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# Prerequisites for Effectiveness of Resource Mobility in Islamic Financial Institutions (IFIs)

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## **Abstract**

Resource mobility (RM), generally speaking, - whether physical resources, human resource or financial resources, - is a key factor in economic performance. In this paper we are examining some dimensions of "RM" with respect to" Islamic financial institutions" (IFIS). We want to indicate the prerequisites which are necessary to make IFIS more efficient in RM. One hypothesis is that doing tasks electronically can enhance RM. First section is devoted to introductory notes and methodology, second section deals with potential significance of IFIS and their relationship with RM. In the third section, while mentioning the factors affecting the efficacy of IFIS regarding RM, the relevant test will be performed. Finally we end up the paper with some concluding remarks and policy implications.

**Keywords:** Islamic financial institutions, resource mobility, efficiency, electronic transaction.

# 1- Introductory notes and methodology

Efficient resource mobilization (RM) in general and financial mobility in particular, can affect economic performance. We argue that, potentially speaking, role of  $IFI_S$  is crucial in this regard, and if we provide some preconditions, their efficacy will be increased, as well. we first mention some points regarding the significance of RM, then we indicate some methodological considerations, after which we will be ready to specify the relationship between,  $IFI_S$  and RM. Some economists stipulate that" at least in the early stages of development, economic growth depends on resource mobilization (krugman, 1999). It goes without saying that some Moslems countries (MC<sub>S</sub>) are in the early stages of development, and consequently need cheap and easy resource to

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be developed. On the other side, nowadays, IFI<sub>s</sub> are managing more than \$300 billion.<sup>1</sup> efficient Using a fraction of resources of IFI<sub>s</sub> based on Islamic contracts-Modharebah, Mosharekat, Morabeh, Joaleh, Ejarah, Garrzol Hassanah, etc- in less developed Moslem countries, can improve their circumstances. However, success in this regard depends on degree of mobility of financial resources among, rich and poor Moslem countries (MC<sub>s</sub>).

Mobilization of resources, form economic point of view does have multidimensional usefulness. Alfred Marshal argued that: "Mobilization of resources, generally, can increase productivity" (Marshal, 1962, 231- 5). Some evidence shows that in affecting RM on economic development it dose not matter, whether, management of resources is at the hand of government or private sector. For instance some private policy in Korea and some government policy in Pakistan have had a sustainable role on economic development in their countries 1997, p 110).

Traditionally speaking, mobilization of resources is prerequisite of competition and efficiency of market place (Blaug, 1990, 44-49). Some economists argue that RM should be considered as a key factor in economic planning in developing countries. Developing economies can not afford to waste their very limited financial and skilled human resources on unproductive ventures. So, efficient mobilization of resources in such countries is very crucial (Todarro, 2000, 625, emphasis added). In addition, RM at one hand can reduce regional inequality, for it can fill the gaps between poor and rich residents in one country. It also can help to reduce poverty among countries- so can be influential, nationally and internationally. In conventional economics, theoretically, perfect mobility of resources is the prerequisite for perfect efficiency of their allocations (lipsey, 1999). At the same time there are different economic approaches in allocating resources and degree of their mobilizations. We can mention typically, Orthodox neoclassic, Keynesianism, Neomarxism Institutionalism, etc (Taylor, 1981).

<sup>1-</sup> in IFI<sub>S</sub> we have at least 270 banks (commercial, investment and offshore ones) which manage \$260 billions," and some Gharzol hasanah" institutions, Waqf units, etc,( in other word, IFI<sub>S</sub> are not limited to banks).

At the other hand, nowadays, considerable units of conventional financial institutions  $CFI_s$  are confronting with sever problem and crisis (Siebert, 2000). This phenomenon induces the economic scholars to think about supplanting or supplementing existing financial versions. We think  $IFI_s$  could be a kind of alternative or complementary system in curing some financial crisis. It goes without saying that our research will be related to globalization as well. For, one famous and prevailing challenge in globalization is comparative nature of mobilization of physical and financial resources from one side, and mobilization of human capital from other side. In second section we express how the efficiency of  $IFI_s$  in mobilization of resources will increase.

# Some methodological considerations

Here we emphasize on following points, least likely.

1-  $IFI_s$  are independent economic units which can be competitive with  $CFI_s$ , so in their literature there are modes and models of behavior, whose characteristics features should be specified.

2- It is expectable that in analyzing efficiency of  $IFI_s$  with respect to RM, we do use some criteria, in addition, to (or different from in some cases) that of  $CFI_s$ .

3- We suppose a systematic nature of Islamic economics and consequently insist on coherent and close interrelationship among all its branches (including  $IFI_s$ ). This is a key factor and at the same time, a losing ring in all Islamic studies. Actual performance of any Islamic unit, I think depends on this factor, as well.

4- Efficiency of IFI<sub>s</sub> regarding RM incorporates some ingredients, among which are technical infrastructures, backing and residual factors and organizing affixing ones (whose simple model will be shown in next section).

5- Ejtehad does play a central role in the methodology of Islamic economic as a whole and in IFI<sub>s</sub> behavior in particular.

6- Although we test some of our assumptions empirically, most of the research is done analytically and descriptively.

7- We define some proxy and semi-indexes for efficiency of  $IFI_S$  regarding RM and use taxonomy method in analyzing them.

# 2- CFI<sub>s</sub>, IFI<sub>s</sub> and RM

The significance of Islamic economics generally and IFIs particularly, from late 3decades- is not only considered among Moslem scholars per, se, but also is prevailing in the works of some seminal non-Moslem thinkers, too (I quote some of which here). Professor Murray and Holman stipulate that:" Islam is a lifestyle and world view- not just a spiritual opinion about God's character (Murray 1989). One signal which Murray and others show in this connection is the performance of IFI<sub>S</sub>- as potential alternatives of crisis oriented CFI<sub>S</sub>. The past decade has been one of unprecedented financial turmoil. Banking system from the US and UK to Scandinavia, East Asia, Russia and now Japan, have come under sever strain, if not collapse. Major economists have witnessed asset price bubbles, fuelled by easy credit terms, followed by slumps and credit contractions. Economists have resurrected the debt deflation analysis of the 1930s, as Japan suffers a falling price level and negative nominal interest rates are charged in Yen deposits. Meanwhile the high level of indebtedness of the world's poorest nations remains largely unresolved. Each of these financial dislocations has their proposed individual remedies, usually involving large amounts of taxpayer's money to subsidize risk-taking by private sector banks and financiers. It is ironic that when western government state aid to manufacturing industries has been largely eliminated, the safely net provided to private banks, goes unchallenged. So we should think for alternative ways. The critique of interest-bearing debt finance has more economic cogency than is assumed by mainstream economics. This position is of long standing in Judeo-Christian and early western economic thought, but it is now most clearly developed in the Islamic analysis of banking and finance (Mills, 1999).

There are some specific differences between  $IFI_s$  and  $CFI_s$ , some of which may even play a restrictive role in financial activities. Islamic economists endorse many conventional attitudes towards money, believing its primary role to be a facilitator of exchange. Differences arise when considering money as a measure and store of value. If money is to act as a measure of value it is paradoxical for it to command a price in terms of itself. Interest acts as the price of money and so makes the measure of value itself an object of exchange. This is believed to impede the effectiveness of money in its role as the means of exchange (Ballantyre, 1988, 5).

Throughout classical and neoclassical literature, the terms profit, interest and rent are often used interchangeably, giving the impression that all income derived from capital is equivalent (Ahmad, 1976, 177). This classification is challenged by those who observe that capital would be unproductive without entrepreneurial input (Pressley, 1994, 586). Most of the Moslem economists argue that profit is only legitimate if effort and/or risk have been involved in its acquisition. In fact value is a market phenomenon and not an intrinsic property of money capital (Sidiqi, 1983, 72). Therefore the enjoyment of a return by financial capital is justified only by the service to society provided by sharing the risks inherent in the productive process (Mills, 1999, 12).

Prohibition of interest, dose have some proponents among non Moslem economists as well. Professor Harberler argues that: "the theory of interest has for a long time been a week spot in the science of economics and the explanation and the determination of the interest rate still gives rise to more disagreement amongst economists than any other branch of general theory (Harberler, 1937, 195). In addition, another appealing factor of  $IFI_{S}$  among economists is that, it (by prohibition of riba) would help minimize the inessential, unproductive elements of aggregate money demand which it dose not seem to be possible to realize in an interest-based system. The minimization of these elements of money demand, tend to promote greater efficiency and equity in the use of scarce resources (Chapra, 1996, 26). There are some other more substantial difference between CFI<sub>S</sub> and IFI<sub>S</sub>. Most of the CFI<sub>S</sub> (especially commercial banks) are engaging in debt financing activities, however, IFIs do not provide debt finance. In conventional financial environment, economists prefer universal banking versus commercial banking. Some experts in financial theories argue that universal banking appears to be the closest thing to Islamic banking (Jarhi, 1999, 7). Nevertheless, debate regarding universal versus commercial banking is rather energetic (Strahan, 1998). Some studies show that functioning IFIs can also have a stabilizing role in financial activities. Islamic modes of finance are highly flexible and have a large potential for further exploration and refinements. The important point to be highlighted is that all market based Islamic modes and principles of finance are linked to real transactions.

Thus these modes have the inherent characteristics to create financial stability and avoid pyramids of debts (Tariqullah Khan, 2000). Establishing some branches of Islamic financial system in, U K, US and other western

countries can be inferred as a signal of taking  $IFI_s$  into more consideration. Acting great England bank of HSBC, in direction with Islamic shariah is very conclusive. As,Uovitch states, Modarabah and Musharekat were the primary methods for mobilizing financial resources and combing them with entrepreneurial and managerial skills for purposes of supporting crafts and manufacture and expanding, long distance trade(Udovith,1970, 180,261).

Also some economic thinkers in Germany argue that interest oriented financial institutions have been main causes of increasing economic, ecological and social problems in their society. Consequently they suggest a kind of reform in their financial systems (Glotzl, 1995). Some seminal managers are suggesting extensive reforms in monetary systems at international level. Andrew Crocket, for instance pointed out that:" after the outbreak of the Asian financial crisis, a great new design for the international financial system, has still to be devised (Crocket 2000, 13). In addition, the speculative nature of CFI<sub>S</sub> has been one crucial factor of crisis in international activities (Volcker, 1979, 110), therefore absence or illegality of pure speculation in IFI<sub>S</sub> is a specific advantage, as compared with CFI<sub>S</sub>. in short we do have severed problems regarding CFI<sub>S</sub>. So thinking about compatible alternative for them, is expectable. If we create appropriate environment enacting for the IFI<sub>S</sub>, we hope increasing efficiency in financial activities generally and mobilization of resources particularly

#### **Relationship between IFIs and RM**

In the beginning we express the relationship between IFI<sub>s</sub> and RM, from economic point of view, and next we explain it in outlook of shariah. Although we concentrate mainly on financial mobility, however we consider labor and human mobility as well. That is IFI<sub>s</sub>, potentially speaking, can affect the mobility of both material and non-material resources too. IFI<sub>s</sub> including banks( commercial, investment and offshore), mutual insurance, Gharzol hasanah centers, investment funds, etc are offering an alternative( if not competing system) for CFI<sub>s</sub>. Both CFI<sub>s</sub> and IFI<sub>s</sub> can affect RM. Capital mobility among Moslem countries (MC<sub>s</sub>) and non Moslem ones, labor mobility, migrations of scholars and seminal mangers are amongst ingredients of RM. So RM can be an opportunity and a threat as well. For example, labor migration poses one of the principal challenges to migration policy makers in the  $21_{st}$  century. ILO estimates that today between 60 and 56 million persons are economically active

in a country other than their own (IOM, 2003). Three key determining factors (labor force need in industrialized countries, population crisis and unemployment pressure in less developed countries, and established inter country networks) will fuel this kind of movement. Large proportion of labor migration occurs illegally with a clandestine industry, including criminal, ready to abet it considerable numbers of which belong to  $MC_s$ ). Before any thing else, It is helpful to mention some potentialities of  $MC_s$  in general and regarding IFIs in particular.

Although Muslim people live throughout the world, however we call Muslim country where the majority of people are Muslim. Based on that we have at least 57 Muslim countries which begin from Indonesia (eastern Asia) to Morocco and Mauritania (North of Africa), Bosnia and Albania (east of Europe) extends to south of Siberia, ends to Guyana and Surinam in Latin America).MC<sub>s</sub> include less than 20 percent of the world population, (1.300 from 6.055 billions based on the data of 2000).About 50 percent of MC<sub>s</sub> have less than 10 million population, 12 percent do have above 50 millions and the population of the remaining countries is less than one million. MC<sub>s</sub>, potentially are rich, actually are poor. Table 1 is responsible to show some indicators about members of organization of Islamic conference OIC.

	world	OIC	The share of OIC
Surface area(millions sq km)	133.8	32.4	24.20
Population, total( billions)	5.98	1.3	21.0
Urban population( billions)	2.8	0.53	19.10
Urban population(% of total)	7.4	73	-
Population ages 15-69, total(billions)	3.7	0.73	19.40
Population ages 15-69,(% of total)	62.7	57.9	-
Labor force, total(billions)	2.9	0.53	18.20
Life expectancy at birth, total(years)	66.4	61.02	0.92
GDP(\$ billions)	30560.6	1306.8	4.30
Exports, goods and services (\$billions)	7265.1	452.7	6.20
Exports of goods and services(% of GDP)	23.8	34.6	-

Table 1: the major indicators of" OIC" member countries (average 1997-2002)

Exports of goods and services per capita(\$)	1215.6	361.3	-
imports of goods and services(\$ billions)	7252.2	419.4	5.80
imports of goods and services(% of GDP)	23.7	32.1	-
Trade of goods and services(\$ billions)	14517.3	872.1	6.0
Trade of goods and services(% GDP)	47.5	66.7	-
Net exports of goods and services(\$ billions)	12.9	63.9	-
Agriculture, value added(\$ billions)	1203.4	182.7	15.20
Agriculture, value added(%of GDP)	3.9	14.0	-
Industry, value added(US\$ billions)	8532.8	328.3	3.80
Industry, value added(%of GDP)	27.9	25.1	-
Services, etc, value added(\$ billions)	18632.2	461.6	2.50
Services, etc, value added(% of GDP)	61.2	35.3	_

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Source: based on data from WDI, World Bank, CD- ROM 2003

To mention another evidence of optimal situation of MC<sub>s</sub>, potentially speaking, we consider some documents of several Islamic banks in these countries. The establishment of Islamic banks has accompanied the development of PLS banking theory. After initial Pakistani experiments, agricultural credit cooperatives in 1950s, the seminal Islamic banking was the Mit Ghamr saving bank in Egypt in 1963, which was nationalized in 1967 and reconverted to noninterest operations in 1971 as the Naser social bank (mills, 1999). The idea was much to developed in 1974 when IDB was established in Jeddah. Establishing first commercial Islamic bank in Emirates in 1975, Islamic bank in Bahrain 1978, reinforced the chain of IFI<sub>S</sub>. Iran and Pakistan 1979, Sudan and Kuwait 1980, established another kind of Islamic banks. In Malaysia the central bank has established its own shariah council to standardize operating procedures for Islamic banks (Parker, 1993, economist 1993). A gradual conversion of Pakistan's nationalized final system to non-interest operation was instituted from 1979 onwards. By 1985, 27.6 percent of all bank deposits had been voluntarily converted to PLS investment accounts (Khan and Mirakhor 1990, 365). However, some thinker argues that in Pakistan changes made to old system have been limited to the minimum (Gieraths 1990, p.183). In Iran the law for riba free banking in august 1983, required that all Iranian banks should act to conform to shariah law (central bank, 1983). These arrangements produced transition to

interest free banking with a rapid growth in deposits (Aryan, 1990, 165-6). To have some more information's about the development of  $IFI_s$ , we show in table 2 the main branches and total assets of about 40 main interest free banks.<sup>1</sup>

	Banks	Country	Assets	Branches
1	First Islamic bank	Bahrain	\$ 523422	6
2	Islamic bank	Emirates	Dir 6,113,147,000	6
3	Al baraka bank	Bahrain	\$259586095	5
4	Tadamon bank	Sudan	Din 2,725,947,176	20
5	ABC Islamic bank	Bahrain	\$5,821,917	3
6	Arab Albanian bank	Albania	\$16321592	12
7	Islamic interal bank	Egypt	£17,871,671	7
8	Banquet Islamique	Senegal	cf11,098,829,000	7
9	Moslem bank	Pakistan	rp187,055,394,000	63
10	Faisal Islamic bank	Egypt	£ 9,127,193,098	20
11	Islam finance bank	Jordan	Jd, 708,587,950	45
12	BSC	Bahrain	Bd 191,181,858	12
13	Interal Islamic bank	Qatar	Qr 2,699,920,000	10
14	Bank Islamic	Malaysia	Rm10,335,296,000	76
15	PLC	Emirates	di15,333,978,000	10
16	SAQ	Qatar	Qr1,213,094,106	10
17	Faisal Islamic bank	Sudan	di12,952,950,000	16
18	Faisal limited	Pakistan	\$429,246,719	6
19	Arab investment	Egypt	£1,849,882,000	12
20	Shamil bank	Bahrain	\$1,216,600 8	
21	Banquet albarakah	Algeria	ad15,110,139,357	10

Table 2: assets of main branches of Islamic banks.

1- These are in addition to major Islamic banks in Iran, Lebanon, Syria, Saudi Arabia, etc.

22	Habib bank	Pakistan	Pr321,335,951,000	12
23	United bank ltd	Pakistan	rp160,852,206,000	145
24	Badr-forte bank	Russia	Ruble 845,874,000	12
25	National bank	Pakistan	Pr373,747,280,000	140
26	Union bank	Pakistan	Pr 30,128,129,000	50
27	Soneri bank	Pakistan	Pr 20,540,675,000	40
28	Al habib limited	Pakistan	Pr 24,137,694,000	60
29	Al falah limited	Pakistan	Pr 40,098,095,000	46
30	Finance bank	Egypt	£ 2,288,620,155	14
31	National bank	Kazakhstan	tg420,454,051,000	25
32	Arab bank	Bahrain	\$26,586,000,000	10
33	Jamuna bank	Bangladesh	Tk 4,210,164,642	6
34	Metropolitan	Pakistan	Pr 27,144,909,000	60
35	Banquet miser	Egypt	£ 62,102,035,000	6
36	Khyber	Pakistan	Pr17,228,792,000	20
37	Punjab bank	Pakistan	Pr 20,186,475,000	10
38	Gulf international	Bahrain	\$15,232,000,000	5
39	Askari ltd	Pakistan	Pr 50,980,392,000	30

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However, -actually speaking- Only about 6 percent of  $MC_S$  has GDP above 100 billion dollars (GDP of about 15 percent of them is even less than 1 billion dollars). The trade balance of the majority of MC is negative, although, they have extensive amount of resources including gas, petroleum, uranium, agricultural products, etc (Kalantari, 2000).

# Framework of RM in IFI<sub>S</sub>

Paying attention to the material reviewed so far, we are now drawing a framework or a model to assess the efficiency of  $IFI_S$  regarding RM. This is a multidimensional model. For, their ingredients, (in contrast with  $CFI_S$ ) are not just economic but, socio-cultural as well. Although  $IFI_S$  are economic units, they are performing in a religious environment, so both economic and non-economic factors can affect on their efficacy. Suppose that  $IF_R$  is a dependent variable and indicates the efficiency of  $IFI_S$  regarding RM. We suppose that following

elements are amongst independent variables: technical infrastructure, economic factors, social-cultural and managerial affixing ones. We show these elements in a simple model with following context:

 $IF_R = f(T_i, E_f, A_i, R_f)$ 

Where  $T_I$  is the vector of technical infrastructure,  $E_f$ , the vector of economic factors,  $A_i$  the vector of affixing, managerial infrastructures and  $R_f$  the vector of residual factors all, affecting the efficacy of IFIS regarding RM.

Technical infrastructures ( $T_i$ ), are set of instruments and tools at the hand of IFI<sub>s</sub> which can increase the speed of mobility of their resources. For example a serious and sever factor which can affect the efficacy of IFI<sub>s</sub> is implementing their activities, electronically. So in this paper we mean technical infrastructure ( $T_i$ ) all tools and instruments which can be used to perform mobility of resources, electronically. By economic factor ( $E_f$ ) we mean using theories and policies which can lead to reduce the opportunity cost of mobilization of resources. Here for simplicity we assume that preparing enough " $T_i$ " incorporates " $E_f$ " as well. At any way we will test this part of model (in the framework of electronic transactions) as a case study, in the next section.

 $A_i$  is a vector of affixing managerial infrastructures which can enhance the efficiency of IFI<sub>S</sub>. IFI<sub>S</sub> is relatively a new and in some cases infant financial system and for the time being is not as efficient as CFI<sub>S</sub> we claim that increasing efficiency of new system as such, needs enough supporting mechanism. By this mechanism we mean developing some software and hardware instruments for better organizing IFI<sub>S</sub> performances. We list these devices as follows:

- 1- establishing central "shariah board"
- 2- Forming monitoring (professional) committee.
- 3- linking to the OIC and IDB offices
- 4- coordination of central banks in MC<sub>S</sub>
- 5- Solidarity and integrity among MC<sub>8</sub>.

One alarming point in this regard is that for the time being some kinds of resource mobility in  $MC_s$  is either illegal (like money laundering), or unjustifiable (like migration of experts and other kind of human capital). Enhancing efficiency regarding RM in this situation, I think, dose not mean necessarily increasing the mobility of resources. In addition, managerial team of IFI<sub>s</sub> should invest some of their financial capital to retain the human capital in Moslem countries. As we know, neoclassical theory draws no meaningful

analytical distinctions between capital and labor in this regard (Demartino, 2000, 181). Is really in Islamic perspective the same gaze? , surely not. Forming regional unions (like Islamic common markets) and trying to have a reasonable relationship with international financial centers is another ingredient of Ai vector. This kind of coordination is a key factor in performance of  $CFI_S$  as well (Hart, 2000, 163).

In Islamic perspective, also socio cultural environment do affect in efficacy of financial system, whose ingredients in our model is shown by vector  $R_f$  (a kind of residual factor). Since these can set up a suitable environment economic agents can act successfully. We can summarize some of these software backing factors as follows:

- 1- Satisfaction of the clients of the funds of IFI<sub>S</sub>.
- 2- Confidence of people regarding the conformity of IFI<sub>S</sub> activities with shariah.
- 3- Paying attention to ethics and social capital in Islamic environment
- 4- Systematic looking at the performance of IFIs and its poly-dimension nature.
- 5- Considering activities in this regard as a kind of "Ebadah" (a religious capital).

When in the secular environment these residual factors do play considerable roles in performance of CFI<sub>s</sub>, their impact in regarding framework should not be surprising. The term" capital" has been extended beyond its traditional economic usages on several occasions in recent years. The idea of human capital, for instance has been advanced to encompass those natural and acquired skills and abilities individuals may utilize in satisfying their objects (Burt, 1999). Then there is the well known concept of social capital to capture the social networks of trust that individuals form and which allegedly serve quite broad and beneficial functions (Putman, 1993). We can add moral capital and religious capital in Islamic perspective. However, it is not enough to be good, or morally irreproachable, it is necessary to have the ability to turn moral and religious capital to effective use and to deploy them in strategic conjunction with those other resources. Unfortunately we, Moslem people, do not benefit from this great influential Capital.

# **3-** Testing IFI<sub>S</sub> regarding RM (case study)

In the first sub-section we mention some elementary points. Reporting the situation of  $MC_S$  regarding electronic transitions  $(ET_r)$  is second subsection. Using taxonomy method and ranking  $MC_S$  in connection with  $ET_r$  is the last part of this section.

#### 3-1- Setting forth the Subject

We suppose that one factor enhancing RM is that  $IFI_S$  do their transactions electronically. Now we want to test element  $T_i$  in our simple model. In analyzing the subject, we have used seven semi–Indexes to rank MC<sub>s</sub>. We use these indexes as proxy, for degree of efficiency in  $IFI_S$  regarding RM. At any way today, most of the transactions have attained to the ultra industrial stage. Not only developed countries, but in most of developing countries, we see basic changes in traditional transaction methods. In developed countries, lawyers and economists are constantly enacting new principles and rules with respect to  $ET_r$ , to maintain sufficient velocity for transactions and maintain required security for trade.

Some studies show that 7 percent of world trade values are spent just for preparing and documentation the trade bills (conference papers 2004). Estimated studies indicate that in using  $ET_r$  instead of traditional one, there will be between 35 till 85 percent economizing in transaction costs. Consequently, using  $ET_r$  will decline the expenses and transparent the transaction, nationally and internationally. Nevertheless in many less developed and MC, there are some bottlenecks, in providing required infrastructure, regarding  $ET_r$ .

 $ET_r$  is related to so many terms which were absent in traditional transaction.  $ET_r$  in a broad sense has been defined as "doing transactions in an electronic framework". so  $ET_R$  is dealing with, electronic mailing, electronic transfer of funds (ETF), electronic point of sale (EPOS) which is a computerized method of recording sales (using a laser scanner), electronic funds transfer at point of sale (EFTPOS) and electronic funds transfer system (EFTS) that is the use of computers in affecting payments between individuals or organization. It would be also touching to electronic data interchange (EDI), which is a generic term covering various standards that describe the format, content and structure of data to be exchanged between computer systems. It deals also with electronic

data processing (EDP) which refers to a class of computer applications and functions within the organizations.  $ET_r$  is also connected to electronic filing (a computer – based system for storage, cataloguing and retrieval of documents) and electronic office (a computer based system designed to office tasks), etc.

It is also dealing with global information infrastructure (GII) and networking economy (a kind of postindustrial society consisting of many small specialists firms, linked together by an information system). So  $ET_R$  is related to post-industrial society which we must pay attention to its considerations. Postindustrial society is any economically advanced society with a declining manufacturing activity and expounding service sector. This intersectional switch has coincided with the shrinking of the size of the working class, the growth of education and the growth of new industries based on information technology (IT).With declining manufacturing activity, an economy becomes more decentralized as, increasingly productive activities move from factories and offices back to the home -in some sense resembling the pattern of economic activity before the industrial revolution-(Shelp 1981). Internet systems, by serving to transform digital materials, electronic transactions of stocks, electronic marketing, electronic trade mark, electronic advertising etc are the other linking networks to  $ET_r$ .

Historically speaking, we can mention 1970 as the beginning of  $ET_r$  activities. In that year some countries and big companies used EDI methods. Advantages of EDI include, economizing in expenditures, in storage of data, precision of information and quickness of communication. Using  $ET_r$  during 1980s and 1990 was increasing extensively. After October 26, 1993 when American government was obliged to implement electronic commerce in transaction of goods and services, the volume of traditional commerce declined in the world (Nag, 1996). for the time being, several organizations, such as, united nation economic commission of Europe (UN/ECE), United Nation conference on Trade and development (UNCTAD), word trade center (WTC),

United Nation, Educational Scientific and Cultural Organization (UNESCO), International Federation of Documentation (IFD), are all active in enhancing the  $ET_r$  affairs.

Efficient performance of  $ET_r$  necessitates obeying a set of principles and provisions (Some of which are mentioned here). 1- Private sector should be guided and supported by public sector. In fact innovation, presentation of services with a great amount and extensive attendance are formed in market oriented environments, which are connected to private sector. 2- Government regulation related to  $ET_r$  should not be cumbersome so that economic agents could act freely.3-Government intervention (where necessary), should move along providing lawful environment for  $ET_r$  and affiliating it, protecting customers, keeping intellectual assets, preventing fraud, prevailing transparency and the like . 4- Protecting electronic messages, "invention right", author rights, lawful competitions, trade codes and marks, keeping data sites and safeguard consumer rights are necessary. In addition, governments in MC<sub>s</sub> should provide necessary conditions in which no illegal activity (Bribery, gambling, usury, etc) appears.

#### 3-2 – Testing ETr, in Muslim countries, as a proxy for RM

Primarily, it is noticeable that engaging in economic transactions in "Islamic shariah" is mostly rational oriented, so is referred to Muslim experts and scientists Moslem, and (Ansari, 1417). In other word all economic activities which are not in forbidden region of shariah, (usury, bribe, untruth, expropriation, theft, fraud, etc) are acceptable. In the case of transaction, some general provisions are emphasized from Islamic point of view, some of which we mention. 1- You who believe, fulfill your obligation (operate contracts). 2-You who believe, use not up your property among yourselves, unjustly except it be a trade by mutual consent. 3- God has permitted transactions and forbidden usury. 4- Some other Islamic provisions regarding economic activities are: "Do not softer damage and do not cause to damage others, do not misinform, do not hoard and so forth (Quran: 5/1,4/29, 2/275,). 5- Considering the consumer rights, illegality of wasting commodities and time, wrong propaganda, tricks in transactions and the like are amongst other Islamic provisions regarding

transactions (Bokhari and Akhond, 1406). I insist on one more point here and that is my belief in illegality of pure speculation in Islamic view (following sadre, 1980). I think it will play very crucial role, regarding  $ET_r$  in MCs.

# **Ranking RM in MCs**

In testing RM, we use seven semi-indexes which mainly are used in analyzing IT. We use those indexes as a system of proxy for  $ET_r$  in MC<sub>s</sub>. These are: 1- numbers of fixed phone lines, 2- numbers of mobile phone lines, 3- TV device numbers, and 4-Radio numbers, 5- numbers of daily newspapers, 6- computers and 7- internet lines. To have a reasonable judgment we have used taxonomy method in ranking, other- wise there might be some confusion. For instance, a country in one index may obtain first rank, while in some others its rank may be even 10. Based on our methodology, According to the table 2 and table 3, Malaysia, Indonesia, Emirate, Kuwait, Qatar and Turkey have obtained the first seven ranks in  $ET_r$ , respectively. This shows that performance of those countries (compared with other MC<sub>s</sub> in connection with  $ET_r$ ) is excellent.

	Fixed	Mobile	TV	Radio			Internet
Rank	phones	phones	sets	devices	Newspapers	computers	users
1	Emirate	Emirate	Qatar	Surinam	Kuwait	Qatar	Malaysia
2	Turkey	Kuwait	Brunei	Kuwait	Saudi Arabia	Bahrain	
3	Bahrain	Bahrain	Oman	Oman	Qatar	Emirate	Turkey

Table 3: MC ranking regarding ET<sub>R</sub>, seven semi- indices (2002)

Source: arranged based on world bank data (2003)

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Table4: MC <sub>s</sub> Ranking with respect to infrastructure for ET <sub>r</sub> (2002)						
Ranks	Country	1-Fi	Ranks	Country	1-Fi	
1	Malaysia	0/001267	29	Benin	0/000275	
2	Indonesia	0/000821	30	Tajikistan	0/000275	
3	Turkey	0/000725	31	Togo	0/000275	
4	Emirate	0/000544	32	Algeria	0/000274	
5	Kuwait	0/000482	33	Kyrgyz	0/000273	
6	Qatar	0/000456	34	Gambia	0/000269	
7	Iran	0/000433	35	Burkina Faso	0/000268	
8	Brunei	0/000403	36	Bangladesh	0/000267	
9	Saudi Arabia	0/000390	37	Nigeria	0/000267	
10	Oman	0/000387	38	Maldives	0/000265	
11	Bahrain	0/000383	39	Yamane	0/000263	
12	Egypt	0/000376	40	Ivory coast	0/000262	
13	Lebanon	0/000375	41	Senegal	0/000258	
14	Surinam	0/000370	42	Iraq	0/000256	
15	Morocco	0/000342	43	Mauritania	0/000252	
16	Gabon	0/000336	44	Cameron	0/000249	
17	Jordan	0/000335	45	Sir Leon	0/000249	
18	Tunisia	0/000331	46	Guinea -	0/000246	
19	Kazakhstan	0/000329	47	Uganda	0/000245	
20	Uzbekistan	0/000328	48	Chad	0/000244	
21	Guyana	0/000325	49	Mali	0/000244	
22	Sudan	0/000321	50	Comoro	0/000242	
23	Pakistan	0/000317	51	Djibouti	0/000241	
24	Albania	0/000278	52	Niger	0/000237	
25	Libya	0/000278	53	Afghanistan	0/000235	
26	Syria	0/000277	54	Guinea	0/000233	
27	Azerbaijan	0/000276	55	Mozambique	0/000228	
28	Turkmenistan	0/000276	56	Somali	0/000228	

Table4: MC<sub>s</sub>Ranking with respect to infrastructure for ET<sub>r</sub> (2002)

Source: Calculated Based on Central Bank data (2003), Taxonomy method.

It goes without saying that the relationship between RM rankings in  $MC_s$  is positive and significant.

We sum up some points and emphasize on some recommendations, list likely.

- 1-Efficacy of IFIs regarding RM does have poly-factor, Systematic nature, undertaking all of them guarantees considerable success.
- 2-OIC member countries are 1/3 of UN member countries, so are biggest second union in the world. Solidarity and integrity among them can affect efficacy of their economy, generally and IFI<sub>s</sub>, particularly.
- 3-Providing technical infrastructure( T<sub>i</sub> in our model) does play partial role in RM, to get perfect outcome, realizing Affixing infrastructures and residual factors are necessary
- 4-IFIs projects must be chosen not solely on basis of partial neoclassical efficiency analysis, but also in the context of an overall development program that takes account of long term objectives. So if IFIs support Moslem scholars to live in MC, their efforts have been efficient.
- 5-Establishing, central shariah board, monitoring committee, opening a representative office in IDB and OIC are amongst other infrastructures which can prepare  $IFI_s$  to enhance RM.

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