THE AFRICAN CASE OF MICROENTERPRISE IN THE LIGHT OF ISLAMIC DEVELOPMENT FINANCING

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Abstract: What can bring about and sustain the life of microenterprise and microcredit for poverty alleviation? The answer is given in this paper by way of the epistemology of organic unity of markets, finance and society premised on the essential outlook of how the Islamic worldview prevails in this tripartite interrelationship. This paper settles this issue of integrative development financing to bring about participation between markets, finance and society in a complementary way so as to connect the poor with mainstream economic order by raising their productivity and market access. Such transformations are necessary for survival of microenterprises in today's world of bitter competition and conflict between the rich and poor.

The argument launched here is that the competition model of microenterprises is not appropriate for the sustainability and poverty alleviation. Contrarily, an epistemic foundation of unity reflected in a participatory development framework is necessary. Islamic finance ought to be studied within such an alternative comprehensive model of organic unity. Systemic unity is equivalent to participation by complementarities between the three subsystems comprising sustainability. These are namely markets, finance and society as these are represented by their variables. This paper thus establishes a model of general-system equilibrium between these embedded subsystems in order to study the possibility of poverty alleviation by means of Islamic financing of microenterprise and microcredit.

The model formalized here is argued to be the appropriate one for Africa in the area of participatory development of microenterprises and poverty alleviation. The example of microenterprises in Sudan is studied in the context of a general-system model.

Keywords: comparative microenterprise and socioeconomic development, microenterprise in Sudan, Islamic development financing.

INTRODUCTION

Africa is rich in resources, but a hinterland for sustaining neo-liberal geo-political interests. In the midst of her resource richness, abundance is denied to many Africans who live in abject poverty. *Microfinance Africa* (August 16, 2010) notes that of the estimated 1.3 billion Muslims worldwide, 35 per cent live in poverty. Of this number there are an estimated 4.5 million poor entrepreneurs in North Africa and the Middle East. For them, access to productivity-based and cooperative mechanisms of microcredit and microenterprise would be most beneficial for their wellbeing. Presently it is surmised that only 2.4 per cent, that is 112,000 microenterprises are being served. The demand is the highest for Egypt that reports 1.4 per cent of the 2.4 per cent number of microenterprises receiving collateral-based borrowing. There remains a wide gap of unfulfilled demand. Many countries in the Middle East and North Africa are still to incubate microenterprises and microcredits for their poor entrepreneurs.

While the experience with neo-liberal economic and financial ideas, practices and policies have not worked out in the area of poverty alleviation and grassroots development, the microenterprises and the poor need to turn elsewhere for their wellbeing. In this paper we present this Islamic microenterprise and microcredit development financing alternative by means of the pertinent Islamic participatory

worldview as the idea, and the financing instruments as the mechanism for attaining this organically unified worldview.

Islamic Financing

The cooperative nature of Islamic financing, which is premised on its episteme of unity of the divine law from which the Islamic world-system derives its law and operations, makes the Islamic financing instruments particularly friendly for grassroots development with MEs. For Africa in particular, a good example to emulate is the case of *Amanah Ikhtiar (AI)*, a Grameen Bank type grassroots financing agency in Malaysia. *AI* funds rural microenterprises at zero rates of interest out of development expenditure allayed by the Government under the development plan of Malaysia. By such funding, *AI* promotes income-generating ventures to make the recipient poor productive with the capability to function in market access (Gibbons & Kasim, 1990).

Another particular case is of the Sudan Islamic Bank, which has an effective program of income-generating projects primarily of the joint-venture type called *musharakah*. Most *musharakah* projects are found in the rural sector and have thereby been effective in poverty alleviation through productive channels of microenterprise. It was found that of all Islamic banks internationally the Sudan Islamic Bank mobilized an impressive amount of funds into the agricultural sector where the mass of the poor live (International Association of Islamic Banks, 1988).

The UNDP *Human Development Report 1997* (1998) was devoted fully to the study of rural poverty alleviation by means of participatory decision-making organization and instruments in developing countries. Even prior to this grassroots development emphasis, cooperative development financing instruments at the grassroots have been slated as effective ways of alleviating rural poverty by small businesses (Ekins, 1992; Korten, 1995; Choudhury 1993). Of recent, the Islamic Development Bank has moved into the area of generating projects for poverty alleviation through microcredits. The first ever workshop in Bangladesh on Microenterprise Development using *Shari'ah* (Islamic Law) instruments was held at the International Islamic University Chittagong, Bangladesh, in December 1998.

MICROCREDIT AND MICROENTERPRISE

We mention these two terms by keeping cognizance of a subtle difference between the ideas of microcredit and microenterprise. Microcredit is a financing operation; while microenterprise is a development financing operation. This integrates human resource development and productivity with microfinancing. The Underprivileged Children Educational Program (UCEP) in Bangladesh (Wahid, 1997) is a good example of a grassroots project to remove panhandling children off the streets and put them in fast-track human resource development program. The result is employment generation for the trained in fast-track programs of vocational training. This brings about poverty alleviation, and entitlement and empowerment for the very poor. This process creates strong grounds for generating viable socioeconomic developmental, organizational capability and empowering programs for the very poor. UCEP provides a good example for amelioration of the poor by the African grassroots development through Islamic bank financing and microenterprise with microcredit.

Objective

In this paper our objective is to develop the various features of a grassroots development program in the perspectives of its financing, organizational and socioeconomic complements according to the Islamic worldview. Our emphasis is on Islamic financing and organizational instruments in view of the strong participatory nature these embody and the pressing need for interest-free financing of the poor. By so studying the general system of interactive, integrative and dynamic (evolutionary) relations between market behavior, financing, and society at large for poverty alleviation we combine income-generating effects of microcredits and microenterprise taken together.

In Part I of this paper, an epistemic model that underlies the interactive, integrative and evolutionary approach to sustainability in the tripartite interrelations combining markets, finance and society is formalized. This analytical construct is necessary in order to bring out the intrinsically unified Islamic worldview of development. Within that purview the participatory and complementary interrelations between operational instruments and organizational behavior are organically unified.

Part II applies the general-system model of Islamic financing for participatory development with MEs to the case of Sudan. Several pertinent issues are examined in some details in respect of the prospects and problems of development of MEs in Sudan within the general-systems methodology of organic unity of interaction, integration and creative evolution that is characterized by the MEs embedded in the general-system model of markets, finance and society.

Part III of this paper deals with the delineation of various new instruments that can be developed within a diversified portfolio of Islamic financing for MEs. These instruments would be equally applicable to the case of MEs in Sudan.

Part IV of this paper gives a study of some possible microeconomic policy instruments for ameliorating the problems that can be applied to MEs in Sudan.

The concluding section follows. In it a new perspective of development planning, namely that centered in participatory synergy between market, finance and society is emphasized.

The episteme of the sustainable general-system model of unity of knowledge and systems

The precept of *unity* is at the core of the Islamic worldview. The worldly construct of systemic unity arises from this epistemic foundation by conscious understanding of the law and rules of unity of knowledge. The paper then formalizes on how the episteme of unity of knowledge constructs the worldview of market, finance and society in general, and applies it to specific issues and problems of ME development. In this latter case, there are the institutions of microcredit and microenterprise, and the greater market, finance and social synergy that the interplay of the organic relations establishes.

The foundational nature of organic synergy in the systemic sense here defines Islamic political economy, beyond Islamic economics and finance as isolated disciplines of the otherwise integrative study. The learning properties of any issue and problems studied in Islamic political economy has the interactive (discursive), integrative (unifying) and evolutionary (learning dynamics) characteristics. These characteristics are derived from the law of *Qur'anic* 'pairing' between 'everything' *res extensa*. Hence by the episteme of unity of knowledge and the specific issues and problems of world-systems we study the Islamic participatory dynamics in reference to the specific theme of microcredit, microenterprise, poverty alleviation and grassroots development in respect of MEs (Choudhury, 1993).

How is development sustainability addressed in this paper?

Sustainability means continuation of a balanced way of development. On the economic side, overlapping with the emergent social contract, are goals such as the following: Resources of every kind are utilized productivity. Such resources are perpetually reproduced and conserved for the present and future generations. Social organization and social contract are continuously simulated towards improvement out of continuous learning in a discursive society. Altogether these conditions continue on the simulation process to improve the collective wellbeing of all the participatory entities in this socio-scientific complex of mutually beneficial interrelations.

The African case of microenterprise is studied in this paper in the light of Islamic financing instruments within its endowed learning model premised on the episteme of unity of knowledge as the social contract. We will explain these important points underlying the sustainability debate beyond simply its environmental meaning and into the comprehensive meaning of wellbeing and learning. The intrinsic participatory nature of the Islamic financing and development variables, agencies and their relations is premised on the episteme of unity of knowledge. This fundamentally initiates and sustains the participatory process generating wellbeing. This is the starting point of the theme of development sustainability in its broadest sense.

The intrinsic epistemic model of unity of knowledge applied to microenterprise

The study of microenterprise is embedded in the Islamic political economy of development at the grassroots. Its methodology takes up a processual worldview that defines its sustainable nature in terms of the process-oriented learning behavior generated by the following interrelated combination: Interaction leads to Integration leads to Evolution by re-generation of such processes in the continuum of systemic learning with unity of knowledge. Thus a learning behavior is established in continuum across knowledge, time and space as (Interaction $\rightarrow$ Integration $\rightarrow$ Evolution) recursively in continuum of learning processes. Such an evolutionary trajectory of development and sustainability is reproducible across unity of knowledge denoted by θ as knowledge-flows, and the unified world-system so constructed denoted by $(\theta,t,\mathbf{x}(\theta,t))$. $\mathbf{x}(\theta)$ denotes a vector of many elements of microenterpreneurial activities comprising market, finance, and society. These are shown in Part II of this paper.

Formalism

Let 'i' denote numbered interaction taking place between the variables representing the subsystems (j) of markets, finance and society.

Integration between the subsystems in respect of their interactive knowledge formation that is induced in the variables causing complementarities between these variables is denoted by $\cap_j$. The interaction and integration are together written as $\cup_i \cap_j$.. The preferences underlying the knowledge-flows (θ) formed by discourse and participation between agents and variables, is denoted by $\{\succeq_{ij}(\theta)\}$. Every Islamic institution, such as the Islamic bank, further overarched by diverse echelons of such institutions, has discursive bodies that consciously discourse on the issues at hand. An important decision-making body for the development of microenterprise and micro-financing within the gamut of market choices and social choices is the institutional networked body shown in Figure 1 below. In the Islamic case such a discursive decision-making body is called the shura.

The aggregate preferences of such institutional (subsystemic) preferences are denoted by the interactive-integrative bundle, $\{\geq(\theta)\} = \{\cup_i \cap_j \{\geq_{ij}(\theta)\}\}$, i = 1,2,…n numbered interactions on issues. j = 1,2,..,m are numbered systems each represented by its variables. Integration in the interactive phases occurs intra- and inter- systems. This is denoted by, $\cap_j$, j = 1,2,…m. Most critically, the knowledge-flow variable θ is derived epistemologically from the Qur'an and the Sunnah (Prophetic guidance). That is $\theta \in \Omega\{$**Q**ur'an, **S**unnah$\}$ denotes the knowledge-flow premised on the episteme of unity of knowledge. Ω comprises the universal space of oneness of the divine law, which is treated as super-cardinal topology (Rucker, 1983). Q denotes the *Qur'anic* knowledge space of the divine law. S denotes the *Sunnah* (Prophetic practices and sayings) of the Prophet Muhammad as carrier of the divine law into the functional ontological space of the world-system. Such a topological mapping well-defines the laws and states of the constructed interactive and integrative system (i,j). Such a complemented system is represented by the bundle $\{\theta,\mathbf{x}(\theta);\geq(\theta)\}$.

Thus, $\{\mathbf{x}_{ij}(\theta);(\geq_{ij}(\theta)\}$ denote socioeconomic variables as perceived by the ith level interactions in relation to integration among j interacting systems and their variables and agents, given there dynamic preferences. From these variables we generate via interaction and integration, the vector of variables, $\{\mathbf{x}(\theta)\}$, with $\theta \in \Omega$. Thereby, $\{\theta, \mathbf{x}(\theta)\}$are derived by conscious discourse in the learning processes of unity of knowledge. The *Qur'an* refers to such a learning process in unity of knowledge and its social construction of the world-system as the shura process. The specific case of a world-system to study is microenterprise development embedded in the interactive, integrating and evolutionary learning processes of sustainability across markets, finance, and society.

At any particular process of learning in this way, the corresponding wellbeing function of unity of knowledge and the world-system -- in our case the microenterprise -- is estimated. Estimation is the reflection of results on the state of the world-system as it prevails at any duration of time. Estimation is then made to lead into simulation by means of changes in the estimated coefficients to generate better degrees of unity between the system-variables.

Let the wellbeing function as the objective criterion of the learning process in unity of knowledge and the reconstruction of the unified (participatory, complementary) world-system be denoted by $W(\mathbf{x}(\theta))$. The wellbeing function is evaluated in its positivistic form for the prevailing socioeconomic case, by means of estimation. The same wellbeing function is re-evaluated by simulation over the vector $\mathbf{x}(\theta)$ to provide a discursively set desired social transformation of the prevalent socioeconomic case.

Wellbeing evaluation (estimation or simulation) is carried out subject to circular causation between the elements of $\mathbf{x}(\theta)$. Values for the knowledge-flow denoted by θ-variable at any given level of the learning process are generated as graded levels of ordinal values in reference to the ascending or descending values of the socioeconomic variable-values (see Table 4). The final constructed θ-values are the averages of various θ-values across their columns as they appear in respect of the socioeconomic, policy and control variables (see Figure 1). The spread of all such variables could be of the time-series or cross-sectional nature.

Following such a complete interactive and integrative evaluation of the wellbeing function in any particular learning process (intertemporal or cross-sectional) involving $\{\theta,\mathbf{x}(\theta)\}$, a new process evolves. Now new emergent phases of learning arise and lead to new social reconstructions. Such a phase of the learning-process from one particular stage to another and so on in continuum is referred to as the evolutionary learning process. The entire learning process in unity of knowledge and the unity of the world-system, in our case of microenterprise in organic relationship with market, finance and society and in reference to $\theta \in \Omega = (Q,S)$, is thus referred to as the **I**nteractive, **I**ntegrative, **E**volutionary (**IIE**) learning process of unity of knowledge and the constructed world-system.

The objective criterion of grassroots development is now given by,

$$\text{Simulate}_{\{\theta,x(\theta)\}} [W(\theta) = W(\mathbf{x}(\theta))] \quad (1)$$

$$\text{Subject to,} \quad Z(\theta) = f_k(\mathbf{x}(\theta) \mid Z(\theta)). \quad (2)$$

The equations in expression (2) mean that each of the knowledge-induced variables, Z(θ), in the vector $\mathbf{x}(\theta)$, is related with the other variables of the vector and the knowledge-flow variable, θ.

Finally, there is the ethical learning parameter θ denoting the degree of unity of knowledge in the system of relations between the variables. The corresponding equation is.

$$\theta = g(\mathbf{x}(\theta)), \quad (3)$$

θ-values so generated by evaluation in equation (3) using regression methods and other more sophisticated methods, is a monotonic positive transformation of $W(\mathbf{x}(\theta))$. Hence, it suffices to 'estimate' followed by 'simulation' of the θ-function in terms of the $\mathbf{x}(\theta)$-vector of variables. Such a

'simulated' versus 'estimated' θ-function turns out to have a monotonic relationship with W(**x**(θ)). Hence empirically, the θ-function is taken as a proxy of the wellbeing function.

In the above institutional framework, a microenterprise is owned and run by members of the grassroots. Such grassroots comprise the poor, and all those who sympathize with them at the microenterprise level. In such a milieu of the grassroots with microenterprises, microenterprise financial shares are purchased or vouchers are floated for their holding by the poor and all categories of shareholders. There is no need for collateral except that the participants share in the cost and profits of the microenterprise by means of their effort (time given to work) and future accrued values of financial returns. The share-value is retired by paying off the purchase value of the shares out of the future accrued returns. Shareholders are thereby also stakeholders. In the microenterprise, stakeholders are simultaneously decision-makers and trainees in the human resource development (HRD) department of the microenterprise. This function is explained below.

The principal philosophy of HRD-department is to inculcate consciousness regarding objective participation and the use of equipment and methods required for productive work and market access. The focus on HRD is also for generating income and enabling participation in the most comprehensive ways that the mutual enterprise comprising Islamic banks, microenterprises and rich and poor shareholders and community can develop through the epistemology of unity of knowledge and its social reconstruction. With progressive knowledge formation, the stakeholders together manage the microenterprise at every echelon and level of progress in it in graduated stages.

Various variables can now be identified. Examples are of marketing vector, say, $\mathbf{x}_M(\theta)$ in relation to appropriately linked markets for the goods and instruments on which the microenterprise can survive. Furthermore, the researchers, engineers, development planners and institutional organizational experts would contribute my way of innovative methods and knowledge to the marketing, economic, financial and developmental variables in the light of the IIE-learning process methodology that we have explained above. Such a variable is a technological change variable, which feeds into and is subsequently sustained by the methodological worldview generated through HRD..

Market-wide we identify the consumption, production, and distribution variables of basic needs. Society thereby rationalizes the benefits of the knowledge-induced general equilibrium system that can be established by a microentrepreneurial dynamic basic-needs approach to development and human fulfillment at the level of interactive systems made up of markets, finance and society at large (Kirzner 1997).

General equilibrium system model of the microenterprise grassroots

Let the set of variables comprise the vector **x**(θ). These variables also include the policy instruments, such as joint ventures, equity participation, profit-sharing, trade financing, interest-free trade-related financing instruments, and cooperative businesses strategies. All of these variables are signals of promoting participatory development enterprises. Such policy-strategy variables are included in the **x**(θ).

The strategy vector reflects the degree of effectiveness of financial organization, such as the Islamic bank and microenterprise along with microcredit. One of the principal strategic tasks of the lender institution is to make the internal financing of microenterprise self-reliant. Thereby retained earnings of microenterprise combined with residual Islamic bank interest-free loan (*qard-hassana*) are targeted, rather than subjecting the microenterprise to the strictures of financial collateral, as are found in the case of conventional banks and the deeply interest-financing aspect of Grameen Bank and its replications. Retained-earnings are the result of shareholding and income generation that arise from the sustainability of microenterprises. Retained earnings can save microenterprises from the vagaries of uncertain macroeconomic environment in times of economic and financial downturns.

In terms of policy variables, the same set of economic policy instruments would apply. Besides, risk-diversification is vigorously pursued in combination with product-diversification as rendered by the productive economic operations. Risk- and product- diversifications are complementary consequences. One reinforces the other through the principle of complementarities between the diverse number of possibilities that knowledge-induction of socioeconomic possibilities brings about.

Following are the usual economic and financial instruments: equity participation and profit-sharing (*musharakah*, *mudarabah*, respectively), cost-plus pricing particularly in foreign trade financing (*murabaha*, *bay muajjal*), unit trust (*amanah saham*), wealth taxation for meeting charitable ends (*zakah*), mutual insurance (*takaful*), and a voucher-system to enable microenterprises to obtain collateral-free loans on equal-treatment basis. These and similar financial and economic instruments can be combined to yield financial indexes.

Thus by means of the underlying participatory context of these instruments and their real sectoral linkages that they generate, particularly in a dynamic basic-needs development regime, these instruments realize risk- and product- diversifications as two complementary consequences. In the macroeconomic sense, there are national economic effects transmitted by the changes that these instruments bring about with respect to the relationships between money, finance, trade and real sectoral activities (Choudhury 1998).

The learning process, causing sustainability by sectoral linkages and institutional networking of microenterprises with Islamic banks, community and the rich and poor shareholders, generates the interactive-integrative preferences, as referred to earlier. That is, the aggregate preferences in such a case of general-system interrelations is denoted by $\{\succeq(\theta)\}_s = \cup_i \cap_j \{\succeq_{ij}(\theta)\}_s$, s = 1,2,… . In the institutional framework of cooperative mechanism interconnecting the grassroots (microenterprises and community) with Islamic banks and their shareholders, the aggregation of interactive-integrative preferences are formed by discourse across the preferences of all such role-players, the aggregate preferences of the financial system, all the way up to the Managing Executive Council level (the institutional *shura*) that guides the development financing decision-making.

Along with such an aggregation dynamics of preferences there also comes about the simultaneous aggregation of socioeconomic variables through the discursive process. Thus, $\cup_i \cap_j \{\mathbf{x}_{ij}(\succeq_{ij}(\theta)\}_s = \mathbf{x}_s\{\succeq(\theta)\}$, s = 1,2,… including in it the knowledge-induced policy variables and control variables. The principle of complementarities, i.e. variable-specific, and thus entity-specific participation in the interactive-integrative dynamics, imply the existence of continuously recursive learning processes between the elements of the **x**-vectors. The microenterprise development episode is embedded in such a general-system model of circular causation relations.

The social wellbeing function as the grassroots evaluative objective criterion of the microenterprise development process is now shown to be the result of the complementarities gained among the knowledge-induced variables in terms of the underlying complementary preference formation and the limiting value of the knowledge-flow gained by discourse in the institutional general-system. The implications of the equations (1)-(3) taken up in their multi-equation details of circular causation relations is established by the general system.

III

IDENTIFYING THE PROBLEMS AND PROSPECTS OF MICROENTERPRISE DEVELOPMENT IN SUDAN ACCORDING TO THE THEORETICAL CONSTRUCT OF THE GENERAL-SYSTEM MODEL

Figure 1 identifies the various factors as problems and prospects in microenterprise development in Sudan (Ibrahim, 2003). The relations underlying these factors are then taken to explain how the general-system model of grassroots development with microenterprise and Islamic financing could be used if sufficient time-series data or cross-sectional data for different microenterprises in Sudan were available. Ibrahim studies the prospects and problems facing the following Islamic banks in Sudan: Islamic banks involved in Islamic financing of MEs in Sudan: Sudan Islamic Bank (SIB), Faisal Islamic Bank of Sudan (FIB), Islamic Co-operative Development Bank (ICDB), Nelein Industrial Development Bank Group (NIDBC), The Agricultural Bank of Sudan (ABS), Farmer's Bank (FB), Savings and Social Development Bank (SSDB).

The structure of financing of these banks is shown in Table 1. The various sectors of the MEs financed by selected Islamic banks in Sudan are also shown. The very high rates of return in the *murabaha*, *musharakah* and *mudarabah* financing in some cases are due to their calculation based on the growth of asset-value *including* direct financial returns. The direct financial returns are not calculated separately. Besides, the proportions of total financing done by these modes of financing are very small and for short time-periods. Under these conditions it is possible to record abnormally high rates of return on assets and direct financial profits with enterprise growth. It is possible that over the long run, the rates of return could stabilize downwards considerably.

Prospects and Problems

Islamic financing of MEs are based on a combination of primary instruments, *mudarabah* (profit and loss sharing), *musharakah* (joint-venture, equity participation), *murabaha* (hire-purchase with mark-up). But in Sudan, the major composition of the ME-financing is by *murabaha* and *musharakah*. The financing portfolio is thereby very narrow. This is contrary to the case of Islamic financing by means of a much diversified portfolio in Malaysia (Rosly, 2005).

1. Murabaha (M_3 denoting amount) is the principal form of financing because it is always profitable to the financier (Islamic banks) with the mark-up of

SIB
Productive families, small enterprises, crafts and informal sector activities
Murabaha *:* 20%

Musharaka*:* 74%
Mudaraba*:* 6%
(1993)
6% of total financing needs of
Tailoring, shoes soap-making, informal sector activities.

FIB
crafts and small producers and productive families
Murabaha over 90%
Of total financing in murabaha

Engineering workshops
machinery & equipments
transport vehicles
bakeries & spare parts

ICDB
productive families
crafts
(1991-93) murabaha & musharakah = 10%
oilmills, needle work
tailoring, soap,
grainmills, sweets

NIDBG
Productive families, small enterprises and crafts Murabaha 4.4% (1992)

Food products, tailoring, needlework, leatherwork, soap-making, building materials, engineering workshops, typing and other services

ABS
Productive families
small farming, other small enterprises
murabaha, musharakah
mudarabah = up to 6%

animal raising, poultry,
small flower nursery,
small-scale industries
foodstuff, soap-making
tailoring

FB
Productive families
crafts, small scale farming
Total financing -
5.4% – 6.5%
(1994-96)

poultry,
animal raising
coal production
professional,

SSDB Small producers
Musharaka 15.6%
Murabaha 60.8%
Others: 23.6%
(1995)
11.7% (1993)
18.8% (1994)
29.3% (up to August 1995)

Poultry, cows, sewing machines, oil production and other service activities

Source: Ibrahim (2003), with the permission of the editor Professor Wohlmuth (2003).

Table 1: Bank Target Group Major Modes of Finance: Percentage of finance (out of total finance) in Types of projects

around 15 per cent (2000-2001 in Sudan) and around 20 per cent (in the late nineties) on the hire-purchase of assets or equipments. This upfront loading by mark-up is outright promising to the financier who shows it as profit and premium for risk-taking. Consequently, *murabaha* yield-rate remains higher than the market interest rate. It is well-known that Islamic financing of all kinds is devoid of interest-based financing methods.

The structure of *murabaha* financing of Al-Girsh Productive Family Branch microenterprise in Sudan is shown in Table 2.

2. Musharakah (M_2 denoting amount) is also a frontrunner in Islamic financing of microenterprises in Sudan. Ibrahim (op cit) points out the prospects of *musharakah* in respect of four microenterprises in Table 3. The abnormally large value of profit rate is due to the *total* asset valuation since inception. The profit is not calculated solely on the basis of direct financial return.

In all Islamic financing modes there is no financial collateral linked to them. Partners in the venture share the risk and return with complete transparency and disclosure. This kind of participatory arrangement between partners needs a high degree of commitment and innovation in the cooperative enterprises.

Unless the financial portfolio is well diversified, good partnership governance cannot be injected into ME-operations for a sustainable time-period. Besides, the absence of regulatory control on the functioning of MEs renders their operations to market forces that may not be to the competitive advantage of MEs and their partners. A strict practice of surveillance of MEs is needed to secure Islamic financing yields in MEs.

Besides the above-mentioned problems and prospects of MEs in Sudan, there are other ones. MEs show weak sectoral linkages, thus foreboding on weak production and risk diversifications. MEs are particularly disadvantaged by their high start-up cost of financing, management cost, and lack of technical expertise.

Central Bank of Sudan regulatory practice has not been conducive for MEs as borrowers. The Central

Bank of Sudan clamped a minimum of 15 per cent mark-up on the hire-purchase of *murabaha* during 2000-2001. During the nineties this used to be 20 per cent. With the implementation of Basle II capital adequacy requirement the mark-up is expected to be higher in the future.

There ought to be also fair determination of *murabaha* mark-up, which at present benefits the financiers at the expense of the MEs. Redistribution can be done by financial compensation principle (charitable donations) or benefits-in-kind extended to the MEs on their production, costs and sales. HRD and cost control of MEs by technical assistance are other means of enabling the profitability and survival of MEs in the midst of market failures.

Poverty alleviation by means of MEs

The fact that the share of lending to MEs in Sudan based on Islamic modes of financing of the total financing is very low, these portions go to cover the management fees and transaction cost of the MEs. There is not much left after such deductions for Islamic banks to devote to poverty alleviation.

The better way of alleviating poverty, which happens to be 83 per cent of the total population in Sudan, is to restrict the poverty alleviation focus to absolute poverty only, and focus efforts on income-generating HRD linked to Islamic banks and MEs. In this way, both entitlement and empowerment of the poor will be addressed for their wellbeing.

Setting the Application of the General-System Model of Grassroots Development with MEs (Sudan)

Legend for variables:

Murabaha = M1; Musharakah = M2; Mudarabah = M3 Shares (%) = Sh; Total Finance = F; Total Cost = C; Rates of return = R; Poverty alleviation = Pv; Income generation = Y; Investment = I; Profits = π; ME-size = Sz; Entitlement = En; Empowerment = Em; Education = HRD; Risk/Return = Rr; Wellbeing = W; Regulatory policies = Rg (mark-up, surveillance; technical assistance, compensation principle). These variables are shown below in respect to sectoral disaggregation denoted by 's' in the sense as pointed out in Tables 1-3.

The above-mentioned variables are set up in Figure 1 to bring out their interrelations as required by the general-system estimation and simulation model for generating predictor values of estimated variables, thus revising coefficients and indicating prospects of constructive change with related policy-making.

Figure 1 is designed in response to the section on Prospects and Problems. The nature of relations of the variables to the total wellbeing of MEs is shown by the signs attached to the variables. These expected signs will become instrumental in the regression system, firstly for 'estimation' in the actual state of the variables relating to the MEs.

Amount in thousands Sudanese pounds. (LS).

Description Amount:	**Total Finance** 500
***Murabaha* period:**	Three Months
***Murabaha* profit margin (profit):**	12% per month (60)
Bank's selling price:	560
Grace period:	Two Months
First installment (15%):	84
Other installments:	476 (i.e 158.66 per month)*
Bank's profit (for three months):	60
Guarantees:	Post dated checks
Method of payments:	Equal monthly installments

The exchange rate is US$ 1 = LS 530 (April 1995).

*The partner also pays 2% of the total finance as Finance Tax, in addition to stamp duties and other finance commissions.

Source: Ibrahim (op cit); with the permission of the editor Professor Wohlmuth (2003).

Table 2: Example of *Murabaha* on Soap Venture (Sudanese Islamic Bank, al-Girsh Productive Family Branch)

Description Projects:	**Project 1 Bread Making**	**Project2 Flower nursing**	**Project 3 Coffee shop**	**Project 4 Medical lab**
Duration of *musharaka*	One week	One month	Four months	One month
Date of *musharaka*	(September, 1995)	(January, 1996)	(December, 1995)	(1996)
Volume of *musharaka*	29,295	200,000	1,000,000	1,000,000
Bank contribution	75%	50%	50%	14%
Partner contribution	25%	50%	50%	86%
Bank's share in management	0%	0%	1.2%	5%
Partner's share in management	30%	60%	87.7%	25%
Bank's share in total profit	52.5%	20%	6.75%	14.8%
Partner's share in total profit	47.5%	80%	93.25%	85.2%
Monthly rates of return:				
Bank	122%	20%	6%	5.2%
Partner	325.3%	80%	84%	6.8%
Average	223.7%	50%	45%	6%

Source, Ibrahim (op cit); with the permission of the editor Professor Wohlmuth (2003).

Table 3: Rates of Return on Investment by Sizes Enterprise (Sudanese Islamic Bank)

Secondly, the coefficients for the adverse signs of the relations could be changed appropriately to imply a better set of signed-responses between the variables for the MEs. The case of 'simulation' would reflect predictor values for all the kinds of variables, namely market variables, policy changes and effects of the control variables as shown in Figure 1 and above.

The **x**(θ)-vector can thus be identified into its market, finance, policy, control and social components. These component variables are then interrelated through circular causation relations between them while responding to the signed coefficients for improvement of the inter-variable complementary relations in the light of a better degree of organic unity of knowledge between them. The treatment of MEs in Sudan in reference to their prospects and problems are thus studied in the context of the general-system model.

The Ethical Evaluation of the ME-System in Sudan by means of Circular Causation Relations of the General-System Model

We refer here to the circular causation relations given by the system comprising equations (1)-(2) of the general-system model in the context of the signs of the coefficients expected in the case of these equations, if they were actually estimated with data on MEs and Islamic bank financing for Sudan. Besides, the wellbeing function W(**x**(θ)), which can be approximated by the estimated form of the θ-function due to the positive monotonic relationship between the two indexes, gives the trajectory of learning process in relationship to the 'estimated' and 'simulated' **x**(θ)-variables for IIE-learning processes.

For the case of MEs in Sudan according to the expected coefficients signs given in Figure 1, the complete system of circular causation relations (1) and (2) is given by the following equations. The components of **x**-vector have been defined in Figure 1.

$$x1 = f1(x2,x3,x4)[\theta] \quad (4)$$
$$x2 = f2(x1,x3,x4)[\theta] \quad (5)$$
$$x3 = f3(x1,x2,x4)[\theta] \quad (6)$$
$$x4 = f4(x1,x2,x3)[\theta] \quad (7)$$

Either if these equations are expressed in linear or log-linear forms in the **x**(θ)-vector, the coefficients will acquire their expected signs as shown in Figure 1 in reference to the prospects and problems of MEs in Sudan, the Islamic financing instruments, and their sectoral disaggregation.

For instance, take the critical case of the sectoral (as named in the section on Prospects and Problems) relations of the MEs in Sudan. The sign (±) of the interrelationship between sectoral output implies that there might exist competition and marginal substitution in outputs between these sectors. Such a case of production menu is harmful for the survival of the MEs. Contrarily, in the interest of generating complementarities between the outputs, simulative changes are required to turn the marginal substitution situation between outputs into sectoral linkages of the positive type. This kind of social transformation of ME-production relationship can be actualized by the free flow of resources between the tradable financing instruments (M1, M2, M3), between projects, across various sectors, and by diversifying the financial portfolio. Presently, the financing portfolio of MEs by Islamic banks in Sudan is made up of *murabaha* and *musharakah* (Ibrahim, 2006). In none of these cases an enabling fair contract in financing can be found. Improving the networking between MEs and Islamic financing outlets by universalizing the decision-making in the interactive, integrative and evolutionary framework would be an effective way. For actualizing this, HRD could be an effective policy variable to tap into.

Integrating the MEs and Islamic development financing approach of poverty alleviation with the national development plans would make the Central Bank and the Government Economic and Social Development Planning Departments to activate their regulatory policies in the direction of HRD. The Accelerated Microenterprise Advancement Project of USAID (AMAP) focus and strategies are indeed in this direction. AMAP states:

Technical Assistance to Integrate Microenterprise into Broader Development Initiatives:
Numerous linkages exist between microenterprise development and broader development initiatives. Through AMAP, missions can access technical assistance in designing programs to offer a range of financial and business development services to support economic growth and poverty alleviation through microenterprise and small business activities that are integrated in broader programs.

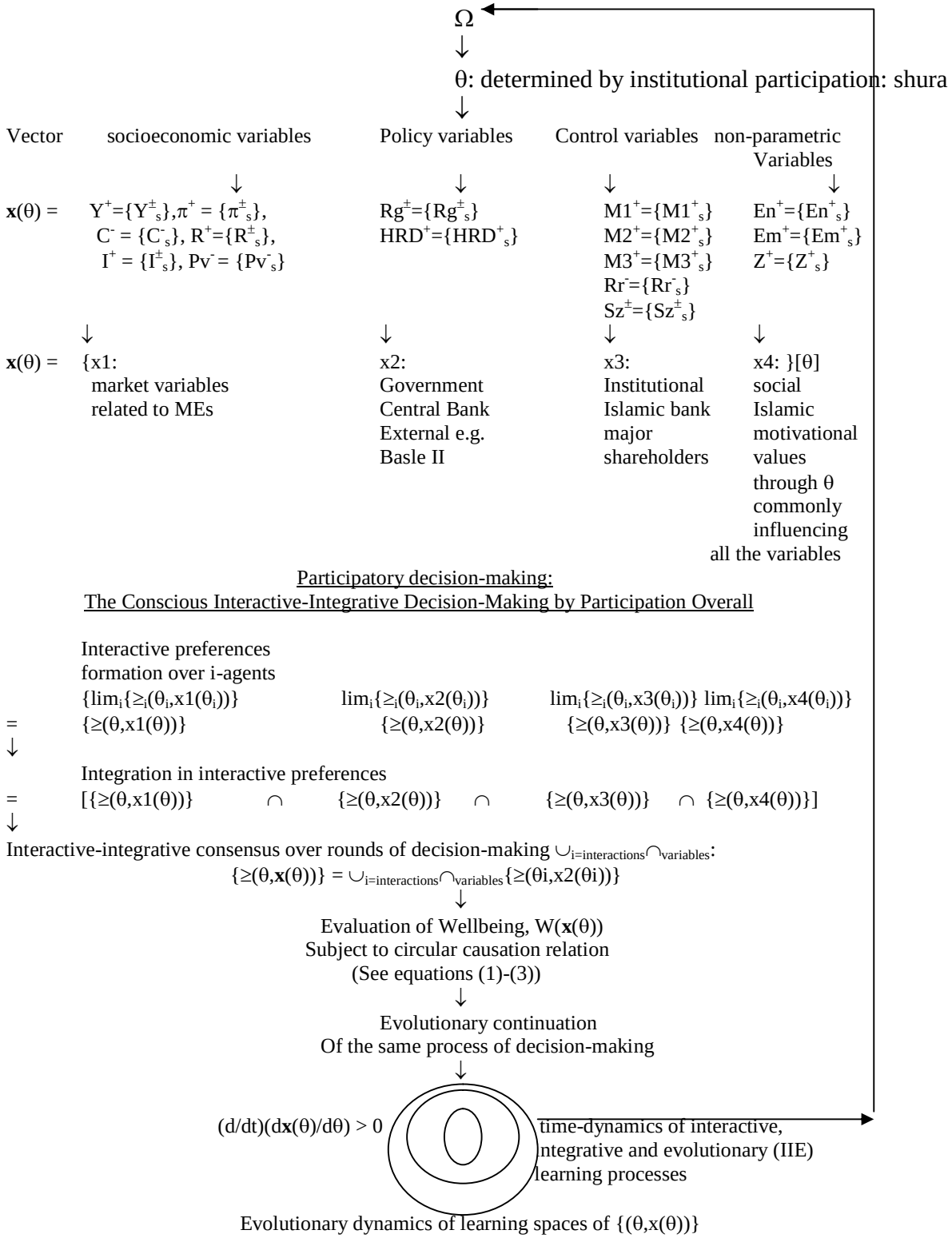

Figure 1: The general-system of interrelations for sustainable development of MEs in Sudan

Along the same lines, the Norwegian Agency for Development Cooperation (NORAD, 2006) points out some of the problems faced by MEs in South Sudan in its report: (a)Lack of sources of credit and banking facilities; (b) Lack of skills, information and knowledge for business; (c) Inadequate access to infrastructure due to poor roads; (d) Inadequate means of transport to sources of goods; (e) Other needs included poor and inadequate business approach, practices and organization, negative competition among traders, exploitation of small traders by the bigger ones, heavy taxation and levies by local authority when traders are on transit from sources of goods. The evaluation found that the programme addresses real needs in an appropriate size of a community for the pilot stage.

The above-mentioned problems of MEs in Sudan point out the need for Government and institutional policy actions and activation of the control variables as shown in Figure 1 for the benefit of MEs in Sudan. Competition between MEs and their exploitation must be changed within a participatory development planning framework. Human resource development including management skill development to reduce transaction costs of starting up and sustaining MEs must be a critical factor of policy mechanism. Activation of financial resources through a pooled fund combination of *murabaha*, *musharakah* and *mudarabah* expanded into a larger diversified financial portfolio will realize production and risk and diversification (denoted by Rr in Figure 1). Integrating the MEs with the development plan would bring forth the application of various Government policy instruments, technical assistance, fair distribution of resources to MEs, their incubation as infant industry, and importantly a program of infrastructure development and HRD (Batbeck & Blackburn, 2008).

The Ethical Index of Participatory Development Applied to MEs in Sudan

It can be shown (Choudhury & Hossain, 2010) that if the equations (4-7) are selected in the log-linear form, then the ethical index corresponding to them takes the form,

$$\theta = A.\exp(\Sigma\alpha_i.x_i)[\theta] \qquad (8)$$

where A is a technologically induced coefficient. This along with the α_i coefficients are θ-induced. The expression (8) in the 'estimated' and'simulated' form is derived from a log-linear regression equation. The 'estimated' and 'simulated' values of θ-variables are obtained on a comparative basis of the actual and predictor values of the x-variables.

Table 4 shows the method of so generating the θ-values.

In the case of MEs in Sudan having sectoral and portfolio diversification problem, which are represented within x1 in Figure 1, the highest value of x1 (and its disaggregation) would yield the highest θ-assigned value, say by a maximum rank of 10. The rest of the θ-assigned values are generated in a descending sequence by proportionate distribution in respect to socioeconomic variables that are in the model. Importantly, discussion among the shura members is desired along with ordinal quantification for choosing the distributed θ-assigned values. Such an institutional interface linked with quantification in θ-assignment reflects the appropriateness of the θ-assignment process in cognizance of constraints that might exist in resource availability and opportunities to expand functions.

For instance, in the case of MEs in Sudan, portfolio diversification would be limited by the availability of management skills and resource availability of Islamic financing other than *murabaha* and *musharakah*. Likewise, resource constraint would not allow any desired level of sectoral diversification in the Sudan case of MEs. These realities were noted under the section, Prospects and Problems. Sudan Consortium (2006) has pointed out some of these pro-poverty alleviation measures for Sudan. According to Sudan Consortium, important focus ought to be placed on increased development financing, which is also the broad field of Islamic financing in microenterprises. It also points out the need for resource development and mobilization in the face of fiscal inappaorpriateness of the Government of Sudan. There is also the need for assuaging the high management financing problems. All of these factors are underpinned most importantly by the HRD problem of grassroots development in Sudan. Thus the inferences surmised to arise from a possible estimation of the general-system model for MEs in Sudan are borne out by the report of the Sudan Consortium.

Now Table 4 is generated completely to yield the log-linear estimate followed by simulation of the ethical index. The 'simulated' predictor values of x-variables are derived from the simulated circular causation equations (4-7).

Time	x1	x2	x3	x4	θ1	θ2	θ3	θ4	Avgθ
1	x11	x12	x13	x14	θ11	θ12	θ13	θ14	Avgθ1=Σθ1i/4
2	x21	x22	x23	x24	θ21	θ22	θ23	θ24	Avgθ2=Σθ2i/4
……									
T	xT1	xT2	xT3	xT4	θT1	θT2	θT3	θT4	AvgθT=ΣθTi/4

Table 4: Generating θ-values in Reference to x-Values: Implications for Sudan MEs

IV

SOME STRATEGIES AND MODES OF DEVELOPING MICROENTERPRISES

1. Voucher System: a Policy Application Relating MEs to Poverty Alleviation

Of special note to take in the grassroots development general-system model is the voucher system. The voucher system comprises microcredit for enabling all recognized microenterprises to obtain collateral-free financing from Islamic banks according to needs. The voucher system works by way of the poor holding a certificate of claim on the microenterprise and in the joint-venture that can be enabled by co-financing by Islamic banks and shareholders to generate future asset-earnings. The resulting dividends are shared by designated proportionate shares. The earning flows to microenterprises and the very poor shareholders can be topped up with charitable distribution of dividends by rich shareholders and Islamic banks. The money-less and the asset-less participants in the voucher system are thus entitled to buy shares with the promise to pay back the face value of the share from their future earnings when these come about. The face-value of the share 'sold' to the very poor shareholders would thus be deducted from their future earnings from the share as debt capital is retired. In the literature on HRD, Blaug (1967) promoted educational vouchers as a universal educational good for claim by all who seek education.

A characteristic voucher of debt-sharing in a microenterprise sold to the very poor

A characteristic voucher-system certificate of a microenterprise 'sold' in interest-free debt to the very poor can be exemplified as follows:

MICROENTERPRISE SHARES/VOUCHER, COMPANY NAME:
NAME OF SHAREHOLDER: KIND OF SHARE (IF SPECIFIED BY FINANCING INSTRUMENT):
Unit Value of Share (quoted periodically): Number of Shares:
Face Value: Yield:
Issue Date: Maturity Date:
Short Run:
Long Run:
Options Available on Maturity:
Options
Financial Index
ENTITLEMENT STATEMENT

(This certificate of shareholding and stakeholding of the (instrument) kind entitles)

NAME:

To proportionate joint stock/participatory privileges in ownership, decision-making, voting, human resource development opportunities and graduated promotions within the cooperative mechanism of the microenterprise.

MEMORANDUM:
Information on period-wise unit value, risk, portfolio composition of stocks and distribution of dividends net of cost of operations and retained earnings will be publicly posted. Options for investments and of all meetings will be announced.

Signatures (Dated): Shareholder
President, Chairman of *Shura*

The end-result of such a financial institutional arrangement is to increase investments in microenterprise by the cooperation of the community, the poor, the shareholders, and the Islamic banks. The shares sold to the poor and destitute are based on deferred payments, promising them dividend distribution net of pay-back of the share value at inception. The net share-value can be topped up with charitable donations from the dividends of Islamic banks and rich shareholders. In Islam there is the example of the mandatory take on wealth of the rich for amelioration of the poor called *zakat* and *sadaqah*. Productive enterprise in such donations is encouraged. The poor and the microenterprises thus become enabled by their capability to function on a sustainable basis. This kind of development relationship raises the entitlement and empowerment of all participants in the grassroots development enterprises by way of Islamic financing (Choudhury, 1997). An example of such an institutional program is UCEP in Bangladesh, referred to earlier. The strategic goal in such a cooperative mechanism of vouchers is to control the real rate of returns of the microenterprise joint-venture shareholding at a level higher than the real interest rates at any period of time. The higher real rates of returns as a sign of productivity also reflect productive participation of microenterprises in development. Higher rates of returns also dispel the irrational allurement of savers for interest rates. By further extension of this kind of development participation arrangement of microentrepreneurial dynamics, a prospect of interlinked Islamic markets can be established nationally and internationally.

2. The interrelationship between HRD and managerial executive council (*shura*)

In the participatory grassroots development with prospects of sustainability as by learning processes explained in the general-system model, the Human Resource Development focus (HRD) is critical. The HRD department becomes the nerve center of all the other departments. By virtue of learning on unifying system of linkages as the sign of organic unity of knowledge and the world-system of microenterprise so generated through Islamic financing outlets, HRD promotes developing of resources for generating wide systems of linkages involving markets, finance, and society. Instructions in the HRD would be launched primarily by representatives from the departments of the microenterprise institution established by a cooperative mechanism of Government, Islamic banks, private and public sectors (Choudhury & Harahap, 2009). One should think of a twice-a-week instruction on basics, three days of on-the-job training, and one day of practical training on technological update. An example of this kind of HRD function is found in Bangladesh Agricultural and Rural Development (BARD). The course materials for HRD will be developed internally in view of the needs of various departments. The program should be so developed as to make the post-training diploma of the HRD well recognized by the educational system.

The HRD-department will look after the needs of training and education of all the departments of the microenterprise institute in accordance with the Islamic model of organic unity of knowledge at the core and its application to the social reconstruction of the market, finance and social interrelations, as explained earlier in the generic participatory development financing model of the general-system type. The rest of the departments in the microenterprise and the Islamic banks will turn around the knowledge-induced training and practice according to their specific functions but tied together by the unified linkages between them. The *Shura* Council of the microenterprise is the parallel most important motivator of knowledge and dynamics in the microenterprise with the HRD department. The *shura* belongs to the Managerial Executive Council and comprises members from the other echelons of *shuras* (specific to departments) In this way, the experience and responsibility of the graduation process of *shura* members enables the *Shura* Council to be trusted in making collective decision-making with the participation of the departments and the rich and poor shareholders from where the *shura* members are inducted. The chairman of the *Shura* Council guides the meeting but has no voting power. The trustees of such a Managerial Executive Council (i.e. of the microenterprise and the Islamic banks) do not have any voting powers. A bias in decision-making is thus removed.

3. Financing of microenterprise in the Islamic way

The establishment of microenterprises, whose model has been formalized as a general-system in this paper can be initiated with a pool of community-based charitable funds (*zakat* and *sadaqat* in the *Qur'an*). These funds along with additional ones can be paid into the pool of funds by community shares for microenterprise development of the very poor for the objective of poverty alleviation. Also belonging to the pool of funds would be shares bought in the microenterprises by the rich and poor shareholders and Islamic banks nationally and internationally. Funds can be made out by non-collateral endowment funds (*waqf*). An example of such funds is Amanah Saham in Malaysia. These are unit trust funds in which the poor and the rich can purchase unit shares for the amelioration of the poor.

Financing of the complex of HRD and related departments for sustaining the institution of microenterprise development by participatory

development financing will come from joint financing via shareholding by Islamic banks, major shareholders, community, and the rich and poor shareholders in microenterprises (Choudhury, Hossain and Solaiman, 2008). The microenterprises would be established in the rural sector in the first instant. This would subsequently expand into better functional connection with the urban sector.

A quantitative example of financing a microenterprise

Here is an example of a microenterprise financing mode that can be used for the case of African Islamic bank financing:

A Financing Mode of Microenterprise

Unit share value (rural sector) =	USD 1.00
x 5000 shareholders (estimate) = total share value =	USD 5000
+ Unit share value (production projects) =	USD 2.00
x 5000 shareholders (estimate) =	USD 15,000
+ Endowment & grants (est. USD15,000) =	USD 30,000
+ major shareholders with equal voting powers with the rest =	USD 40,000
Total initial amount =	USD 90,000
+ total at the end of initial year yield on shares (10% estimate) =	USD 99,000
+ Islamic *zakah* and *sadaqah* charity (estimate) =	USD100,000
Total at the end of initial year =	**USD199,000**
Less	
Salaries: 10 personnel x USD 100 x 12 months =	USD1,200
Projects will be generated by financial shares	
HRD cost. (loaned from Islamc banks)	USD 1000
Net retained earnings net of dividends (10%) in the initial year =	USD 19,680

The institute of microenterprise development would be housed in a property contributed jointly by the community, Islamic banks, and a university where a program on human resource development for microenterprise can be established.

CONCLUSION

This paper has outlined a unique philosophy of participatory microenterprise development using the Islamic general-system model and development financing instruments. The general-system model, which feeds in the worldview of the Islamic development process based on organic unity of knowledge and its constructed world-system is activated by a continuously discursive learning process of interactions, integration and creative evolution of knowledge-flows and their induction of the world-system comprising the organic interrelationships between markets, finance, and society. In such a learning-process methodology, sustainability of grassroots development is explained by way of discursive mechanism with consciousness as of shared resources, equitable distribution of wealth and opportunities, poverty alleviation, entitlement and empowerment formation. This kind of organization of participatory development comprises the institution of the shura.

The shari'ah-compliant institutional, economic and financial instruments identify such market, financial and social possibilities in a dynamic basic-needs human fulfillment approach to development. The attainment of social wellbeing objective becomes the principal one in this kind of a general-system perspective of participatory development for microenterprise, given its circular causation relations signifying complementarities and participative nature of the selected variables and institutional objectives.

Because of the intensely ideological framework of the microenterprise for meeting community-based social objectives and generating productivity and efficiency simultaneously along with distributive equity in an economy-wide sense, there remains the unfailing need for high moral integrity and comprehensive learning among the participants. The impetus gained must then be transmitted to the grassroots in its most comprehensive of ways.

A mechanism for establishing the participatory development synergy between markets, finance and society for microenterprises with the influence of Islamic banks and major shareholders and the community at large has been explained in this paper. Such mechanisms can be exemplified by some existing cases of microenterprises and their subsequent growth into global corporations. Grassroots development of microenterprises for poverty alleviation is UCEP and BARD in Bangladesh; and Amanah Ikhtiar in Malaysia.

A success story of a microenterprise that expanded its growth into becoming a global corporation is the Spanish Mondragon Industrial Cooperative (Lutz, 1997). It is found that focus on HRD has always been at the center of all such major grassroots movements and organizations. An example of this is the Antigonish Movement of Nova Scotia, Canada (Mufeedhul Choudhury, 2005).

For the Islamic microenterprise model provided in this paper, knowledge-flow and its induction of microenterprise development is shown to be epistemological embedded in the objective, organization and functions of the Islamic bank, market, and societal interactions, integration and creative evolution through the action of shari'ah financing instruments.

The arguments and mechanisms pointed out in this paper in respect of a participatory general-system model of organic unification between markets, finance, and society can be effectively exported to the case of microenterprise development and poverty alleviation in Africa. Islamic banks along with their mobilization of funds from community, rich and poor shareholders, Islamic banks nationally and internationally, will then play catalytic functions in the grassroots development that Africa badly needs. We have brought out these points in reference to the general-system model in this paper in the context of problems and prospects of microenterprises in Sudan.

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