trade compared to managed trade. The former idea of free trade has helped shaped several rounds of multilateral negotiations under the auspices of the General Agreement on Tariffs and Trade (GATT) although the latest Uruguay Round was born way past its due date. The latter idea of managed trade has led to the current fashion of bilateral or regional arrangements. Regional efforts to mention a few include the Association of South-East Asian Nations (ASEAN), the East Asian Economic Caucus (EAEC), the South Asian Association for Regional Cooperation (SAARC), the Western African Economic Community (ECOWAS), the Arab Common Market (ACM) and the European Community (EC).

Social, political and military considerations can act as trigger mechanisms for bilateral or regional arrangements. But the usual economic arguments for bilateral or regional arrangements include economies of scale rendered possible due to the extension of markets, enhancement of efficiency and productivity and better allocation of resources through the removal of trade barriers and the speeding up of the process of economic growth through collective self-reliance (Balassa 1962; Krause 1972; Pazos 1972).

The Muslim countries are no exception in seeking to format some kind of unity or collective effort among themselves. Discussions of the Islamic Common Market (ICM) in academic circles are on the increase.<sup>1</sup> This paper examines the structural pattern of the international trade of the Muslim<sup>2</sup> countries among themselves. The strength of past and current trading relationships among the Muslim countries will hopefully provide rough clues as to the future direction of trade relationships among Muslim countries. This will help Muslim countries like Malaysia that are trying to become developed and industrialized countries in the near future to plan the forums or trade arrangements that should be given priority.

In Section I, the GNP/capita of the Muslim countries will be examined to provide broad measures of the prevailing socio-economic conditions of the Muslim countries. Countries will be divided into groups based on geographical factors as well as GNP/capita to denote various income groups. In Section II, the direction of trade of the various geographical groups of Muslim countries will be examined. This will be followed by an examination of intra-Muslim countries trade based on geographical groups. Section III discusses the Muslim countries trade based on income groups of Muslim countries. Again, the international trade of the different income groups will be examined and the trade among themselves analyzed.

The trade of the Muslim countries with non-Muslim countries will be the subject of analysis in Section IV. The trade intensity index will then be used to evaluate the intensity of trade of the Muslim countries among themselves based on geographical and income groups in Section V. The intensity of trade among Muslim and non-Muslim countries will also be examined using the trade intensity index. The conclusion of the study as well as some policy issues will be highlighted in Section VI.

## BASIC ECONOMIC AND TRADE INDICATORS

The analysis of the trade pattern of the Muslim countries is based on 50 Muslim countries. The majority of Muslim countries, that is 27 of them are located in Africa although the size of each of these countries is relatively small in terms of population and Gross National Product (GNP). Of the remaining 23 countries, 15 of them are located in the Middle East, 7 of them are located in Asia while Turkey is the sole Muslim country located in Europe. Actually, all the countries in the Middle East are Muslim countries except for Israel. Table 1 shows the geographical location of the Muslim countries studied.

The 50 Muslim countries studied have also been divided into four income groups, namely, the Muslim countries that belong to the high income group, the upper middle income, the lower middle income and the low income group of Muslim countries. This division of countries according to the various income groups is based on the *World Development Report* for the years 1986-1990. Although the classification of countries according to income groups vary from year to year for some countries, the majority of times a country has been designated in a certain group will determine which income group it belongs to in this study. Six countries, five of which are located in the Middle East with Brunei being located in Asia, belong to the high income group. The upper middle income group of Muslim countries consists of Algeria and Gabon situated in Africa, while Iran, Iraq, Libya and Oman are situated in the Middle East. The lower middle income group of countries includes the African countries of Cameroon, Djibouti, Morocco, Senegal and Tunisia; the Middle Eastern countries of Egypt, Jordan, Lebanon, Syria and North Yemen; the Asian country of Malaysia and the European country of Turkey. The remaining 20 muslim countries located in Africa; Afghanistan, Indonesia, Maldives, Pakistan, Bangladesh and South Yemen are all designated low income countries. Thus, 26 Muslim countries belong to the low income group

TABLE 1. Basic Economic and Trade Indicators of the Muslim countries

| Country    | Income Group | Population, (million) | GNP/capita 1990 | Location | Exports 1991 million | Imports 1991 million | Trade percent 1991 | Trade Ranking |      |      |      |
|------------|--------------|-----------------------|-----------------|----------|----------------------|----------------------|--------------------|---------------|------|------|------|
|            |              |                       |                 |          |                      |                      |                    | 1991          | 1990 | 1988 | 1986 |
| Saudi      | high         | 14.902                | 6020*           | Mid-East | 51719                | 34587                | 16.7               | 1             | 1    | 1    | 1    |
| Malaysia   | lowmid       | 17.752                | 2340            | Asia     | 34405                | 36749                | 13.77              | 2             | 2    | 2    | 2    |
| Indonesia  | low          | 181.58                | 560             | Asia     | 29142                | 25869                | 10.65              | 3             | 3    | 3    | 3    |
| U.A.E.     | high         | 1.592                 | 19860           | Mid-East | 24261                | 16049                | 7.80               | 4             | 5    | 5    | 4    |
| Iran       | upmid        | 56.925                | 2450            | Mid-East | 15916                | 21688                | 7.28               | 5             | 6    | 8    | 6    |
| Turkey     | lowmid       | 56.277                | 1630            | Europe   | 13335                | 22576                | 6.95               | 6             | 4    | 4    | 5    |
| Algeria    | upmid        | 25.056                | 2060            | Africa   | 12314                | 9104                 | 4.15               | 7             | 7    | 7    | 7    |
| Nigeria    | low          | 117.51                | 270             | Africa   | 12710                | 7781                 | 3.97               | 8             | 8    | 10   | 13   |
| Libya      | upmid        | 4.564                 | 5310*           | Mid-East | 10775                | 6001                 | 3.25               | 9             | 10   | 11   | 11   |
| Pakistan   | low          | 113.687               | 380             | Asia     | 6494.2               | 8431.5               | 2.89               | 10            | 11   | 12   | 12   |
| Morocco    | lowmid       | 25.091                | 950             | Africa   | 5148.8               | 7458.2               | 2.44               | 11            | 14   | 14   | 14   |
| Egypt      | lowmid       | 52.061                | 600             | Mid-East | 3838.2               | 8226.7               | 2.33               | 12            | 13   | 13   | 10   |
| Oman       | upmid        | 1.554                 | 5220*           | Mid-East | 7236.2               | 3309.7               | 2.04               | 13            | 18   | 15   | 15   |
| Tunisia    | lowmid       | 8.175                 | 1420            | Africa   | 3826.7               | 5444.6               | 1.79               | 14            | 16   | 16   | 17   |
| Bahrain    | high         | 0.504                 | 6380*           | Mid-East | 3160.9               | 3992.8               | 1.38               | 15            | 17   | 17   | 16   |
| Syria      | lowmid       | 12.533                | 990             | Mid-East | 3699.8               | 2857.3               | 1.27               | 16            | 18   | 20   | 18   |
| Bangladesh | low          | 113.188               | 200             | Asia     | 1687.5               | 3381.4               | 0.98               | 17            | 18   | 18   | 19   |

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Table 1 (Continued)

|             |        |        |        |          |        |         |      |    |    |    |    |
|-------------|--------|--------|--------|----------|--------|---------|------|----|----|----|----|
| Qatar       | high   | 0.439  | 15860  | Mid-East | 3197.8 | 1862.1  | 0.98 | 18 | 20 | 21 | 21 |
| Brunei      | high   | 0.256  | b      | Asia     | 2597.4 | 1780.7  | 0.85 | 19 | 21 | 24 | 23 |
| Kuwait      | high   | 2.141  | 16160* | Mid-East | 422    | 3882    | 0.83 | 20 | 12 | 9  | 9  |
| Lebanon     | lowmid | -      | d      | Mid-East | 490.2  | 3748.4  | 0.82 | 21 | 25 | 22 | 22 |
| Gabon       | upmid  | 1.135  | 3220   | Africa   | 2573.2 | 961.9   | 0.68 | 22 | 24 | 25 | 25 |
| Jordan      | lowmid | 3.154  | 1240   | Mid-East | 879.2  | 2512.1  | 0.66 | 23 | 23 | 19 | 20 |
| Cameroon    | lowmid | 11.941 | 940    | Africa   | 1909.5 | 1345    | 0.63 | 24 | 22 | 23 | 24 |
| Yemen, N    | lowmid | 11.612 | a      | Mid-East | 1110.4 | 1951.3  | 0.59 | 25 | 26 | 26 | 30 |
| Afghanistan | low    | -      | a      | Asia     | 932.77 | 1669.58 | 0.50 | 26 | 27 | 27 | 27 |
| Senegal     | lowmid | 7.428  | 710    | Africa   | 736.79 | 1358.91 | 0.41 | 27 | 28 | 28 | 26 |
| Sudan       | low    | 25.191 | a      | Africa   | 358.1  | 1419.1  | 0.34 | 28 | 29 | 29 | 29 |
| Tanzania    | low    | 24.518 | 120    | Africa   | 385.3  | 1089.6  | 0.29 | 29 | 30 | 32 | 31 |
| Ethiopia    | low    | 51.183 | 120    | Africa   | 307.26 | 1114.32 | 0.28 | 30 | 31 | 30 | 28 |
| Mozambique  | low    | 16.784 | 80     | Africa   | 389.61 | 899.07  | 0.25 | 31 | 32 | 31 | 37 |
| Guinea      | low    | 5.718  | 480    | Africa   | 637.78 | 604.6   | 0.24 | 32 | 33 | 35 | 33 |
| Togo        | low    | 3.638  | 410    | Africa   | 302.12 | 863.68  | 0.23 | 33 | 34 | 33 | 39 |
| Malawi      | low    | 8.504  | 200    | Africa   | 443.38 | 544.64  | 0.19 | 34 | 36 | 38 | 42 |
| Mauritania  | low    | 1.969  | 500    | Africa   | 515.17 | 471.71  | 0.19 | 35 | 37 | 34 | 35 |
| Mali        | low    | 8.461  | 270    | Africa   | 293.95 | 569.63  | 0.17 | 36 | 36 | 41 | 36 |
| Benin       | low    | 4.741  | 360    | Africa   | 121.2  | 836.55  | 0.15 | 37 | 41 | 40 | 40 |
| Burkina F   | low    | 9.016  | 330    | Africa   | 197.28 | 552.45  | 0.15 | 38 | 38 | 42 | 41 |

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Table 1 (Continued)

|              |        |        |     |          |        |         |      |    |    |    |    |
|--------------|--------|--------|-----|----------|--------|---------|------|----|----|----|----|
| Yemen, S     | low    | -      | -   | Mid-East | 94.77  | 603.23  | 0.14 | 39 | 35 | 36 | 34 |
| Niger        | low    | 7.666  | 310 | Africa   | 240.67 | 407.17  | 0.13 | 40 | 40 | 38 | 38 |
| Uganda       | low    | 17.358 | 220 | Africa   | 171.45 | 464.09  | 0.12 | 41 | 42 | 37 | 32 |
| Iraq         | upmid  | 18.914 | d   | Mid-East | 297    | 284     | 0.11 | 42 | 9  | 6  | 8  |
| Gambia       | low    | 0.875  | 260 | Africa   | 166.22 | 287.39  | 0.09 | 43 | 44 | 44 | 46 |
| Djibouti     | lowmid | 0.427  | c   | Africa   | 54.5   | 376     | 0.08 | 44 | 46 | 46 | 45 |
| Sierra Leone | low    | 4.137  | 240 | Africa   | 145.39 | 246.05  | 0.08 | 45 | 45 | 45 | 44 |
| Somalia      | low    | 6.284  | 150 | Africa   | 106.46 | 196.91  | 0.06 | 46 | 43 | 43 | 43 |
| Chad         | low    | 5.679  | 190 | Africa   | 89.82  | 158.19  | 0.05 | 47 | 47 | 47 | 47 |
| Maldives     | low    | 0.218  | 440 | Africa   | 53.73  | 161.22  | 0.04 | 48 | 48 | 48 | 48 |
| GuineaBissau | low    | 0.981  | 180 | Africa   | 19.665 | 133.963 | 0.03 | 49 | 49 | 49 | 50 |
| Comoros      | low    | 0.475  | 480 | Africa   | 27.8   | 119.6   | 0.03 | 50 | 50 | 50 | 49 |

- Notes:
- GNP/capita estimated to be <\$500 in 1989
  - GNP/capita estimated to be > \$6000 in 1989
  - GNP/capita estimated to be in the \$500-\$1499 range in 1989
  - GNP/capita estimated to be in the \$1500-\$3499 range in 1989
- \* Figures for population and GNP/capita are for the years 1989

Source: World Development Report (various issues), World Bank and The World Bank Atlas, World Bank, 1991

of countries; 12 Muslim countries belong to the lower middle income group of countries; 6 Muslim countries each are designated upper middle income and high income Muslim countries.

The 50 Muslim countries (for which data are available) shown in Table 1 are all members of the Organization of Islamic Conference (OIC) with the exception of Ethiopia, Malawi, Mozambique, Nigeria, Tanzania and Togo. Based on available data for 1990, the combined GNP of the Muslim world is almost one trillion U.S. dollars which is equivalent to about one-third of Japan's GNP or one-fifth of US's GNP. Roughly, the average GNP/capita of the Muslim world is about \$850 for 1990. The Muslim countries with high per capita incomes are those that are endowed with huge petroleum supplies and mainly located in the Middle East with the exception of Brunei.

Table I provides data on basic economic and trade<sup>4</sup> indicators of the Muslim countries. The volume of exports and imports of the 50 Muslim countries shows the vast disparity among Muslim countries where international trade is concerned. For example, in 1991, Saudi Arabia which is the largest trader contributed 16.7 percent towards the Muslim countries trade while Comoros, the smallest trader contributed only 0.03 percent. Malaysia is the largest importer among the Muslim countries importing over \$36 billion worth of merchandise in 1991. Where total trade is concerned, Saudi Arabia is the largest trader followed by Malaysia, Indonesia, United Arab Emirate, Iran and Turkey.

The Muslim countries in Table I have been ranked according to their trade contribution to the Muslim countries as a whole for the years 1986, 1988, 1990 and 1991. The relative trade ranking of the Muslim countries for the above mentioned years stayed roughly the same with the exception of the ranking for Iraq and Kuwait. Iraq ranked as the eight, sixth and ninth largest trader among the Muslim countries for the years 1986, 1988 and 1990 respectively. But in 1991, Iraq's rank fell to forty second where the Muslim countries trade is concerned. Kuwait ranked ninth, ninth and twelveth respectively for the years 1986, 1988 and 1990. Kuwait's rank similarly fell to twentieth in 1991. The Gulf War did affect the trade ranking of both Iraq and Kuwait although the negative effect on Iraq is much greater than on Kuwait.

TABLE 2. Relative Contribution of Different Geographical Groups of Muslim Countries towards Export, Import and Trade (million \$)

|            | 1986     |          |          | 1988     |          |          |
|------------|----------|----------|----------|----------|----------|----------|
|            | Export   | Import   | Trade    | Export   | Import   | Trade    |
| African    | 23576.30 | 30258.88 | 53835.19 | 29800.86 | 34521.37 | 64322.24 |
|            | 16.72    | 20.21    | 18.52    | 16.98    | 19.87    | 18.42    |
| Asian      | 35392.02 | 31312.03 | 66704.05 | 48713.71 | 41838.9  | 90552.61 |
|            | 25.09    | 20.92    | 22.94    | 27.76    | 24.08    | 25.93    |
| Turkey     | 7455.9   | 11027    | 18482.9  | 11753    | 14694.7  | 26447.7  |
|            | 5.29     | 7.37     | 6.36     | 6.7      | 8.46     | 7.57     |
| Mid-East   | 74617.17 | 77108.26 | 151725.4 | 85187.56 | 82672.54 | 167860.1 |
|            | 52.9     | 51.51    | 52.18    | 48.55    | 47.59    | 48.07    |
| All Muslim | 141041.4 | 149706.1 | 290747.6 | 175455.1 | 173727.5 | 349182.6 |
|            | 100      | 100.01   | 100      | 99.99    | 100      | 99.99    |
| African    | 43852.55 | 43714.81 | 87567.35 | 44192.11 | 44608.32 | 88800.43 |
|            | 17.17    | 19.3     | 18.17    | 17       | 17.37    | 17.19    |
| Asian      | 65478.15 | 65636.32 | 131114.4 | 75312.6  | 78042.4  | 153355   |
|            | 25.64    | 28.98    | 27.21    | 28.97    | 30.39    | 29.68    |
| Turkey     | 12959.3  | 22302.3  | 35261.6  | 13334.9  | 22576.4  | 35911.3  |
|            | 5.07     | 9.85     | 7.32     | 5.13     | 8.79     | 6.95     |
| Mid-East   | 133102.9 | 94841.71 | 227944.6 | 127097.4 | 111554.6 | 238652.1 |
|            | 52.12    | 41.87    | 47.3     | 48.9     | 43.44    | 46.19    |
| All Muslim | 255392.9 | 226495.1 | 481888.0 | 259937.0 | 256781.7 | 516718.8 |
|            | 100      | 100      | 100      | 100      | 99.99    | 100.01   |

Source: Computations based on *Direction of Trade Statistics Yearbook*, IMF, 1992



## DIRECTION OF TRADE AMONG MUSLIM COUNTRIES BASED ON GEOGRAPHICAL GROUPS

The Muslim countries located in the Middle East dominates the exports, imports and trade of the Muslim countries as shown in Table 2. The trade of the Middle Eastern Muslim countries represent roughly 52, 48, 47 and 46 percent of the Muslim countries trade for the years 1986, 1988, 1990 and 1991 respectively. Between the years 1988 and 1990, exports of the Middle Eastern countries increased 7.3 percent but imports fell 12 percent during the same period. The direction of change of exports and imports for the remaining years that were studied has been the same for the Middle Eastern countries.

The seven Asian Muslim countries trade has consistently increased between 1985 and 1991 representing between 22.9 percent and 29.7 percent respectively of the Muslim countries trade. Imports of the Asian Muslim countries have consistently increased but the direction of change of exports has sometimes been positive and at other times negative between 1986 and 1991.

The trade of the 27 African Muslim countries represent 17 to 18 percent of the Muslim countries trade over the years studied. Exports of the African Muslim countries represent 16 to 17 percent of the Muslim countries exports while the share of imports consistently declined from a 20 percent share in 1986 to a 17 percent share in 1991. The trade of Turkey represent 6 to 7 percent of the Muslim countries trade. Turkey's imports represent 7.37 to 10 percent of the Muslim countries imports and always outpacing exports that represent between 5 to 6.7 percent of the Muslim countries exports between 1986 and 1991.

Table 3 portrays the Muslim countries trade among themselves in terms of percentages for each of the group of Muslim countries. Looking at the lower right portion of Table 3, it can easily be gleaned that overall, the Middle Eastern countries absorb between 60 and 65 percent of the exports, imports and total trade of the Muslim countries over the years 1986 to 1991. The domination of the Middle Eastern countries in the overall picture of intra-Muslim countries trade is obvious. The Muslim countries' trade with Asian Muslim countries increased from 11.39 to 19.17 percent between 1986 and 1991 although it took a slight fall from 14.43 to 13.86 percent between 1988 and 1990.

Where the trade among groups of Muslim countries are concerned, the trade of Turkey with the Middle Eastern countries is prominent. In

TABLE 3. Direction of Trade among Muslim Countries (percent)

| To \ From  | African Muslim countries |       |       |       | Asian Muslim countries |       |       |       |
|------------|--------------------------|-------|-------|-------|------------------------|-------|-------|-------|
|            | 1986                     | 1988  | 1990  | 1991  | 1986                   | 1988  | 1990  | 1991  |
| African X  | 47.52                    | 45.56 | 45.38 | 47.90 | 7.22                   | 10.20 | 7.91  | 8.27  |
| African M  | 37.41                    | 33.00 | 34.34 | 35.95 | 13.12                  | 14.69 | 9.11  | 12.23 |
| African T  | 41.18                    | 37.96 | 38.74 | 40.80 | 10.92                  | 12.92 | 8.64  | 10.62 |
| Asian X    | 15.47                    | 10.58 | 7.00  | 7.01  | 30.77                  | 37.66 | 34.17 | 34.88 |
| Asian M    | 2.96                     | 5.58  | 4.27  | 4.20  | 24.35                  | 34.17 | 28.63 | 36.01 |
| Asian T    | 8.51                     | 7.85  | 5.50  | 5.61  | 27.20                  | 35.75 | 31.13 | 35.44 |
| Turkey X   | 8.24                     | 10.57 | 11.59 | 14.59 | 0.99                   | 2.79  | 2.94  | 3.69  |
| Turkey M   | 6.51                     | 7.71  | 11.18 | 9.56  | 4.38                   | 4.20  | 3.27  | 7.28  |
| Turkey T   | 7.45                     | 9.21  | 11.34 | 11.90 | 2.54                   | 3.46  | 3.14  | 5.61  |
| Mid East X | 7.62                     | 8.38  | 9.94  | 9.71  | 10.51                  | 11.63 | 12.91 | 15.86 |
| Mid East M | 5.55                     | 4.83  | 6.65  | 6.97  | 8.89                   | 11.46 | 11.66 | 19.64 |
| Mid East T | 6.66                     | 6.75  | 8.61  | 8.49  | 9.75                   | 11.55 | 12.40 | 17.55 |
| Muslim X   | 11.74                    | 12.07 | 12.74 | 13.06 | 11.41                  | 13.94 | 14.51 | 17.80 |
| Muslim M   | 9.47                     | 9.05  | 10.91 | 10.81 | 11.38                  | 14.94 | 13.14 | 20.65 |
| Muslim T   | 10.62                    | 10.59 | 11.87 | 11.97 | 11.39                  | 14.43 | 13.86 | 19.17 |

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Table 3 (Continued)

| From \ To  | Turkey |       |       |       | Mid-East |       |       |       |
|------------|--------|-------|-------|-------|----------|-------|-------|-------|
|            | 1986   | 1988  | 1990  | 1991  | 1986     | 1988  | 1990  | 1991  |
| African X  | 12.38  | 11.31 | 13.89 | 9.4   | 32.88    | 32.93 | 32.81 | 34.43 |
| African M  | 10.78  | 12.27 | 7.73  | 8.8   | 38.69    | 40.04 | 48.81 | 43.01 |
| African T  | 11.37  | 11.89 | 10.18 | 9.05  | 36.52    | 37.23 | 42.44 | 39.53 |
| Asian X    | 3.25   | 3.59  | 5.33  | 3.91  | 50.51    | 48.17 | 53.5  | 54.21 |
| Asian M    | 1      | 2.57  | 1.56  | 2.85  | 71.69    | 57.68 | 65.54 | 56.94 |
| Asian T    | 2      | 3.03  | 3.26  | 3.38  | 62.29    | 53.36 | 60.1  | 55.57 |
| Turkey X   | 0      | 0     | 0     | 0     | 90.77    | 86.63 | 85.48 | 81.72 |
| Turkey M   | 0      | 0     | 0     | 0     | 89.12    | 88.09 | 85.55 | 83.16 |
| Turkey T   | 0      | 0     | 0     | 0     | 90.02    | 87.33 | 85.52 | 82.49 |
| Mid East X | 15.83  | 16.3  | 14.64 | 10.13 | 66.05    | 63.69 | 62.5  | 64.29 |
| Mid East M | 23.27  | 23.44 | 13.65 | 12.14 | 62.3     | 60.27 | 68.04 | 61.25 |
| Mid East T | 19.28  | 19.57 | 14.24 | 11.03 | 64.31    | 62.12 | 64.74 | 62.94 |
| Muslim X   | 11.69  | 11.74 | 12.18 | 8.02  | 65.16    | 62.24 | 60.57 | 61.13 |
| Muslim M   | 15.11  | 15.1  | 8.66  | 8.49  | 64.05    | 60.91 | 67.3  | 60.06 |
| Muslim T   | 13.37  | 13.39 | 10.52 | 8.24  | 64.61    | 61.59 | 63.75 | 60.61 |

Source: Computations based on *Direction of Trade Statistics Yearbook*, IMF, 1992

1986, 90.8 percent of the exports of Turkey to Muslim countries, 89.1 percent of the imports of Turkey from the Muslim countries and 90 percent of trade with the Muslim countries were carried out with the Middle Eastern countries. Among the Muslim countries trade relationships, Turkey's trading relationship with Middle Eastern countries is the strongest. Over the years studied, this relationship has gradually and continuously declined but still in 1991; 81.7, 83.2 and 82.5 percent of Turkey's exports, imports and trade respectively with the Muslim countries is predominated by the Middle East countries. Although this relationship is most prominent among the groups of Muslim countries studied, we must still bear in mind that Turkey's volume of trade represent only 6 to 7 percent of the Muslim countries trade as shown in Table 2.

The trade relationship among the Middle Eastern Muslim countries themselves is also important. The exports of the Middle Eastern countries to themselves as a proportion of exports to Muslim countries has varied between 62.5 and 66 percent over the years 1986 and 1991. Similarly, the imports of the Middle Eastern countries among themselves as a proportion of imports from Muslim countries has fluctuated between 60 and 68 percent over the years 1986 to 1991 without any definite trend.

The Asian Muslim countries trade with Middle Eastern Muslim countries ranked third where strength of trading relationships among geographical groups of Muslims countries is concerned. The Asian Muslim countries exports to the Middle Eastern countries represent about 50.5 percent of its exports to the Muslim countries in 1986 although in 1991 this figure has increased to 54 percent. The imports of the Asian Muslim countries from the Middle East as a proportion of imports from Muslim countries has fluctuated between a low of 57 percent in 1991 to a high of 72 percent in 1986. Overall, the trade of the Asian Muslim countries with the Middle Eastern countries as a proportion of Asian Muslim countries trade with Muslim countries fell between 1986 and 1988 from a high of 62 percent to a low of 53 percent and then increased to 60 percent in 1990 before falling again to 55.6 percent in 1991.

The African Muslim countries export more to themselves than they import from themselves. On average, about 46 percent of the exports of Africa that is destined for the Muslim world end up in Muslim Africa itself. Where imports are concerned, about 35 percent of the imports of the African Muslim countries originate from Muslim Africa itself. Where intra-Muslim country trade is concerned, the trade relationship of African Muslim countries among themselves is about as important as the trade

relationship with the Middle Eastern countries. The African Muslim countries export more to themselves compared to importing from themselves. This contrasts with the African Muslim countries relationship with Middle East where import flows from the Middle East are more important than export flows to the Middle East.

The trade flows among the Asian Muslim countries themselves are also important. Over the period studied, between 30.8 and 37.7 percent of the exports of the Asian Muslim countries that are destined for Muslim countries end up in Muslim Asia itself. In the case of imports, between 24.4 and 36 percent of the imports of the Asian Muslim countries from Muslim countries are from itself.

The six trade flows identified above, that is between Turkey and the Middle East, the Middle Eastern countries among themselves, the Asian Muslim countries and the Middle East, the African Muslim countries among themselves and also with the Middle Eastern countries and the Asian Muslim countries among themselves represent the most significant trade relationships in intra-Muslim countries trade based on geographical groups. The prominence of the Middle Eastern countries in terms of its contribution to the volume of Muslim countries trade and significance of trade relationships of the Middle eastern countries among themselves and other geographical groups of Muslim countries automatically bestows any leadership capacity to these countries in trying to shape the ICM.

#### DIRECTION OF TRADE AMONG MUSLIM COUNTRIES BASED ON INCOME GROUPS

As explained in Section I, the Muslim countries have been divided into various income classes that is, high, upper middle, lower middle and low based on their GNP/capita between 1986 and 1990. Table 4 shows the relative contribution of the various income groups towards exports, imports and trade<sup>5</sup> of the Muslim countries. The trade contribution of the high income Muslim countries towards Muslim countries trade has fluctuated between 26.8 and 28.6 percent over the years 1986 and 1991 without any particular trend. Similarly, the trade contribution of the low income Muslim countries has fluctuated between 20.6 and 22.4 percent.

The trade contribution of the upper middle income Muslim countries towards Muslim countries trade has continuously declined from a 23.6 percent share in 1986 to a 20.4 percent share in 1988, 20.3 percent share in 1990 and later in 1991 to a 17.5 percent share.<sup>6</sup> The trade share

TABLE 4. Relative Contribution of Groups of Muslim Countries Based on their GNP/Capita towards Exports (X), Imports (M) and Trade (T) of the Muslim World (million \$ and percentages)

| GNP/capita | 1986              |                   |                   | 1988               |                    |                    |
|------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|
|            | Export            | Import            | Trade             | Export             | Import             | Trade              |
| High       | 46170<br>32.74    | 35582.8<br>23.77  | 81752.8<br>28.12  | 52172.5<br>29.74   | 41252.4<br>23.75   | 93424.9<br>26.76   |
| Up Mid     | 33860.5<br>24.01  | 34753.8<br>23.21  | 68614.3<br>23.6   | 38196.1<br>21.77   | 33054<br>19.03     | 71250.1<br>20.4    |
| Low Mid    | 31994<br>22.68    | 48490.72<br>32.39 | 80484.72<br>27.68 | 46702.89<br>26.62  | 59703.95<br>34.37  | 106406.8<br>30.47  |
| Low        | 29016.89<br>20.57 | 30878.85<br>20.63 | 59895.75<br>20.6  | 38383.64<br>21.88  | 39717.16<br>22.86  | 78100.81<br>22.37  |
| All Muslim | 141041.3<br>100   | 149706.1<br>100   | 290747.5<br>100   | 175455.1<br>100.01 | 173727.5<br>100.01 | 349182.6<br>100    |
|            | 1990              |                   |                   | 1991               |                    |                    |
| High       | 84511.8<br>33.09  | 46844.6<br>20.68  | 131356.4<br>27.26 | 85358.1<br>32.84   | 62153.6<br>24.2    | 147511.7<br>28.55  |
| Up Mid     | 56187.3<br>22     | 41819.3<br>18.46  | 98006.6<br>20.34  | 49111.4<br>18.89   | 41348.6<br>16.1    | 90460<br>17.51     |
| Low Mid    | 62872.38<br>24.62 | 85549.94<br>37.77 | 148422.3<br>30.8  | 69433.99<br>26.71  | 94603.91<br>36.84  | 164037.9<br>31.75  |
| Low        | 51821.42<br>20.29 | 52281.29<br>23.08 | 104102.7<br>21.6  | 56033.59<br>21.56  | 58675.64<br>22.85  | 114709.2<br>22.2   |
| All Muslim | 255392.9<br>100   | 226495.1<br>99.99 | 481888.0<br>100   | 259937.0<br>100    | 256781.7<br>99.99  | 516718.8<br>100.01 |

Source: Computations based on *Direction of Trade Statistics Yearbook*, IMF, 1992 and *World Development Report* (various issues), World Bank.

of the upper middle income Muslim countries among the different income groups of Muslim countries is lowest in 1988, 1990 and 1991.

On the other hand, the trade contribution of the lower middle income Muslim countries towards Muslim countries trade has continuously increased over the years studied, that is, from 27.7 percent in 1986 to 31.8 percent in 1991. The lower middle income Muslim countries contribution towards the Muslim world's trade is highest for the years 1988, 1990 and 1991 although in 1986 it was the second highest trade contributor next to the high income countries. Thus, on average the lower middle income Muslim countries contributes the most to Muslim countries trade followed by the high income Muslim countries, the low income and lastly the upper middle income Muslim countries.

Table 5 shows the percentage of intra-Muslim countries trade among the different income groups of Muslim countries. Overall, the trade contribution of the six high income Muslim countries is dominant as shown by the last row of Table 5. Over the years examined, between 36 and 38.2 percent of intra-Muslim countries trade is contributed by the high income countries. This is followed by the twelve lower middle income Muslim countries' contribution of 29 to 30.8 percent. The upper middle income Muslim countries rank third in terms of overall contribution to intra-Muslim countries trade for the years 1986, 1988 and 1990 but its rank fell to fourth in 1991 exchanging positions with the low income Muslim countries.<sup>7</sup> The upper middle income Muslim countries share of intra-Muslim countries trade was roughly 19 percent between 1986 and 1990 but in 1991, it was 14 percent. The low income countries contribution to intra-Muslim world's trade consistently increased and was between 13.3 and 18.9 percent over the period examined.

The specific percentages for particular trade flows among the different income groups of Muslim countries changed somewhat over the years examined. In some cases, the trade relation is strong for the earlier years examined and progressively weakens for the subsequent years and in other cases the reverse occurs. In order to facilitate analysis, the average of the percentages over the years examined will be used to determine the strength of the trade flows.

During the earlier years studied, the trade between the upper middle and lower middle income Muslim countries was significant with about 53 percent of the trade of the upper middle income Muslim countries being directed to the lower middle income countries but this flow decreased to about 40 percent in the latter years. The second most significant trade

TABLE 5. Exports (X), Imports (M) and Trade (T) of Various Income Groups of Muslim Countries among Themselves (percentages)

| From \ To | High Income Muslim countries |       |       |       |               | Upper Middle Income |       |       |       |               |
|-----------|------------------------------|-------|-------|-------|---------------|---------------------|-------|-------|-------|---------------|
|           | 1986                         | 1988  | 1990  | 1991  | Mean<br>86-91 | 1986                | 1988  | 1990  | 1991  | Mean<br>86-91 |
| High X    | 35.91                        | 39.21 | 35.08 | 34.31 | 36.13         | 19.95               | 16.94 | 18.63 | 16.61 | 18.03         |
| High M    | 51.89                        | 47.73 | 51.06 | 43.93 | 48.68         | 5.32                | 7.21  | 6.79  | 3.91  | 5.81          |
| High T    | 42.17                        | 43.03 | 40.92 | 38.12 | 41.06         | 14.22               | 12.58 | 14.33 | 11.57 | 13.18         |
| Up Mid X  | 40.67                        | 43.25 | 38.66 | 55.89 | 44.62         | 2.09                | 1.45  | 4.49  | 4.78  | 3.20          |
| Up Mid M  | 38.19                        | 29.27 | 42.54 | 37.29 | 36.82         | 1.29                | 1.70  | 6.93  | 5.39  | 3.83          |
| Up Mid T  | 39.43                        | 37.28 | 40.29 | 46.65 | 40.91         | 1.69                | 1.55  | 5.51  | 5.09  | 3.46          |
| Low Mid X | 24.05                        | 24.23 | 25.58 | 24.27 | 24.53         | 40.12               | 40.7  | 29.97 | 26.86 | 34.41         |
| Low Mid M | 29.85                        | 25.11 | 26.89 | 33.01 | 28.72         | 40.75               | 44.87 | 41.29 | 20.39 | 36.83         |
| Low Mid T | 27.19                        | 24.68 | 26.28 | 28.48 | 26.66         | 40.46               | 42.83 | 36.07 | 23.75 | 35.78         |
| Low X     | 40.13                        | 34.86 | 34.70 | 37.85 | 36.89         | 12.74               | 9.73  | 11.39 | 12.64 | 11.63         |
| Low M     | 61.43                        | 49.25 | 44.66 | 49.55 | 51.22         | 4.01                | 5.73  | 21.32 | 10.68 | 10.44         |
| Low T     | 52.79                        | 43.84 | 41.21 | 45.00 | 45.71         | 7.55                | 7.24  | 17.89 | 11.44 | 11.03         |
| Muslim X  | 34.20                        | 35.26 | 33.62 | 35.85 | 34.73         | 20.63               | 19.14 | 17.03 | 16.88 | 18.42         |
| Muslim M  | 42.98                        | 36.78 | 40.09 | 40.76 | 40.15         | 16.12               | 18.10 | 21.17 | 10.7  | 16.52         |
| Muslim T  | 38.53                        | 36.00 | 36.67 | 38.21 | 37.35         | 18.41               | 18.63 | 18.98 | 13.9  | 17.48         |

(continued next page)



Table 5 (Continued)

| From \ To | Lower Middle Income |       |       |       |               | Low Income |       |       |       |               |
|-----------|---------------------|-------|-------|-------|---------------|------------|-------|-------|-------|---------------|
|           | 1986                | 1988  | 1990  | 1991  | Mean<br>86-91 | 1986       | 1988  | 1990  | 1991  | Mean<br>86-91 |
| High X    | 24.66               | 21.65 | 26.21 | 21.48 | 23.50         | 19.48      | 22.19 | 20.08 | 27.61 | 22.34         |
| High M    | 29.23               | 31.38 | 28.84 | 27.74 | 29.30         | 13.57      | 13.68 | 13.21 | 24.43 | 16.22         |
| High T    | 26.45               | 26.02 | 27.16 | 23.96 | 25.90         | 17.16      | 18.37 | 17.59 | 26.35 | 19.87         |
| Up Mid X  | 52.51               | 49.99 | 41.96 | 27.96 | 43.11         | 4.73       | 5.31  | 14.89 | 11.37 | 9.08          |
| Up Mid M  | 52.52               | 62.86 | 43.54 | 46.29 | 51.30         | 8.00       | 6.17  | 7.00  | 11.03 | 8.05          |
| Up Mid T  | 52.52               | 55.49 | 42.62 | 37.07 | 46.93         | 6.36       | 5.68  | 11.58 | 11.20 | 8.71          |
| Low Mid X | 23.15               | 18.52 | 27.92 | 29.56 | 24.79         | 12.68      | 16.55 | 16.54 | 19.31 | 16.27         |
| Low Mid M | 19.41               | 18.12 | 20.26 | 31.20 | 22.25         | 9.99       | 11.89 | 11.56 | 15.40 | 12.21         |
| Low Mid T | 21.13               | 18.32 | 23.79 | 30.34 | 23.40         | 11.22      | 14.18 | 13.85 | 17.43 | 14.17         |
| Low X     | 21.38               | 26.55 | 29.41 | 28.30 | 26.41         | 25.76      | 28.87 | 24.5  | 21.21 | 25.09         |
| Low M     | 18.20               | 27.29 | 20.56 | 26.82 | 23.22         | 16.36      | 17.72 | 13.46 | 12.95 | 15.12         |
| Low T     | 19.49               | 27.01 | 23.62 | 27.39 | 24.38         | 20.17      | 21.91 | 17.28 | 16.16 | 18.88         |
| Muslim X  | 30.20               | 28.88 | 31.04 | 26.04 | 29.04         | 14.97      | 16.72 | 18.32 | 21.23 | 17.81         |
| Muslim M  | 29.33               | 32.79 | 27.31 | 32.19 | 30.41         | 11.57      | 12.33 | 11.44 | 16.35 | 12.92         |
| Muslim T  | 29.77               | 30.80 | 29.28 | 29.00 | 29.71         | 13.29      | 14.57 | 15.07 | 18.88 | 15.45         |

Source: Computations based on *Direction of Trade Statistics Yearbook*, IMF, 1992 and *World Development Report* (various issues), World Bank.

flow, where trade among the different income groups of Muslim countries is concerned, is the trade between the low income and high income Muslim countries which averaged about 45 percent of the trade of the latter group of Muslim countries. The trade of the high income Muslim countries among themselves averaged about 41 percent of the high income Muslim countries trade with the Muslim world. Similarly, the upper middle income Muslim countries trade with the high income Muslim countries averaged about 41 percent of the former's trade with the Muslim world. The volume of trade between the lower middle and the upper middle income Muslim countries which averaged 35.8 percent of the trade of the former group of Muslim countries with the Muslim world ranks fifth compared to the other flows of trade. The five trade flows cited above average between 35 and 47 percent of the respective income groups trade with the Muslim countries.

The following four trade flows averaged between 23 and 27 percent of the respective income groups trade with the Muslim world. The sixth most significant trade flow is between the lower middle income and high income Muslim countries which fluctuated between 24.7 and 28.5 percent of the former countries trade with the Muslim world. The remaining trade flows which are significant is the trade of the high income, low income and lower middle income Muslim countries with the lower middle income Muslim countries which respectively averaged 25.9, 24.4 and 23.4 percent of the former countries trade with the Muslim countries.

Overall, for intra-Muslim countries trade as a whole, trade with the high income Muslim countries is dominant, followed by trade with the lower middle income Muslim countries, the upper middle income Muslim countries and lastly the low income Muslim countries.

#### DIRECTION OF TRADE OF THE MUSLIM COUNTRIES WITH NON-MUSLIM COUNTRIES

The Muslim countries trade among themselves represent between 9.8 and 12.4 percent of their total trade. This implies that the Muslim countries trade with the non-Muslim countries represent between 87.6 and 90.2 percent of their total trade. The share of trade of the Muslim countries among themselves increased from 11.85 percent to 12.42 percent between 1986 and 1988. Between 1988 and 1990, the volume of intra-Muslim countries trade fell from 12.42 to 11.37 percent and further dropped to 9.8 percent in 1991.

Table 6 shows the proportion of trade between Muslim and non-Muslim countries based on geographical groups of Muslim countries. Turkey's percentage of trade with the Muslim countries is the highest although this percentage declined over the period examined from 25.2 in 1986 to 13.3 in 1991. The Middle Eastern countries rank second where trade with other Muslim countries relative to non-Muslim countries is concerned. The percentage of the Middle Eastern countries trade with the Muslim countries fluctuated between 12.6 and 15.4 percent with no definite trend.

The African and Asian Muslim countries switched positions where relative trade with Muslim and non-Muslim countries is concerned over the years studied. In 1986 and 1988, the Asian Muslim countries share of trade with other Muslim countries slightly exceeded that of the African Muslim countries. In 1990 and 1991, the reverse occurred where the African Muslim countries share of trade with the Muslim countries exceeded that of the Asian countries. Thus, the Asian Muslim countries trades the least with other Muslim countries in the early 1990s.

The trade profile of the different income groups of Muslim countries with other Muslim and non-Muslim countries is shown in Table 7. It is obvious that the low income Muslim countries proportion of trade with the Muslim countries relative to the non-Muslim countries is the lowest for all the years studied. For the other income groups, that is high income, upper and lower middle income, the percentage of trade with the Muslim countries is lowest for the year 1991 with percentages of 11.1, 10.7 and 9.1 respectively. The high income group of Muslim countries volume of trade with other Muslim countries was roughly 13 percent of its total trade for the years 1986, 1988 and 1990. The upper middle income group of Muslim countries trade with the Muslim countries fluctuated between 11.6 and 14.6 percent for the years 1986 to 1990. On average, the high income Muslim countries trade percentage with the Muslim countries was slightly higher at 12.78 percent compared with the similar measure for the upper middle income countries of 12.49. The lower middle income Muslim countries trade with the Muslim countries averaged 11.4 percent over the years studied and gradually declined from a high of 13.2 percent in 1986 to a low of 9.1 percent in 1991.

The raw trade figures in Table 7 can be recomputed to show the absolute trade contribution of the different income groups. Overall, the trade contribution of the high income Muslim countries towards Muslim countries trade is greatest; followed by the lower middle income countries, the upper middle income countries and lastly the low income countries.

TABLE 6. Trade of Geographical Groups of Muslim Countries among Themselves and with Non-Muslim Countries (million \$ and percentages)

|          | Muslim countries |         |         |         | Non-Muslim countries |         |         |         |
|----------|------------------|---------|---------|---------|----------------------|---------|---------|---------|
|          | 1986             | 1988    | 1990    | 1991    | 1986                 | 1988    | 1990    | 1991    |
| African  | 3586.53          | 4619.15 | 6260.16 | 5856.54 | 50248.6              | 59703.0 | 81307.1 | 82943.8 |
| %        | 6.66             | 7.18    | 7.15    | 6.6     | 93.34                | 92.82   | 92.85   | 93.4    |
| Asian    | 4923.23          | 6918.51 | 8490.31 | 10048.1 | 61780.8              | 83634.1 | 122624. | 143306. |
| %        | 7.38             | 7.64    | 6.48    | 6.55    | 92.62                | 92.36   | 93.52   | 93.45   |
| Turkey   | 4665.6           | 6043.3  | 5993.4  | 4769.9  | 13817.3              | 20404.4 | 29268.2 | 31141.4 |
| %        | 25.24            | 22.85   | 17      | 13.28   | 74.76                | 77.15   | 83      | 86.72   |
| Mid-East | 21277.5          | 25785.6 | 34023.2 | 30016.1 | 130447.              | 142074. | 193921. | 208635. |
| %        | 14.02            | 15.36   | 14.93   | 12.58   | 85.98                | 84.64   | 85.07   | 87.42   |
| Muslim   | 34452.9          | 43366.6 | 54767.1 | 50690.7 | 256294.              | 305816. | 427120. | 466028. |
| %        | 11.85            | 12.42   | 11.37   | 9.81    | 88.15                | 87.58   | 88.63   | 90.19   |

Source: Computations based on *Direction of Trade Statistics Yearbook*, IMF, 1992

TABLE 7. Trade of Different Groups of Muslim Countries Based on their GNP/Capita with Muslim and Non-Muslim Countries (million \$)

| Income Group | Muslim countries |         |         |         | Non-Muslim countries |         |         |         |
|--------------|------------------|---------|---------|---------|----------------------|---------|---------|---------|
|              | 1986             | 1988    | 1990    | 1991    | 1986                 | 1988    | 1990    | 1991    |
| High         | 10693.3          | 12563.5 | 17693.6 | 16393.7 | 71059.5              | 80861.4 | 113662. | 131118  |
| %            | 13.08            | 13.45   | 13.47   | 11.11   | 86.92                | 86.55   | 86.53   | 88.89   |
| Up Mid       | 7947.8           | 10373.5 | 12867   | 9674    | 60666.5              | 60876.6 | 85139.6 | 80786   |
| %            | 11.58            | 14.56   | 13.13   | 10.69   | 88.42                | 85.44   | 86.87   | 89.31   |
| Low Mid      | 10613.4          | 13653.0 | 15516.7 | 14962.9 | 69871.2              | 92753.8 | 132905. | 149074  |
| %            | 13.19            | 12.83   | 10.45   | 9.12    | 86.81                | 87.17   | 89.55   | 90.88   |
| Low          | 5198.42          | 6776.62 | 8689.81 | 9660.05 | 54697.3              | 71324.1 | 95412.9 | 105049. |
| %            | 8.68             | 8.68    | 8.35    | 8.42    | 91.32                | 91.32   | 91.65   | 91.58   |
| All          | 34452.9          | 43366.6 | 54767.2 | 50690.7 | 256294.              | 305816. | 427120. | 466028. |
| %            | 11.85            | 12.42   | 11.37   | 9.81    | 88.15                | 87.58   | 88.63   | 90.19   |

Source: Computations based on *Direction of Trade Statistics Yearbook*, IMF, 1992 and *World Development Report* (various issues), World Bank.

## INTENSITY OF TRADE AMONG MUSLIM AND NON-MUSLIM COUNTRIES

Systematic studies of the determinants of bilateral trade flows has proceeded using the gravity model approach or the intensity approach. In this paper, the latter approach is followed. Brown (1949) and Kojima (1964) developed the trade intensity index which was later synthesized by Drysdale and Garnaut (1982). This index provides a useful means of gauging the relative importance of bilateral trading relationships of the Muslim countries with each other and with third countries. The trade intensity index ( $I_{ij}$ ) is defined as follows:

$$I_{ij} = (X_{ij}/X_i) / (M_j/(M_w - M_i))$$

where

$I_{ij}$  is the intensity of exports of country  $i$  to  $j$

$X_{ij}$  is exports from country  $i$  to country  $j$

$X_i$  is total exports of country  $i$

$M_j$  is total imports of country  $j$

$M_i$  is total imports of country  $i$

$M_w$  is total world imports

This index measures variations in bilateral trade levels that result from differential resistances by abstracting from the effects of the size of exports and imports. The value of the intensity index greater (lesser) than unity indicates that a country is exporting more (or less) to another country compared to the latter country's share in world trade. The intensity of trade index above measures relative resistances roughly because it fails to account for the countries varying commodity composition of foreign trade. The degree of complementarity in the commodity composition of one country's exports and the other's imports will limit opportunities for bilateral trade where commodities are not substitutable for each other.

Tables 8 and 9 respectively shows the intensity of trade index among the Muslim countries based on geographical and income groups. From Table 8, it can be gleaned that among geographical groups of Muslim countries, the exports of Turkey to the Middle East assumes the highest intensity of trade index of 8.2 in 1986 which then continuously declined to 4.3 in 1991. The second most intense trade flow is from the Middle East to Turkey with an index of 4.4 in 1986 which increases to 4.9 in 1988 and then falls to 3.3 in 1990 and then falls again to 2.0 in 1991. The third most intense trading relationship is that of Turkey and Africa with an index that fluctuated between 1.6 and 1.9. The trade intensity index for the remaining trade flows among the different geographical groups of Muslim countries is not significantly different from unity. Where overall exports of the Muslim countries to the different geographical groups of

TABLE 8. Export Intensity of Geographical Groups of Muslim Countries among Themselves

| Exports from \ To | Africa |       |       |       | Asia  |       |       |       |
|-------------------|--------|-------|-------|-------|-------|-------|-------|-------|
|                   | 1986   | 1988  | 1990  | 1991  | 1986  | 1988  | 1990  | 1991  |
| Africa            |        |       |       |       | 0.266 | 0.409 | 0.232 | 0.201 |
| Asia              | 0.641  | 0.54  | 0.316 | 0.368 |       |       |       |       |
| Turkey            | 1.901  | 2.279 | 1.598 | 1.935 | 0.222 | 0.497 | 0.27  | 0.28  |
| Mid-East          | 0.765  | 1.07  | 1.158 | 0.988 | 1.02  | 1.226 | 1.001 | 0.923 |
| Muslim            | 0.92   | 1.145 | 1.058 | 0.983 | 0.864 | 1.091 | 0.802 | 0.766 |

  

| Exports from \ To | Turkey |       |       |       | Mid-East |       |       |       |
|-------------------|--------|-------|-------|-------|----------|-------|-------|-------|
|                   | 1986   | 1988  | 1990  | 1991  | 1986     | 1988  | 1990  | 1991  |
| Africa            | 1.295  | 1.29  | 1.2   | 0.792 | 0.492    | 0.668 | 0.666 | 0.587 |
| Asia              | 0.369  | 0.43  | 0.472 | 0.406 | 0.822    | 1.026 | 1.113 | 1.139 |
| Turkey            |        |       |       |       | 8.222    | 7.796 | 5.435 | 4.333 |
| Mid-East          | 4.363  | 4.892 | 3.342 | 2.037 |          |       |       |       |
| Muslim            | 2.515  | 2.616 | 1.983 | 1.193 | 2.004    | 2.465 | 2.318 | 1.84  |

Source: Computations based on *Direction of Trade Statistics Yearbook*, IMF, 1992

TABLE 9. Export Intensity of Different Income Groups of Muslim Countries among Themselves

| Exports from \ To | High Income |       |      |       | Upper Middle Income |       |      |       |
|-------------------|-------------|-------|------|-------|---------------------|-------|------|-------|
|                   | 1986        | 1988  | 1990 | 1991  | 1986                | 1988  | 1990 | 1991  |
| High              |             |       |      |       | 1.64                | 1.858 | 2.01 | 1.637 |
| Up Mid            | 2.733       | 4.465 | 3.73 | 3.152 |                     |       |      |       |
| Low Mid           | 2.074       | 2.282 | 2.08 | 1.521 | 3.543               | 4.786 | 2.73 | 2.53  |
| Low               | 1.665       | 1.534 | 1.45 | 1.437 | 0.541               | 0.534 | 0.53 | 0.721 |
| Muslim            | 2.279       | 2.798 | 2.6  | 1.937 | 1.407               | 1.896 | 1.48 | 1.371 |

  

| Exports from \ To | Lower Middle Income |       |      |       | Low Income |       |      |       |
|-------------------|---------------------|-------|------|-------|------------|-------|------|-------|
|                   | 1986                | 1988  | 1990 | 1991  | 1986       | 1988  | 1990 | 1991  |
| High              | 1.453               | 1.315 | 1.38 | 0.925 | 1.802      | 2.026 | 1.73 | 1.918 |
| Up Mid            | 2.59                | 3.565 | 2.21 | 1.036 | 0.366      | 0.569 | 1.29 | 0.679 |
| Low Mid           |                     |       |      |       | 1.26       | 1.619 | 1.21 | 1.281 |
| Low               | 0.651               | 0.807 | 0.67 | 0.706 |            |       |      |       |
| Muslim            | 1.477               | 1.584 | 1.32 | 0.924 | 1.15       | 1.378 | 1.27 | 1.215 |

Source: Computed from the models.

Muslim countries is concerned, the exports of the Muslim countries to the Middle East countries is characterized by consistently high indices. The intensity of exports of the Muslim countries to Turkey was high during the earlier years examined, but in 1991, the trade intensity index was not significantly different from unity.

The trade of the middle income group of Muslim countries with the high income group of Muslim countries as shown in the upper left quarter of Table 9 is characterized by high trade intensity indices. In this case, all the indices increased between 1986 and 1988 but fell between 1988 and 1990 and fell again between 1990 and 1991. The trade of the lower middle income and upper middle income group of Muslim countries is also characterized by high trade intensity indices with the same trend of an increasing index between 1986 and 1988 and a decreasing index thereafter. The high income Muslim countries also trade intensively with the low income Muslim countries.



TABLE 10. Export Intensity of Different Geographical Groups of Muslim Countries with Muslim and Non-Muslim Countries

|          | Muslim countries |       |       |       | Non-Muslim countries |       |       |       |
|----------|------------------|-------|-------|-------|----------------------|-------|-------|-------|
|          | 1986             | 1988  | 1990  | 1991  | 1986                 | 1988  | 1990  | 1991  |
| Africa   | 0.77             | 0.965 | 0.851 | 0.74  | 1.002                | 0.989 | 0.997 | 1.007 |
| Asia     | 0.838            | 1.014 | 0.871 | 0.913 | 0.996                | 0.983 | 0.989 | 0.983 |
| Turkey   | 4.665            | 4.282 | 2.663 | 2.303 | 0.708                | 0.775 | 0.876 | 0.892 |
| Mid-East | 2.03             | 2.539 | 2.247 | 1.768 | 0.879                | 0.865 | 0.882 | 0.907 |
| Muslim   |                  |       |       |       | 0.876                | 0.874 | 0.887 | 0.899 |

  

|         | Muslim countries |       |       |       | Non-Muslim countries |       |       |       |
|---------|------------------|-------|-------|-------|----------------------|-------|-------|-------|
|         | 1986             | 1988  | 1990  | 1991  | 1986                 | 1988  | 1990  | 1991  |
| High    | 1.909            | 2.087 | 1.993 | 1.587 | 0.91                 | 0.911 | 0.915 | 0.936 |
| Up Mid  | 1.597            | 2.451 | 1.993 | 1.365 | 0.935                | 0.89  | 0.917 | 0.959 |
| Low Mid | 2.05             | 2.237 | 1.682 | 1.517 | 0.893                | 0.894 | 0.925 | 0.932 |
| Low     | 0.986            | 1.045 | 0.866 | 0.919 | 0.985                | 0.982 | 0.993 | 0.989 |
| Muslim  |                  |       |       |       | 0.876                | 0.874 | 0.887 | 0.899 |

Source: Computed from the models.

Overall, the Muslim countries as a group trades intensively with the high income Muslim countries. Most of the trade intensity indices exhibit increasing values between 1986 and 1988 and decreasing values thereafter. Thus, the intensity of trade indices for trade among Muslim countries are relatively low in 1991 whether trade is viewed between geographical groups of Muslim countries or between different income groups of Muslim countries.

Table 10 shows the intensity of trade indices for trade between groups of Muslim and non-Muslim countries. The most striking observation is that the trade intensity indices for trade between groups of Muslim and non-Muslim countries are all less than or equal to unity. The trade of the high income and lower middle income Muslim countries with the Muslim countries averaged around 2.0 for 1986 and then slightly increases in 1988 before falling to around 1.5 in 1991. Turkey and Middle East's

trade with the Muslim countries are characterized by high indices which decreased in the later years.

High trade intensity may be broadly explained by two sets of factors (Drysdale and Garnaut 1982). The first set of factors relate to the degree of trade complementarity or the "matching" between export commodity composition of the exporting country and the corresponding commodity composition of the importing country. The second set of factors relate to "special country bias". These factors relate to resistances to trade which include transportation costs and other costs related to overcoming geographical distance and official barriers to trade, the importance of historical connections and ease of communication between countries. In the case of intra-Muslim countries trade, it appears that the trade of the Middle Eastern Muslim countries among themselves and Turkey can be attributed to "special country bias" factor.

This "special country bias" factors also can help explain the high trade intensity indices among the Muslim countries trade compared to trade with non-Muslim countries. The relatively high intensity of trade indices between the high income and low income Muslim countries can be attributed to complementarity factors. The high income Muslim countries have comparative advantage mainly in fuels whereas the low income Muslim countries comparative advantage rests primarily in commodities other than fuels.

## CONCLUSION AND POLICY IMPLICATIONS

When Muslim countries are viewed as geographical groups of Muslim countries, the trade of the Middle East countries is dominant followed by the trade of the Asian Muslim countries and Turkey. When viewed in terms of income groups of Muslim countries, the trade contribution of the high income Muslim countries followed by the lower and upper middle income countries are dominant. Any form of trade integration among the Muslim countries must incorporate the Middle Eastern countries.

But the Middle Eastern countries have their own political problems and uniting them is no easy task. Iran which embraced the Islamic political ideology in the early 1980s posed a threat to the Middle Eastern countries although Iran was the cornerstone of military strength in the Middle East prior to 1980. The threat of Iran at that time speeded up the formation of the Gulf Cooperation Council. Attention then shifted to Iraq with the hope that Iraq would fill the leadership vacuum in the area. The Gulf

War in 1990 shattered hopes of Iraq becoming a dominant political and military force in the Middle East. The Muslim countries trade volume in 1990 was \$483 billion which roughly is the same amount of money that the Arab countries put forth (\$440 billion) to free Kuwait from Iraq during the Gulf War.

If the Islamic Common Market (ICM) is to materialize, selected Muslim countries which are major players in the trade arena may get together to promote trade integration. The success of the ICM ultimately depends on the political will of the major players but at least Middle Eastern unity will not be a prerequisite to the formation of the ICM.

The current declining trend in the trade intensity indices should not discourage any efforts towards Muslim trade integration. The intensity indices for trade among Muslim countries are much higher than for trade with non-Muslim countries which are less than or not significantly different from unity. The Muslim countries share in world trade is about 7 percent in 1990. But all of the trade flows among groups of Muslim countries as shown in Table 7 is greater than this 7 percent share. The "special country bias" factors does seem to point to some form of positive bias in intra-Muslim countries trade. The Muslim countries are all developing countries with a lot of potential to develop in the future. Economic development and industrialization of the Muslim countries will tend to foster international trade especially intra-industry trade in manufactures in the future.

Developing Muslim countries like Malaysia, Indonesia and Brunei which are members of ASEAN had better concentrate on forums like ASEAN which are further ahead in their integration efforts both at the political and economic level. Efforts to promote ASEAN can simultaneously occur with efforts to promote the ICM although the former forum should be given priority. The industrialized or developed countries continue to dominate in trade, in financing, in political clout, in wealth and in determining the "rules of the game" in world affairs. The appropriate course of action for the Muslim countries is to simultaneously continue building relationships among themselves, among other non-Muslim developing nations and also the industrialized world.

#### NOTES

1. See Sadeq (1990), p.133 for discussions on the Islamic Common Market.
2. The definition of Muslim countries is based on Faruqi and Faruqi (1992) and OIC reports.

3. All dollars in this paper refer to the US dollar.
4. The trade data for the study was gathered from various issues of the Direction of Trade Statistic Yearbook, IMF.
5. Trade here includes trade of the Muslim countries among themselves and also trade with non-Muslim countries.
6. Iraq which belongs to the upper middle income Muslim countries may have played a role in contributing to the bigger decline in trade share between 1990 and 1991 as a result of the Gulf War.
7. Again this may be due to the effect of the Gulf War on Iraq. Kuwait which belongs to the high income Muslim countries did not seem to have affected the trade of the high income Muslim countries in a significant way.

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Fakulti Ekonomi  
 Universiti Kebangsaan Malaysia  
 43600 UKM Bangi  
 Selangor D.E.