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**From the Selected Works of Md. Mahmudul Alam**

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2013

# Development Issues, Policies and Actions: Selected Recent Works on Malaysia and Bangladesh

Rafiqul Islam Molla  
Md. Wahid Murad  
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*Selected Recent Works on Malaysia and Bangladesh*

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## **Dedication**

*This book is dedicated to Professor Rafiqul Islam Molla's loving granddaughter and grandson **Anorah** and **Ashiq**, and the children of their generation.*

*Anorah Quuin Molla (born on December 12, 2011 at Houston, USA) is the granddaughter from his son Saiful Islam Molla. Khandaker Ashiqur Rahman (born on December 6, 2005 at Nagoya, Japan) is the grandson from his daughter Taslima Molla.*

The authors

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## Foreword

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Prof. Datuk Dr. Syed Othman Alhabshi

# Preface

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Development Issues, Policies and Actions is intended as a book of readings on development for the general readers and for the undergraduate and graduate students of development as a supplement to the text book on economic development. It is written with materials mostly taken from our recent research works on current development issues and policy actions in Malaysia and Bangladesh. As a result, we believe that the intended readers and students will find the materials fairly known and easier to read and comprehend.

To make the book more reader-friendly, we provided a comprehensive summary at the end of each essay. Readers who are time pressed but want to know the basic contents and the key messages of the essays at the shortest time at hand, can do so by reading the summaries of the essays.

An additional and **special feature of this book is that it emphasizes on the holistic and ethical aspects of development.** This aspect is least covered by most standard text books on the subject. In that sense this book will serve as a make up for the deficiencies of the text book materials in terms of ethical orientation, essence, and higher goals of development.

We gratefully acknowledge the generosity of the publishers and authors of all the research works from where the materials have been compiled for use in this book. Similarly we are profoundly thankful to all the scholars, particularly to Prof. Golam Dastagir of Jahangirnagar University, Dhaka, and Prof. Munir Quddus of Prairie View A&M University, Texas, for their critical comments on the draft of the book. Specially, we are profoundly thankful and grateful to Prof. Datuk Dr. Syed Othman Alhabshi for writing the scholarly foreword of this book. Finally, we remain thankful to Universiti Malaysia Perlis, Malaysia and the International Islamic University Chittagong, Bangladesh for jointly publishing this book.

The Authors

Dated: February, 2012

## List of Abbreviations

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ADF	Augmented Dickey-Fuller
AIC	Akaike Information Criterion
BATSA	Bangladesh Association for Total Social Advancement
BEPZA	Bangladesh EPZ Authority
BIDS	Bangladesh Institute for Development Studies
BRAC	Bangladesh Rural Advancement Committee
BSCIC	Bangladesh Small and Cottage Industries Corporation
ECER	East Coast Economic Region
EDC	Economic Development Corridors
EPF	Export Processing Factory
EPZ	Export Processing Zone
ERSS	Economic Region of Saba and Sarawak
EZ	Enterprise Zone
FDI	Foreign Direct Investment
FIDA	Federal Industrial Development Authority
FTZ	Free Trade Zone
GDP	Gross Domestic Product
GHG	Greenhouse gases
GLC	Government Linked Companies
GMO	Genetically Modified Organism
GNI	Gross National Income
IDR	Iskandar Development Region
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
LDC	Least Developed Country
MNC	Multinational Corporation
MRA	Microcredit Regulatory Authority
NCER	Northern Corridor Economic Region
NGO	Non-government Organizations
NIEO	New International Economic Order
OECD	Organisation for Economic Co-operation and Development
PKSF	Palli Karma-Sahayak Foundation
PPP	Public Private Partnership
R&D	Research and Development
SCORE	Sarawak Corridor of Renewable Energy
SDC	Sabah Development Corridor
SE	Social Enterprises
SEDC	State Economic Development Corporation
SEZ	Special Economic Zone
SOE	State Owned Enterprises
SZ	Specialized Zone
TI	Transparency International
UN	United Nations
USA	United States of America
WB	World Bank
WDI	World Development Indicator
WTO	World Trade Organization

# Chapter 1

## The Ethical and Holistic Nature of Development

Materials in this essay have been compiled from the following papers: i. Molla, R. I. and G. Dastagir (2011), “Faith-based Ethical Reform for Social Stability and Sustainable Development”, *Dialogue and Alliance*, Inter-religious Federation of World Peace, New York; ii. Molla, R. I. (2005), “Islamization: A project of reform movement under faith-based intellectualism and activism, *Euro-Asian Journal of Applied Sciences*, Cyprus; iii. Molla, R. I. (2008), “Islam-based Grassroots Institutions for Sustainable Integrated Rural Development: The Case of *Sheba Polly* in Bangladesh”, *Journal of Business and Behavioral Sciences*, USA.

Development is a Cultural and Ethical Construct and a model of material, moral and total wellbeing. Well-being of mankind is the sole purpose of the entire creation of Allah the Lord Almighty (Al-Quran: 14:32-33; 31:20). This divine scheme is a comprehensive welfare plan. It is a project of material, intellectual and spiritual betterment, a project of welfare here and the hereafter. It is a plan for world peace. However, it is left for mankind to actualize it through a strategy of balanced commitment to spiritual and worldly aspects of life. Wellbeing is more of a cultural and, thus, controversial phenomenon along the line of cultural, ideological and religious differences in measuring what is good and desirable, and bad and undesirable. The word ‘development’ is a most widely and frequently used term to mean many things to many individuals, societies, and peoples. It is perceived, meant, and described differently under different contexts by different people of different professional, economic, social, and cultural backgrounds. Therefore, both conceptually and operationally it is a multidimensional matter. In a simplistic manner, it can be described as improvement in the condition and level of living both materially and spiritually. It considers economic, social, institutional, cultural, and religious aspects of life as closely interrelated and inseparable elements of development. Each of these various aspects unilaterally is only a necessary but not sufficient condition of development. Economic development is only one important aspect of development. The non-economic and nonmaterial aspects are its other equally important components. Development therefore refers to simultaneously a material, moral, and spiritual advancement; it is a total wellbeing concept. In that sense it is equally a concern of industrialized rich nations where economic and material advancement have been attained, but spiritual and moral development are seriously lacking. From the perspective of Sen’s *capabilities approach* and *five opportunities* in social choice theory, development really refers to *a life we want to lead and the freedom we want to enjoy*. And similarly, economic development refers to, as a former minister of Uganda in mid-1970s stressed, *a means towards building the kind of society we want to build*. Therefore, it is seen ultimately rooted to values and ethics and, thus, fundamentally an ethical and cultural construct.

But unfortunately, development is commonly viewed as economic development which again is usually referred to mean economic growth. As a result, until recently it was viewed as a quantitative measure of betterment in life. However, now a days it is widely recognized as growth with equity – a qualitative measure with a human face. Economic development is considered as the base and trigger element for development. It is argued that through a spread effect on all the other aspects it creates total development. As a result, the emphasis is put on economic development with the purpose to help improve the material lives of people as the necessary first step towards total development. To an extent, at lower level of material life and at the initial stage of development, it may be true that economic development works as a trigger for development. But certainly after the take off, the non-economic (social and political) and nonmaterial (spiritual and moral) elements play the dominant and pivotal role in the process for a steady and sustainable development.

### **The Essence and Objectives of Development**

The concepts of development are subjective representing implicit as well as explicit value premises about desirable goals based on ideological and religious differences. Therefore, in respect of many of its details development is controversial. However, its essence, as Mahatma Gandhi observes, is the realization of the human material and spiritual potentials. It is uplifting of human beings in spiritual, material, and social spheres of life. For the overwhelming majority of the population it is beyond the betterment of material lives here. It is the wellbeing here and the hereafter.

Economic development as an independent goal is hardly recognized now a days by any of the ideological and religious camps. It is seen in its entirety to include the gamut of both material and spiritual aspects of human endeavors. In that sense, most of the economically advanced countries where a high degree of immorality and social degeneration exist will not pass as developed countries. The working goals of development are to achieve economic and social equality, the elimination of poverty, universal education, rising levels of living, national independence, political and economic participation, social mobility, religious freedom, grassroots democracy, self reliance, and personal fulfillment. All these goals are derived from subjective value judgments about what is good and desirable and what is not. Most of these are also found embodied in Sen's Five Opportunities for development of individual capabilities:

1. Social opportunity – enabling conditions for individuals through health, education, land reform, etc.
2. Political opportunity -political participation by all groups of people

3. Civil liberty - freedom of thinking and expression, freedom to religion, freedom to profession, etc.
4. Market opportunity for small businesses and product of developing economies.
5. Procedural opportunities - both private and public participations in economic activities.

An ‘ethical factor’, implicitly and explicitly guides the fulfillment of all these operational goals. This is fundamentally important because ethics epitomize the common values of a society and determine the preference structure of the members of that society; it controls and moderates the materialistic instinct of man (Naqvi pp18, 160). Therefore, ethical and cultural considerations should guide our understanding of development issues, construction of development theories, and development planning and actions. *Ethics could be faith-based or secular in nature*. However, in this chapter, our examination of relevant variables of development theories leads to the favourable argument for the faith-based ethical construct as the more dependable and workable guide for attainment of sustainable development for human societies.

### **Faith-based Ethical Reform for Social Stability and Sustainable Development**

We are living in what appears to be the age of ‘super-high technology’ where the next challenge for the scientists is believed to be, not just how fast objects could be moved, but how objects would be moved, not by other objects but *by just thinking about the objects*. Despite the amazing advancement of science and technology, our globe is facing multifaceted crises such as increased violence, intolerance, tension, alienation and agitation that seem to have no end. On one hand, we seem to be blessed with a world in which our knowledge in science, technology, economics, and politics stands superior to that of any ‘golden age’ of the past, on the other, our un-self-critical ultra-modern society faces unprecedented moral problems of life.

Our global village is suffering most from degradation of morality and disintegration of traditional values. Deplorably, knowledge seems to be divorced from values, as people are trying to gain great power without insight. Our existence is in jeopardy; humanity is at stake, the reason being more of moral crisis and spiritual confusion than political instability and economic recession. ‘A hungry man is an angry man’ type philosophy does not seem to apply in curbing tension and frustration among the youths, as we know aggression and arrogance, in reality, usually spring up more from the riches.

Moral decadence and corruption of various forms are the common features of individual and social behaviors in most societies and cultures in the world. If

Transparency International's (TI) reports are accepted at least as an indication of the nature of things, then the situation in most high- and low-income countries and cultures is very alarming. Finding solution to this problem is the cry of the day all over the world. As a result, we find almost everywhere a strong realization of the need for ethics-based knowledge as a means of lasting solution to that problem. But one of the tragic features of our present day education and research programs and policies is the stress on highly specific knowledge and skills, sidelining traditional values, religious morals and ethical principles. Ethical and moral orientations of the subject matters of studies are mostly absent from the academic curricula. There is therefore an urgent need for a proper revision of academic and research programs at universities and other institutions that would promote ethics-based knowledge and culture. Ethics shapes the behavior of individuals and society, and morality is the standard of measurement of that behavior. Therefore, morality is rooted in ethics, which is rooted to religious values. But morality and ethics are not always viewed from this religious perspective. These are also viewed from secular or universal (natural) perspective, particularly in cultures and societies that de-emphasize faith-based values. However, in this discourse we shall address ethics from its religious perspective to analyze how more studies and better understanding and practices of religion can improve our ethical and moral standards to substantially reduce corruption and immoral practices in the society. On issue of the epistemology of ethics we would like to focus on the nexus between secular and faith-based ethics and morals.

### **Crux of the Problem and Need for Ethical Reform**

Not the inter-faith conflict, but the clashes between divine values and secular values and between secular civilization and religious civilization seem to be the crux of the problem facing the human society in the present day world.

Since the 17th century, religion has lost its dominance and grip on the world order giving way to the rise and triumph of the secular culture and civilization. Religion has been pushed back to the backyard as an outdated guide to life. It has no relevance to the reality of modern society. With its popular intellectual and political appeals, the 'secular' was able to replace the 'sacred' in the world order, giving rise to conflict between atheistic civilization (of the West) and religious civilization (of the East) as reflected in Huntington's *Clash of Civilization* (1996). The secular order is primarily based on atheistic and materialistic humanism, which pursues the philosophy of 'survival of the fittest' with the value system that aims to maximize sensual pleasure, rejecting the role of conscious pursuits of higher goals of life. Where material gain and political power set the standard and tune of morality and ethics is considered as an obsolete concept having no appeal. The approach is managerial performance – 'do it, no matter how, but do it'. Having no care and respect for human values man is thus transformed into lower level animal. Thus

moral decadence, atrocities and oppression, social instability and disintegration, exploitation and injustice, etc., at individual and state levels, aided by scientific and material advancement without commitment seem to have become essential phenomena of the present day secularized world order characterized by drug and sexual abuses, promiscuity, homosexuality and aggression. Arnold Toynbee<sup>(1)</sup> described this human degradation and malaise and menace of secular world order as the sickness of modern society and sought solution through spiritual development based on religious foundations.

### **Epistemology of Ethics**

Though the terms ‘morality’ and ‘ethics’ are often used interchangeably, strictly speaking, they have different contextual connotations. The term ‘morality’ is used to mean moral standards and moral conduct while ‘ethics’ is used to mean the formal study of those standards and conduct. Moral philosophers have proposed a number of theories regarding the determination of standards of judging ‘right’ and ‘wrong’. Some of the major theories are: standard as law, standard as pleasure, standard as perfection, standard as determined by evolution, standard as given by intuition, standard as value, etc. Morality is an inner faculty like rationality and is contained in love of truth, beauty and goodness. Morality is derived from the sense of morality of the rational being with good intentions. Goodness is not a capacity or potentiality but an activity that can be good if it springs from rationality. A good man is the one who acts rightly and justly. More so, a just man is the one who possesses good conduct, which is again not a capacity but a habit or custom of voluntary actions. Morality therefore is not a principle but an action and history, where ethics is the principle of that act of morality. We, however, note that religion reinforces the ground of morality and reshapes our moral standard of conduct. Therefore, ethics is more deeply rooted to religion.

Philosophical ethics, or secular ethics, as is known in the West, is primarily a part of the quest for truth. Ethics aims at finding out the rightness and wrongness of the conduct of human beings living in societies; and conduct is a collective name for voluntary actions. The basic questions raised in ethics include: What does it mean to be right or wrong? How can one differentiate good from bad? Are morals objective or subjective? Are morals relative or universal?

### ***Religious and Non-religious Roots of Ethics***

The term stating the closest meaning of ethics is perhaps *justice with fairness*. In an analytical manner, we can identify morality as doing right thing while avoiding wrong doing, and find ethics as the guiding principles in determining what is right and what is wrong. This basic issue of right and wrong can be addressed by asking the questions *who are*

*we, how are we, and for what purpose are we?* Dependable answers to these basic philosophical questions cannot be found without support of religious worldviews of individuals. Setting up of these guiding principles (ethics) therefore, in turn, is tied up with religious worldview that serves as the lens through which all understanding and thinking of an individual (or society) can take place to the extent that human minds with different hierarchies of mental capacities can exhibit. Thus, we may argue that morality through ethics is ultimately rooted to religion. It may be regarded as the standard of measurement of achievements of religion.

Indeed, morality is linked to religion in many ways. But we may have different viewpoints in this regard. Some claim that religion is prior to morality, whereas others say the opposite. There are also striking claims that morality is independent of religions. Even some may go further and argue that religion obstructs human freedom and human development. However, modern philosophers such as Locke (1632 – 1704), Descartes (1596 – 1650), and Paley (1743 - 1805) hold that the source of all morals lies in the commandments and wills of God. They argue that although man is free, his will is not, for his will is determined by God's will. To be moral, man must follow God's commandments without any question. For persons who subscribe to religious morality, the rules are handed down to them from the Supreme Being, who makes them unbreakable and unquestionable. Immanuel Kant (1724 – 1804) holds that morality, which is the highest commandment of pure reason, leads individuals ultimately towards religious belief, 'through which it extends itself to the idea of a powerful Lawgiver, outside of mankind' (Kant, 1793, 3). Kant's theory of moral heteronomy was endorsed by James Martineau (1805 – 1900), John Stuart Mill (1806 – 1873), Herbert Spencer (1820 – 1903), and so on.

There is an influential philosophical tradition that maintains that ethics is an autonomous field of inquiry without any support of religion. It is argued that ethical judgments can be formulated independently of revealed religions and that humans can cultivate practical reason and wisdom and, by its application, achieve virtue and excellence. However, for secular thinkers, such as Jean-Paul Sartre (1905 – 1980), Nietzsche (1844 – 1900) and so on, the existence of an objective moral standard is not dependent on religious commitment, and the non-existence of God does not preclude the possibility of there being an objective standard on which to base moral judgments.

James Rachels (2002) in his doctrine of cultural relativism holds that moral codes are subjective and that there is no objective standard or universal truth in ethics, as the concept of morality differs from culture to culture. In his view, God's existence cannot be proved on the basis of morality and one who believes in God cannot be a free moral agent, for to believe in God is to obey the commands of God, ceasing his freedom of will.

Rousseau (1712 – 1778) in his *Social Contract* considers religion as an obstacle to mould good and honest citizens. Russell (1872 – 1970) in his *Why I am not a Christian*, goes several notches down and labels religion as the ‘dragon’ guarding at the door of golden age of mankind, just as Marx (1818 – 1883) supposes religion as the ‘opium’ of the poor. Furthermore, some philosophers argue that social justice can be established without religious influence and that religions are not prerequisites for an individual’s obligations and responsibilities toward others. In many cases, thus, people would find the source of morality outside of religion, such as the inherent value of all human beings. Thus, secular humanists claim that there is no need to derive morality from religious belief, because there are moral people who do not espouse a religious doctrine. For secular humanists, ethical conduct is, or should be, judged by critical reasoning and their goal is to develop autonomous and responsible individuals, capable of making their own choices in life based upon an understanding of human behavior. However, in an attempt to oppose the so called secularists’, the Pope Benedict XVI, in the homily he gave at the synod’s opening mass in St Peter’s Basilica in October 2005, asserts that when man makes himself the only master of the world and master of himself, justice cannot exist but arbitrariness, power, and interests rule; and so it is hypocritical to exclude religion from decision making in public life.

### **Faith-Based Ethical Reform Movement**

Humanity is now at the cross-road of secular (atheistic) and sacred (religious) approaches to civilization. Strategically, all believers are called upon to make the pattern of history (i.e. the world order) follow the revealed principles. All religious communities are under the sacred pledge of bidding the good and forbidding the evil. They cannot allow the world to fall in the hands of the ungodly. They are duty-bound to restore the lost unity of the nature and moral world. This call for ethical reformation of the social order is a movement, a call to all humans – come one come all – to join hands under the philosophy of cooperation to build knowledge, institutions, and a world order based on common eternal and universal values enshrined in major religions, particularly the revealed ones.

### ***Privileged Position and the Cutting Edge of Faith-based Ethics***

Major world religions inherently contain supernatural elements. It is this supernatural and divine reference that makes morality universal. Some thinkers tend to confine morality to a single domain, but we must not forget that religion has no reservation for any particular community or nation; it teaches and preaches the brotherhood and unity of man; its outlook is humanitarian. We argue for the necessity of the single God in religion, because if there is no such God each person must define ‘good’ and ‘bad’ in ways that will benefit him, as individuals do have radically different moral intuitions and notions of standards of

moral judgment. Morality, in that case, loses its universality, because if each person defines 'good' and 'bad' for himself or herself, there can be no objective moral standard, and we may turn to the Sophist ethical system of judging 'good' and 'bad' by the standard, 'man is a measure of all things'.

We feel the necessity of God for morality in the sense that since God is absolutely good, God's commandments serve as an objective and absolute standard of 'good' and 'bad'. God's goodness is manifested and based on good evidence, our purpose for living, scriptural data with clear directives to choose freely good from evils, guidance, messages with messengers, and the like. God made us free to exercise our freedom of will to make our moral life, for which we are judged as good or bad. We argue for the necessity of religion on the ground that morality may exist in a way without any support from a religion but that would be a different morality. In deed, the existence of God is 'a postulate of the useful if not of the necessary kind in ethics'. Moreover, the theists claim that humans possess a basic moral standard implanted by God. It is consistent with the basic innate moral principles and unchanging ethical codes applicable to all rational beings. However it may be argued that they do not contend that all moral decisions are drawn directly from men's innate moral understanding. But only general principles of morality are innate. Therefore, following these innate principles men must use reasons to arrive at specific moral decisions. Since humans are created as rational and free moral agents and they possess the power to conceive of alternate moral codes, it is imperative that they use this power of choice in making decisions. That is why we see some people appear to be more morally sensitive than others.

Religion not only gives objectivity to moral values, but also implies a certain metaphysical outlook. As religious people, we believe that 'the voice of conscience is the voice of God within us' and feel that 'there is in our human nature an urge towards what is higher and better which can never be explained in merely natural terms.' Thus, divine ethics reflects human ethics. In his *Wealth of Nations*, Adam Smith's theme that a 'sympathy faculty' exists side by side with the self-interest faculty in human nature is a reflection of this human ethics.

Religion covers a wide area of human conduct; for example, Islam, which is a complete code of life, tells us what is required, recommended, permitted, discouraged and forbidden. It affirms freedom of will of man. The object of moral judgment is not only end, but means, end, intention, and the result as well. God, who is essentially of ethical nature, is the necessary postulate for moral judgment. From this perspective, Islam, for example, subscribes to three categories of ethical concepts: those that refer to the ethical nature of God, such as 'merciful,' 'just,' 'benevolent,' etc., secondly, those that describe the basic attitudes of man towards God, and thirdly, those that refer to the principles and

rules of conduct regulating the ethical relations among individuals who belong to, and live within, the religious community as well as the international community that include all religious and non religious communities, on the basis of their humanity and will to peace alone (Izutsu, 1966, 17; Abu-Sulaiman, 1987).

In secular ethics, pleasure is desirable and the maxim is 'highest pleasure for the highest number of people'. On the contrary, religion attaches importance to peace more than pleasure. That is how we find Islam as a religion of moral law, Buddhism as an ethic of eight-fold path and compassion, Christianity as an ethic of love and brotherhood, and Judaism as an ethic of divine commandments. The list goes on. In fact, the origin and development of moral consciousness began in ancient Greece, India, China and Iran with primitive religious beliefs, myths, ancient religious scriptures, etc. Throughout the ancient and medieval periods, our ethical thinking was largely determined by moral traditions of Judaism, Christianity and Islam. But, in recent times, moral philosophers have tended to divorce moral virtues from religious traditions. They like to heavily rely on human critical thinking. However, it cannot be denied that our customs and conventions, out of which custom ethics arises, are influenced and shaped by religious morals. In fact, religions can and most of them actually have adopted customs, with necessary modifications in form and substance, into their ethics. Both Plato and Aristotle emphasized this custom ethics to form the social custom based on morality in a bid to purge human characters from evils. This view is widely accepted by John Dewey (1859 – 1952) in modern times.

Moral values are necessary conditions for any development—social, moral, economic and human. Social values are different in types and ends in accordance with the social status and structure. A rule may be highly regarded in a certain society, but at the same time, it may be bitterly deemed as harmful in another society. It is believed that moral codes vary considerably according to the conditions in which the operation is committed, and the society in which a certain group or community lives. Values—social, religious, moral—are at stake in the society especially in a developed country where people believe in uncommitted individual freedom without regard for religious virtues. Morality without subscription to religion, in that case, is likely to be antisocial, subjective, or promiscuous, as it leads to the breakdown of moral standards.

Social values can be viewed in terms of how much and what kind of freedom is provided with man and what laws are framed to protect the individuals and the society from moral breakdown. Laws have foundations on which they stand. It is widely argued that we need laws that are based on religious morals, since the purpose of law is to enforce moral and religious principles. Such laws, if adopted rightly, can lay the foundations of the society towards the right path or the path most people would expect to follow for a moral life. For example, many of our laws are based on the principle of

honesty and the value we place on this principle is very much influenced by our religions. A great advantage of these laws founded on religious ethics of humanitarianism advocated by major religions of the world are naturally dynamic to accommodate adjustment to suit the changes in human attitude over time.

A society in which moral, social, and religious values are respected and practiced is expected to be much more peaceful than other societies. For example, in a society where adultery is not considered a crime by law, people may abstain from committing adultery not because of social punishment but because of religious aberration. Religious values, therefore, can safeguard social people from wrong doing. This illustration can be compared to any country in which people are more inclined to indulge in individual desire because of not believing in religious principles. Our youths are extremely frustrated with their misdeeds. Both societal and moral laws are needed to arm them with core ethical virtues such as honesty, responsibility, respect, civic duty, courage and co-operation. As a pathway of curbing corruption from the society, business leaders must avail themselves to the great ethical traditions found within the world's religions and cultures. Much of our civil law is rooted in religion. The major religions of the world contain three canonical elements—belief or faith, practice or action, and virtue or value. Religion is the source of the ethical values of most people, and laws reflect these ethical values setting minimum standards with which citizens must comply. Therefore, to be effective, laws of the country must properly reflect the ethical values of its people. When the values reflected in a country's laws stray too far from the values of its people, those laws are likely to lose support, leaving coercive force as the only means of obtaining compliance. That is why law and religion at times may engage in tension.

On the other hand, secular humanism with no theology of its own and promising no answer to the riddle of death is dubious both in nature and organic structure. It is hardly in a position to guide mankind to the meaning and purpose of life. Moreover, any social system or civilization, to be operationally successful, effective, and sustainable, must have three fundamental components: legitimacy, order, welfare/well-being (L.O.W), with legitimacy as the first and foremost condition. As a result, any civilization founded on secular ethics and having no legitimacy (i.e. divine backing) has the greatest risk of failing to work and sustain. A social order based on religious ethics, on the other hand, has better chance to be successful and sustainable.

Cultures and religions are intermingled in our society. Culture means cultivation of the human mind and thus becomes synonymous with life and its activities, both inward and outward, whether this life is of an individual or of the class or group to which we belong. In its group aspect, it manifests itself in our language and literature, art and philosophy, customs and traditions, norms and laws. Every culture is, at bottom, an

attitude of mind, a living idea, which inspires and moulds our life. The cultures which religions aim to promote are reflections of the harmony which prevails in the divine working of the universe containing twin principles—individual peace & happiness and peace & happiness of mankind as a whole through moral progress with clear-cut directives of what man ought to do to this end. Religion is an integral component of cultural values. Its content is the lens through which all his understanding and thinking take place. It is therefore the essence and core of civilization; in that, if culture is the body of the society, religion is its mind and soul. Thus religion shapes culture and civilization. When body and soul work in harmony the result is social stability, and achievement reaches its highest peak.

### ***Optimism of the movement***

To counter and reverse the trend of secularization of the world order and moral decadence and disorder, there has come the move for a faith-based intellectualism and activism with Islamization of knowledge leading the way. Accordingly, contemporary Muslim thought has made an appearance like the early crescent. Even though the secular tradition has penetrated deep into society and shaken its religious foundation, it could not detach society from religious roots. As a result, contemporary thinkers like Ali Mazrui (1994, 1995) observes that we have reasons to be hopeful that religion and policies (state) will be reunited in new ways; the unity of faith and world will reemerge soon. He advises Huntington and other protagonists of secular civilization to reexamine the efficacy and validity of their models. They are asked to come closer to the social microscope and look again to discover that they are in fact in the fault-lines. In the USA where secular order in general term is a settled matter, yet it is the object of much attention and dispute; there ‘family values’ are the ‘reigning mantra’ of the day. This signifies that the fact that in the USA and Europe, nobody really wants a wholly secular order if secular means disconnected from traditional and religious values.

*Islamization of knowledge* is a part of this grand movement designed to counter the secularization and establish a social order based on religious ethics and thereby rescue mankind from the path of degradation and ruination at the hands of the secular thought and civilization. It promises to replace the secular with the sacred. Islamization of knowledge movement wishes to achieve that through participation and cooperation of all religious communities (*Millahs*) and individuals based on the primordial and eternal truth underlying all religions. This is a shared spiritual vision. Islam’s ethical reform movement therefore is structured based on the 1) fundamentals of truth that a) everyone is born with a religious nature, b) religion is a mercy and divine guidance for the benefit of mankind to live in peace and harmony in a plural global society, c) it contains guidance and ideal trend for humanity to advance perpetually establishing and upholding the right and justice and forbidding the

wrong; and the 2) eternal-universal values like goodness and truth, justice, kindness, equality of mankind and brotherhood, piety and righteousness, freedom of religion and belief etc., as guidance for establishing God's willed society on earth for men to live in peace.

The present day human societies seem to float on 'so-called secular values' without having specific goals in life and commitment to God, divine laws, and His creations. They end up with despair and frustration. They seem to be disoriented, despondent, and disarrayed. They are thus suffering from unprecedented level of moral decadence. On the other hand, religious ethics and morality are commitments to safeguard social people from wrong doing and promote a world of universal good and brotherhood, peace, and trust. Islam and all other revealed religions, for example, have the holy commitment to call all humans to bid the right and forbid the evil and establish the religious world order and the 'City of God', with piety, peace, and prosperity as its centre piece. It is, therefore, argued that for ensuring social stability and sustainable development morals founded on the eternal and universal values enshrined in all the major religions should play a pivotal role.

### **Faith-based Grassroots Institutions for Sustainable Integrated Rural Development: The Case of *Sheba Polly* (rural services centre) in Bangladesh**

*Sheba Polly* (rural services centre) is an Islam-based (faith-based) action research in Bangladesh for actualizing integrated rural development in conformity with the divine scheme of total wellbeing. Islam and other established religions are fully committed to the holistic approach to development. Development is seen in its entirety to include betterment of spiritual, social, and economic aspects of human endeavors.

Sheba Polly is one of the two operating arms of the Bangladesh Association for Total Social Advancement (BATSA<sup>2</sup>). It is a field level action program for development. It is a project of a series of rural services centers, each armed with facilities ranging from Hospital, Technical Institutes, and other Services outlets built primarily through local initiatives to provide various social services in the community and motivate members of public to commit to social services with realization that '*serving humanity is serving religion*'. It is a charitable institution to provide six categories of aids at cost and under a charity scheme of '*service according to need and payment according to ability*'. Under the scheme, those who are incapable to pay full cost for the services may apply and negotiate with 'Sheba Fund' (created for this purpose) for payment of the balance. Recipients of the services thus will actually pay only according to their ability.

An overwhelming majority of population in Bangladesh and most other developing countries live in rural areas. Rural development therefore plays a crucially

important role for any meaningful development in those countries. Bangladesh has already experienced three world famous models for rural development namely the Comilla Model<sup>3</sup>, Bangladesh Rural Advancement Committee (BRAC) Model<sup>4</sup> and the Grameen Model<sup>5</sup>. Now there is the Sheba Polly Model. Each of these models addresses rural development through a strategy of broadening rural capacity and transforming rural population into social capital. However, their approaches and focuses are different. Comilla model puts primary emphasis on modernization of agriculture through labor intensive technology and necessary rural institutions. BARC model has its primary emphasis on improved physical infrastructure, skill development, and rural industrialization for job creation. Grameen model's primary emphasis is on providing collateral free credit to the economically and socially under privileged population for investment in productive activities. Sheba Polly on the other hand has a distinctly different approach and focus; it is a faith-based development model under a charity scheme relying on religious and moral commitments of society's resourceful and able members for material and spiritual wellbeing of their underprivileged brethren. It conforms to the Islamic spirit and strategy of development stated earlier. By providing the 6 categories of aids - health aid, skill development and job creation aid, educational, religious, cultural & social aid, legal aid, and agricultural aid, it has a balanced emphasis on all aspects of development. It is a social movement for promoting 'service to humanity' as a means for empowerment and wellbeing of the rural underprivileged.

As mentioned earlier, for any social system or institution to be operationally successful, effective, and sustainable, it must have the three fundamental components: 'legitimacy, order, welfare (LOW)', with legitimacy as the first and foremost condition. Sheba Polly has all these three fundamental components. Being founded on religious values (divine expectations) it enjoys the highest legitimacy and thus greatest scope for sustainability.

### **Sheba Polly Bhadughor**

Sheba Polly Bhadughor (rural services centre at Bhadughor) is the first Sheba Polly. It was established in 2002 by individual initiative of Professor Rafiqul Islam Molla, under the auspices of BATSA. For building the physical facilities it cost Bangladesh BDT (BDT) 9 million (US\$ 140,000). It is located in his village Bhadughor, a sub-urban area of the District town Brahmanbaria. It started operations in 2004. It was formally opened by the Honorable Minister of Social Welfare, Government of Bangladesh, on December 20, 2005. Its slogans are:

*a. Dharme shakti, Dharme mukti, Drarmo muder Dhayan*  
*Shabae Shanti, Shabae Tripti shaba Dharmer Pran*

(Religion is the goal and guide; in it lies our strength and salvation; service to humanity is the source of satisfaction, peace, and happiness; it is the soul of religion)

b. *Polly rupashi Banglar besh, shebia polly shebi desh*

(Countryside (rural) makes up the real body of Bangladesh; serving countryside is serving the nation).

It stands to offer the following 6 categories of development Aids:

- Health Aid (Health first! Health for all!)
- Employment Generation Aid (Everyone must have access to work & earning for a living)
- Educational and Religious Aid (Everyone must have access to basic education and religion)
- Legal Aid (Everybody must have access to justice)
- Socio-cultural Aid (Everyone must have the right to promote his/her culture and live with social dignity)
- Agricultural Aid (Every farmer must have access to modern agricultural technology)

Emancipation and empowerment of underprivileged and weaker sections of the community is its underlying goal. It operates through the following /arms:

- a. A modern 10-bed hospital.
- b. A Nursing Institute and a Medical Technology Institute
- c. A Handicrafts & Technical Institute
- d. Services Shops (for legal, social, agricultural, and disaster, etc aids)
- e. Sheba Club (a youth club)
- f. Shebok Title Award (Social Title)

### **The Hospital Program**

It has A modern 10-bed hospital for providing modern health services with priority for economically weaker underprivileged members of the community. For the fact that access to modern health services is a basic human right, its ruling principle and slogan is '*Health first and for all*'. Its operating strategies are:

- i. It emphasizes on mother and child health.
- ii. To make its modern health services easily and conveniently available for a greater number of population in remote areas it has 3 out-reached stations at convenient locations for mobile out-door health services delivery by both male and female doctors on a weekly basis under the concept 'let hospital reach the patients'.

- iii. It holds Medical Camps periodically in remote areas.

### **The Nursing and Medical Technology Training Program**

It has a Nursing Institute and a Medical Technology Institute for producing junior nurses & midwives cum health assistants and junior medical technologists especially for rural health care services. Priority is given to the economically weak female candidates for admission and training. Its slogans are:

- i. *Nursingshudhu pasha noi, sheber brata, deekhashomo*

*Rugir shebay nibedita pran abirata*

(Nursing is not only a profession, but a mission –  
a mission for always serving the sick & disabled)

- ii. *Pathology chikitshar pran; tar-i lalone bare shebar maan.*

(Pathology is the heart of medical treatment; better pathological investigation improves quality of treatment)

- iii. *Pollybashir nitta shathi polly chikitshok, bondhu beshe shabia polly shebese desh*

(As constant companions and friends of villagers, village doctors serve villages and thus the nation)

### **The Handicrafts and Technical Training Program**

It has A Handicrafts & Technical Institute for vocational training and job creation for the economically disadvantaged members of the society. Its slogan is:

*Karme sristi karme tusti, karma shustha jiboner shupan*

*Dharon kore take gori jiboner ma-an.*

(In work there is creation and satisfaction; it is the means of healthy life,  
a means of improving quality of life)

### **Other Services and Aids Program**

It has Services Shops for educational, legal, religious, cultural, social, agricultural, and other aids. It has a profit-sharing production venture scheme and has a plan to introduce microcredit loan system on profit-sharing basis to generate self employment opportunities and facilitate mobilization of rural small scale savings in the locality. It also offers legal, social, cultural, educational, religious, agricultural, and other aids to the community<sup>7</sup>. Its other objective is to support and protect the interest of the economically weaker and underprivileged sections of the society for maintaining justice and social stability.

- i. It runs a cattle rearing project. Marginal farmers are supplied with cattle for rearing on profit-sharing basis, inconformity with Islamic *mudaraba* principle, with 75% share of profit going to the farmer.
- ii. Its legal aid section has a 4-member Council of Legal Consultants available for consultation and mitigation of conflicts between members in the community judiciously without going through unnecessary and expensive court case procedures and delay. In the event arbitration fails and the case needs to go to court, economically weaker party may request for lawyers and any other necessary support from this section to fight the case. 'Access to justice is a basic human right' is the mentor of this aid scheme. So far two cases were reported but these could not be finally dealt with due to lack of commitments of the plaintiffs.
- iii. Agricultural aid section is yet to be developed and set ready for operation. It will have agricultural experts available at the Shop for consultation. This section may often represent the farming community to the local Agricultural Extension and other Offices. It will have a few important equipment like power tiller, low lift pump, sprayer, etc as stand-by to support agricultural operations in the locality.
- iv. Micro credit aid section is yet to be developed and set ready for operation. It will deal with arrangement for production credit on profit sharing basis, in conformity with Islamic *mudaraba* principle, under '*Poroshi*' (neighborhood) model. Under this scheme, relatively better-off families with small savings will be encouraged and motivated to extend production credit to their poor but enterprising neighbors on profit-sharing basis against a social collateral from Sheba Polly for refund of the loan in the event of losses. Most of these small savers are afraid of losing their money due to negligence or insincerity of the borrowers. In addition, the lenders may require their money back any time for emergency reasons. Sheba Polly will remain stand-by to repay the amount whenever the lender demands and the borrower fails.

Through the *Sharaiah* provisions of *quard hasana* (benevolent loan), use of *zakat* fund for repayment of debts, and *mudaraba* type business operations (where one party supplies labor and the other party supplies capital and share the profit on an agreed ratio; in case of loss the capital supplier loses the capital and the labor supplier loses the labor) Islam recognizes 'Access to credit as a basic human right'. This is the mentor of this credit aid scheme. Since the borrower is the neighbor and known to the lender he can easily and most effectively supervise the use of the credit. This credit aid scheme will, in fact, enable mobilization of small savings for productive investment and development of the community on a self reliant track. It is envisaged that there will be 10-15% cases of failures and the borrowers will fail to repay the loan. The *Sheba Polly* will have to repay the lenders this amount, hopefully for recycling the loan, from the fund created for

that purpose. This fund will be created with the contributions and grants received from the proposed members of Sheba Polly and or the *zakat* and *sadaka* received from public to the Sheba Polly fund. Since *zakat* can be used for repayment of loan it can be used as an important source for building that fund.

- iv. Socio-cultural aid section mobilizes and/ or provides financial support to individuals and institutions in the community for promotion of social wellbeing and educational, cultural, and religious developments. It has a very active relief program for the needy and victims of natural disaster.

With financial support from Muslim Aid Bangladesh, it has, as part of our General Studies course, a continuing study program called 'Islam and Life Studies' for the generality of public in the area.

It spends a substantial amount of money for regularly providing support fund for marriages of the young girls of the poor families and giving *sadaka* to needy families in the locality. It has contributed a large sum of money for development of a local secondary school.

### **The Youth Club Program**

It has a Sheba Club (a youth club) for creating cadres of good citizens motivated and committed to religious practices and social services.

It is a Club of children and youths of various age groups and categories formed under 6-Founding Principles to create Cadres imbued with the motto: '*Serving humanity is serving religion*'. It is a strategy to help grow and nurse in minds of club members, in particular, and the public, in general, the concept that serving humanity lies at the heart of religion, and thus serving humanity amounts to serving religion. It, therefore, forms the nerve centre of reform movement of Bangladesh Association for Total Social Advancement and as such the Sheba Polly. Its underlying objective is to continuously produce cadres of morally strong good citizens committed to religious practices and social services based on a realization that serving humanity is in fact serving religion. Its slogan is:

*Manob sheba dharmo sheba, sheba dharmer pran*

*Manob shebar brote amra jiban karbo da-an*

(Serving humanity is serving religion; it is the soul of religion;  
we dedicate lives for service to humanity)

The Founding Principles: Cadres are trained, motivated, and mentally and physically shaped based on following 6-FH founding principles:

Faith - Believing in the Almighty Creator and worshipping Him. Commitment to religious practices & culture.

Fairness - Commitment to justice and morality.

Heart - Kind and sympathetic to human and all other beings.

Head - Skill and intellectual development.

Hand - Hardworking and respect for labor.

Health - Keeping a sound health

In order for the Cadres to attain and maintain a high standard of these qualities there is a 'scouting type' continuous training and camping programs for all categories of cadres. In addition, there are general studies, English and computer learning programs for them. Its band and marching songs are:

a. *Dharme shakti, Dharme mukti, Drarmo muder Dhayan*

*Shebae Shanti, Shebae Tripti Sheba Dharmer Pran*

(Religion is the goal and guide; in it lies our strength and salvation;

service to humanity is the source of satisfaction, peace, and happiness; it is the soul of religion)

b. *Manab Sheba Dharma Sheba, Sheba Dharmer Pran*

(Serving humanity is serving religion; service to humanity is the soul of all religions')

Through continuous training programs and camping activities under the spirit and culture of this motto its basic objective is to imprint in the young minds of Cadres the fact that serving humanity is a fundamental religious duty. It will similarly help educate and motivate public for commitment to religious practices and social services.

Grades of Cadres: On consideration of age, experience, and levels of achievements, club members will be admitted into 6-S hierarchical grades as below:

*Shikor:* (root/beginning). They are the hopefuls and the beginners. Children who accept and follow a faith and accept honesty as a cardinal principle of life and remain mindful of it are awarded and admitted to this cadre.

*Shujon:* (likeable). They are the promoted *Shikors* with additional qualities like good personal and social behavior. They are liked by people around them. They are the likeables in the society.

*Shathi:* (associate). They are the promoted *Shujons* with additional qualities like benevolence, participation and interest in social works, some academic participation and achievements. They are the trusted and literate associates.

*Shikha*: (flames/candles). They are the promoted *Shathies* with additional qualities like participation in intellectual activities, organizing and leadership some social works in the locality. They are the candles and pride of the society.

*Shakty*: (might/strength). They are the promoted *Shikhas* with additional attributes like intellectual achievements, leadership and dedication to higher level intellectual and social service activities. They are society's strength and base for progress and advancement.

*Shebok*: (social workers). They are the promoted *Shakties* and the highest grade cadres who made significant contributions to the promotion of intellectual and social advancement at national and / or international level. They are the dedicated social workers contributing to well-being of the society.

It is expected that these Cadres will eventually form a large contingent of morally sound ideal citizens ready to successfully initiate a movement for promoting the right, and forbidding the wrong in the society so as to establish an environment for people to live in peace, harmony, trust, and prosperity, without fear and intimidation.

### **Social Title Awarding Program - *Shebok* title<sup>8</sup>**

It has been noticed that social works and social workers are not often given due recognition and honor by the society in many developing countries. If social workers are given adequate recognition and respect institutionally by the public for their dedications and sacrifices for wellbeing of underprivileged people, many wealthy persons and institutions would be motivated and encouraged to come forward to use their resources for improving living conditions of society's weaker communities. *Sheba Polly* therefore introduces a scheme of annually awarding the honorable title *Shebok* (dedicated social worker) to individuals and institutions as a mark of *public* honor and recognition for their dedications to social works. Awarding of such title as a mark of respect and honor may cost the society almost nothing, but it may attract a great number of resourceful persons to social works and dedicate their wealth to the cause of humanity. Many of them will find social work as an attractive and most satisfying alternative means than political and other means for gaining *public* respect and honor in the society.

A 9-member *Citizens Committee* with dignified personalities in the society (preferably to include Chairman of Municipal Corporation, Chairman of Committee of Local Government Council Presidents, President of Teachers' Association, President of Bar Association, President of Press Club, President of Traders' Association, and some enlightened and respectable elders) selects and recommends a list of awardees every year.

### **The Annual Title Awarding and Certificate Distribution Ceremony**

The first Annual *Shebok* Title Awarding and Certificate Distribution ceremony was held in February 2007. Four distinguished social workers of the locality – three in the area of education and one in the area of health services - received this award, and a few dozens of students received certificates in junior nursing, medical technological, embroidery, etc received certificates at that Annual Title and Certificate Awarding Ceremony.

## Summary

In today's fluid world, values do not seem to have any permanent nature for the materialists, who seem to lose the meaning and purpose of life. They float on 'so-called secular values' that frequently change themselves without specific goals in life and commitment to God, divine laws, and His creations. They end up with despair and frustration, leading to a dangerous way of living on earth. They not only harm themselves but others as well. Religion, on the contrary, confirms an individual his self-esteem and respect for others, commitment to the moral codes and prescribed codes of conduct such as 'generosity,' 'simplicity,' 'humility,' 'kindness,' 'goodness,' and the like that benefit himself and the society in which he lives with others in harmony and peace. Religious values have universal and humanitarian appeal; religion, therefore, can never be detrimental to social customs, if applied in its pristine sense. Human societies can and should now benefit from these to reform what can be considered hostile to moral and spiritual development of human beings – the 'crown of creation' of God. A true believer's heart is purged of all greed, lust, desire that cause one to take the path of corruption and sin. His actions and behavior are guided and motivated by the religious codes of conduct attuned for social peace and harmony which are requisites for sustainable development of a society. For example, in Islam a believer is guided by five categories of the moral codes of human actions: 'obligatory' (*wajib*), 'recommended' (*mandub*), 'disapproved' (*makruh*), 'prohibited' (*mahzur*) and 'indifferent' (*ja'iz*). They constitute the moral character of an Islamic way of life. This kind of religious ethics is deemed as not only divine moral, but also human ethics which is indispensable for modern people to be led and guided by divine laws for moral, spiritual, and social development.

What is the *summum bonum* (the ultimate good) in life? Secular ethics defines it as that which is desired or that which brings pleasure in life. Religion does not subscribe to this view, because this seems to lead us to the view that whatever gives pleasure is desirable and that man's devil mind may very often aspire many evils i.e., perverted versions of pleasure, which cannot and must not be acceptable to the people inspired by divine values. For example, from the ethico-religious point of view we cannot call it an acceptable norm if one finds pleasure in illicit sexual affairs or perverted sexual orientations, or engagement in crime and corruption. Religions vehemently oppose this

kind of secular definition of good life in relation to pleasure. Pleasure or happiness is not all that is involved in the *summum bonum* in religion. The *summum bonum* in religious life is obviously a moral and enlightened life, leading to attainment of 'peace' at individual as well as social levels; it is as opposed to 'happiness' in secular life-style. This motivates the mankind of all races and faiths to choose a virtuous life in this world with the hope of a reward of 'good life,' i.e. the 'eternal peace' in the life hereafter. As God promised in the holy Qur'an: 'We shall pay them a recompense in proportion to the best of what they used to do.' Therefore, the commitment of today's ethical reform movement should focus on re-establishing religious civilization and replacing the secular 'life-styles' with the sacred divine ideals in the world order for a sustainable world peace, happiness, and prosperity.

Development is a concept of total advancement in material and spiritual terms. Development planning requires innovation of appropriate institutions at grassroots to achieve the two-pronged goal of material and spiritual betterment. *Sheba Polly*, an integrated rural development scheme, is such an initiative with emphasis on religious imperatives for development. It is a faith-based rural development institution founded on a charity scheme - *service according to need and payment according to ability* - following the broad philosophical foundation of man's humanity - 'in your wealth there is a share of the poor and the needy' (Al-Quran : 51:19). It is a movement aimed at motivating people of means to come forward with their helping hands and take initiative to found *Sheba Polly* (rural services centers) to discharge their moral and religious duty for improving the quality of life of the economically less privileged members in their own localities. Because of its faith-based nature its approaches and focuses are distinctly different from the other nationally and internationally reputed rural development models, like the Comilla, BRAC, and Grameen models, originated and developed in Bangladesh. In fact it is a social movement promoting 'service to humanity' as a means for empowerment and wellbeing of the rural underprivileged. Having had the faith-based foundation and thus enjoying the highest level of legitimacy, it has the best scope to be a sustainable integrated rural development institution. Based on its scope for success, *Sheba Polly*, like Grameen bank which recently gained exalted recognition for its role as a model for 'development from below' to ensure sustainable world peace, will eventually spread all over the country and gain recognition nationally and internationally as a model of faith-based institution for sustainable integrated rural development in economically less advanced countries.

#### Notes:

<sup>1</sup> Quoted in Chandra Muzaffar (July 1997), P.1

<sup>2</sup> BATSA has been established as a non-governmental organization (NGO) within the principles of non-profit organizations as laid down in the *Societies Registration Act of 1860* (amended to date) of Government of the Peoples' Republic of Bangladesh, Ministry of Law, Dhaka, Bangladesh.

<sup>3</sup> The Comilla model was launched in the 1960s at Kashinathpur Village in Kotowali Thana of Comilla District, Bangladesh, under the leadership of Mr. Akhter Hamid Khan, ICS. The model has four components, namely village-level primary cooperatives, a Thana-level training and development centre, a work Program, and an irrigation program. The primary cooperatives are integrated at the Thana levels and an integrated rural development program provides all essential and critically needed farming inputs on credits to the farmers to be paid after selling harvests during the off-season when prices are high.

<sup>4</sup> The Bangladesh Rural Advancement Committee (BRAC) model was launched in 1972 to carry out reconstruction works in the rural areas after the war of independence, and was then extended to all-round development works. Its activities now span from emancipation to enlightenment, from empowerment to advocacy and knowledge building for preserving civil and human rights, and include rural development, microcredit supply, non-formal education to tertiary education, health, sanitation, development of low-lying areas (haor and coastal areas), disaster prevention, and many other programs for grassroots development.

<sup>5</sup> The Grameen model was initiated in December 1976 to provide microcredit to the landless farmers and who could not provide land collateral or crop hypothecation as needed in any traditional money lending system operated by bank. It now focuses on the women especially and activities relate to the economic and overall social development of the marginal classes.

<sup>6</sup> Programs of these institutes are temporarily suspended due to changed government regulations.

<sup>7</sup> This comprehensive services list includes all types of services so far offered and is under consideration to be offered.

<sup>8</sup> This title is awarded as a symbol of public honor and respect.

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## Chapter 2

### **Innovative and Proactive Economic Zone Regime Sets the Base and Space of Industrialization and Globalization in Developing Economies: *Experiences of Malaysia and Bangladesh***

The materials of this essay are obtained from: Lectures delivered by Prof. Rafiqul Islam Molla at the University of Trento, Italy and University of Regensburg, Germany, as a visiting professor under the Enusmus Fellowship in June 2010

A faster growth of industrial and manufacturing activities is indispensable for economic development of any nation. Industrialization is the phase of a country's economic development in which industries grow faster and gradually come to play the leading role in the economy. This necessitates pursuing an export oriented or outward looking industrialization for producing goods and services on a large scale for world market and to enjoy the economies of scale. This export oriented industrialization finally leads to economic globalization i.e. integration of national economy with international economy. Therefore, it is largely thought to be an effective means for making the developed and developing worlds truly become part of one World -- forged together by a common economic destiny and guided by the humane principles of peace, friendship, and mutual respect. Accordingly, with this end in view, Malaysia, Bangladesh and most other developing countries are pursuing a dynamic path of industrialization.

#### **Economic Zone Regime**

Economic zone regime is the hardware of industrialization and economic globalization process especially in the developing economies. Particularly it has been the cornerstone of Malaysia's economic industrialization and globalization. When economic globalization refers to integration of the national economy with the international economy it in effect means free movement of both products and factors of production. Unfortunately, there are serious political and sociological problems for free movement of labor. At the same time movement of capital is highly limited because of investors' fear of insecurity of their investments in the host countries. Under these circumstances Heckscher-Ohlin trade model wanted to suggest that in the absence of factor movement free trade alone would have the ability to *ultimately*, i.e., in the long run, equalize factor prices (and hence to an extent reduce the income gap) in the trading nations. Unfortunately, most nations do not and cannot wait for that magic long run. As a result, to enjoy the benefits of the gains of trade, the quick and easy way out is to ensure free movements of both inputs and outputs across the borders. Even though from the point of political and sociological considerations

movement of labor is not always easy, the movement of capital is relatively simpler, easier and more feasible.

Export Processing Zone (EPZ) came into existence as an innovative mechanism for motivating the capital owners in the industrialized countries to invest and establish plants (Greenfield investment) in the developing countries under a guided condition so that host countries' benefits are protected. It provides adequate incentives and security to the foreign investments. But the EPZ scheme must be designed with necessary guard against the inherent selfish motive of the MNCs. It must ensure that the benefits of the host countries are protected. International Labor Organization (ILO 1999) describes EPZs usually as purpose-built industrial parks with dedicated infrastructure designed to suit the needs of investors from foreign and host countries.

Modern economic zones could be publicly owned or privately owned or jointly owned Public-Private Project (PPP). These could be enclaves exclusive of the national economy or inclusive of or integrated with the national economy. Integrated ones are preferable for national economic development. Economic zones are named in various terms in different countries. Terms such as Export Processing Zone (EPZ), Free Trade Zone (FTZ), Special Economic Zone (SEZ), Free Port, Enterprise Zone (EZ), Single Factory EPZ, Hybrid EPZ, Export Processing Factory (EPF), Specialized Zone, etc. refer to similar concepts with variations determined by policy prescriptions and objectives. In the developing countries, it is popularly termed as Export Processing Zone (EPZ) or Free Trade Zone (FTZ). It is primarily applied as a tool for economic globalization and export-led national economic growth as well as increase in employment, diversification of exports, and foreign exchange earnings. It is a scheme for guided globalization.

### **I. Malaysia's Smartly Designed and Managed Economic Zone Regime Forms the Cornerstone of Its Successful Industrialization and Globalization**

Malaysia's industrialization and globalization approach is a strategy of growth with equity. It can be best described as a strong market embedded into a strong government and is driven by Malaysia's vision of becoming a fully developed and industrialized knowledge-based nation by the year 2020. It is a highly target oriented phase by phase approach strictly monitored and modified as necessary by compromising efficiency for effectiveness. Fostering national unity and growth with socio-economic justice through broader quantitative and qualitative participation of all groups of people at all levels of activities are the hardcore and touchstones of the approach and its tools and strategies. It is guided by long-term plans such as New Economic Policy, Outline Perspective Plans, National Development Policy, various Industrial and Knowledge based Master Plans, etc. It is pursued through medium-term operational plans such as five-year Malaysia plans. In

1991 Malaysia formally articulated its vision as a blueprint of national development over a period of thirty years under the name Vision 2020, to transform it finally from a developing to a fully developed nation not only in economic sense but ‘along all the dimensions: economically, politically, socially, spiritually, psychologically, and culturally’. It projects per capita annual GDP to grow at the rate of 7-8% and expects annual GDP per capita to rise from \$2,000 to \$17,000. Accordingly, its level of globalization and level of industrial competitiveness have been on steady increase since 1970.

### ***Industrialization and Globalization Approaches***

From a background of a colonial agrarian open economy, Malaysia formally started its industrialization journey in 1957 and proceeded phase by phase through the road map of development to realize its vision of becoming a ‘fully developed’ nation by 2020. Its development pattern follows the stereo type that starts with the import-substitution based industrialization and ends with technology-intensive high-value adding industrialization. However, the industrialization and globalization of its economy effectively started from 1970 with the program of export oriented industrialization added with the program of industrial and social restructurings. Its scale increased steadily during 1970-2007. Recognizing the danger of the deceptive nature of capitalist globalization, Malaysia approached its economic globalization very prudently through a strategy of export-oriented industrialization with internal and external investments, but without yielding to any pressure and influence of the dominant nations and international organizations. Distancing itself from the capitalist mould and upholding its own unique personality, globalization in Malaysia stands today as a ‘*Malaysia model of economic development and globalization*’ with the ‘look east’ and ‘Malaysia-centric’ autonomous identity themes as the mastermind and hardcore, and the schemes of Free Trade Zones (FTZs) and Economic Development Corridors (EDCs) as the cornerstones of its pattern and structure. With these unique features it has become known as a ‘Malaysia model of economic development and globalization’. To realize this goal it pursued a dynamic approach to industrialization with necessary modifications, extensions, and changes in strategies and actions at different phases of development.

During the import substitution phase (1957-1969) tax exemption, under the Pioneer Industries Ordinance 1958, was given as an incentive to encourage local and foreign firms to establish industries in the country. Under Investment Incentive Act 1968 the tax relief period was extended beyond 5 years. Certain ‘infant industries’ were given protection through import tariff and quota by Tariff Advisory Board and Federal Industrial Development Authority (FIDA).

During the most challenging long period of globalization through export oriented industrialization (1970-1990) all the plans and policy actions and institutions were geared to achieve the national objectives of economic growth with distributive justice, to bring about social restructuring through reduction in economic disparity among the Malay, Chinese, and Indian ethnic groups, eradicate poverty, and promote national unity. As a result, in many ways and in many cases intensive government interventions were necessary to ensure increased participation of the Malay ethnic community at all levels of economic activities to enable them increase their wealth sharing and to reduce foreigners' equity ownership. Malays are the Bumiputera i.e., legal land-owners of the country; but they were far behind the non-Bumiputera (Chinese and Indian communities) and foreign investors in respect of ownership of national wealth. In 1970 their equity ownership was only a meagre 2.4%. Special state-owned companies under the State Economic Development Corporation (SEDCs) were set up to promote and serve Bumiputera entrepreneurs. In addition, government encouraged and pushed non-Bumiputera and foreign investors to form joint-venture companies with Bumiputera. This was a period of serious challenges and achievements.

During the maturity and affluence period (1991-2020) Multimedia Super Corridor and various other economic development corridors/zones have been set up to broaden the coverage of industrialization and globalization to include agriculture and service sectors, and widen the quantitative and qualitative participation of all groups of people in an economy driven by knowledge and innovations. It is to effect transformation of the economy from production-led to knowledge and innovation driven, so that the vision of becoming a fully developed and industrialized affluent nation with a robust and resilient economy, distributive justice, and strong bond of national unity is fully realized by the year 2020.

#### *An Overview of the Structure and Time-path of Industrialization*

The structure and time-path of Malaysia's industrialization and globalization can be summarized from Cheng (2008) as follows:

- (1) 1957-1969: Import substitution based industrialization - to encourage growth of domestic industries for producing simple consumer goods. Targets were production of goods mainly for home consumption and increase in employment. Tax relief and other incentives and protection from foreign competition were given to encourage local and foreign companies to set up factories.
- (2) 1970-1990: Outward looking industrialization and industrial and social restructuring - to encourage increased foreign investment and transfer of technology in the country and to link the export oriented industries with the rest of the domestic sector of the economy. Targets were production for global

market, increase in economic growth, eradication of poverty, and reduction in disparity of income levels, education and skill, economic functions, and employment opportunities among different ethnic groups. It passed through the following phases:

- (i) 1970-1980: Growth of export-oriented light industries - creation of free trade zones (FTZs) and provision for various fiscal incentives to attract local and international investments and production for export.
- (ii) 1980-1985: Growth of heavy industries - through establishment of some government pushed and supported heavy industries like automobile, still, cement, and petrochemicals, under heavy protection from outside competition. Outputs are meant primarily for local market. This is thus considered as the second round of import-substitution industrialization in the country.
- (iii) 1985-1990: Trade and investment liberalization - to bring structural adjustments in the industrial sector. Privatization was mooted to transform many government owned companies into government linked companies (GLC). Tariffs were increasingly reduced. Restriction on foreign equity was relaxed allowing foreign investors to be able to hold up to 100% of the equity. This policy-shift toward more market oriented and outward-looking approach attracted many multinational companies to move their operations to Malaysia.
- (iv) 1991-2020: This is the phase of taking the economy to its full maturity, through rigorous tests of international competitiveness, and stepping into the state of affluence to mark the full realization of the vision of becoming a fully developed and industrialized knowledge-based country *underscoring national unity and socio-economic justice*. Various plans and policies have been introduced since 1991 towards achieving this goal. Industrialization and globalization base has been broadened to include agriculture and service sectors linking them with the global market.

### ***The Smart Economic Zone Regime***

Malaysia is a newly emerging industrialized economy from a basically agricultural economy. It is an emerging Asian Tiger Economy. It has used a very innovative, smart, and proactive economic zone regime to work as the cornerstone and propeller for its industrialization and globalization process. The economic zone scheme started in 1970s and was reformed and modernized in 1990 to make it more integrated with the national economy through backward and forward linkages of companies belonging to the zones. In recent years, it launched 4 large economic development zones in a bid to ensure a balanced development of the country.



Figure 2.1: Locations of FTZs in Malaysia

### *Structure of the Scheme*

Economic zone in Malaysia is known as Free Trade Zone (FTZ) and Economic Development Corridor (EDC) - an area mainly designed to promote entrepot trade and for manufacturing industries producing goods for export.

1. It is comprised of:
  - a) a free commercial zone for commercial activities which include trading (except retailing), breaking bulk, grading, repacking, relabeling, transit, etc. ;
  - b) free industrial zone for manufacturing activities for all goods except the prohibited items.
2. It is governed by Free Trade Zone Act 1971, Free Zones Act 1990 and Free Zone Regulations 1991. Each zone is administered by a Zone Authority appointed by the Ministry of Finance (PRU 2011). The Zone Authority for each FTZ is named differently.
3. It started in 1970s. It has now 11 operating FTZs (4 in Penang, 3 in Selangor, 2 in Johor states) and 2 Free ports (Labuan in the East Coast- for finance and insurance business, and Langkawi in the West Coast – for tourism industry). In addition, it has the recently launched following 4 large free economic zones (corridors) (WTEC 1997, Lim and Hamid 2008):
  - a) Iskandar Development Region (IDR), also called South Johor Economic Region (SJER). It is Malaysia's largest free economic zone. It expects to create 8,00,000 jobs, and attract \$100 billion investment over 25 years.
  - b) East Coast Economic Region (ECER) - Very large and expected to create 560,000 jobs and attract \$ 34 billion investment over 12 years.
  - c) Northern Corridor Economic Region (NCER). It will be a logistics and transportation hub of the region. It will serve Indonesia-Malaysia-Thailand growth triangle.

d) Economic Region of Sabah and Sarawak (ERSS) :

i. Sabah Development Corridor (SDC)

ii. Sarawak Corridor of Renewable Energy (SCORE)

4. To be placed in the zone a company must export at least 80 % of its outputs.

#### *Special Attractions for Foreign Investors*

1. The political stability and a state-of-the art industrial infrastructure. This is essential for the security of investment and most important of all the attractions for foreign investors.
2. The most convenient geographic location with deep-water ports, modern sea and airports, transportation system, steady power and water supply, and other financial and institutional infrastructure.
3. Investment friendly environment with fast custom and other services, tempting fiscal incentives, and easy foreign exchange control permitting full repatriation of capital and dividend (BERNAMA 2009).
4. Minimum custom duty and income tax payment for a stipulated initial period.
5. 30 to 100% foreign ownership for companies based on level of exports of their outputs and patent right for 15 years (US State Department 2011)
6. Growing Islamic financial market. Malaysia has been a magnet for Middle Eastern investors. Kuala Lumpur by now has established itself as a leading centre in Asia for the growing Islamic financial market.

Special features of the smartness of Malaysia's economic zone scheme lies in its dynamism in protecting the national interest as well as the interests of the enterprises housed in the zones, in its commitment to directing industrialization towards a balanced development of all parts of the country, and constantly accommodating to the changing circumstances along the processes and stages of industrialization and globalization. Most importantly the smart management can be said to be the most distinguishing feature of Malaysia's free trade zone scheme.

#### *Achievements*

Despite the increasing global competition for receiving FDI, Malaysia continues to attract global foreign investment outflows reflecting the country's cost-competitiveness as a manufacturing and export base. Economic Zone (FTZ and EDC) regime most successfully played the pivotal role in the export-led industrialization strategy, so much so that the success of Malaysia's industrialization and globalization can be largely attributed to the success of the economic zone scheme. It is the centre of gravity of the FDI inflows. About 61% of the FDI inflows landed in the zones. It accounted for about

80% of national's merchandise exports (ILO 2003). It caused the diversification of Malaysia's exports. Since the opening up of the investment regime in 1985, the contribution of foreign establishments to total value-added of the manufacturing sector increased from 33.4 to 44.2 per cent (during 1986 – 1999) and their employment share increased from 30.3 to 38.1 per cent during the same period of time (Raquib et al. 2007). In 2006 FDI inflows contributed to almost a fifth of the country's annual Fixed Capital Formation.

Economic globalization in Malaysia increased steadily under its economic development and industrialization strategy during 1970-2006. Index of globalization level increased from 63 in 1970 to 78 in 2006. Achievements of its development and globalization strategy can be evaluated from the context of national macroeconomic goals and global competitiveness and income convergence (benefits sharing) objectives. From the context of national macroeconomic indicators, Malaysia had significant and commendable achievements during the study period. During 1970 – 2006 per capita real gross national income (GNI) increased from \$1,110 to \$5140 with an average annual growth rate of 5%. If it maintains 5.4% for the remaining period of 10 years per capita GDP will reach \$15,300 which is minimum for a high income economy. Unemployment rate dropped from 8% in 1970 to 3.1% in 2008 (Table 2.1), inflation rate dropped from 4.49% in 1975 to 2% in 2007 (Cheng, 2008), foreigners' share of equity capital decreased from 63.4 % in 1970 to 28.8% in 2004 (Table 2.2), poverty rate decreased from 52.4 % in 1970 to 3.6% in 2007 (Table 2.3). At the level of international competitiveness, Malaysian economy maintained a steady improvement moving from 40<sup>th</sup> in 1980 to 21<sup>st</sup> position in 2008 in terms of global industrial performance/competitiveness ranking (Table 2.4).

Table 2.1: Malaysia's unemployment rates

Year	1970	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Rate (%)	8.0***	2.8**	2.5**	2.5**	3.2**	3.1**	3.1**	3.9**	3.5**	3.8*	3.6*	3.0*	3.6*	3.5*	3.1*

Sources: \*Index Mundi (2009), \*\* International Labor Organization (2003), and \*\*\*Cheng (2008)

Table 2.2: Ownership of share capital (at per value) of limited companies, 1969-2004 (%)

Type of Owners	1969	1970	1975	1980	1985	1990	1995	1999	2004
Bumiputera Individuals and Trust Agencies	1.5	2.4	9.2	12.5	19.1	19.2	20.6	19.1	18.7
Chinese	22.8	27.2	-	-	33.4	45.5	40.9	37.9	40.9
Indians	0.9	1.1	-	-	1.2	1	1.5	1.5	1.5
Others	-	-	-	-	-	-	-	0.9	0.8
Nominee Companies	2.1	6	-	-	1.3	8.5	8.3	7.9	9.2
Locally-Controlled	10.1	-	-	-	7.2	0.3	1	-	-

Foreigners	62.1	63.4	53.3	42.9	26	25.4	27.7	32.7	28.8
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Sources: Malaysia (1996, 2001)

Table 2.3: Malaysia's poverty statistics, 1970 – 2007 (%)

	1970	1980	1985	1990	1995	2000	2004	2005	2007
Poverty	52.4	37.4	20.7	16.5	8.9	7.5	5.7	5.2	3.6
Urban Poverty	22.3	-	8.5	7.1	3.7	3.5	2.5	2.4	2.0
Rural poverty	60.0	-	27.3	21.1	15.3	14.0	11.9	11.2	7.1
Hardcore Poverty	-	-	6.9	3.9	2.1	2.4	1.2	1.1	0.7
Urban Hardcore Poverty	-	-	2.4	1.4	0.9	0.8	0.4	0.4	0.3
Rural Hardcore Poverty	-	-	9.3	5.2	3.7	3.1	2.9	2.1	1.4

Source: Malaysia (2006).

Note: A projection for poverty rate in 2010 is 2.8%, which was done recently by Economic Planning Unit, Prime Minister's Department, Malaysia

Table 2.4: Competitive industrial performance of selected countries – rank

Economy	1980*	1990*	2000*	2008**
United States	13	14	11	1
Singapore	2	1	1	7
Japan	5	4	6	8
United Kingdom	12	13	17	9
Korea	23	18	10	11
Malaysia	40	23	15	21
Thailand	47	32	23	28
China	39	26	24	34
South Africa	36	44	35	44
India	38	36	40	48
Mexico	31	29	26	52
Indonesia	75	54	38	54
Philippines	42	43	25	71
Brazil	24	27	31	72

Sources: \* United Nations Industrial Development Organization (2004) & \*\* World Economic Forum (2008)

## II. A Weakly Designed and Managed Export Processing Zone Scheme in Bangladesh Could Yield Only Limited Achievements

Bangladesh is basically a resource constraint developing country with agriculture as the foundation of its economy. Accordingly its development strategy is basically based on rural and agricultural development. Development of large and capital intensive industries is pursued through state owned enterprises (SOE). Development of small scale and

cottage industries are promoted through Bangladesh Small and Cottage Industries Corporation (BSCIC). More particularly the export-led industrialization is pursued through foreign investment under the EPZ scheme supervised by the Bangladesh EPZ Authority (BEPZA).

### ***Export Processing Zone (EPZ) Scheme***

In Bangladesh, economic zones are called Export Processing Zones (EPZs). An EPZ is described as a territory or a stand-alone economic enclave in which goods may be imported and manufactured and reshipped with a reduction in duties and taxes /and/or minimal intervention by the custom officials. It is an area where potential investors would find a congenial investment climate with custom and tax incentives and free from cumbersome procedures. Its primary objectives are to attract foreign (as well as local) investments, create employment, increase exports, increase foreign exchange earnings, and stimulate rapid export-led economic growth. The scheme was introduced in 1980s. There are now 8 public and 1 recently established private EPZs in Bangladesh. These are basically stand-alone enclaves. The figure below shows the spread of these EPZs throughout the country. In the year 2008/9 they housed about 283 industrial enterprises of which 75% were entirely foreign owned, 10% were jointly owned, and the remaining 15% were entirely locally owned.



Figure 2.2: Locations of EPZs in Bangladesh

Export Processing Zones are managed by the Bangladesh Export Processing Zones Authority (BEPZA). Zones' primary tasks are:

- a) to provide special areas where potential investors would find a congenial investment climate, free from cumbersome procedures
- b) to provide fiscal and non-fiscal incentives & facilities like easy custom facilities and tax exemptions, repatriation of full capital and dividend, guarantee of safety of investment through various international insurance programs, and assured uninterrupted labor services with minimum monthly wages ranging from \$ 30 – 60 based on level of skill, etc.

### ***Achievements***

Achievements of EPZ scheme in Bangladesh are very modest. In 2008/9 (Compiled from BEPZA<sup>1</sup>) it provided only 234,000 jobs in 2008, 0.43% of national total employment, it accounted for \$2,581.7 million exports - 16% of national total export, accounted for \$1,582.47 million investment, and attracted only a meagre amount of slightly over \$1billion FDI. However, it has been the major source of the increase and diversification of the national exports. EPZs in Bangladesh have been primarily publicly owned more like stand-alone enclaves with no or least linkages (integration) with the national economy. As a result their impact on the economy has been very modest. However recently reform is attempted and privately owned zones are coming up and more backward and forward linkages with the national economy are being initiated and facilitated.

### ***Shortcomings***

In spite of the lowest labor cost it has failed to attract any reasonable amount of FDI. This is mainly because of inadequacy and uncertainty of power and water supply, poor roads and transportation infrastructure, lack of security, political agitations, wrangling and instability, political and administrative corruptions, etc.

Papanek (2010) observes that Bangladesh has low labor costs because it has never provided productive jobs for millions of its citizens. Every year 2 millions are added to labor force, but only about 0.6 million are productively employed within the country and about 0.2 - 0.3 million are exported. The remaining are either unemployed or unproductively engaged mostly sharing works and income with family members or those from the same village. He points out that Bangladesh has the potential to get growth rate of 8-10% and create 3-4 million jobs a year if it takes advantage of its assets and opportunities and overcomes its handicaps. The crucial requirement is investment of \$10 billion FDI a year. And the key incentive to attract FDI is to end the constipated process

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<sup>1</sup> BEPZA Website: [www.epzbangladesh.org.bd](http://www.epzbangladesh.org.bd)

of decision making by the government. EPZ Authority should be given the power to decide fast and Public-Private Project of EPZ should be promoted.

## **Summary**

By encouraging and motivating the multinational companies to settle their Greenfield investments in developing countries, the developing countries are able to enjoy numerous economic benefits that are otherwise unavailable. Therefore, they created EPZs for this purpose. In order to tempt foreign investors into the zones the host developing countries offer a variety of incentives and inducements including tax holidays, tariff and duty-free imports and exports, an ample supply of relatively cheap labor, and access to markets. It is an innovative scheme. Under this scheme, in fact, both local and multinational firms are invited to set up their operations in those zones in exchange for handful of economic benefits. The strategy of EPZ has been profitably used by many developing countries. These are playing dynamic roles to accommodate international Greenfield investors to put their funds for exploiting viable industrial and business potentials in those countries. Cheap labors, tax holidays, deregulation and dynamic infrastructural benefits are the main attractions for foreign firms for bringing their bulk investments to the EPZs in those nations. The scheme facilitates convergence of the economically powerful and the powerless groups through equitable sharing of the gains from trade. In the developing countries EPZs act as empowering the local economy to gain multiple capabilities and go global increasingly.

Nonetheless, it is not a magic wand for industrialization and economic development. But if it is smartly designed and managed it may create wonder, otherwise not. This is observed from the experiences in Malaysia and Bangladesh. In Malaysia the EPZ program is structured and managed very smartly linking it to the entire national economy and providing all the needed physical and institutional infrastructure, security for foreign investments, maintaining high administrative discipline and political commitment to make it work for the benefit of the national economy. As a result, it has been a great success, to the extent that it stands as the cornerstone of national industrialization program. On the other hand, in Bangladesh, the EPZ program suffers from the basic shortcomings like inadequacy and irregularity of power and water supply, political agitations, etc, and above all administrative and political indiscipline. The program is structurally deficient with no workable linkages with the rest of the economy. Its achievement is therefore very limited, in spite of a very wide open scope for its expansion in the country.

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## Chapter 3

### **Mainstreaming the Third Sector Economics as a Way Out to Ensuring Development with Equity and Social Justice: *The Role of Islamic Entrepreneurship***

The materials of this essay are obtained from the following works: Molla, R.I., Alam, M.M. 2011. Mainstreaming the Third Sector Economics by Adopting the Principles of Islamic Entrepreneurship: For Development with Equity and Social Justice, *Dialogue & Alliance*, 25 (2).

At a later stage of the Roman Era the Puritan and Protestant ethics declared wealth as gift from God, and pursuits of wealth were freed from social and religious stigma, though, on condition that the wealth acquired would be used for righteous purposes. However, this opened the doors for wealth making, giving rise to *a nascent form of capitalism*. The Roman era thus sowed the seeds of capitalism by allowing unrestricted individualism. Roman law and legal structure were accordingly designed to nurture this nascent form of capitalism. This nascent capitalism formally grew up at the hands of Adam Smith and other classical economists and it fully blossomed and flourished at the hands of Alfred Marshall and other neoclassical economists. Adam Smith, the father of modern economics, saw economics fundamentally as the subject involving effective utilization of society's resources for the wellbeing of mankind. Over the time, it grew and thrived for the purpose of best achieving that very fundamental goal - the wellbeing of mankind. Its disciplinary development was pursued through ideologically and operationally different two dominant modes – the market (private sector) and the state (public sector) economic systems. Private sector economy relies on methodological individualism and 'maximization of profit' for individuals on the assumption that individual benefits added together maximizes society's benefits. Thus, it puts individual's benefit at the centre. Maximizing individual's wellbeing is maximizing society's wellbeing. It is based on free market competition under the strategy of 'strongest takes it all' following the Darwinist social philosophy of 'survival of the fittest'. The Political economy of the cultures of profit maximizing market economics, founded on the spirit and principle of Darwinist social philosophy and tailored to create unjust extreme economic and social imbalances, gave birth to oppression in the past through imperialist colonization of territories and nations, and now through American led terrorism for occupation, domination and control of world's natural resources. On the other hand, the public sector economy relies on the philosophy that society's benefit is the summation of all individual benefits. When the society maximizes its benefits it necessarily maximizes individual member's benefit. Maximizing society's wellbeing is maximizing individual's wellbeing. It puts society methodologically at the centre.

At the hand of Marshall, during the last quarter of the 19<sup>th</sup> century, economics gained maturity as a social science. It gained greatly in mathematical and technical proficiency to qualify as a science and earn the name ‘darling queen’ of social sciences. At that time, market, consisting of competing for-profit firms, was conceived as the sole agent for efficient organization and management of the economy for growth and ensuring wellbeing of the community. However, from the beginning of the 20<sup>th</sup> century it was realized that market alone could not be trusted to ensure community wellbeing. State involvement and participation side by side with the market was thought necessary. Market was to produce and supply mainly the private goods and the state was to produce and supply primarily the public and collective goods. As a result, market-state partnership in the management of the economy was thought essential for realization of the goals of the economy at national and international spheres. This market-state mixed economy model was thought necessary to ensuring community wellbeing at national and global levels. Their strengths and limitations in performing at different sectors of the economy eventually made the ‘private’ and ‘public’ sector economics find their own strong places in the mainstream economy to play their roles most efficiently. This market-state model gained continued acceptance of the academicians, professionals, and policy makers, for some time. But their serious shortcomings surfaced when the income inequalities within and among nations continued to increase instead of decreasing. Profit maximizing principle without care for social justice led to exploitation and concentration of wealth in the hands of the small group of capital owning business enterprises. The inherent inability of government in handling economic/business operations resulted in gross inefficiency and economic losses and vulnerability of the public sector enterprises. Therefore, the private-public economic model seriously failed to stop the widening of the income and social divides within and among the nations. Income inequalities significantly increased among citizens and among nations. It has become so embarrassing and disgraceful for world’s human society that the UN High-Level Panel on Financing for Development, in 2001, had to comment that increasing polarization between the haves and the have-nots had become a sad feature of our world; and reversing this *shameful* trend would be the preeminent moral and humanitarian challenge of our age.

World Development Indicator 2007 reported that 84% of world’s population received less than half (46%) of world’s income in 2005. The Gini coefficients of world’s income and wealth distributions are 0.612 and 0.892 respectively signifying an extremely high inequality of world’s income and wealth distribution. The richest 1% of adults in the world own 40% of the planet's wealth, and 2% own more than half of global household wealth. Even the wealth inequality within the nation is too high, such as wealth Gini of Japan is 0.55 and USA is about 0.8 (Davies et al. 2006). This model even failed to eliminate the most acute forms of poverty in various countries and locations. Excessive emphasis given on self-interested and competitive behavior has weakened the fellow

feeling and brotherhood and thus weakened the social bonds among people; it has diminished trust relations and cooperative behavior heightening the sense of vulnerability and fears for the future (Borzaga et al. 2009). Increased economic growth has not been matched by increased wellbeing and happiness at national and global levels. Therefore, at the end these two modes – the private, popularly called the *first sector economics*, and the public, called *the second sector economics* - both individually and jointly have been found seriously inadequate and incapable to ensuring wellbeing of nations and human societies. Various attempts were made to remedy the shortcomings of the market-state operated economy model by reducing the size of the public sector through privatization policy. Under the scheme, many public sector enterprises were transferred to private sector to avoid inefficiency. But it did not yield expected results. This points to how difficult it is to obtain socially responsible behavior from agents concerned only with the maximization of their self-interest.

### **Emergence of the Third Sector Economics**

Based on failure of the profit maximization model it is said that all was not well in the house economics had built; there is need for a new paradigm to effectively serve its purpose and goal. It is necessary to find a new balance between markets, governments, and other institutions, including not-for-profits and cooperatives with the objective of building a plural economic system with several pillars. Other scholars of the same standing fully support that position. They see cooperatives and social enterprises as better suited to coordinate collective action and promote collaboration, enhance trust, and increase freedoms. Responding to such a situation, a number of non-conventional approaches like cooperatives and social enterprises, *Waqaf*, foundations, and other non-profit institutions, etc., together called *third sector economy*, were moved and promoted as make-up for the deficiency of the two dominant models to ensure wellbeing of mankind. Initially the third sector emerged as a make up and defensive strategy of the market-state model to meet the minimum of unmet requirements in the sectors where the market and state grossly failed. It is typically conceived as an economic model comprising the various not-for-profit and other organizational forms able to perform well in the production of personal and collective services that cannot be provided so efficiently by for-profit or public organizations. It is the kind of social activity that is suitable for carrying out basically by non-profit and non-governmental organizations. It is also known as voluntary sector or non-profit sector. Typically, it consists of non-government, and not-for-profit bodies e.g. charities. Cooperatives and social enterprises are the two main movements of the third sector economics.

A Cooperative can be defined as a voluntary organization – farm, firm, or other organization - that is owned and managed jointly by its members for a common goal and

share the benefits among themselves. It follows the Rochdale principles. The modified Rochdale Principles are: open and voluntary membership, democratic governance, limited return on equity, surplus belongs to members, education of members and public in cooperative principles, cooperation between cooperatives, and concern for community. The key element is that it is basically meant for serving the interest and benefits of its members. Rendering service to the community is only incidental for a typical cooperative.

Social enterprises on the other hand are ‘social mission driven’ organizations. These include both non-profit and for-profit enterprises which apply market-based business approach in their operations to achieve social objectives. These are *business like operations but not for business*. Social enterprise must satisfy a social need and at the same time its activities must be economically sustainable. These are organized under different names with different tendencies in different countries and societies. It may be interpreted as any for-profit or non-profit organization that applies capitalistic strategies to achieve philanthropic goals without any ulterior motive. It is not outright a charity function. It is, in fact, based on the principle that can be described as ‘doing charity by doing trade’, rather than ‘doing charity *while* doing trade’.

Some recent theoretical developments have been helpful in strengthening the academic and analytical arguments for the third sector economics (Euricse’s Philosophy 2011):

- i) The new theories of the firm shift from a view of the firm as centered on profit maximization to one as a coordinator aimed at solving society’s problems through the production of goods or services. This new conception of the firm broadens its role by envisaging its use in the production of public and collective-interest goods as well.
- ii) Similarly, the new contributions of the behaviorist school and experimental economics to the analysis of individual behaviors question the hypothesis that every human action, and in particular every economic action, is governed exclusively by self-interest. This school maintains that human actions spring from a mix of motivations (which could be in the nature of intrinsic, extrinsic, self, others, etc.) and are influenced by a general ethical factor of inclination to help each other (brotherliness) and uphold justice and equity. These theoretical developments clearly point to the truth that men are fundamentally ‘ethical social beings’ and secondarily ‘economic beings’. This is the message of Islam and all other revealed religions.

These two theoretical developments have facilitated explaining why the objective of an enterprise is, or can be, also the solution of a collective problem; these new theories propose to provide the rationale for the third sector economics. Thus, the inability of the

dominant models to respond to numerous needs has, among other things, made room for the development and growth of cooperative and social enterprises created by groups of citizens and civic movements specially during the past three or four decades. Under the circumstances, the third sector economy is seen as a viable and needed economic model to ensure realization of the fundamental goal of economics – the wellbeing of mankind in the national and global domains.

### **Limitations in spheres of operation**

Unfortunately, from the inception, conceptually, structurally, and functionally these movements were meant and designed as special programs with location of operation primarily in the peripheral areas of the economy, like poverty alleviation, rural and agricultural development leaving the two other models to operate in all the dominant and growth generating sectors of the economy. Some scholars like to insist that the third sector economics are best suited mainly for the provision of personal and community care services. As a result, it remained outside the mainstream of the economy and could not play any dominant role in the economy. It failed to gain necessary recognition and respectability. Even donors and international agencies also promote cooperatives and social enterprises only as poverty reduction, and employment generation tools (UNDP 2008).

Asia is fortunate to be the birthplace of several successful and large Social Enterprises (SEs) such as Grameen Bank, The Bangladesh Rural Advancement Committee (BRAC), and Population and Community Development Association (PDA). These enterprises are respected and discussed widely. These few SEs are lucky to receive extensive government and donor supports. Unfortunately, the rest of the SEs are small or mid-sized. But in an increasing number of instances, these are accomplishing the socioeconomic goals in both the for-profit and not-for-profit sectors (Shahnaz and Tan 2009). Moreover, Asian SEs are finding increasing opportunities to raise capital. It is very satisfying to note that there is now a rise in governments' interest, availability of Islamic banking and financial services, and availability of *Shariah* (Islamic Principles) compliant funds for promotion of social enterprises as a new sector. But in spite of the invaluable contributions of the third sector economics towards bridging the social divides and achieving the community wellbeing, unfortunately it is not receiving expected attention and recognition for necessary development and expansion as potentially a more effective dominant economic model for balanced and sustainable development at national and global domains. It is currently treated as a peripheral activity and is put on the side line in the national economic management. Broadening and mainstreaming it (bringing it in the limelight with the other two economic systems) is now the most important task in order to make it play the expected role as a dominant and leading economic system for the future

world. This essay examines the scope of its widening and mainstreaming by employing the principles of Islamic entrepreneurship in its mode of operation.

### **Scope for Mainstreaming the Third Sector Economics by Adopting the Principles of Islamic Entrepreneurship**

In terms of its objectives of collective benefit, balanced and just economic development, equitable distribution of income and wealth, and narrowing the income gaps, closer understanding and trust among nations and societies, increased quality and standard of living of all etc. the third sector has close similarity with Islamic economics. Basic goals of economics are allocative efficiency and distributive efficiency and justice and balanced development for all. Distributive efficiency is a value driven function. It includes the universally-desired socio-economic goals of need-fulfillment, full employment, optimum rate of economic growth, equitable distribution of income and wealth, economic stability, and ecological balance, all of which are generally considered indispensable for actualizing human wellbeing. Being driven by profit maximization, the mainstream market economics is highly deficient and inefficient to meet these normative goals for the society. Because of its secularist worldview with materialist and social Darwinist outlook, the conventional economics fails to specify the necessity of individual behavior to serve social interest. The third sector economics emerged in order to make up this deficiency. It makes a frontal attack to the problem by mobilizing and demanding its entrepreneurs work ultimately for the benefit of the society. It puts social benefit as the prime mover of entrepreneurial functions.

Islam's commitment to brotherhood and justice makes the wellbeing (*falah*) of all human beings its principal goal. This wellbeing is the balanced realization of both material and spiritual needs of human personality. Therefore mere maximization of total output cannot be the goal of a Muslim society. Maximization of output must be accompanied by efforts directed to ensuring spiritual health at the inner core of human consciousness and interactions. Economic development can be considered realized only when the need-fulfillment for all, equitable distribution of income and wealth, full employment, and environment protection are satisfied. Islamic economics is founded on the principle of goal realization rather than profit maximization. In Islam, it is ethics that dominate economics and not the other way round. Hence, Islamic system differs from all other economic systems by an 'ethical factor' (Naqvi 1981, pp.12-18). This difference is fundamental because ethics epitomize the common values of a society and determine the preference structures of the members of that society. Independence of economics from ethics has no place in this system. In the Islamic perspective ethics set the tone for economics, with the result that the rules of economic behavior are derived from the ethical norms of Islam. Therefore, it is a value driven system that stands fundamentally to

meet the ethically determined and demanded normative goals for the wellbeing of the society. It aims to establish a just and balanced social system – ‘a social environment that brings a sense of community and fellowship in human relationships’ - that demands expressed recognition of justice, human dignity, and compatibility among man, his technology and his natural environment. Such a social environment requires much more than the economic growth and prosperity, much more than the so called efficient allocation of resources. Therefore, it supports the view of economic development described by Myrdal as an upward movement of the entire social system, or simply growth plus change in the redistribution of income in favor of the lower income groups, so that economic dualism is avoided. In Islam, however, economic development is viewed as only an element of wellbeing of the society; it is important but only as a contributor to the uplift of human beings in spiritual, material, and social spheres. Its entrepreneurship is geared to ensure expansion of useful production for the benefit and improvement of the human community (*Ummah*), improvement in its quality of life allowing enjoyment of conveniences and a moderate amount of luxuries, but avoiding extravagance.

Therefore, to the extent that community benefits, rather than individual benefits, are the focus and prime mover of the economic and entrepreneurial orientations, the third sector economics and Islamic economics have close similarity. Both the systems are basically community benefit driven.

### **The Potentials of the Third Sector and Call for Its Restructuring**

With its community centric conceptual base and social justice-driven motivation, the third sector stands as the superior economic model for goal realization. It has the best potential for most effectively managing the economy with human face and heart. It qualifies best to take the driver’s seat of the economy to realize sustainable growth and development with equity essential for realizing the wellbeing of the human community. Therefore, there is an urgent call for its necessary development and expansion in that direction.

Earlier we noted that the third sector economics conceptually and operationally have remained mostly involved at the peripheral areas and not at the mainstream of the economy. It is now working only as a filler holding a subordinate position as non-vibrant, non-growth generating, non-progressive, and non-challenging set of activities. Typically it comprises the non-government, and not-for-profit bodies with cooperatives and social enterprises as its two main movements. With this narrow base it is defined to include only the non-governmental and not for-profit economic activities for addressing societies’ wellbeing. But profit seeking and profit making is the legitimate right of the entrepreneurs. Without profit the enterprise cannot survive and entrepreneur cannot

remain in business. That is why the normal profit, without which the entrepreneur will not be willing and able to continue with the business, is calculated as a part of economic cost. Therefore, the third sector economics should not remain confined to only not for-profit activities. On the basis of its spirit and essence it needs to widen its sphere and domain of operations. However, profit maximizing or seeking unreasonable and excessive profit or profiteering without due regard for social wellbeing is not desirable for the society and cannot be the legitimate right of the entrepreneurs from the point of view of the goals of economics and essence of the third sector economics. The 'not for-profit' narrow base has put serious limitations to its growth and expansion and entry to the growth yielding and more challenging industrial sectors which are together called the mainstream economy.

It was highly expected that the third sector economics would play its role as another dominant model working not only for poverty alleviation but also for enhancing economic growth to bridge the economic and social divides. In recent decades, therefore, attention has been given to widen the dimension of its goals and objectives, and expansion of its spheres of operations to find its place as another dominant and more effective economic model for producing development with social justice. If it wants to make its presence felt and play a significant role in ensuring wellbeing of the society it has to rise up and get out of the present subordinate position. It has to expand in terms of conceptual base, domains of operations, and types of enterprises and their objectives to include social businesses and businesses blended with social justice, in addition to the not for-profit activities. Neither not for-profit nor purely profit maximization could be the natural themes of the general and mainstream economic activities in an economy. In fact these may be regarded as extreme and special cases. The mainstream economic activities are supposed to be carried out in the environment of the natural theme of doing business (for earning profit) with human face and social justice. Philosopher Adam Smith in his theory of moral sentiment highlighted that men are endowed with two instincts - self-interest and sympathy faculty. The sympathy faculty refers to feelings for others in the society. Sympathy faculty constantly moderates the self-interested behavior so that others' interests are protected. This being the case, the natural behavior of the entrepreneurs is expected to be doing business for earning profit but within the framework of social justice. Therefore, the restructuring of the third sector economics should capitalize this natural behavior of human being. Accordingly it should accommodate changes to include the following additional types of enterprises: i) 'social businesses' that are basically profit-driven but some operations are social benefit-driven, ii) public private partnership (PPP) enterprises with social benefit as a control factor, iii) all Islamic business enterprises with ethics and social benefit as control factor, and iv) cooperatives, basically for benefits of the members but with some operations devoted to community benefits, etc. It will thereby include all enterprises which have at least a declared policy and some stated operations driven by community benefits. Thus it should

be viewed and structured to include the not for- profit enterprises and the for- profit 'businesses blended with social justice' to enable it ultimately become a large and most dominant economic model carrying comparable status with the market-based first sector economics in terms of size and domain of economic activities and share and control of the economy. With this expansion and restructuring, the third sector will be strong enough to significantly influence the first sector to moderate and blend its profit maximizing behavior with equity and social justice. This will produce the best and most desirable set up and combination of operating economic models for ensuring balanced and sustainable growth with equitable distribution of income and wealth and realization of the ultimate goal of economics – the wellbeing of human society at national and global levels.

For this restructuring it will require regulatory provision of registration of enterprises as third sector enterprises specifying their plan of actions to meet their commitment to social justice in their operations. Since for these enterprises profit maximization is not the basic reward, there should be regulatory provisions for rewarding these enterprises as a category by a socially respected trade mark, award of social titles as recognition to the successful enterprises and entrepreneurs, special financial and other supports for these enterprises in the event of any temporary financial crisis or genuine business failures, punishment through withdrawal of the trade mark, social and economic privileges, etc., in case of their willful negligence to their commitments to social justice. This new regulation may conveniently replace the earlier regulations for NGOs, cooperatives, foundations, *Waqfs*, etc.

### **Role of Entrepreneurship in Economic Growth and Development**

Entrepreneurs are the initiators and drivers of the economy. Importance of entrepreneurship cannot be over estimate in accelerating economic growth and development both in developed and developing countries. Entrepreneurship is a process through which individuals identify opportunities, allocate resources, and create value. An entrepreneur undertakes innovations and initiates an effort to transform innovations into economic goods. In business term the most obvious form of entrepreneurship is a 'startup company' (that starts new businesses). However the concept of entrepreneurship has a wide range of meanings. It may mean a person who pioneers change. It may also mean who wants to work for himself or herself rather than being an employee. Innovative entrepreneurs who are willing to take risks are an essential human resource in any economy. They are very few, particularly in the developing countries. Entrepreneur possesses certain qualities that are unique and found in very few individuals in society.

A more comprehensive and descriptive business definition of entrepreneur could be that, an entrepreneur is one who organizes, manages, and assumes the risks of a

business or enterprise. He sees 'problems' as 'opportunities', and accordingly identifies the solutions to those problems and finds customers who are ready to pay for such products/solutions. According to Joseph Schumpeter, he 'is a person who is willing and able to convert a new idea or invention a successful innovation'. He works for change through what Schumpeter called 'the gale of creative destruction' - the process of changing the old to the new. Schumpeter's definition of entrepreneur placed emphasis on his role for innovation such as new product, new production methods, new markets, and new forms of organization. This process of creative destruction through innovations is largely responsible for the dynamism of industries and long-run economic growth. Entrepreneurship therefore is an indispensable function in economic growth for social wellbeing and progress of human civilization.

### **Required Qualities of Entrepreneurs**

Entrepreneurial abilities and qualities are very scarce and valuable. These are needed to improve upon what we have and to create new goods and services for progress in human civilization.

#### ***For conventional economics***

Various western scholars highlighted the common personal qualities of successful entrepreneurs for the market economics. These are scarce qualities available only in a tiny fraction of the members in the society. An entrepreneur is about more than just starting a business or two, it is about having attitude and the drive to succeed in business. All successful Entrepreneurs have a similar way of thinking. The common qualities they possess can be summarized as follows:

Inner drive to succeed and very ambitious; strong belief in themselves – assertive personality; creative and search for new ideas and innovation; openness to change – dynamic in nature; competitive by nature; highly motivated and energetic – abundance of self-motivation; accepting of constructive criticism and rejection – positive in attitude

But the most essential ones from the perspective of community wellbeing are missing. These are motives to serve the social goals and values, and commitment to ethics and religious values. These are in fact the missing items of personal qualities differentiating them with the Islamic entrepreneurs and, similarly, the entrepreneurs for the third sector economics.

#### ***For Islamic economics***

Islam regards entrepreneurship as essential and indispensable for progress of human civilization. Entrepreneurship is essential for effectively exploring and exploiting the existing and potential world resources for economic growth and development for benefit of the human community. In Islam, to indulge in business (*tejarati*) is to perform an obligatory duty (*fardhukifayah*); having no entrepreneur in a community is regarded as sinful for the entire community. That is how seriously Islam perceives and encourages entrepreneurship. Profits are merely incidental in the fulfillment of this *fardhukifayah*. Emphasizing it as the prime mover, Islam has made entrepreneurship as a societal obligation (*fardulkifaya*) that must be performed even if by one or some members in the society. However, entrepreneurial qualities are very special and rare, and people with such entrepreneurial qualities are very limited in supply. That is why Islam made it a societal obligation (*fardulKifya*) and not a personal obligation. That means the few available entrepreneurs must perform the function of pioneering continued changes through innovations in the economic environment. Since it is a societal obligation it has to be for society's benefit. More people with this quality are available the better for faster and greater wellbeing of the society.

Islam endorses entrepreneurship regardless of it is being opportunity or necessity driven as long as it stands on moral and ethical grounds and conforms with the Islamic code of conduct. Entrepreneurship in Western societies is mainly driven by the prospect of material rewards. Islam has nothing against seeking profit through the creation of, or the engagement in, business ventures. The only condition that must be preserved is the realization that every business undertaking is a form of religious duty (*Ibadah*) intended firstly to please the Almighty Allah and secondly to satisfy the needs of the society and finally to generate reasonable income for the owners of the enterprise. Islamic entrepreneurship is not against seeking reasonable profit but it puts ethical consideration and community interest at the fore. Islam aspires to create high quality entrepreneurs and productive Islamic entrepreneurship. Thus, Muslim entrepreneurs are permitted and encouraged to be involved only in morally accepted and socially desirable productive business activities. *Haram* (non-permissible) activities like the activities that are involved with alcohol, drugs, usury, prostitution, gambling, and highly speculative business behavior are strictly prohibited, despite the possibility of their economic viability.

In Islam entrepreneurship is viewed from a larger perspective and the entrepreneur assumes an altruistic role that goes beyond satisfying immediate needs and personal interest. Thus, the 'pursuit of self-interest' and 'self-centered wealth creation' are not the primary motives behind Islamic entrepreneurial activity. Altruistic motives override personal considerations; it is the conviction that self-interest shall be realized as a natural outcome while advancing the society's common welfare. The personal motives of

entrepreneurs for starting their businesses are considered important indicators that explain the status and the direction of entrepreneurship in a country. The ability of the entrepreneurs to orchestrate and lead the economic transformation and to carry out needed fundamental changes in the cultural, social and economic structure of the country depends much on the entrepreneurial motives of the new business founders when starting their businesses. Besides being holistic in approach, Islamic entrepreneurship dictates that the individual must first be a religious person. It is motivated by success which encompasses the world here and the hereafter. Entrepreneurial success, in Islam, is wider in scope and not confined to merely the 'bottom-line' principle of earning profit and material wealth. The following philosophical principles describe the nature of the Islamic entrepreneurship: it is an integral part of Islamic religion; Islam encourages its *ummah* to venture into business; doing business is a part of *Ibadah* (good deed); a Muslim entrepreneur (like any other Muslim) is a *Khalifatullah* (Allah's agent) guided by Islamic ethics and values prescribed by the Holy Qur'an and the traditions of the Prophet (*Hadith*).

### **Islamic Entrepreneurship for Successfully Mainstreaming the Third Sector Economics Model**

For actualizing this needed expansion for the desired success of the third sector model it requires the right kind of entrepreneurship and entrepreneurs to guide and lead the economy towards development with social justice. As noted earlier, the entrepreneurs functioning in the market-led economy are motivated and driven by profit maximization as the sign and symbol of success. Community wellbeing through the provisions like corporate social responsibility (CSR) is only a residual consideration for them. The CSR is used primarily as an instrument for public relations and marketing strategy, again with the motive of gaining market control for maximizing corporate profits. They remain smartly engaged in serving the needs of the *haves* ignoring the cause of the *have-nots*. This, in fact, reinforces and expands the problem than solving it. These kinds of entrepreneurships are harmful and dangerous for the society. These are grossly misfit for the third sector economics. We noted earlier that profit maximizing market economics gave birth to all kinds of international exploitations and oppressions in the past through imperialist colonization and now through American led terrorism for control of world's natural resources. To counter these oppressions there emerged various strains of movements and revolutions. However, Islam addresses this kind of oppression (*zulum*) with the call for *Jihad* – a resistance movement and continuous effort for betterment and development against all sorts of injustices and oppression - under the conviction that wherever oppression (*zulm*) occurs, there will arise the brigade of Muslim army to fight it (the principle of '*amr bil maaruf, wannahi anil munkar*'). This has given birth to various types of current revolutions and resurgence movements, including the *Al-Qa'ida* (the

base) movement, for liberating the oppressed from the hands of the capitalist terrorists and all other occupiers.

Entrepreneurs in Islamic mould are guided by the Islamic etiquettes (ethics) in their search for best serving the cause of mankind. For them the motivating factor is wellbeing of mankind and pleasure of Allah, the Creator. The unique ethical and motivational structure of the Islamic entrepreneurship puts priority to community considerations over the individual benefits of other agents. It puts community as the primary stakeholder of the output of any entrepreneurial action. Islamic entrepreneurship and entrepreneurs being imbued with Islamic spirit of community wellbeing as a priority, fit very well to this structure of the proposed restructured third sector economic model. Applying the principles of Islamic entrepreneurship this sector can grow and expand to its required size to find that a large number of its member enterprises is operating in the mainstream and growth sectors of the economy. Therefore, this kind of mainstreaming of the third sector economics is required and proposed. Only then it can upgrade itself to the dominant and comparable position with the first sector to effectively play its role to ensure sustainable growth with equity and social justice at national and global levels. However, in most countries of the world, in reality, most entrepreneurs now may lack Islamic conviction and spirituality. Particularly in the non-Muslim countries, entrepreneurships cannot be expected to conform fully to Islamic norms in respect of both the religious and material aspects of the entrepreneurship. Therefore, these cannot be reasonably called fully Islamic entrepreneurships. Under the circumstances, the entrepreneurship which falls short of fully conforming to the religious elements of Islamic entrepreneurship but conforming reasonably fully to all its material aspects and community centric spirit may be conveniently called *Islamic style entrepreneurship*. Under the Islamic style entrepreneurship, output maximization, profit maximization, employee benefits etc., are all subject to community wellbeing considerations. Profits for the equity holders and benefits for employees are put as residual matters. Therefore, it may be found most suitable and useful for successful functioning of the third sector economics for development with social justice more particularly in the developing countries.

### **Examples of Recent Islamic Style Third Sector Enterprises**

In Malaysia, Johor state government's investment agency, Johor Corporation (JCorp) is an example of a successful initiative of Islamic entrepreneurship (Musa 2010). JCorp, through creation of its corporate *Waqaf*, WANCorp, has successfully initiated a new way of doing business under the banner 'Business Jihad' - an alternative to the purely shareholder-centric, business-driven economic model. Its mission and slogan is 'Building wealth for all with Islamic entrepreneurship'. It is formed on the basis of the institution of

*Waqaf*, which in Islamic Law, is a permanent endowment or trust, customarily of real estate, in which the proceeds are spent for purposes designated by the benefactor – usually charitable foundations such as schools, orphanages, hospitals, and mosques, etc. This newly created corporate *Waqaf* is a legally recognized community-owned corporation that continues in perpetuity, for producing useful goods and services for the society. Profits from it are used solely for reinvestment or funding community interests in charitable or social causes as a way of bridging the social divides. It is more or less like the ‘social business.’ It is claimed that the approach largely adheres to the nature and character of Islamic entrepreneurship. Community and social justice are at the core of this alternative way of doing business. Thereby it initiates a shift from the conventional to a community-centric business concept. This is an example of staunchly business like initiative of Islamic style third sector entrepreneurship.

Similarly, Sheba Polly in Bangladesh is an example of another type of Islamic style third sector entrepreneurship. It is a cost based charity initiative. Sheba Polly (*integrated rural service centre*) (Molla 2008) is one of the two operating arms of the Bangladesh Association for Total Social Advancement (BATSA). It is a field level action program for development. It is an integrated rural development scheme. It is a project of a series of rural services centers, each armed with facilities ranging from hospital, technical institutes, and other services outlets built primarily through local initiatives to provide various social services in the community and motivate members of public commit to social services with the realization that ‘*serving humanity is serving religion*’. It is to provide at cost six categories of aids under a scheme - ‘*service according to need and payment according to ability*’. Under the scheme, those who are incapable to pay full cost for the services may apply and negotiate with ‘Sheba Fund’ management (created for this purpose, with donations and *zakah* receipts from individuals and institutions) for payment of the balance. Recipients of services thus only pay according to their ability. So far only one such service outlet has been established at the suburban village of the district town Brahmanbaria. Its six categories of development aids are namely:

- Health aid (health first! health for all!)
- Employment generation aid (everyone must have access to work & earning for a living)
- Educational and religious aid (everyone must have access to basic education and religion)
- Legal aid (everybody must have access to justice)
- Socio-cultural aid (everyone must have the right to promote his/her culture and live with social dignity).
- Agricultural Aid (every farmer must have access to modern agricultural technology)

## Summary

The two economic systems – the private, popularly called the first sector economy, and the public, called the second sector economy - both individually and jointly have been found seriously inadequate and incapable to ensuring wellbeing of human societies nationally and globally. In response to such a situation a number of non-conventional approaches like cooperatives and social enterprises, *Waqaf*, foundations, and other non-profit institutions, etc., together called third sector economy, were moved and promoted to ensure social justice and wellbeing of mankind. Initially it emerged as a make-up and defensive strategy of the market-state model to meet the minimum of unmet requirements in the sectors where the market and state have grossly failed. It, thus, played only a subordinate role with no substantial effects. However, it is strongly felt that a broadly based third sector economic model with both not for-profit business like enterprises and for-profit businesses blended with social justice is necessary to play its role as a mainstream model not only for poverty alleviation but also for economic growth to bridge the economic and social divides. Islamic entrepreneurship, which is basically a community-centric mode of business initiative is found to be a natural strategy to pursue against all forms of capitalist exploitations like, in the past, through European colonialism and now through American led terrorism, to control resources. It is an antidote to the problem of intolerable economic and social dualism in the economies. It is the natural model for solving the problems of economic inequity, concentration of wealth, and social divides. Therefore, this study finds the Islamic mode of entrepreneurship to be most suitable and effective for gainfully widening and mainstreaming the third-sector economies, more particularly in the developing countries.

There is indeed the scope to expand and develop the third sector economics to upgrade itself from the level of peripheral activities to the level of mainstream economic activities standing comparably and competitively with the market led private sector (1<sup>st</sup> sector) economics. Nations and societies which are interested to expand, develop, and mainstream their third sector economies to help establish a balanced and just economic development to bridge the economic and social divides, may need to profitably promote Islamic style entrepreneurship which is by nature not against seeking reasonable profit but which puts ethical consideration and community interest at the fore. There is therefore need for credible researches in this field of community-centric economic model. Accordingly, there is need for some research centre established specifically for this purpose.

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## Chapter 4

### **The Deceptive Nature of Capitalist Globalization and the Demand for Inclusive Globalization for a New International Economic Order: *Experiences of Malaysia's Economic Globalization***

Materials in this essay have been compiled from the following papers: i. Molla, R.I., M.M. Alam & M.W. Murad (2011), 'The Deceptive Game of Today's Capitalist Globalization: Evidence from Malaysia's Experience', *European Journal of East Asian Studies*, 10(2): 169-180, and ii. Molla, R.I., M.W. Murad, and M.M. Alam (2011), 'Malaysia's Economic Globalization in the Milieu of the Deceptive Game of Capitalist Globalization', paper under consideration of an international journal for publication.

History tells us to suggest that economic policies and approaches periodically change perspectives, swinging back and forth, under different names, along the continuum of different shades and flavors of mercantilism and liberalism. One such swing is from Keynesian embedded liberalism (roughly the era of mid 1940s – early 1970s) to neoliberalism (roughly the era of late 1970s – late 1990s) with globalization as its working agenda to the extent that the two names are at times interchangeably used.

Literally, globalization is international integration – a cultural phenomenon - for a borderless world. However, as is practiced, it refers to economic globalization - integration of national economies into the international economy through trade, foreign direct investment, capital flows, migration, and the spread of technology under the framework of free market competition to reap the benefits of specialization, efficiency, economies of scale and gains from trade. Essentially, it is the increased interconnectedness of national markets reflected in the growth and rise in international trade, foreign investment, and especially in international financial flows. It is argued that the neoliberal policies would yield better national and global economic performance - higher GDP, employment, and productivity growth. Technology transferred from the North would let less developed nations converge to the developed nations' level of economic performances. Therefore, it is prescribed and pushed as a policy strategy for outward looking industrialization and economic growth of the developing countries of the South. Economic globalization is the integration of national economy with the global economy. Indeed, it is the natural outcome and the end result of economic development processes in any nation. The internal dynamics of the process of development pushes the economy going global. It is done primarily through liberalizing trade and liberalizing capital investment. In its fullest form it is a borderless economy where, as opposed to a regime of restriction and protection, there is a regime of free trade of all inputs and outputs. Essentially, it is the increased interconnectedness of national markets reflected in the growth and rise in international trade, foreign investment, and especially in

international financial flows. It is, thus, a strategy of outward looking industrialization to enjoy the benefits of production for wide world market, specialization, and economies of scale. Traditionally the development process starts with import-substitution based industrialization, to replace imports by domestic production, followed by export oriented industrialization, for foreign market exploration, and finally followed by a technology-intensive high-value adding industrialization. The internal dynamics of specialization, economies of scale, managerial efficiency, product quality, research and development, etc. at the national and firm levels create country-specific and firm-specific advantages that strongly argue for going global. Therefore, for both the developing and developed economies globalization is a fact of life.

### **Globalization as the Fact of Life of the Industrialization Process**

Outward looking industrialization is considered essential for economic emancipation of countries, and globalization is a fact of life of their such industrialization processes. Economic globalization is largely thought to be an effective means for making the developed and developing worlds truly become part of one World forged together by a common economic destiny and guided by the humane principles of peace, friendship, and mutual respect. It necessarily means globalization of world economy and not globalization of trade. The strongest economic argument for promoting economic globalization, is the 'gain from trade' arising out of specialization and economies of scale. This 'gain from trade' is an added income for the trading countries to share and increase their welfare. The internal dynamics of specialization, economies of scale, managerial efficiency, product quality, research and development, and quality of products, etc., at the national and firm levels make globalization a more reliable strategy for sustained economic growth and development. In that sense, it is a natural outcome and the end result of economic development processes of any nation. It is argued that through this process of globalization the technology transferred from the North would let less developed nations converge to the developed nations' level of economic performances. Therefore, it is prescribed and pushed as a policy strategy for outward looking industrialization and economic growth of the developing countries of the South.

Unfortunately, however, there is a dark and ugly face of capitalist globalization. This ugly face makes it a deceptive strategy and a threat to the cause of developing economies. Development theories that advocate for globalization as a way forward for global economic growth with equitable sharing of the gains from growth among participating nations are unfortunately founded on the assumption of perfect market which is an unrealistic and wrong assumption for the global economy consisting of national economies widely unequal in terms of political and economic powers and levels of industrialization and competency. Under the circumstances, capitalist globalization

only leads industrialized powerful countries and developing weak countries enter into a centre-periphery relationship in production power structure in which the developing periphery countries become dependent on the industrialized developed centre countries for their production and trade (Gilpin, 1975). As a result, by pursuing a strategy of globalization, under the present global economic order, the newly industrializing countries are subjecting themselves to sharing either only the least or none of the amount of gains from globalization, leaving the industrialized developed partners to enjoy the most or all of it, under the rule 'strongest takes it all'. Capitalist globalization is in fact an operational agenda of neoliberalism. It is therefore alleged as primarily a project of capital accumulation for the capitalist North through a process of systematic exploitation of the developing South. Thus, Mahathir, the former Prime Minister of Malaysia, alleges that unregulated capitalist globalization has been the cause of greater global inequality and underdevelopment of many developing countries (Billington 2002). He blamed it to be responsible for the East-Asian economic crisis in 1997.

To the industrialized nations, economic globalization is to facilitate acquiring their imports, mostly the primary products, at the lowest prices from developing countries and selling their industrial and financial products to those countries at the highest prices to generate maximum capital accumulation. As a result, the industrialized capitalist countries always get the most or all of the gains from trade. It is a deceptive game used by the capitalist nations as an exploitative mechanism for enriching themselves at the expenses of the developing countries. It is a project of 'strongest takes it all'. By pursuing a strategy of globalization of economy under the present capitalist framework, industrialized powerful countries and industrializing weak countries enter into a centre-periphery relationship in production power structure in which the developing industrializing periphery countries become dependent on the industrialized developed centre countries for their production and trade. To this extent, the era of globalization closely resembles the age of imperialism in the past. Capitalist globalization, thus, earned the international condemnation for its natural blind eye to the interests of the developing economies. As a result, the developing economies must pursue globalization only cautiously and selectively.

This chapter examines the depth and breadth of the deceptive game of capitalist globalization and analyses, through the case study of Malaysia's economic globalization, the impacts of this dichotomous role of capitalist globalization on the international political economy of the emerging economies of the South and the rich capitalist countries of the North.

### **The Bright and Dark Sides of Capitalist Globalization**

Its bright aspect is that it is a natural outcome and end result of economic development process of any nation. The strongest economic argument, as mentioned earlier, for promoting economic globalization has always been the 'gain from trade' arising out of specialization and economies of scale. Under a perfectly competitive market structure they are expected to share this gain equitably. Economic globalization is a strategy of outward looking industrialization to enjoy the benefits of production for wide world market, specialization, and economies of scale. The internal dynamics of specialization, economies of scale, managerial efficiency, product quality, research and development, etc. at the national and firm levels are, thus, its bright aspects to make it a more reliable strategy for sustained economic growth and development. But, today's globalization is a 'capitalist' globalization and an operational agenda of neoliberalism and capital accumulation for the capitalist North. This is its dark and demonic side. It seeks to transfer the control of economy from public to the private sector and is often described as a project of restoration and consolidation of world capitalist class (global rentier class) power to enhance and protect capital accumulation (Harvey, 2005:2 and 2009; Crotty and Dymski, 2001:3). It is therefore primarily a scheme for maximizing capital accumulation for the capitalist North by means of systematically exploiting the developing South through manipulation of international prices of goods and services - highest price for their exports and lowest price for their imports. To this extent, the era of globalization closely resembles the age of imperialism in the past. It is therefore perceived and accused as a deceptive game of the capitalist North. Under the circumstances, it is seen as a 'capitalist' globalization and a double-edged sword for the industrializing economies. On one hand, it is an indispensable source of their industrialization and economic growth; and on the other, it is a means of their systematic exploitation by the capitalist countries.

As a result, to many of the developing countries it has not brought the promised economic benefits; instead it generated higher profits for some multinational firms and banks, and much higher returns for rentiers throughout the world (Stiglitz 2002:5; Crotty and Dymski, 2001:4). Instead of narrowing the gap between rich and poor countries, globalization, in fact, has widened the gap to reinforce the North-South divides. Consequently, capitalist globalization, as an agenda of neoliberalism, earned the international condemnation for its natural blind eye to the interests of the developing economies. At a dialogue at Dhaka on inclusive globalization, attended by Nobel laureates Sen and Yunus, and global financier Soros, globalization was criticized in various respects. Soros leveled it as a market fundamentalist project. Placing ultimate reliance on market, it leads to monopolistic tendencies by promoting international business cartels. It hardly offers any playing field between the rich and the poor, far less any level playing field. As a result, inequities are growing in the world instead of healthy inter-dependence for the sake of collective good. Sen and Yunus criticized it as moving in a wrong direction, as the majority of the nations are denied the privileges and are

becoming weaker and weaker while the rich countries are getting stronger and stronger with the prerogative of giving the global economy the shape they like, and the poorest nations have no say. The dialogue noted with shock that two percent of people possess 50 percent of the world's total assets. Even, apparently in an unusual move, the British Prime Minister Mr. Gordon Brown has recently talked about the dark side of capitalist (unregulated) globalization in which it is seen inherently a scheme for widening the income gap between developed and developing countries. Other critics accuse USA and other Western countries guilty of hypocrisy. These countries have kept up their own trade barriers, while they pushed the poor countries to eliminate their barriers (Stiglitz, 2002:6-7).

### **Global Economic Structure and the Deceptive Nature of the Globalization Game**

As mentioned earlier, to the industrialized nations economic globalization is meant for acquiring their imports, mostly the primary products, at the lowest prices from developing countries and selling their industrial and financial products to those countries at the highest prices to generate maximum capital accumulation.

Since the real world is divided into widely unequal north and south, strong and weak, rich and poor, developed and developing, industrialized and industrializing countries, free (and fair) market competition is not a feasible and tenable premise. Taking full advantage of this uneven global economic structure the capitalist countries (North) have driven the globalization agenda ensuring that it garners for them a disproportionate share of benefits, at the expense of the developing countries of the South (Stiglitz, 2002:7). By virtue of their economic strength and bargaining power they always insist on fixing the prices of their exports and imports closest to the autarky prices of the developing countries for maximizing capital accumulation. Moreover, globalization favors capital as a mobile factor of production but not the labor for which international mobility is extremely constrained. Therefore, it is pathologically incapable to benefit developing economies. As a result, the industrialized/capitalist countries always get the most or all of the gains from trade. It is a deceptive game used by the capitalist nations as an exploitative mechanism for enriching themselves at the expenses of the developing countries; it is a project of 'strongest takes it all'. A simple hypothetical example below will explain the principle how exploitations take place under unregulated globalization:

Country A (relatively small developing economy) and Country B (strong industrialized economy) produce 2 groups of goods – Consumer goods and Capital goods. Their production possibilities with given resources, therefore, are:

For A: 100 consumer goods or 20 capital goods

For B: 30 consumer goods or 120 capital goods

Autarky prices (prices without trade) in country A:

Relative price (cost) of one unit of capital good:  $100/20 = 5$  consumer good

Relative price (cost) of one unit of consumer good:  $20/100 = 0.2$  capital good

Autarky prices (prices without trade) in country B:

Relative price (cost) of one unit of capital good:  $30/120 = 0.25$  consumer good

Relative price (cost) of one unit of consumer good:  $120/30 = 4$  capital good

Since the cost of capital good in country B is the lowest (.25 as against 5 in country A) clearly B has the comparative advantage in the production of capital good and A has comparative advantage in the production of consumer good. If they decide to specialize and enter into trade the international price of the commodities can be bargained and settled anywhere between the autarky prices of the commodities in the two countries; closer it is to the importing country's autarky price, exporting country gains more and importing country gains less and vice versa. In our example price of capital good could be settled anywhere between 0.25 – 5 consumer goods. If it is settled closest to 5, B (exporting country) will get the most of the gains from trade, and A (importing country) will get none or the least of the gain. Therefore, if A and B are committed to fair trade and sharing of the gains from trade equitably the terms of trade should be settled at the middle of the range of the autarky prices in the two countries. But the rich capitalist trading partners by virtue of their economic strength and bargaining power always insist on fixing the prices of their exports and imports closest to the autarky prices of the developing countries for maximizing capital accumulation. Therefore the dark and deceptive side of globalization is so glaring that it overwhelms all its bright aspects making it misfit for the search of a New International Economic Order (NIEO) according to the contemporary vision of social market economics – i.e. transforming the perspective from the 'free' to 'fair' market.

Another feature of the deceptive nature of globalization is that it is a 'one-way street' re-enforcing dependency of the South to the North. Unfortunately it appears that in the South 'West is best' is generally the accepted concept when it comes to styles to be emulated. The late president Julius Nyerere of Tanzania called this 'catching up with the North syndrome'. As a result, most of these countries have easily accepted North-pushed consumerism and globalization in which Westernization is symbolized as globalization. Consumerism is the unbridled urge for consumption, as if 'we only live to eat'. It is the product and teachings of capitalism of the affluent economy. One of the most important objectives of the North-pushed globalization is to promote and spread this consumerism to the developing countries so that their economies become dependent (by a centre-periphery relationship) on the industrialized economies. This has led to the wanton spread

of Western practices of consumption in all the developing countries making the South increasingly dependent on the North and, thus, making globalization practically a one-way traffic instead of a two-way movement of products and cultures between the North and the South. That is why we find that in spite of the established superiority and more dependable performances of Islamic banking system even in the North's own territory, the North is not yet ready to openly and wholeheartedly accept and accommodate Islamic banking system in its banking industry. Because of its religious foundation, 'ethical financing' is the centre piece of Islamic banking system. As a result of which Islamic banks and banking system were not affected by the global financial crisis. However, the conventional banking and financial system is guilty of unethical and speculative financing, which created the credit bubble in the financial sector and caused its eventual collapse. Emphasizing on the desirability and ethical superiority of the profit- and-loss sharing principle and the Islamic bond (*sukuk*) for funding development and business projects, various credible quarters in the North, for example Prof. Rodney Wilson of London School of Economics, Lord Mayor of the City of London, and the Vatican, recognized and appreciated the superiority of Islamic banking and financial principles for a viable and stable global financial system (Al-Arabia, 2009; The Brussels Journal, 2009). But at the same time, we also find many along the way who, like Gaffney (2008), busily painting *Shariah*-compliant Islamic finance as a *Jihadi* (holy war) institution and a formula for devastation. Accordingly, we find that it has been largely denied its rightful place in the North.

Unfettered capitalist globalization, therefore, cannot be trusted and taken for granted as a workable and profitable development policy for the developing countries. Yet globalization is a fact of life in the emancipation of their developing economies. It is therefore essential for these countries to workout and decide upon the nature, kind and framework of the globalization they want to pursue in order for their economies to operate gainfully without being exploited by the industrialized trading and growth partners. Asian Development Bank, for example, argues for a 'market driven but state steered' globalization model ('Asian Model') as a development strategy for these countries. From the study of the East Asian Tiger economies, it can be noted that the re-imposition of national capital control in pursuit of the reconstruction of effective and progressive national industrial policies are quite likely preconditions for success in the pursuit of economic development of the countries of the South. Accordingly, in the interests of the global whole, it is necessary to create appropriate global institutions to support such progressive national programs of the developing South.

## **The Way Out**

For safeguarding the legitimate right and interest of the developing nations in the game of globalization, the following can be understood and pursued as strategies for the way out.

### **Economic Nationalism as the Mainspring of Development Process**

Globalization may be the fact of life and natural outcome and the end result of economic development processes of any nation. But the truth of the matter is that it is not the mainspring of the process. In fact, economic nationalism founded on mercantilist perspective is its mainspring. We must remember that it was Prime Minister Nehru's first economic policy declaration, 'produce or go without it' - a sound of economic nationalism and stand for effectiveness as against efficiency - and not any call for globalization that stimulated the Indian lion economy to roar. Similarly, using the same magic wand of effectiveness China activated its dragon economy to spread its wings. The East Asian Tiger economies were energized into growth through the wisdom of the flexible and adapted state-led growth policy. East Asia's success stands as a proof of the superiority of the Asian Model - an intelligent and flexible combination of state regulation and market forces, under a shade of mercantilist perspective - in achieving a desirable combination of economic growth, productivity, technological progress, and income equality. Unguided globalization for the newly industrializing country, in fact, will only jumpstart the process of economic development and may risk malfunctioning. The Prebisch-Singer hypothesis that countries (developing economies) cannot effectively industrialize under free-market system will lend support to that. In addition, as a regime of supply-side management, neoliberal globalization leads to a chronically inadequate aggregate demand growth and structurally determined excess aggregate supply. Therefore, the big industrialized countries are now vying for a kind of *regulated capitalism* and proposing revamping the old Bretton Woods accord under the new name Bretton Woods II (The Daily Star, 2008).

That is why we observe that in most cases generally a dual strategy of protection and globalization, which we may like to call a guided globalization, is used to simultaneously ensure fair sharing of the gains from specialization and trade and guarantee growth and security of industrial capacity of the national economy. Malaysia's globalization largely fits into this category.

### **Inclusive Globalization / Neoglobalization: The Next Swing for the Way Out**

Because of its inherent interest for elitist development, its natural disregard for egalitarian development and its habit of turning a blind eye to the aspirations of the emerging economies of the South, the amount of love, respect and enthusiasm shown for globalization had started to erode by the late 1990s. In 1998 the extent of its market

freedom attribute was curtailed and a new consensus was reached on the recognition and specification of the 'role and responsibilities' of both state and market in a state guided market-driven development policy. The development policy and approach again took another swing, this time some way back towards the embedded liberalism, to reshape and redress it in the search of a new international economic order from the perspective of the contemporary vision of social market economics. Sound of this swing was clearly heard at that time in the writings of the scholars (like, for example, Nobel laureate Prof. Paul Krugman, 1999: *The Return of Depression Economics*).

Because of its ugly face the unregulated capitalist globalization, pushed and patronized by the developed industrialized countries, has earned international condemnation and is a suspect of deceptions. It cannot be trusted and must be approached 'rationally, moderately, and selectively, rather than whole-heartedly' by the developing economies (Shakur 2002). The demand now is for 'inclusive globalization'. For the developing countries, globalization must play the role of ensuring the sharing of gains from trade and growth equitably with the developed industrialized partner countries and contribute positively to the growth in industrialization, industrial competitiveness, economic growth and development and to the reduction of their income gaps with industrialized developed countries. To make it work and help create a new global economy in which not only is growth more sustainable and less volatile but the fruits of the growth are more equitably shared, it needs to be reshaped, reoriented, and properly managed with all countries having a voice in policies affecting them. Similarly, the Economic Dialogue in Dhaka mooted an inclusive globalization to realize the potential of globalization to eradicate poverty and lift countless have-nots. They believe this 'inclusive globalization' will promote a new international economic order requiring reformation, reorientation, reorganization, and restructuring of the mighty international institutions like the UN, World Bank, International Monetary Fund and World Trade Organization, etc. in terms of management control, objectives, and goals, and through creation of new global institutions to support such egalitarian progressive national programs.

While the capitalist globalization is a project of efficiency that works for benefits of the most efficient and the strongest, the 'inclusive globalization' is a project of effectiveness that works for equitable sharing of benefits. It is a pursuit of a new international economic order. It has to be guided and regulated to ensure equitable sharing of the benefits of trade and growth among the participating nations. Its underlying theme must be internationalization of the economies rather than globalization of trade, production for need fulfillment rather than for profit maximization, replacement of greed and competition based on the philosophy of 'survival of the fittest' by the humanity of

cooperation based on the philosophy of ‘live and let live’, and replacement of the ‘free market’ by ‘fair market’ perspective.

### **Reshaping and Resetting the Mindset of the Developing Nations**

As a way out to reduce this dependency, the developing countries should be able to overcome the ‘catching up with the north’ syndrome and reshape and redirect their industrialization and development programs along the route of need-based production free of imitative and conspicuous consumptions. They should pursue their industrialization and economic programs to achieve development in the spirit of, as Sen suggests, ‘*a life we want to lead and the freedom we want to enjoy*’. Going for conspicuous and imitative consumptions and life style will only make the rich industrialized countries stronger in bargaining power when setting the terms of trade. That is why Dr. Mahathir Mohamed recently repeated the call when he stated publicly that by resisting the imitative Coca Cola, Kentucky Fried Chicken, and MacDonald’s culture we can create credible pressure on the economy of the North and resist its deceptions in setting the international terms of trade.

### **Malaysia’s Experience of Globalization**

How and to what extent Malaysia has been able to neutralize the negative effects of the dark-side and enjoy the positive effects of the bright-side of globalization during 1970 – 2006 is our next task. We have used both quantitative and qualitative methods of analysis in this exercise.

#### **The nature and structure of Malaysia’s globalization**

From a background of a colonial agrarian open economy Malaysia formally started its industrialization journey in 1957 and proceeded phase by phase through the roadmap of development to realize its vision of becoming a ‘fully developed’ nation by 2020. Its development process followed the usual pattern that starts with the import-substitution based industrialization followed by export oriented industrialization and finally ends with technology-intensive high-value adding industrialization. However, the globalization of its economy effectively started from 1970, with the program of export oriented industrialization and added with it the program of industrial and social restructurings. Its industrialization and globalization program is characterized by unique features. ‘*Look east*’ and ‘*Malaysia-centric*’ autonomous identity themes remained its mastermind and hardcore, and the export processing zone (EPZ) and economic development corridor (EDC) schemes remained its cornerstones. With these unique features, it has become known as a ‘Malaysia model of economic development and globalization’. Its structure

and time-path can be summarized from Cheng (2008) as follows (this summarization has also been reported in Essay 2):

- (3) 1957-1969: Import substitution based industrialization - to encourage growth of domestic industries for producing simple consumer goods. Targets were production of goods mainly for home consumption and increase in employment. Tax relief and other incentives and protection from foreign competition were given to encourage local and foreign companies to set up factories.
- (4) 1970-1990: Outward looking industrialization and industrial and social restructuring - to encourage increased foreign investment and transfer of technology in the country and to link the export oriented industries with the rest of the domestic sector of the economy. Targets were production for global market, increase in economic growth, eradication of poverty, reduction in the disparity of income levels, education and skill, economic functions, and employment opportunities among different ethnic groups. It passed through the following phases:
  - (i) 1970-1980: Growth of export-oriented light industries - creation of free trade zones (FTZs) and provision for various fiscal incentives to attract local and international investments and production for export.
  - (ii) 1980-1985: Growth of heavy industries - through establishment of some government pushed and supported heavy industries like automobile, still, cement, and petrochemicals, under heavy protection from outside competition. Outputs were meant primarily for local market. This was thus considered as the second round of import-substitution industrialization in the country.
  - (iii) 1985-1990: Trade and investment liberalization - to bring structural adjustments in the industrial sector. Privatization was mooted to transform many government owned companies into government linked companies (GLC). Tariffs were increasingly reduced. Restrictions on foreign equity were relaxed allowing foreign investors to be able to hold up to 100% of the equity. This policy-shift toward more market oriented and outward-looking approaches attracted many multinational companies to move their operations to Malaysia.
  - (iv) 1991-2020: This is the phase of taking the economy to its full maturity, through rigorous tests of international competitiveness, and stepping into the state of affluence, to achieve the full realization of the vision of becoming a fully developed and industrialized knowledge-based country *underscoring national unity and socio-economic justice*. Various plans and policies have been introduced since 1991 towards achieving this goal. Industrialization and globalization base has been broadened to include agriculture and service sectors linking them with the global market.

## **Management of economic development and globalization**

Malaysia's industrialization and globalization approach is a strategy of growth with equity. It can be best described as a strong market embedded into a strong government and is driven by Malaysia's vision of becoming a fully developed and industrialized knowledge-based nation by the year 2020. It is a highly target oriented phase by phase approach strictly monitored and modified as necessary by compromising efficiency for effectiveness. Fostering national unity and growth with socio-economic justice through broader quantitative and qualitative participation of all groups of people at all levels of activities are the most hardcore and touchstones of the approach and its tools and strategies. It is guided by long-term plans such as New Economic Policy, Outline Perspective Plans, National Development Policy, various Industrial and Knowledge-based Master Plans, etc. and is pursued through medium-term operational plans such as five-year Malaysia plans. In 1991 Malaysia formally articulated its vision as a blueprint of national development over a period of thirty years under the name Vision 2020, to transform it finally from a developing to a fully developed nation. Table 4.2 in Appendix summarizes the approaches and actions at different phases of economic development and globalization in Malaysia.

During the import substitution phase (1957-1969) tax exemption was given under the Pioneer Industries Ordinance 1958 as an incentive to encourage local and foreign firms to establish industries in the country. Under Investment Incentive Act 1968 the tax relief period was extended beyond 5 years. Certain 'infant industries' were given protection through import tariff and quota by Tariff Advisory Board and Federal Industrial Development Authority (FIDA).

During the most challenging long period of globalization through export oriented industrialization (1970-1990) all the plans and policy actions and institutions were geared to achieve the national objectives of economic growth with distributive justice, bring about social restructuring through reduction in economic disparity among the Malay, Chinese, and Indian ethnic groups, eradicate poverty, and promote national unity. As a result, in many ways and in many cases intensive government interventions were necessary to ensure increased participation of the Malay ethnic community at all levels of economic activities to enable them increase their wealth sharing and to reduce foreigners' equity ownership. Malays are the Bumiputera i.e., legal land-owners of the country; but they were far behind the non-Bumiputera (Chinese and Indian communities) and foreign investors in respect of ownership of national wealth. In 1970 their equity ownership was only a meager 2.4%. Special state-owned companies under the State Economic Development Corporation (SEDCs) were set up to promote and serve Bumiputera entrepreneurs. In addition, government encouraged and pushed non-Bumiputera and

foreign investors to form joint-venture companies with Bumiputera. This was a period of serious challenges and achievements.

During the maturity and affluence period (1991-2020 Multimedia Super Corridor and various other economic development corridors/zones have been set up to broaden the coverage of industrialization and globalization to include agriculture and service sectors, and widen the quantitative and qualitative participation of all groups of people in the economy driven by knowledge and innovations. It is to effect transformation of the economy from production-led to knowledge and innovation driven, so that the vision of becoming a fully developed and industrialized affluent nation with a robust and resilient economy, distributive justice, and strong bond of national unity is fully realized by the year 2020.

### **Achievements in national and international fronts**

Economic globalization in Malaysia increased steadily under its economic development and industrialization strategy during 1970-2007. Index of globalization level increased from 62.94 to 78.03 (3<sup>rd</sup> continued part of Table 4.1 in Appendix). Achievements of its development and globalization strategy can be evaluated from the context of national macroeconomic goals and global competitiveness and income convergence (benefits sharing) objectives.

#### ***National macroeconomic goals***

From the context of national macroeconomic indicators Malaysia has had made significant and commendable achievements during the study period. During 1970 – 2007 per capita real gross national income (GNI) increased from \$1,110 to \$5140 with an average annual growth rate of 5% (1<sup>st</sup> part of Table 4.1 in Appendix), unemployment rate dropped from 8% in 1970 to 3.1% in 2008 (Table 4.1), inflation rate dropped from 4.49% in 1975 to 2% in 2007 (Cheng, 2008), foreigners' share of equity capital decreased from 63.4 % in 1970 to 28.8% in 2004 (Table 4.2), poverty rate decreased from 52.4 % in 1970 to 3.6% in 2007 (Table 4.3).

Table 4.1: Malaysia's unemployment rates (repeat of Table 2.1)

Year	1970	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Rate (%)	8.0***	2.8**	2.5**	2.5**	3.2**	3.1**	3.1**	3.9**	3.5**	3.8*	3.6*	3.0*	3.6*	3.5*	3.1*

Sources: \*Index Mundi (2009), \*\* International Labor Organization (2003), and \*\*\*Cheng (2008)

Table 4.2: Ownership of share capital (at per value) of limited companies, 1969-2004 (%)  
(repeat of Table 2.2)

Type of Owners	1969	1970	1975	1980	1985	1990	1995	1999	2004
Bumiputera Individuals and Trust Agencies	1.5	2.4	9.2	12.5	19.1	19.2	20.6	19.1	18.7
Chinese	22.8	27.2	-	-	33.4	45.5	40.9	37.9	40.9
Indians	0.9	1.1	-	-	1.2	1	1.5	1.5	1.5
Others	-	-	-	-	-	-	-	0.9	0.8
Nominee Companies	2.1	6	-	-	1.3	8.5	8.3	7.9	9.2
Locally-Controlled	10.1	-	-	-	7.2	0.3	1	-	-
Foreigners	62.1	63.4	53.3	42.9	26	25.4	27.7	32.7	28.8

Sources: Malaysia (1996, 2001)

Table 4.3: Malaysia's poverty statistics, 1970 – 2007 (%) (repeat of Table 2.3)

	1970	1980	1985	1990	1995	2000	2004	2005	2007
Poverty	52.4	37.4	20.7	16.5	8.9	7.5	5.7	5.2	3.6
Urban Poverty	22.3	-	8.5	7.1	3.7	3.5	2.5	2.4	2.0
Rural poverty	60.0	-	27.3	21.1	15.3	14.0	11.9	11.2	7.1
Hardcore Poverty	-	-	6.9	3.9	2.1	2.4	1.2	1.1	0.7
Urban Hardcore Poverty	-	-	2.4	1.4	0.9	0.8	0.4	0.4	0.3
Rural Hardcore Poverty	-	-	9.3	5.2	3.7	3.1	2.9	2.1	1.4

Source: Malaysia (2006).

Note: A projection for total poverty in 2010 is 2.8%, which was done recently by Economic Planning Unit, Prime Minister's Department, Malaysia

Recently, the country made an inroad to political maturity having attained the *competitive political culture* with less than absolute (two-third) majority by the governing political party/alliance at the parliament. Undoubtedly, this is a chapter of great achievements in terms of political maturity and social empowerment.

#### *Effect of globalization on GDP/GNP*

For ascertaining the contribution of globalization to these achievements firstly a simple log-linear regression analysis of the GNP and gross domestic product (GDP) as functions of the Globalization Index has been made. Results suggest that globalization has a strong positive influence on GNP and GDP; for a one percent increase in globalization GNP and GDP increase by 8.33% and 8.02% respectively (Table 4.4). This shows that Malaysia effectively enjoys positive effects of economic globalization.

$$\ln Y_{1t} = \alpha + \beta_1 \ln X_{1t} + \varepsilon \quad (1)$$

$$\ln Y_{1t} = \alpha + \beta_1 \ln X_{1t} + \varepsilon \quad (2)$$

Where,  $Y_{1t}$  = Total Real GNP/GNI of Malaysia,  
 $Y_{2t}$  = Total Real GDP of Malaysia,  
 $X_{1t}$  = Economic Globalization Index,  
 $\alpha$  = Constant, and  $\varepsilon$  = Residual.

Table 4.4: Statistical output of the GNP/GNI and GDP as functions of globalization index in Malaysia (1970-2006)

Equation No.	Dependent Variable	Independent Variables	Coefficient	t-stat	P-value	DW	R2
1	$\ln Y_{1t}$	$\alpha$	-10.61*	-4.72	0.000	0.67	0.875
		$\ln X_{1t}$	8.33*	15.70	0.000		
2	$\ln Y_{2t}$	$\alpha$	-9.25*	-4.48	0.000	0.71	0.885
		$\ln X_{1t}$	8.02*	16.44	0.000		

\* indicates significant at 1% level.

Secondly, for a closer and more rigorous examination multiple log-linear regression analyses of GNP and GDP as functions of fixed capital formation, employment, foreign direct investment, and globalization index have been made. There again results show that Globalization positively contributes to GNP and GDP; a one percent increase in globalization increases GNI and GDP by 1.47% and 0.78% respectively (Table 4.5 and Table 4.6). However, the coefficients were not found statistically significant even at 5%. Therefore, these results cannot be statistically relied upon and these could at best be taken as indicative of globalization having positive influence on national economic growth. It is interesting and encouraging to note that globalization appears to have relatively more influence on GNI than GDP.

$$\ln Y_{1t} = \alpha + \beta_1 \ln X_{1t} + \beta_2 \ln X_{5t} + \beta_3 \ln X_{6t} + \beta_4 \ln X_{4t} + \varepsilon \quad (3)$$

Where,  $Y_{1t}$  = Total Real GNP/GNI of Malaysia,  
 $X_{1t}$  = Economic Globalization Index,  
 $X_{5t}$  = Local Fixed Capital Formation in Malaysia,  
 $X_{6t}$  = Total foreign direct investment (FDI) outflow from Malaysia,  
 $X_{4t}$  = Total Employment in Malaysia,  
 $\alpha$  = Constant, and  $\varepsilon$  = Residual.

Because of non availability of local labor employment data for all the years of the period of study total employment data ( $X_{4t}$ ) have been used in equation 3.

Table 4.5: Statistical output of the GNP/GNI as a function of globalization index and other variables in Malaysia (1970-2006)

Equation No.	Dependent Variable	Independent Variables	Coefficient	t-stat	P-value	DW	R2
3	lnY1t	$\alpha$	-1.66	-0.89	0.379	0.64	0.979
		lnX5t	0.52*	9.35	0.000		
		lnX6t	-0.01~	-1.70	0.100		
		lnX4t	0.53~	1.92	0.064		
		lnX1t	1.47	1.23	0.229		

\* and ~ indicate significant at 1% and 10% levels, respectively.

$$\ln Y_{2t} = \alpha + \beta_1 \ln X_{1t} + \beta_2 \ln X_{2t} + \beta_3 \ln X_{3t} + \beta_4 \ln X_{4t} + \varepsilon \quad (4)$$

Where,  $Y_{2t}$  = Total Real GDP of Malaysia,

$X_{1t}$  = Economic Globalization Index,

$X_{2t}$  = Total Fixed Capital Formation in Malaysia,

$X_{3t}$  = Total FDI Inflow in Malaysia,

$X_{4t}$  = Total Employment in Malaysia,

$\alpha$  = Constant, and  $\varepsilon$  = Residual.

Table 4.6: Statistical output of the GDP as a function of globalization index and other variables in Malaysia (1970-2006)

Equation No.	Dependent Variable	Independent Variables	Coefficient	t-stat	P-value	DW	R2
4	lnY2t	$\alpha$	1.87	0.81	0.425	0.74	0.979
		lnX2t	0.41*	4.66	0.000		
		lnX3t	0.01	0.17	0.863		
		lnX4t	0.64**	2.12	0.042		
		lnX1t	0.78	0.55	0.584		

\* and \*\* indicate significant at 1% and 5% levels, respectively.

### ***Global competitiveness and income convergence goals***

#### *Industrial performance/ competitiveness*

At the level of international competitiveness Malaysian economy maintained a steady improvement moving from 40<sup>th</sup> in 1980 to 21<sup>st</sup> position in 2007 in terms of global industrial performance/competitiveness ranking (Table 4.7).

Table 4.7: Competitive industrial performance of selected countries – rank (repeat of Table 2.4)

Economy	1980*	1990*	2000*	2008**
United States	13	14	11	1
Singapore	2	1	1	7
Japan	5	4	6	8
United Kingdom	12	13	17	9
Korea	23	18	10	11
Malaysia	40	23	15	21

Thailand	47	32	23	28
China	39	26	24	34
South Africa	36	44	35	44
India	38	36	40	48
Mexico	31	29	26	52
Indonesia	75	54	38	54
Philippines	42	43	25	71
Brazil	24	27	31	72

Sources: \* United Nations Industrial Development Organization (2004) & \*\* World Economic Forum (2008)

This may suggest that globalization has created an attractive and efficient industrial environment and caused transfer of technology in management, process, and products to increase economy's competitiveness and performance level.

#### *Income convergence with industrialized partner countries*

Income convergence analysis signifies the nature of change in income gaps between countries over time. It can be conveniently used to study the political economy of globalization and test how fairly a developing country, by pursuing the strategy of economic globalization, shares the gains from trade and growth with its industrialized rich trading partners. If the income gap between the rich and developing country trading and growth partners decreases over time it may signify that the developing country partners are sharing the gains from trade and growth more than proportionately with the rich country trading partners. When the income gap between them increases it may signify sharing of the gains from trade and growth less than proportionately with the rich trading partner countries.

Bernard and Durlauf (1994) provided the definitions of the convergence hypothesis that are interpretable in terms of unit roots and co-integration theory. Specifically, there will be income convergence over time if a stationary process with zero mean forecast value, integrated order  $I(0)$ , shows a stable long run co-movement between two countries' income; otherwise the result would be income divergence. Oxley and Greasley (1995) defined the concept of long-run convergence as the attainment of long-run steady-state equilibrium in the income differential between two contrasting economies. They also defined the concept of long-run catching up as a narrowing down of income gap between two contrasting economies over time and hence the convergence process is yet to be completed. In fact, the log-linear model of time series frameworks shows both long-run convergence and catching up when the trend in income differential between two economies is found to be stationary.

In fact, there are two measurements of growth convergence:  $\beta$ -convergence and  $\delta$ -convergence. The  $\beta$ -convergence describes an inverse relationship between initial income

levels and growth differences among countries, where the  $\delta$ -convergence focuses on the actual income differences among countries. There will be  $\beta$ -convergence if an initially poorer economy grows faster than an initially richer one, and  $\delta$ -convergence if income differences between the economies decrease over time. This paper focuses on the  $\delta$ -convergence criteria, which has been determined by the augmented Dickey-Fuller (ADF) test using time series data.

$$\Delta Y_t = \alpha + \beta_1 T + \beta_2 Y_{t-1} + \sum_{k=1}^n \delta_k \Delta Y_{t-k} + \varepsilon_t$$

Where,  $\varepsilon$  is a pure white noise error term,  $T$  is a deterministic trend,  $\alpha$  is a constant term,  $\beta_1$  and  $\beta_2$  denote the parameters of convergence to be estimated. The unit root test of the income convergence hypothesis for the time series properties is the logarithm differences of real GDP or GNI per capita between country  $i$  and country  $j$ , where,

$$Y_t = \ln(Y_{it} / Y_{jt}) = \ln Y_{it} - \ln Y_{jt}$$

The framework can further be defined as:

$$\Delta(\ln Y_{i \ t-k} - Y_{j \ t-k}) = \alpha + \beta_1 \ln T + \beta_2 (\ln Y_{i \ t-1} - \ln Y_{j \ t-1}) + \sum_{k=1}^n \delta_k \Delta(\ln Y_{ij \ t-k} - \ln Y_{j \ t-k}) + \varepsilon_t$$

The usable format of the model is presented below:

$$\Delta \ln Y_{3t} = \alpha + \beta_1 \ln T + \beta_2 \ln Y_{3 \ t-1} + \sum_{k=1}^n \delta_k \Delta \ln Y_{3 \ t-k} + \varepsilon \quad (5)$$

$$\Delta \ln Y_{4t} = \alpha + \beta_1 \ln T + \beta_2 \ln Y_{4 \ t-1} + \sum_{k=1}^n \delta_k \Delta \ln Y_{4 \ t-k} + \varepsilon \quad (6)$$

$$\Delta \ln Y_{5t} = \alpha + \beta_1 \ln T + \beta_2 \ln Y_{5 \ t-1} + \sum_{k=1}^n \delta_k \Delta \ln Y_{5 \ t-k} + \varepsilon \quad (7)$$

$$\Delta \ln Y_{6t} = \alpha + \beta_1 \ln T + \beta_2 \ln Y_{6 \ t-1} + \sum_{k=1}^n \delta_k \Delta \ln Y_{6 \ t-k} + \varepsilon \quad (8)$$

Where,  $Y_{3t}$  = USA per Capita Real GNI / Malaysia per Capita Real GNI,

$Y_{4t}$  = USA per Capita Real GDP / Malaysia per Capita Real GDP,

$Y_{5t}$  = Japan per Capita Real GNI / Malaysia per Capita Real GNI,

$Y_{6t}$  = Japan per Capita Real GDP / Malaysia per Capita Real GDP,

$T$  = A deterministic trend,  $\alpha$  = Constant, and  $\varepsilon$  = Residual.

Table 4.8: Summary of unit root test results for income convergence hypotheses for Malaysia (1970-2006)

Eq. No.	Data Set	Adjusted Observations	Coefficient ( $\beta_1$ )	t- stat ( $\beta_1$ )	Coefficient ( $\beta_2$ )	Decision	ADF t-Value
5	$\Delta \ln Y_{3t}$	32	-0.003	-1.20	-0.337*	Divergence	-2.64~
6	$\Delta \ln Y_{4t}$	32	-0.003	-1.10	-0.328**	Divergence	-2.48~

7	$\Delta \ln Y5t$	35	0.005	1.39	-0.221**	Divergence	-1.99~
8	$\Delta \ln Y6t$	35	0.005	1.40	-0.224**	Divergence	-2.01~

\* and \*\* indicate significant at 1% and 5% levels, respectively.

ADF t-critical values for 32 observations are -4.27, -3.56, and -3.21 at 1%, 5% and 10% levels, respectively.

ADF t-critical values for 35 observations are -4.24, -3.54, and -3.20 at 1%, 5% and 10% levels, respectively.

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The above results of the ADF unit root tests are very sensitive to the selection of lag length. Too few lags cause to reject the null when it is true (i.e., adversely affecting the dimension of the test), but too many lags reduce the power of the test (since unnecessary nuisance parameters reduce the effective number of observations). Hence, for a proper selection, this study used the Akaike Information Criterion (AIC) to determine the optimal lag length.

The USA and Japan are Malaysia's two rich and industrialized major trading and growth partners. An analysis of Malaysia's income convergences with USA and Japan shows that there exists a unit root with a significant ADF test t-value even at 10% level (Table 4.8). That means Malaysia's income is diverging over time with the incomes of USA and Japan and therefore its income gaps with these countries have been widening. This may imply that Malaysia has been having unfavorable terms of trade with them and thereby has been sharing the benefits of globalization proportionately far less than its rich trading and growth partners. The general findings of income convergence studies show that lower income industrializing countries are 'catching up' to the higher income industrialized countries, even when the developing countries in a group does not have income convergence with the rich industrialized countries as a group (Hubbard and O'Brien, 2006). In that sense Malaysia's globalization has failed even to match with the general findings of income convergence studies. This unexpected departure from the general findings, therefore, calls for further investigation, more particularly, in respect of Malaysia's terms of trade with the USA and Japan.

#### *Income ratios and globalization*

A simple log-linear regression analysis of the income ratios of Malaysia with the USA and Japan as functions of Malaysia's economic globalization index, nonetheless, are found inclined to support a phenomenon of convergence or 'catching up' with USA and a phenomenon of divergence or 'lagging behind' with Japan. Results show that with increase in globalization income gap between Malaysia and the USA has a tendency to decrease – a convergence or 'catching up' phenomenon - and that of between Malaysia and Japan has a tendency to increase – a divergence or 'lagging behind' phenomenon (Table 4.9). The results are found to be statistically highly significant but the  $R^2$  of the

equations are found rather low. It may signify that Malaysia's economic globalization may not be the most reliable and accountable factor for explaining these relationships.

$$\ln Y_{3t} = \alpha + \beta_1 \ln X_{1t} + \varepsilon \quad (9)$$

$$\ln Y_{4t} = \alpha + \beta_1 \ln X_{1t} + \varepsilon \quad (10)$$

$$\ln Y_{5t} = \alpha + \beta_1 \ln X_{1t} + \varepsilon \quad (11)$$

$$\ln Y_{6t} = \alpha + \beta_1 \ln X_{1t} + \varepsilon \quad (12)$$

Where,  $Y_{3t}$  = USA Per Capita Real GNI / Malaysia Per Capita Real GNI,  
 $Y_{4t}$  = USA Per Capita Real GDP / Malaysia Per Capita Real GDP,  
 $Y_{5t}$  = Japan Per Capita Real GNI / Malaysia Per Capita Real GNI,  
 $Y_{6t}$  = Japan Per Capita Real GDP / Malaysia Per Capita Real GDP,  
 $X_{1t}$  = Economic Globalization Index,  
 $\alpha$  = Constant, and  $\varepsilon$  = Residual.

Table 4.9: Statistical outputs of regression analyses of income ratios of the USA and Japan with Malaysia and globalization of Malaysia (1970-2006)

Equation No.	Dependent Variable	Independent Variables	Coefficient	t-stat	P-value	DW	R2
9	$\ln Y_{3t}$	$\alpha$	12.57*	5.95	0.000	0.33	0.410
		$\ln X_{1t}$	-2.44*	-4.90	0.000		
10	$\ln Y_{4t}$	$\alpha$	13.07*	6.31	0.000	0.34	0.440
		$\ln X_{1t}$	-2.57*	-5.26	0.000		
11	$\ln Y_{5t}$	$\alpha$	-14.21*	-5.69	0.000	0.41	0.540
		$\ln X_{1t}$	3.78*	6.42	0.000		
12	$\ln Y_{6t}$	$\alpha$	-13.27*	-5.34	0.000	0.41	0.511
		$\ln X_{1t}$	3.55*	6.06	0.000		

\* indicates significant at 1% level.

Figure 4.1: The trend of relationship between Malaysia's income ratio with USA and Malaysia's economic globalization index

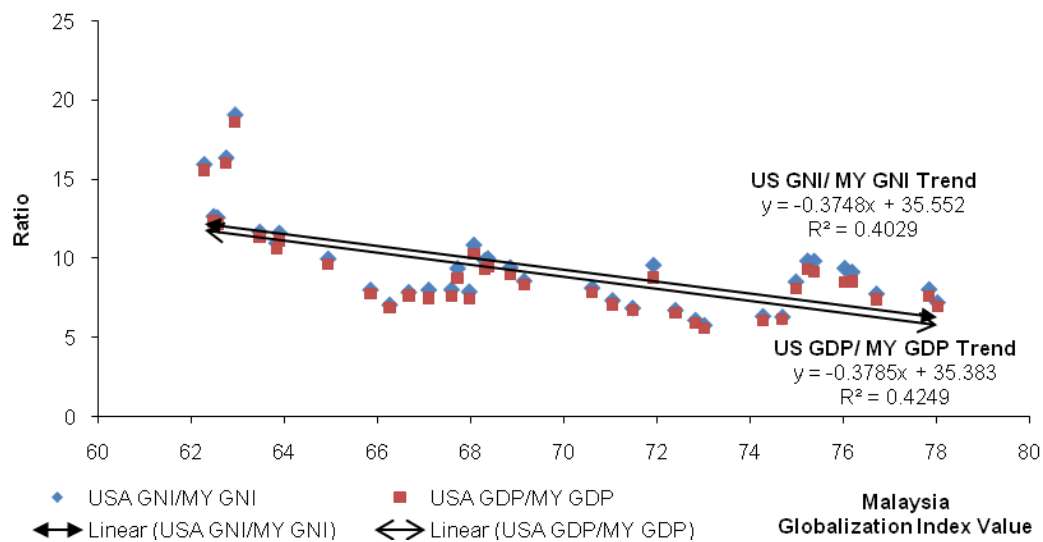
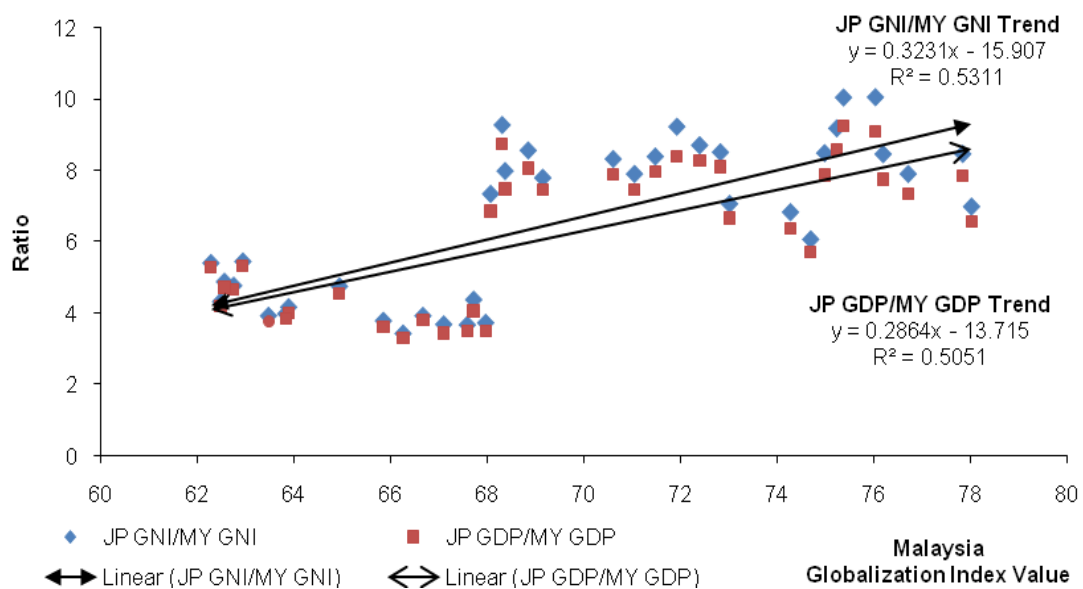


Figure 4.2: The trend of relationship between Malaysia's income ratio with Japan and Malaysia's economic globalization index



The Figure 4.1 above reveals the fact that Malaysia's income ratio with the USA and Malaysia's economic globalization index are to some extent supportive with the income convergence theory. That is to say, Malaysia is slightly catching up with the USA in terms of its income ratio. The Figure 4.2, on the other hand, reveals the fact that Malaysia's income ratio with Japan and Malaysia's economic globalization index are not supportive with the income convergence theory. That is to say, Malaysia is 'lagging behind' with Japan in terms of its income ratio. On the basis of the above income convergence and income ratio analyses, however, it may reasonably be concluded that Malaysia's economic globalization has in fact failed to reduce its income gaps with the rich trading and growth partners.

## A Critical Assessment

Having had created an investment and business friendly production and industrial environment Malaysia is now a fast growing open economy in the region. It has earned the respect as a 'Malaysia model of economic development and globalization' with 'autonomous identity' and priority to realization of country objectives. But on the account of international political economy it is found to have failed unexpectedly. It appears that as a developing small economy Malaysia has a very limited scope to play its card at the international front. But at the national front it has the will, courage, and strength to play all its cards to promote and safeguard its national interest, growth, and security. As a result, its success so far on most of the national accounts is undoubtedly commendable and attractive for other developing nations to emulate.

In recent times, however, even the very architect of the Vision 2020 Tun Dr Mahathir Mohamad expressed reservations that because of some political and administrative mismanagement the goal of the Vision 2020 may not be fully achieved by 2020 (see *The Malaysian Insider*, 2008). Similarly, the immediate past Prime Minister Tun Abdullah Ahmad Badawi was worried for the recent low economic growth rate (see *The People's Portal - MalaysiaToday.com*, 2008). Others like Lim Kit Siang, parliamentary opposition leader, are critical about government's overly concern about the fully developed nation status at the negligence to the fundamental issues like Merdeka "social contract", creation of Bangsa Malaysia (Malaysia Nation), and the issue of social, religious, cultural, and national cohesion (see *Dapmalaysia.org*, 2006). There is no denying the fact that these are important observations that need to be taken care of during the remaining one decade at hand. Errors, failures, corrections, and moderations are routine matters of management for necessary adjustments to continue. Having had one more decade at hand for necessary adjustments and modifications these are possibly only unnecessary worries.

Moreover, the notion of developed or 'fully developed' nation status is not an absolute measure. It is very much a relative matter; it depends on the mindset of the people. Development is, as Sen likes to put it, '*a life we want to lead and the freedom we want to enjoy*' and, *economic development is*, as a former minister of Uganda in mid-1970s stressed, '*a means towards building the kind of society we want to build*'. Westernization cannot be the necessary criterion to measure it. Similarly, the capitalist globalization cannot be the relevant strategy for economic emancipation of the developing countries. As noted earlier that India's lion economy was stimulated to roar not by any call for globalization but by Nehru's first economic policy declaration: 'produce or go without it' – a project of effectiveness as against efficiency; and by the touch of the same magic wand of effectiveness China activated its dragon economy to

spread its wings. Therefore having had all the achievements thus far along the roadmap of development and a decade more at hand to work on, there is no scope now for anyone to doubt about the full realization of the goals of Vision 2020 as long as the mindset of the Malaysians and their leaders do not become corrupted by what the late president Julius Nyerere of Tanzania called the ‘catching up with the north syndrome’, and ‘westernization’ does not take precedence over the ‘look east’ vision of development.

Scholars will always have research interest to identify the core factors that contributed to this commendable achievement. There are reasons to believe that the wisdom of a ‘Malaysia-centric’ development strategy, application of the strict political and administrative discipline at all levels, and above all the resolved political will played the pivotal role in this game of success. But we leave this for some other studies to cover more rigorously. Moreover, further studies are required to identify the limitations and scopes of management strategy of Malaysia’s globalization program specifically for realization of its international goal of reducing income gaps with the industrialized economic partners.

## **Summary**

Capitalist globalization is the economic policy of integration of national economies with global economy on the basis of free market competition. It is a neoliberal prescription for industrialization and growth of the emerging economies of the South and a project of capital accumulation for the capitalist North through a process of securing disproportionate share of benefits at the expense of the developing South. The content analyses poise to support the hypothesis that globalization has high potential to contribute to industrialization and growth of the emerging economies. But at the same time, the way it is practiced, it is a deceptive game of the North and cannot be trusted wholeheartedly for emancipation of the developing economies. It rather requires a policy of target oriented ‘inclusive globalization’ to ensure equitable share of benefits of specialization and globalization.

Malaysia’s economy is considered as one of the most globalized and successful in the developing countries. Its economic globalization is a kind of cautious and guided globalization. ‘Malaysia-centric’ and ‘look east’ strategies are its unique features. Its success in respect of achieving the national macroeconomic goals is found commendable. But it has clearly failed in respect of the international political economy objective; it has failed to reduce Malaysia’s income gaps with its industrialized economic partners like USA and Japan. This tends to suggest that even a guided and regulated globalization like that in Malaysia will have the tendency to yield relatively more benefits to the developed industrialized economic partners. It, therefore, confirms the fact that the developing

countries must pursue globalization only selectively, rationally, and prudently without joining the bandwagon of the industrialized countries. Therefore, it may require to pursue the model of target oriented 'inclusive globalization', under the framework of internationalization of the economies instead of globalization of trade and the perspective of 'fair market' instead of 'free market', to ensure equitable sharing of benefits of specialization and globalization among the industrialized and industrializing partner nations. The focus should be on reducing the income gap between nations and societies. This gap has become so wide that the U.N. High-Level Panel on Financing for Development, in 2001, termed it as shameful for the human community of the world. "Reversing this *shameful* trend is the preeminent moral and humanitarian challenge of our age".

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## Appendix

Table 4.1: The economic data series used in the paper for analyses (1<sup>st</sup> Part)

Year	Total Real GNI Malaysia (US\$) <sup>1</sup>	Total Real GDP Malaysia (US\$) <sup>1</sup>	Per Capita Real GNI Mal (US\$) <sup>1</sup>	Per Capita Real GDP Mal (US\$) <sup>1</sup>	Mal Total Real GNI Growth Rate (%) <sup>2</sup>	Mal Total Real GDP Growth Rate (%) <sup>2</sup>	Mal per Capita Real GNI Growth Rate (%) <sup>2</sup>	Mal per Capita Real GDP Growth Rate (%) <sup>2</sup>
1970	12055027703	14747121876	1110	1141				
1971	14822557869	15566671448	1331	1366	23	6	20	20
1972	17050805863	17881193813	1493	1530	15	9	12	12
1973	22656924909	23972614024	1938	2002	33	12	30	31
1974	24264163428	25899651282	2026	2112	7	8	5	5
1975	22937902376	24122827551	1871	1928	-5	1	-8	-9
1976	26343077233	27984700952	2100	2178	15	12	12	13
1977	29887604952	31761996800	2330	2416	13	8	11	11
1978	34637327557	35443239217	2638	2753	16	7	13	14
1979	43995129852	45005512533	3275	3415	27	9	24	24
1980	48230449698	48896168659	3504	3623	10	7	7	6
1981	44899796670	45469710629	3182	3287	-7	7	-9	-9
1982	44400117417	45478604800	3068	3207	-1	6	-4	-2
1983	47443266813	49488004129	3195	3399	7	6	4	6
1984	51531807695	54009139200	3380	3611	9	8	6	6
1985	46457291328	48880375335	2963	3179	-10	-1	-12	-12
1986	41489655071	43450928837	2572	2747	-11	1	-13	-14
1987	47511085614	49510302326	2860	3040	15	5	11	11
1988	50938306918	52644598066	2978	3144	7	10	4	3
1989	55372706007	56302268475	3145	3321	9	9	6	6
1990	61860308985	62005882592	3417	3557	12	9	9	7
1991	65702360172	66397095438	3532	3707	6	10	3	4
1992	75790351419	76819857621	3970	4179	15	9	12	13
1993	82944311428	83618063360	4236	4435	9	10	7	6
1994	89000195857	89735918111	4433	4641	7	9	5	5
1995	102607151917	103293547163	4983	5208	15	10	12	12
1996	112576780996	113316613178	5329	5570	10	10	7	7
1997	108550124263	110075660941	5010	5275	-4	7	-6	-5
1998	74099672386	75182617600	3335	3514	-32	-7	-33	-33
1999	78308176916	80763699200	3442	3686	6	6	3	5
2000	86182105263	90319740928	3703	4030	10	9	8	9
2001	85189161022	87129755121	3583	3864	-1	0	-3	-4
2002	91505365355	92392438058	3772	4036	7	4	5	4
2003	100261133603	99992410585	4055	4285	10	6	8	6
2004	111630089375	111755712242	4431	4672	11	7	9	9
2005	120759075387	119972456279	4707	4934	8	5	6	6
2006	134227897674	131805626223	5140	5300	11	6	9	7

Table 4.1: Continues... (2<sup>nd</sup> Part)

Year	Per	Per	Per Capita Real GNI Japan(US\$) <sup>1</sup>	Per Capita Real GDP Japan (US\$) <sup>1</sup>	Malaysia	Malaysia
	Capita	Capita			Total Fixed	Local Fixed
	Real	Real			Capital	Capital
	GNI	GDP			Formation	Formation
	USA	USA			(constant	(constant
	(US\$) <sup>1</sup>	(US\$) <sup>1</sup>			(US\$) <sup>3</sup>	(US\$) <sup>4</sup>
1970	21191	21210	6044	6079	1681786747	1397282333
1971	21792	21870	6344	6379	2129990222	1889291042
1972	23838	23845	8063	8094	2506330010	2255439922
1973	24446	24377	9453	9488	3348558576	3015010156
1974	23572	23497	8433	8483	4328010473	3302364706
1975	23726	23794	8076	8117	3587133916	3049898103
1976	24567	24679	8230	8271	3841104544	3241356929
1977	25631	25656	9263	9304	4718555119	4076598817
1978	26400	26458	12524	12569	5471139840	4795778237
1979	26348	26495	12383	12417	6574277284	5900746257
1980	24915	24981	11995	12046	8051571777	7065322712
1981	25138	25121	12470	12542	9422567314	8099892938
1982	24750	24475	11244	11286	9826016221	8416370950
1983	25348	25411	11899	11932	10569106568	9342546404
1984	27190	27039	12440	12466	10477192251	9705976096
1985	27853	27787	12956	12960	9484135669	8776642331
1986	27983	28169	18871	18883	7205441378	6723427567
1987	28686	28709	22826	22792	7190361857	6771448256
1988	29517	29267	27601	27554	8139852328	7440302864
1989	29751	29826	26911	26843	10459258880	8914931053
1990	29418	29580	26615	26557	13291110400	10905537600
1991	28875	29081	29379	29307	16144117459	12490274579
1992	29319	29663	31357	31225	18673563562	14245158442
1993	29242	29726	35527	35368	21264074524	16569541923
1994	30014	30520	38573	38432	26042187200	22062325036
1995	30599	30874	42383	42245	32242125203	27399801285
1996	30993	31230	37620	37217	35168252749	29180327325
1997	31992	32140	34201	33758	24869922221	21228742626
1998	32943	32808	30607	30192	14520262872	12484892642
1999	33959	33705	34559	34122	13570526585	10519677805
2000	34863	34280	37211	36742	17155789878	14416489407
2001	34436	33986	33047	32504	16592104825	16197812878
2002	34613	34442	31887	31363	16644473263	14393090708
2003	34720	34694	34392	33804	17094736842	15383150538
2004	35795	35620	37486	36776	17630525979	14511781491
2005	36713	36526	37177	36319	18564814425	15962605423
2006	37279	37065	35887	34898	19816946946	16141178017

Table 4.1: Continues... (3<sup>rd</sup> Part)

Year	FDI Inflow in Malaysia (US\$) <sup>5</sup>	FDI Outflow from Malaysia (US\$) <sup>5</sup>	Malaysia Total Labor Employment <sup>6</sup>	Malaysia Local Labor Employment <sup>7</sup>	Economic Globalization Index of Malaysia <sup>8</sup>
1970	94000000	0	3231413		63
1971	100000000	0	3417100		63
1972	114000000	0	3498934		62
1973	172000000	0	3644745		63
1974	570820000	0	3762255		64
1975	350490000	0	3861154		62
1976	381260000	0	4008257		63
1977	405890000	0	4149714		64
1978	499990000	0	4294551		65
1979	573470000	0	4461808		66
1980	933900000	201113520	4787400		66
1981	1264690000	292953492	5067100		67
1982	1397200000	260085039	5249000	5112700	68
1983	1260530000	225783522	5457000	5285600	68
1984	797480000	242443379	5566700	5364800	67
1985	694710000	209783169	5653300	5441400	68
1986	488870000	248930829	5760100	5558200	68
1987	422680000	214475084	5983900	5774100	68
1988	719420000	198336630	6175800	5916500	68
1989	1667870000	273068915	6390900	6160800	69
1990	2611000000	129000000	6685000	6443100	69
1991	4043000000	175000000	6866400	6570900	71
1992	5138000000	115000000	7047800	6698700	71
1993	5741000000	1063000000	7383400	6942300	71
1994	4581000000	2329000000	7514200	7054000	72
1995	5815000000	2488000000	7645000	7165700	73
1996	7297000000	3768000000	8399500	7499100	73
1997	6323000000	2675000000	8569200	7623800	74
1998	2713995728	863000000	8599600	7600000	75
1999	3895263158	1422368421	8837800	7784100	75
2000	3787631579	2026052632	9321700	8337900	76
2001	553947368	266842105	9357000	8448200	72
2002	3203421053	1904736842	9542600	8612600	76
2003	2473157895	1369473684	9869700	8892000	75
2004	4624210526	2061315789	9979500	8997600	78
2005	3967162122	2971410767	10045400	9030000	77
2006	6047522204	6041415634	10275400	9255600	78

Sources:

1. UN online database. Total GNI data are available at: <http://data.un.org/Data.aspx?d=SNAAMA&f=grID%3A103%3BcurrID%3AUDS%3BpcFlag%3A0>, total GDP data are available at: <http://data.un.org/Data.aspx?q=gdp&d=CDB&f=srID%3a29919>, per

- capita GNI data are available at:  
<http://data.un.org/Data.aspx?q=per+capita+gni&d=SNAAMA&f=grID%3a103%3bcurrID%3aUSD%3bpcFlag%3a1> >, per capita GDP data are available at:  
<http://data.un.org/Data.aspx?q=GDP+per+capita&d=SNAAMA&f=grID%3a101%3bcurrID%3aUSD%3bpcFlag%3a1> >, and CPI data are available at:  
<http://data.un.org/Data.aspx?d=CDB&f=srID%3a5980> >.
2. Growth Rate data has been calculated from the table itself.
  3. UN online database. Total Fixed Capital Formation data are available at:  
<http://data.un.org/Data.aspx?q=Fixed+Capital+Formation&d=CDB&f=srID%3a29930> >. Year End Exchange rates (RM/\$) are available at:  
<http://data.un.org/Data.aspx?q=+Exchange+rate&d=CDB&f=srID%3a6100> >.
  4. UNCTAD online database. *Local Fixed Capital Formation* has been calculated from *Total Fixed Capital Formation* (Table 11) adjusted with *Inward FDI flows as a percentage of Gross Fixed Capital Formation*. Available at:  
<http://www.unctad.org/Templates/Download.asp?docid=10589&lang=1&intItemID=3277> >.
  5. UNCTAD online database. FDI Inflow available at:  
<http://www.unctad.org/Templates/Download.asp?docid=10590&lang=1&intItemID=3277> > and FDI Outflow is available at:  
<http://www.unctad.org/Templates/Download.asp?docid=10597&lang=1&intItemID=3277> >.
  6. Malaysia Total Labor Employment Data (1980-1990, 1992-1993, 1995-2007). Data from 1989 to 2002 are compiled from: Department of Statistics Malaysia (2004). Malaysia Labor Force Survey 2003: Country Report. Department of Statistics, Putrajaya, Malaysia. Total Employment Data for 1991, 1994 are interpolated (average of previous and next year data). Employment data (1970- 1979) was calculated from Unemployment Rate (Prime Minister's Department of Malaysia: <http://www.epu.jpm.my/ses/pdf/1.3.1.pdf> >, and Total Population, Population ages 15-64 (% of total), Total Labor force participation rate (% of total population ages 15-64 of 1980) (World Development Indicator, 2007. World Bank, Washington, DC).
  7. Malaysia Local Labor Employment Data from 1989 to 2002 are compiled from: Department of Statistics Malaysia (2004). Malaysia Labor Force Survey 2003: Country Report. Department of Statistics, Putrajaya, Malaysia. Data from 1982 to 1988 and from 2003 to 2006 are compiled from ILO Labor Statistics, Available at: <http://laborsta.ilo.org/STP/do> >.
  8. KOF Index of Globalization is available at: <http://globalization.kof.ethz.ch/> >.

Notes to above table:

- (i) Data available on current price has been converted to real value by CPI (value of year 2000 = 100).
- (ii) Formula for Growth Rate Calculation =  $(t_1 - t_0) / t_0$ .
- (iii) Total Fixed Capital Formation data is available in RM which is converted by exchange rate. Formula:  
*Total Fixed Capital Formation / Exchange rate (RM/\$)*.
- (iv) Local Fixed Capital Formation (Constant USD) has been calculated by “*Total Fixed Capital Formation \* (1 - FDI flows as a percentage of Gross Fixed Capital Formation)*”.
- (v) FDI Outflow data is not available for 1970-1979, which is considered as 0.
- (vi) Total Employment Data (1970-1979) Formula = Total Population\* Population ages 15-64 (% of total) \* Total Labor force participation rate (% of total population ages 15-64 of 1980)\* Employment rate (1-unemployment rate).
- (vii) As Local Employment data is not available from 1970, this paper considers Total Employment instead of Local Employment in Equation No. 3 (Table 5).
- (viii) In the index of 100.00 for globalization was considered as the maximum value for full globalization and one is the minimum value. Higher values denote greater globalization.

Table 4.2: International Trade Objectives, Strategies, and Policies in Malaysian Development Plans.

Period	Objectives and Strategies	Policies
PRE-NEP 1960-1970  First Malaysia plan, 1966-1970	Fuller and more efficient use of natural resources. Expansion of economic base to reduce dependence on raw material exports.  Generation of higher income through expanding domestic production and increasing exports of manufactured products.	<ul style="list-style-type: none"> <li>• Import substitution policy</li> <li>• Promotion of traditional and new export possibilities</li> <li>• Industrial development led by private sector</li> <li>• Favorable investment climate, industrial estates, and transport; power and communication provided by government</li> <li>• Foreign private entrepreneurship and capital welcomed</li> <li>• Protective tariff for selected infant industries.</li> <li>• Tax intensives and subsidies to facilitate industrial development</li> </ul>
NEP; OPP1 1971-1990  Second Malaysia Plan, 1971-1975 Third Malaysia Plan, 1976-1980 Fourth Malaysia plan, 1981-1985 Fifth Malaysia Plan, 1986-1990	Based on two pronged approach of <ol style="list-style-type: none"> <li>Poverty eradication and</li> <li>Restructuring of society</li> </ol> Increased production for export, including new industrial and agricultural items.  Greater processing of raw materials.  Further substitution of domestic production for import.  Malaysia incorporated emphasizing cooperation between government and private sector.	<ul style="list-style-type: none"> <li>• Increased direct government participation in industrial development</li> <li>• Improved export incentives / Export oriented policies</li> <li>• Free trade and export processing zones established</li> <li>• Promotional and publicity efforts by government to attract foreign capital and expertise.</li> <li>• Promotion and domestic production of intermediate and capital goods</li> <li>• Emphasis on productivity increased and more intensive production methods</li> <li>• Progressive and selective privatization of government services</li> <li>• Overall protection in industry reduced to reasonable level</li> <li>• Encouraging joint ventures with international corporations, using foreign technology and local resources</li> <li>• Ensuring availability of finance for exports</li> <li>• Liberalized equity guidelines</li> </ul>
NDP, OPP2, 1991-2000  Sixth Malaysia plan 1991-1995 Seventh Malaysia plan 1996-2000	Promotion of a balanced, broad-based, resilient and internationality competitive economy.  Enhance potential output growth, achieve further structural transformation and attain balanced development.  Moving towards capital-intensive and technology sophisticated industries.	<ul style="list-style-type: none"> <li>• Accelerating productivity and efficiency, primarily through private sector initiatives</li> <li>• Accelerating the diversification of industries</li> <li>• Reorienting industries of target production for the world market</li> <li>• Encouraging large-scale production for the economies of scale</li> <li>• Further liberalization and deregulation of industries</li> <li>• Development of a modern, competitive and technologically innovative small and medium industry (SME) sector</li> <li>• Greater role of trade and industry associations to improve standards and quality</li> <li>• Establishment of new trade and networks, especially within regional trade blocs</li> <li>• Development of industrial estates</li> </ul>

NVP; OPP3 2001-2010	Greater responsiveness to challenges and opportunities from global competition.	<ul style="list-style-type: none"> <li>• Developing domestic industries to be globally competitive</li> <li>• Strengthening resilience to external shocks</li> <li>• Focus on more efficient use of labor and capital as well as improvement in skills, technology, and managerial capability</li> </ul>
Eighth Malaysia Plan, 2001-2005	Enhance position as strategic and cost-effective location for foreign investment.	<ul style="list-style-type: none"> <li>• Greater application of information and communication technology and knowledge</li> <li>• Increased intra-regional trade using AFTA and other bilateral arrangement mechanisms</li> </ul>
Ninth Malaysia Plan, 2006-2010	Improve knowledge management; accumulate new skills, change mindsets, and human capital development.	<ul style="list-style-type: none"> <li>• Identifying and developing new sources of growth, particularly in services, to become the regional centre or hub.</li> </ul>

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Source: Reproduced from: UNDP Malaysia (2006). Malaysia International Trade, Growth, Poverty Reduction and Human Development. UNDP Malaysia, Kuala Lumpur. Available at: [http://www.undp.org.my/uploads/UNDP\\_Booklet\\_PDF\\_FORMAT.pdf](http://www.undp.org.my/uploads/UNDP_Booklet_PDF_FORMAT.pdf).

Note: NVP= National Vision Policy; NEP = New Economic Policy; NDP =National Development Policy.

## Chapter 5

### **Scopes and Limitations of Microcredit/Microfinance as a Strategy for Poverty Alleviation and Socio-economic Emancipation of the Poor in Bangladesh**

Materials for this essay have been compiled from the following research papers and reports: i. Molla, R.I., M.M. Alam, and A. N. M. Wahid (2008), 'Questioning Bangladesh's Microcredit', *Challenge: The Magazine of Economic Affairs*, USA; ii. Molla, R.I. and M.M. Alam (2011), 'Microcredit - A More Credible Social than Economic Program in Bangladesh', *Economics Bulletin*, New York; iii. Alam, M.M. and R. I. Molla (2011), *Inside Story of Microcredit in Bangladesh: An Empirical Investigation on the Role and Productivity*, LAP Lambert Academic Publishing: Saarbrücken, Germany.

The literal and generic meaning of microcredit is small loan. When the Prophet of Islam, during the medieval era, offered an axe to a poor man when he came for begging help, in its spirit and essence it amounted to a typical microcredit for poverty alleviation. It can be aptly said that the Prophet thereby virtually initiated introducing a microcredit system for poverty alleviation. In terms of its present day usage, purpose, application, and operation (i.e. in terms of its essence, content, and form), however, microcredit refers to very small size supervised collateral free loans to targeted groups of poor people for both production and consumption purposes primarily with the objective of stimulating them to initiate self-employment and home based economic enterprises and, at the same time, to motivate them to regularly maintain minimum savings with the lending institutions. In effect, it deals with very small scale financial services like savings and loans for productive purposes like investment in productive activities and for non-productive purposes like meeting emergencies, spending for day-to-day living, etc. Credits are usually given to groups of individuals or village organizations without any collateral. It applies the principle of joint-liability (peer-pressure) to enforce loan repayment. Its fundamental goal is to free the poor from the clutches and exploitations of the traditional money lenders and borrowers' credit lending rich friends and relatives. It is served by microcredit institutions which could be state agencies, banks and NGOs.

It has launched a challenge to the formal financial system which virtually denies the scope of economic emancipation of the poor. Prof. M. Yunus, the founder of the Grameen Bank in Bangladesh, claims that microcredit program is an effective tool for enhancing income of the poor primarily through creation of self-employment opportunities for them in a variety of informal economic activities. It is claimed that microcredit has been effectively serving the financial needs of the poor; they now have access to necessary credit for building economic enterprises, according to their available skills, to earn better income. Its importance as a strategy for poverty alleviation has been prioritized since 2007 when Grameen bank and its founder Prof. M. Yunus jointly won

the Nobel Prize for pioneering the microcredit program. It is now practiced in a large number of countries in the world.

### **A Brief Historical Background of Microcredit Program in Bangladesh**

Exploitation of the rural poor by the landlords and local money lenders is a historical fact in Bangladesh and other countries of the Indian sub-continent. During the colonial period, the British government attempted to address the problem by introducing cooperatives for the rural farming communities. It was primarily a strategy for improvement in agricultural productivity and growth. After the British rule, the internationally appreciated Comilla Model (Comilla Cooperative Pilot Project) was established in Bangladesh in 1959, under the leadership of Dr. Akhter Hameed Khan, as a cooperative-finance-based rural development and economic growth tool focusing on modernization of agriculture and establishment of necessary rural institutional infrastructure. It was a methodology for promoting agricultural and rural development based on the principle of cooperative participation by the people at the grassroots. The model had four components, namely village-level primary cooperatives, a *thana*-level training and development center, a work program, and an irrigation program. The primary cooperatives are integrated at the *thana* (a sub-district i.e. a lower tier administrative unit) levels; and an integrated rural development program provides all essential and critically needed farming inputs on credits to the farmers. Farmers are to pay the input prices by selling their harvests during the period when prices are high in the market. To safeguard the farmers from money lenders and at the same time to enable them to modernize their farming methods to increase productivity were its main focus and goal. On that count Dr. Khan and the Comilla model are rightly credited for pioneering microcredit and microfinance initiatives in the country.

But after independence of Bangladesh in 1971 and with the change in political culture and discipline, credit cooperatives were not found actually working and serving the rural poor any longer due to influence of the local political power groups in the cooperative management and control. These cooperatives became virtually under the command and control of the local elites and political power groups to serve their own ends. These credit cooperatives were large and open for all categories of members of the society; these were not specifically targeted for the poor marginal and landless farmers. It was realized that the methodology of forming cooperatives with large number of members from all sizes and categories of farmers was one of the main contributing technical reasons for the model to become ineffective for serving the poor. This frustrated the founder of the movement as well as other development practitioners and scholars.

As a result, two new rural development approaches or models with similar international reputation emerged in the field during the 1970s. One is the Bangladesh Rural Advancement Committee (BRAC), emphasizing primarily on infrastructure building, and the other is the Grameen Bank, emphasizing on credit supply for the poor to generate income from creation of self-employed economic enterprises.

The *Bangladesh Rural Advancement Committee* (BRAC) model was launched in 1972 by Sir Fazle Hasan Abed to carry out reconstruction works in the rural areas after the war of independence. Its emphasis was on rural infrastructure building. It was later extended to cover all aspects and types of development works and programs including microcredit supply to the impoverished for their socioeconomic emancipation and participation in economic growth and development. Accordingly, its microcredit program was motivated primarily as a growth oriented tool. It replaced the ‘mixed group’ approach of the credit cooperatives and adopted a ‘targeted group’ approach with small groups of targeted members.

Later, in 1976 the Grameen Bank model was initiated by Prof. Muhammad Yunus to provide microcredit to the marginal and landless farmers who could not provide land collateral or crop hypothecation as needed in any traditional money lending system operated by banks. It focuses specially on the women and activities that relate to the economic and overall social development of the marginal classes. Recently it gained exalted recognition for its role as a model for ‘development from below’ to ensure sustainable world peace. Grameen model is also a ‘targeted group’ approach. This ‘targeted group’ approach is the innovativeness of the present day microcredit models. Other two large non government organizations (NGOs) that joined the movement are Proshika in 1976 and ASA in 1978.

By the innovation of a methodology of making available necessary credit to the poor, it has opened a window to the future where economic growth and human development become accessible to all, and income inequalities among nations and regions may become minimal. Therefore, the microcredit program has posed a challenge to the formal financial system which denies any possibility of development to the poor who represent the largest part of the world’s population.

### **Objective and Approach of the Program**

Though the world history of microcredit is not so recent, but it was not so prioritized until 2007 when Grameen Bank and its founder Professor Yunus received Nobel Prize for pioneering microcredit. In the last few years “microcredit” has become a well-known term, first in the development sector of the developing countries, and later in the

developed countries as an anti-usury tool and in support of the emergence and development of micro-entrepreneurship. Credit is usually provided without any collateral to the targeted small groups of individuals or organizations of rural poor who use joint-liability (peer pressure) to enforce loan repayment. It is a targeted and supervised group approach.

Yunus sees microcredit program as an effective tool for enhancing income of the poor through various self-employed informal activities. It has been able to bring credit to the poor (mostly women) who are often illiterate and do not know how to invest money for earning income. In Bangladesh it is popularly known as *Grameen Bank model*. It is claimed that this model has created a methodology and an institution for effectively serving the financial needs of the poor. The poor now has access to credit without collateral. It has thus enabled them to build economic enterprises based on their existing skill to earn a better income. The approach emphasizes on the marginal and landless farmers as a strategy for broadening the base of development, and prioritizes non-land-based off-farm source for income generation for the target group. All the dominant and most other NGO microcredit providers basically follow this model with minor variations in the details. This methodology has produced remarkable results in terms of solidarity, education, and a high level of loan repayment rate.

There is no denying the fact that microcredit has been playing an important role in the movement for poverty alleviation. But by the same token it is also a hard fact that it has serious limitations in terms of its delivery system, rules of repayment, interest rate charges, etc. and due to these drawbacks, it has largely failed to realize its potential and expected goals. This can be observed from the following empirical study on the role and productivity of microcredit as a credible program for poverty alleviation and rural development in the country.

## **Role and Productivity of Microcredit in Bangladesh**

### ***Structure of the Industry***

Bangladesh is often called the land of Microcredit because of its extensive use by the teeming millions of small borrowers all over Bangladesh. It is a household word. The country is noted for a very high growth rate of microcredit borrowers as well as microcredit lending institutions. In December 2005, Palli Karma-Sahayak Foundation (PKSF) reported that 688 microfinance/microcredit institutions (MFIs/MCIs), 2 government departments, 6 specialized organizations, and 7 commercial banks were working in rural areas in Bangladesh to provide microcredit services to 21.77 million gross borrowers or, after adjustment for overlapping, 15.55 million net borrowers. By

now nearly two hundred thousand people are employed in MFIs/MCIs and Grameen Bank and around 30 million poor people are directly getting benefits from microcredit programs. In order to bring microcredit sector under regulatory framework, the government of Bangladesh enacted Microcredit Regulatory Authority Act 2006. According to the Act, no MFI/MCIs can operate microcredit program without obtaining license from Microcredit Regulatory Authority (MRA). As of November 2010, only 535 MFIs/MCIs obtained license. However, it is believed that currently over 7000 NGOs now run microcredit programs in Bangladesh, and after adjustment for overlapping, the net borrowers account to nearly 24.5 million. This includes over 500,000 borrowers of Islamic microcredit. Islamic microfinance is at its infant stage. The primary institution lending Islamic microcredit in the country is the Islami Bank Bangladesh Ltd (IBBL). It offers microcredit products through its rural development scheme (RDS). It is one of the top 10 MFIs in the country.

But, despite the fact that institutional credit has expanded remarkably in the country, informal credit still continues to dominate and remain important in the rural areas. In spite of their exploitive nature, the traditional and informal moneylenders till today account for about two-thirds of credits delivered in rural areas. This is possibly because these credits are easily available and, therefore, more capable of meeting the urgent needs of the marginal and landless farmers.

Institutional or modern microcredit is delivered in Bangladesh by government agencies, some commercial banks and the non-government organizations (NGOs). However, NGOs share roughly as much as 60% of the market of over 24 million borrowers. The credit supply market is highly concentrated in the hands of a few large MCIs and NGOs. About 8% of the lending institutions control 80% of the market (Ahmad 2010). Among all microcredit lending intuitions and programs, only a few large ones dominate the market. Grameen Bank (established in 1976) with 7.67 million borrowers tops the list. It is followed by ASA with 7.13 million, BRAC with 6.37 million Proshika with 2 million, and Islami Bank Bangladesh (including a few other Islamic microcredit institutions) with 0.5 million borrowers. On the demand side, similarly, it is heavily concentrated to women borrowers with 90% share, mostly for home and family based subsistence level economic operations for generating income through self-employment (MRA 2010). The growth rate of the number of borrowers has been very high over the years. Average sizes of the loan and saving per borrower are \$80 and \$21 respectively.

### ***Controversies on Achievements***

The initial success of this movement drew international attention as a promising strategy for rural development. International donor agencies and development planners became tempted to treat microcredit as a growth tool for the developing nations. However, its potential and scopes were tested and found limited to as a tool for poverty alleviation. The program experienced a very high growth rate in terms of number of credit borrowers and credit suppliers in spite of an exorbitantly high interest rate charges ranging from 25% to 65%. High interest rate is charged under the plea that microcredit transactions are multitudinous detail involving high transaction costs. High interest charge is necessary to cover the high delivery and supervision costs. It is argued that a high growth rate in the number of borrowers, despite high interest rate charges, is an indication that microcredit is highly productive, useful, and profitable for the borrowers. Microcredit is delivered to groups of borrowers under the strategy of group liability. Therefore, the model relies on group pressure (peer-pressure) and close supervision for loan repayment. As a result, the loan recovery rate is as high as above 95%. Accordingly, many success stories of microcredit have been written and reported in the meantime.

However, different studies conducted on the achievements and effectiveness of microcredit program in Bangladesh produced different results. Therefore, the success stories are not without contest. It has been highly criticized by many scholars, development practitioners, and politicians for low achievement and high interest rate charges. The then Finance Minister of Bangladesh M. Saifur Rahman once lamented by saying that if the microcredit lending NGOs continue to charge such high interest from the poor borrowers, the fortunes of the poor could not be improved even in centuries. Some scholars also observe that it will be too much to regard microcredit as a panacea for entrenched poverty in the developing world. A report of the UK's Department for International Development (DFID 2001) similarly notes that international experiences of microfinance indicate that microcredit is not an appropriate and effective tool for assisting the chronically poor. Many of the researches on microcredit programs have attempted to measure the benefits of microcredit in terms of income, employment, and other socioeconomic outcomes, but they have largely failed to specify that the benefits are due to the borrows' participation in microcredit program. Some researchers argue that although microfinance has reached many rural poor but it still remains questionable if it has reached the real target groups and has been able to reduce their poverty. Researches also reveal that most of the beneficiaries do not make repayment of the credit from the income generated by the use of microcredit, but usually by arranging funds through another credit, or by selling their domestic animals, trees, etc. when the credit providers pressurize them for repayment (Ahsan & Rahaman 2006).

However, at the same time, few would deny the critical role played by microcredit in assisting poor households to escape from poverty pyramid. The current finance

minister of Bangladesh recently observed that even though microcredit could not possibly pull people out of poverty but it gave them a way for living (Star Business Report 2009). Various empirical studies suggest that microcredit programs have in fact generated a positive change in the income of beneficiaries. But this change has been only marginal; a large number of the borrowers may not have experienced any change in their economic and social status. Other researchers view that while microfinance program is increasingly becoming an important development strategy but the knowledge about its impacts is so far only partial and controversial. Some argue that because of the high interest charged for microcredit, the borrowers can quickly sink into a cycle of debt. It is mentioned that for many lenders the interest rate may begin with around 15% which can soon rise to anything between 40% - 100%. Dr. Qazi Kholikuzzaman Ahmad, Chairman of PKSF (a body that monitors microfinance) describes microcredit as ‘death trap’ for the poor who often take loans without thinking of the consequences (Melik 2010). Thus, the role of microcredit in reducing poverty and improving socioeconomic wellbeing of the poor in Bangladesh is very controversial with contradictory results from different researches.

There is, therefore, a need for more rigorous studies involving surgical investigation for having a clear view and understanding of the inside story of microcredit’s socioeconomic productivity and real achievements. This study, through a survey of selected microcredit borrowers, is an attempt to that end. Data were collected from a sample of 555 (519 conventional interest-based and 36 Islamic interest-free based) current microcredit borrowers all over the country during January-April, 2008. (Alam & Molla 2011). In addition to a tabular and descriptive analysis, a Cobb-Douglas type production functions as below have been also used in the analysis. Since in some cases Y (net-worth) has negative values the following linear (instead of log linear) production model has been used:

$$Y_i = \Omega_i + \alpha_i K_i + \beta_i L_i + \varepsilon_i \quad (1)$$

Where, Y = Year end net-worth (in Tk) before paying family labor and interest cost

K = Full year equivalent capital/ investment (Tk)

L = Total labor hours

$\Omega$  = Constant

$\alpha, \beta$  = Coefficient

$\varepsilon$  = Error term

For computation of elasticity, the following formula has been used:

$$\Psi = \zeta * (J_i / \delta) \quad (2)$$

Where,  $\Psi$  = Elasticity value

$\zeta$  = Coefficient of respective variable -  $\alpha_i$  or  $\beta_i$

$\bar{X}$  = Mean of respective independent variable -  $K_i$  or  $L$

$\bar{Y}$  = Mean of the dependent variable -  $Y_i$

$i$  = Respective variable

In measuring the productivity or surplus generated from the use of microcredit, researchers in previous studies conveniently avoided the use of economic-profit counting method which takes into account also the implicit costs like cost of self-employed family labor. However Molla et al (2008) successfully used economic-profit counting method in their pilot study on productivity of microcredit in 2006. Accordingly, in this study the economic-profit counting, instead of accounting-profit counting, method has been used. Application of this approach may be claimed as a net addition to the literature on research methodology in this field.

### *Findings and Discussions*

Features of important findings of the survey of microcredit borrowers in Bangladesh, 2008:

Important Features	Data and Findings
Sample size	Total sample : 555 Subsistent borrowers: 490 (88.3%) Microenterprise borrowers: 65 (11.7%) Beyond subsistence level operation using self- employed labor : 20 Beyond subsistence level operation using self- employed and hired labor : 33 Subsistence level operation but using self-employed and hired labor : 12 Conventional microcredit clients 519 (93.5%) Islamic microcredit clients 36 (6.5%)
Age below 30 years	42% of borrowers
Literacy : Literate	53.5% of borrowers
Number of current credits per borrower	Single credit: 71.7% ; Multiple credits : 28.3% ( 2 loans 22.7% ; 3 and more loans 5.6% )
Total number of credits taken over time	6.9 per borrowers
Amount of current credit per borrower	Tk 15,342 (Tk5,000-20,000 – for 82% borrowers) exchange rate : US\$1= Tk70
Desired credit requirement	Tk 20,000 - 69% borrowers reported
Grmean's permissible credit size per borrower	Tk 5,000 – 12,000

Use of credit fund entirely for consumption	15% borrowers
Use of credit fund for investment	Full amount– 56%; partial- 29%; with initial additional fund – 28%; topped-up fund during the year – 21%
Amount of full-year equivalent current investment per borrower	Tk 16,424 (credit constitutes 81% of it)
Investment in small scale production & trade in agric, livestock & fishery items	48% of the borrowing investors
Cycle of business return	A day or a week - for 69% borrowers A month or a year – for 28.5% borrowers
Amount of annual return on investment per borrower	Tk 33,654 after paying self-employed labor at minimum wage rate - Tk8 for man; Tk 5 for woman per hour Tk. 9,341 after paying self-employed labor at market wage rate - Tk17.8 for man; Tk12.4 for woman per hour
Inability to pay any interest	7.6% after paying self-employed labor at minimum wage rate 48% after paying self-employed labor at market wage rate
Ability to pay above 60% interest with capital repayment	75.1% after paying self-employed labor at minimum wage rate 33.8% after paying self-employed labor at market wage rate
Ability to pay more than 25% interest with capital repayment	41% after paying self-employed labor at market wage rate
Elasticity of Productivity	Microcredit : 0.44 - 0.46; Labor: 0.49 - 0.54
Return to Scale	Decreasing for subsistent enterprise
Job creation (self-employment) per Tk 1000 microcredit investment for a year	31.7 labor-days
Economic wellbeing of the households after using microcredit	Improved: reported by 86.5% borrowers
Use of microcredit by women borrowers themselves	10.6% of the women borrowers
Family level empowerment of women borrowers	Increased : 37.48% women borrowers; no change 34.8% women borrowers

### ***Size and Use of Credit Funds***

Microcredit borrowers under the survey are small producers, petty traders, small shopkeepers like tailoring shop, vegetable stall or peddling, fruits stall or peddling, fish stall or peddling, carpenter shop, hair cutting saloon, etc. About 48% of them are primarily engaged in small scale production or selling of agricultural, forestry, livestock,

and fisheries products. They use the credit fund as capital for their different economic operations as well as for consumption purposes. Amount of capital required to start a small economic operation varies according to the type of operation. Therefore, in some cases the amount of the microcredit may not be enough to start the operation; in some other cases additional amount is required at the later stage after the start of the business. In such cases, the investors have to top up the capital from their own resources or by taking one or more loans from other microcredit lending institutions. In some other cases, the entire credit amount may not be required or used at the start of the operations. In such cases, the borrowers often use the unused amount for non-productive purposes.

From the survey it is found that about 15% of the borrowers used the credit fund entirely for consumption (non-productive) purposes. About 56% of them used the entire credit fund and about 29% used only part of the credit fund in productive operations (Table 5.1). About 28% of all the borrowers had to top-up the loan fund with personal fund or another loan from other microcredit lender to start the business. On top of that, about 21% of all the borrowers invested additional fund during the year similarly either from personal source or from credits obtained from other microcredit providers.

Table 5.1: Utilization of microcredit fund and own fund (frequency of borrowers)

Heads of uses of credit fund	At the Starting of the Operation	Additional Investment during the Year*
Consumption	82 (14.8%)	
Investment- Part Amount	162 (29.2%)	37 (6.7%)
Investment- Full Amount	156 (28.1%)	46 (8.3%)
Investment- Full Credit fund and Additional Amounts*	155 (27.9%)	36 (6.5%)
Total	555	119 (21.4%)
Full-year equivalent total investment per credit-borrower investor : Tk 16,424		

\* Additional amount for investment comes from personal and/or additional borrowing from other lending organizations

Source: field data

### ***Credit Requirements and Multiple Borrowing***

About 64% of the borrowers had total investments (borrowed and own funds) up to Tk 20,000 or below. On the other hand, over two-third (i.e. 69%) of them indicated that they needed credit up to Tk 20,000. Therefore, it reveals that many borrowers need more credit fund for effective operation of their economic enterprises. In an earlier study Sharma (2002) similarly observed that the current amount of microcredit was very inadequate as capital to initiate any reasonable business or expand a business. To find the required additional fund the borrowers generally rely on their personal source or other microcredit lending institutions. A borrower can take loans simultaneously from different microcredit institutions (MCIs) or from different branches of the same MCI. In this study over 28% of the borrowers are found to have multiple loans (2-3 or more) from 2-3 or more

microcredit institutions to meet their business capital requirements. Over 37% of the borrowers reported that they were encouraged by other MCIs to take additional loans from them. PKSf (Palli Karma-Sahayak Foundation) is also aware of this multiple credit practices.

### ***Borrowers' Business Return Cycle***

Repayment installment for microcredit starts from the subsequent week of the loan disbursement. For many economic activities it is nearly impossible to generate significant return within a week after initiating an investment, for example, investment in agriculture and livestock. In case of only 69% of the borrowers under study there were daily or weekly return from microcredit invested activities. But in 28.5% cases the return from investment started coming after 1-12 months. As a result, it was not possible for many of these borrowers to pay the initial repayment installments from the revenue generated from the investment of the credit fund. Earlier, other researches also reported that most of the clients did not pay the initial repayment installments from the generated revenue (or increase in income) but usually by obtaining funds through another credit or by selling their domestic animals, trees etc.

### ***Economic Productivity of Microcredit***

Interest rate for microcredit ranges from 25% - 65% while the formal banking sector charges interest only at 10% - 12% for the small and cottage industry sector. Grameen Bank reportedly charges nominal interest at 22.45% which effectively comes to 30.5% because of the system of weekly repayment of installments. Islamic microfinance institutions, of course, charge profit at the flat annual rate of 10% - 12% or at the effective rate of about 20%. The lenders argue that microcredit's delivery and supervision cost is very high. Therefore, charging of high interest is required to cover the high delivery costs. They also claim that the high rate of growth of the borrowers at this high interest rate indicates that the microcredit is highly productive and profitable for them to be able to easily pay the high rate of interest.

When analyzing the benefits of the borrowers and effectiveness of the microcredit programs, the lenders take resort to calculation of accounting profit of borrowers' business enterprises and ignore implicit costs under the plea that the opportunity cost of labor is near zero in the country. This plea is certainly not tenable even under the assumption of a less than full-employment. It will, in fact, amount to going back to the concept of distressed selling of labor (much like slavery) of the medieval age and making microcredit a self defeating strategy for poverty alleviation. Therefore interest rate for microcredit should be consistent with its true productivity which should be measured by

taking into consideration the implicit cost of self-employed family labor, under the framework of economic- profit counting. Accordingly, in a pilot study in 2006, applying the economic-profit counting approach, it was found that the exorbitantly high rates of interest charged by the credit providers were in fact pushing many borrowers to sell their self-employed family labor at or below subsistence rate of wages. The results of the current study confirms this state of situation.

*Revenue and net worth of investment by economic profit counting*

Borrowers' average full-year equivalent investment during the study year is Tk 16,424; and microcredit constitutes 81% of it. If we impute a minimum labor cost for borrowers' self employment, the rate of return on investment (ROI) is reduced from 430% to 254%; and this rate declines to 28% if market rate of labor cost is applied for self-employed/family labor (Table 5.2).

Table 5.2: Return and net worth of microcredit investments

Net Worth and Return on Investment	Before paying Family labor and interest	After paying family labor at minimum wage rate, but before paying interest*	After paying family labor at market wage rate, but before paying interest**
Average of borrowers' Net Worth or Surplus (Tk)	52,282	33,654	9,341
Average of borrowers' Investment (Tk)	16,424	16,424	16,424
Average of borrowers' ROI (%)	430%	254%	28%

\* Minimum labor cost per hour = man @ Tk 8, woman @ Tk 5

\*\*Standard labor cost per hour at market rate = man @ Tk 17.8, woman @ Tk 12.4

Source: field data

But behind this scenario of the average return on investment lies the truth of the deplorable situation. When minimum cost for family labor is charged the ROI for 7.6% of the borrowers become negative and when the family labor cost is charged at market wage rate the ROI for 47.6% of the borrowers become negative (Table 5.3). It therefore suggests that for about 48% of the borrowers microcredit investment is not productive to generate enough revenue for payment of any interest if the market wage rate is charged for self employed / family labor; but it is unproductive only for about 8% of them if minimum wage is charged for family labor. Therefore it appears that many (as many as 48%) of the borrowers compromise wages for their self-employed labor (family labor) to find microcredit productive to command high interest payment. If minimum wage is paid for the family labor, as many as 75% of the borrowers will have annual rate of net return on investment enough for payment of interest @ 60% and above. Whereas, if market rate of wages is paid for them only 34% of them will have enough return on investment to pay that high rate of interest. But the 48%, and more particularly the 8% borrowers, are the

critical groups whose family labor wages are being seriously compromised to make it possible to pay high interest and make microcredit credible in the eyes of the society even at that high rate of interest charges.

Table 5.3: Borrowers by interest payment capability from business returns (frequency)

Interest Rate ( % )	Ability after paying family labor @ minimum wage rate*	Ability after paying family labor @ market wage rate^
Negative	36 (7.6%)	228 (48.2%)
Above 0 and up to 10	24 (5.1%)	25 (5.3%)
Above 10 and up to 25	15 (3.2%)	25 (5.3%)
Above 25 and up to 40	20 (4.2%)	15 (3.2%)
Above 40 and up to 60	23 (4.9%)	20 (4.2%)
Above 60	355 (75.1%)	160 (33.8%)
Total	473**	473**

\* Considering minimum labor rate: male @ Tk 8, and female @Tk 5 per hour.

^ Considering standard/ market wage rate: man @ Tk 17.8, and woman @ Tk 12.4 per hour

\*\* 1 person who was holding the credit fund at hand and the 81 non-investment cases are not included here

Source: field data

Thus, the harsh criticism against the high interest rate of microcredit is very much real. There is an urgent need for this to be addressed seriously<sup>2</sup>. The problems of the critical and vulnerable groups of 48% borrowers must be addressed and resolved urgently. Because of the fact that these poor borrowers deal with very low-return economic opportunities, it is unreasonable to believe that they can pay such high interest. (One reviewer of the draft manuscript of this book lamented and noted that, once Grameen Bank and other non profit developmental NGO's proved that the 'poor are bankable' the private banks that were previously only interested in the rich to maximize their profits, sniffed money at the 'bottom of the pyramid'; they moved to exploit the poor by charging, in 'money-lender style', high interest for the microcredit). It is important to note that 48% of the borrowers who have low productivity and are deprived of the market rate of wages for their self-employed labor remain vulnerable to default repayments. As a result 22.9% borrowers reported that they were not able to pay their repayment installments from income of microcredit invested economic operations.

### *Econometric measurements of productivity*

Using the production function (equation-1) the econometric analysis of productivity of labor and microcredit similarly suggests that labor is relatively more productive than microcredit under both the assumptions that in subsistent enterprises a) male and female labors are equally productive, and b) female labor is relative less productive and can

<sup>2</sup> Consequently, the government of Bangladesh recently set 27% as the upper limit of chargeable interest rate on microcredit.

claim only a lower wage rate. The analyses reveal that a 1% increase in labor hour or labor cost increases the net-worth by 0.54% or 0.49%, and a 1% increase in microcredit investment increases the net-worth by 0.44% or 0.46% (Table 5.4). It is also found that the subsistent enterprises have reached the stage of decreasing return to scale supporting the fact that microcredit is primarily a program of poverty alleviation. It has, as such, limited scope to be used as a growth generating tool, for example for promoting microenterprises.

Table 5.4: Productivity of microcredit and labor

Measurement	Variable	Coefficient ( $\alpha$ , $\beta$ )	Elasticity	Return to Scale	P value	R <sup>2</sup>	Sample Size
Labor in Hour <sup>a</sup>	$\Omega$	-1186.80			0.65		524 <sup>s</sup>
	K	1.13*	0.44	0.98	.000	0.53 <sup>^</sup>	
	L	12.42*	0.54	(decreasing)	.000		
Labor in value (General) <sup>b</sup>	$\Omega$	2146.01			0.41		
	K	1.18*	0.46	0.95	.000	0.507 <sup>^</sup>	
	L	0.57*	0.49	(decreasing)	.000		

\* Denotes significant at 1% significance level

<sup>^</sup> In analyzing cross-sectional data R2 value of 0.53 or 0.51 is considered acceptable

<sup>s</sup> Includes 51 borrowers who have invested in multiple business activities (473 +51 = 524 samples)

<sup>a</sup> Under the assumption there is no difference between male and female labor in terms of productivity

<sup>b</sup> Labor hours weighted by market established standard wage rates for male and female reflecting the society's perception that female labor is relatively less productive to command a lower wage rate.

## ***Social Productivity of Microcredit***

### *Job creation*

A fundamentally important claimed role of microcredit is job creation through opportunities of self-employment. This study finds that for each Tk 1,000 microcredit invested for a year, a 31.7-mandays of job is created (Table 5.5). In other words, for creation of a full-time annual self-employed job (310 labor-days of actual work in a year) it requires an investment of nearly Tk 10,000 microcredit fund. Though, in the pilot study in 2006 this was found to be Tk 12,000. We hope future researches will as well study the job creation abilities of other types of investments in the country.

Table 5.5: Job creation per Tk 1,000 microcredit investment for a year

Types of Labor	Labor Hours	Labor Days**
Average Job Creation for Man	200.77	28.68
Average Job Creation for Woman	25.06	3.58
Total Job Creation*	221.88	31.70

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\* Average of the jobs created by individual borrowers

\*\* Full-time labor day is considered as 7 working hours per day

Source: field data

### *Household economic wellbeing*

Yunus claims microcredit program as an effective tool for increasing income of the poor through creation of self-employment in informal economic activities. World Bank's study on the impacts of the microcredit program of the Grameen Bank indicates that access to credit by the poor has increased self-employment and rural wages. This has brought desirable impacts in terms of employment and production especially for women in the non-farm sector. A study on rural poverty in Bangladesh by the Bangladesh Institute for Development Studies (BIDS) shows that microcredit recipients have higher rate of growth in per capita income compared to non recipients. Microcredit, therefore, has brought large growth in non-farm income and thus total income gain at the village level. Likewise, 87% of the borrowers under survey reported that they experienced economic improvements after joining the microcredit program. This economic improvement is, however, not necessarily due to economic productivity of microcredit itself, but mostly because microcredit serves as a facilitator for self-employment opportunities and other socio-economic wellbeing. It also means that for most of the borrowers credit, either from MFIs or from traditional moneylenders and other sources, is a necessary factor for their economic improvements through self-employment opportunities. About 30% borrowers believed that after taking 1-3 more loans they would not require any further credit. This may suggest that microcredit is an effective facilitator for socio-economic betterment of the borrowers, even when its economic productivity as such is not found so satisfactory for about 48% of the borrowers.

### *Women empowerment*

Microcredit is known as a most significant intervention in the fight against poverty for the twenty-first century. The thrust of the movement especially has been to engage poor women not only to alleviate poverty but also to increase their access to resources and enhance their power in household decision-making. It is assumed that in the poor families women's increasing access to micro-finance will enable them to make a greater contribution to household income and this, together with other interventions to increase households' wellbeing, will enhance their dignity and facilitate their playing a greater role in the society. This will increase women's self-confidence and status within their families. Different researches suggest that empowerment of women brings significant improvement in their participation in household decision making, family planning, children survival rate, health and nutrition and children education, especially girls' education. With this end in view microcredit is mostly given to the women of the rural

poor families. But in reality women are found to be only the media for obtaining the credit. In most cases male members of their families actually take decisions and use the fund. It is found that actually only 10.6% of the women borrowers used the credit by themselves. In the remaining 89% cases the male members of their families made decisions and used the loan fund. Similarly, borrowers' assessment on empowerment is found mixed and unclear - about 39% claimed that their status and authority in the family improved, but about 37% felt that there was no change in their status and authority in the family.

### ***A More Credible Social than Economic Program***

Interest rate for credit is expected to be consistent with the economic productivity and profitability of the credit. Judging from this consideration, interest rate for microcredit is found unjustifiably high for most of the borrowers. 48.2% borrowers have no ability to pay any interest and only 38% borrowers have the ability to pay interest at 40% and above (Table 5.3). However, it is interesting to note that about 57% of the borrowers surveyed did not think that interest rate charged for microcredit was unreasonably high; only about 36% believed otherwise.

Micro borrowers feel socially and politically better with institutional credit obtained from MFIs. Because, in the first place interest rate charged by the local moneylenders may not be less than that is charged by the microcredit providers. In addition, the poor borrowers generally lose a great deal of their political and social rights and status in the hands of these moneylenders (or friends and relatives) when they borrow money from them. (Traditionally, lending money, even on payment of high rate of interest, is regarded as a favour done to the borrower. As a result, the borrowers remain highly grateful to the lenders. This makes the borrowers become subservient and under the domination of the credit lenders). It appears that the micro borrowers give priority to social and political empowerment/dignity over the economic gains. As a result, they prefer to borrow from microfinance institutions even when their interest rates often could be higher than the interest rates charged by local moneylenders. That is why as many as 48% of the micro borrowers are found willing to sacrifice or compromise their standard market wages for their self-employed labor. They see microcredit as a saver of their social and political rights and status. They see it as a more credible social than economic program.

### ***Limited Scopes for Promoting Microenterprises***

Initially, decades ago, microcredit was thought to be a growth generating tool in the pursuit of rural development. But now it is regarded basically as a tool for poverty

alleviation. It is aimed at creating self-employment opportunities primarily for the poor female clients according to their individual survival skills. Accordingly, a stereotyped delivery system is designed and used for promoting and supporting the survival and subsistent level economic activities of these clients. Survey results suggest that to the extent that the activities are only at survival and subsistent level this standardized system is generally working. However, since the individual survival skills are different for different borrowers and they are pursuing different activities requiring credit supports differently, this stereotyped system may not be so effective for all the borrowers. This is particularly true for the microeconomic enterprises which are growth yielding small business like beyond subsistent level economic operations. This kind of operations has a different nature of credit needs. Survey result shows that 11.7% of the microcredit borrowers belong to this kind of potential or growing microentrepreneurs. It also shows that microcredit's standardized delivery system, particularly in respect of gender preference, loan size, loan disbursement and repayment schedules, is highly inadequate and limiting factor for effectively serving and promoting the microenterprises which require a more flexible credit package. It, therefore, suggests that a methodological modification is necessary to accommodate flexibility in microcredit delivery system to be able to work for microenterprises as well. For promoting this kind of enterprises, its attachment to and preference for female clients must be relaxed. In fact, in the context of Bangladesh society, male entrepreneurs should be preferred in these business like enterprises. In business like economic activities generally women are not found culturally and traditionally effective entrepreneurs and credit users in Bangladesh. Social customs and religious traditions do not encourage and respect women in such business like economic activities. As a result, in most cases the women collect the credit as borrowers (since the credit providing institutions prefer to grant credit to women) but generally the male members of their families make the decisions and use the credit fund. That is why from the survey it is found that only 10.6% of the women borrowers actually used the credit by themselves. In the remaining 89% cases the male members of their families used the loan fund (Table 5.6).

Table 5.6: Users of Credit Borrowed by Women Clients (frequency)

Loan User	All Borrowers	Microenterprises Borrowers
Self	57 (10.6%)	6 (9.5%)
Male Family Members	453 (84.4%)	56 (88.9%)
Third Party	11 (2.0%)	
No Response	16 (3.0%)	1 (1.6%)
Total	537	63

\* 18 cases out of 555, the microcredit clients are male and 2 cases out of 65, the microcredit clients are male.

Source: field data

Various reasons were mentioned by the respondents (women borrowers) for their dependence on men for economic operations. The most frequently reported ones are: a) inability and lack of skill of the women borrowers in doing business like outside-home activities, b) more and better investment opportunities in man relevant activities, c) male dominated family structure where male members maintain and control family, d) social environment and custom where business activities are considered to be men's job, and e) women are not expected and respected in the domain of men's activities (business like activities). Therefore, the preference for women as clients for credit is found as a strong methodological limitation of the microcredit delivery system for promoting microenterprises.

The need for a separate credit package for microenterprises has been recognized by Grameen and other microcredit institutions like Rural Development Scheme (RDS) of Islami Bank Bangladesh (IBBL) in the country. Grameen Fund (2010) has undertaken a separate project for providing loans to microenterprises, but under very restricted conditions. Unfortunately, because of these restricting conditions it has turned out to be almost like a traditional commercial loan scheme. Thus, most of the potential microenterprises are not able to enjoy the services and benefits of that loan program. In 2003 RDS-IBBL introduced what can be termed as Microenterprise investment scheme to offer larger loans ranging from TK50,000 to TK3,00,000 to 'graduated clients'. However, its clients and uses are still very limited.

### ***A Reflection on Islamic Microcredit and its Economic Productivity***

As noted earlier, the Prophet of Islam in a way took the first initiative, during the medieval age, to introducing microcredit system for poverty alleviation when he offered an axe to a poor man who came to him for begging help. Islam's public policy has placed utmost priority on poverty alleviation in the society. Its objective is to ensure dignity and self-reliance of individuals through a process of participatory development agenda. Microcredit is so important and vital for the Islamic view of life. Islamic microcredit system follows Islamic *shariah* to ensure credit transaction between the borrower and the lender without any involvement of interest (or *riba*), but involving sharing of return from investment of the credit. Therefore, Islamic microfinance is interest-free (profit-sharing) based, where the conventional microfinance is interest-based. These are the two operating modes available for delivering microcredit to the poor families in the society.

Though Islam is the innovator of microcredit for poverty alleviation in the society, yet the outreach of Islamic microcredit is very limited in the world. Bangladesh has the largest Islamic microcredit outreach, with over 500,000 clients and a few active credit lending institutions like Islami Bank Bangladesh Ltd. (IBBL), Muslim Aid, Al-Fallah,

Ahsania Mission, and a few more. Conventional microcredit has the largest outreach with over 24 million borrowers. The Islamic microcredit, therefore, represents only 2% of the present microfinance market in the country.

In the overwhelmingly Muslim populated country Bangladesh, most of the microcredit clients are Muslims. But in Islam interest-based credit system is not an acceptable or *halal* economic activity. As a result, there are many microcredit clients who categorically reject interest bearing credit products. But there are others who have accepted the interest bearing credit in the absence of availability of Islamic microcredit. There are still others who do not bother if it is an Islamic or conventional credit product. Since Islamic microfinance is in limited supply, most of the microcredit borrowers in the country are now clients of the conventional microcredit system.

### ***The Features of Islamic Microcredit***

#### ***IBB Microfinance: Rural Development Scheme (RDS)***

Realizing the need and importance of *Sharia*'h-compliant microcredit in this Muslim country, Islami Bank Bangladesh Ltd. (IBBL) has devised a "Rural Development Scheme" (RDS) with a view to creating employment opportunity for the rural population and reducing their poverty through income generation activities. The scheme was launched in 1995 as a pilot program styled after the Grameen Bank model but with the Islamic face. Its investment is based on Islamic *Shariah* principles. Its primary focus is to provide the financial access to poor people for creating opportunity of income generation with a view to alleviating poverty in a sustainable manner (IBBL, 2009; Rahman et al., 2008). Small amount of credit / investment (initially around TK10,000) is allowed for subsistent and small scale economic operations pertaining to production, trade, and services primarily in rural sector. These activities include production of crops, off-farm income activities like service, trading, processing and manufacturing, shop keeping, peddling and rural transport like rickshaw, rickshaw-van, cart, irrigation equipment, hand tube-well, housing materials etc. In 2003 RDS introduced what can be termed as Microenterprise investment scheme to offer larger loans ranging from TK50,000 to TK3,00,000 to 'graduated clients'.

#### ***Similarities and Dissimilarities with the Conventional Microcredit***

In Bangladesh, in many respects Islamic microcredit is similar to conventional microcredit system. They are similar in respect of use of group financing as a substitute to collateral, a high concentration of women clients, concentration on the moderately poor

families as the target group, strategy for women empowerment, and poverty alleviation as the primary objective.

The most important difference is in respect of the operational mechanism of earning economic gains by the microcredit providing institutions. For the conventional system earning interest revenue is the means of economic gains. For Islamic system, sharing the return from investment of the credit fund (i.e. profit sharing) is the means of economic gains. Attitudinally, it is a business for the conventional microcredit lenders/institutions (MCIs); and for the Islamic microcredit lenders/institutions (IMCIs) it is a social business. They also differ in respect of duration of credit and repayment scheme of the credit. Conventional microcredit is for one year with a scheme of weekly repayment installments, but Islamic microcredit can be for more than one year and the repayment installments could be weekly or at the end of harvesting of crops.

### *Products*

Islamic microcredit institutions (IMCIs) at present generally offer only one or two Sharia-complaint products. The Consultative Group to Assist the Poor (CGAP) identified that over 70 percent of the products offered by IMCIs are *murabaha* concentrating primarily on asset financing (Karim et al., 2008). But Islamic microcredit system has the scope to offer a variety of products to meet the needs of various types of clients. The following are some of the important potential *sharia*'h-compliant microcredit products available for offer by the RDS-IBB depending upon the sector and purpose of investment (Jinan, 2010):

- a. Bai-Muajjal: Under this mode bank sells goods to the client under deferred payment basis. The payment is made in lump sum or in fixed installments within a predetermined future date.
- b. Hire-Purchase Shirkatul Melk (HPSM): Under this mode bank may supply implements/equipments on rental basis. The ownership of the equipment remains with the Bank but the client is authorized to possess the equipment for certain period.
- c. Mudaraba TR: Under this mode bank may supply capital to the *mudarib* (agent) for conducting business, purchase of inputs, commodities etc. to be repaid on future date. Bank and *mudarib* share the profit at an agreed ratio.
- d. Musharaka: Under this mode the bank extends investment on profit and loss sharing basis. The capital sharing ratio will be maximum 80:20 between Bank and the client. The profit is to be negotiated and will be determined so as to ensure minimum 12% rate of return.

- e. Bai-Salam: Under this mode bank executes advance purchase contract with the client and make payment against purchase of the product by the client.
- f. Murabaha TR: Under this sale contract bank purchases a certain commodity for the client as requested and specified by him and deliver the same to the client on payment at a pre-determined price.

### *Sources of Fund*

RDS's funds are obtained from internal and external resources as follows (Dusuki, 2008):

- *Internal resources:* Deposits and equity. (a) *Deposits:* Islamic microfinance can mobilise from members as well as public various forms of deposits such as *wadiah* (safekeeping), *qard al-hassan* (benevolence loan) and *mudarabah* (profit sharing). About 33% of RDS funds come from its members' savings. (b) *Equity:* It can also mobilise funds through participatory models such as *musharakah* and *mudarabah*.
- *External resources:* Under the principle: 'in your wealth there is a share of the poor', Islam offers built-in mechanisms for redistribution of income and wealth and enhancement of social inclusion for ensuring minimum standard of living for all. These mechanisms include *zakah*, *waqf* (donations or gift), etc. Of these, *zakah* is a compulsory religious levy.

### *Economic Productivity*

Assessments on socioeconomic productivity of microcredit so far have been done through impact studies applying analyses of changes in borrowers' family income and assets or through cost-benefit analyses using accounting-profit method, and by management efficiency and revenue analyses of the credit lending institutions. Accordingly, many studies found and reported that both conventional and Islamic microcredits contributed to significant increase in moderately poor borrowers' family income and expenditures, and standard of living. Microcredit is, therefore, seen as successful in achieving its primary objective of poverty alleviation and at the same time earning comparable rate of return on investments for the lending institutions. High rate of interest charges by the MCIs and profit charges by the IMCIs are, therefore, tolerated and considered acceptable.

For a credible measurement of economic productivity of microcredit or any factor of production it requires application of economic-profit counting method. Because, for economic efficiency and moral justification the factors can be paid only according to their

productivity. Accordingly, in the previous section productivity of microcredit was calculated by the economic-profit counting method for 555 sample borrowers including 36 who borrowed credit from lenders of Islamic microcredit, and the productivity or the rate of return on investment (ROI) of microcredit for most of the borrowers was found negative or very low. Here the productivity of Islamic microcredit borrowers has been separately calculated to find if it is different.

It may be noted that not all these 36 borrowers borrowed from Islamic microcredit institutions (IMCIs) out of religious commitment. Only 8 of them had their current loans entirely from Islamic IMCIs. The rest also borrowed simultaneously from conventional microcredit lending institutions (MCIs). One of these 8 borrowers used the credit fund entirely for consumption purposes. The productivity of credit for the remaining 7 borrowers is found relatively better with rate of return on investment averaging 342% (as against 254% for all the 555 sample borrowers) when minimum wage is paid for the family labor, and 36% (as against 28% for all the 555 sample borrowers) when family labor is paid wages at market rate (Table 5.7). However, results based on so small sample size cannot be considered reliable for drawing any conclusion.

Table 5.7: Return and net worth of Islamic and all microcredit investment

	Average ROI before paying family labor*	Average ROI after considering family labor at minimum wage rate*	Average ROI after considering family labor at market wage rate*
All borrowers	430%	254%	28%
Islamic credit borrowers	569%	342%	36%

\* and before paying interest (cost of capital) or profit.

Source: field data

Table 5.8: Estimated rate of return on investment (ROI) for RDS credit

Estimated Rate on Investment (ROI) for Islamic Microcredit	Types of Investment			All Category
	Agriculture	Business	Other	
Average Investment (TK) ^	12339	18568	30906	20604
Average Gross Return (TK) ^	15224	43418	58642	39095
Gross Return on Investment (ROI)^	23.4%	133.8%	89.7%	89.7%
Minimum Wage Rate Charges on Investment (for Family Labor)*	27.2%	111.1%	119.8%	91.6%

Market Wage Rate Charges on Investment (for Family Labor)*	65.4%	248.1%	288.8%	211.7%
Net Rate on Investment (ROI) available for interest payment after considering minimum family labor cost *	-3.8%	22.7%	-30.1%	-1.9%
Net Rate on Investment (ROI) that available for interest payment after considering market family labor cost *	-42.0%	-114.2%	-199.1%	-121.9%

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^ Recalculated as average of the relevant category, from Table 10 of Jinan (2010).

\* Estimation is based on the labor rate calculated from the field data of the current study

Source: Jinan, 2010 and field data

Jinan (2010) made a survey on the RDS-IBB Islamic microcredit borrowers and estimated the rate of return on investment (ROI) to be 89.7% by accounting-profit method. By treating Jinan's findings with the imputed family labor costs we have re-estimated the ROI by economic-profit counting method. It is found that the recalculated rate of return on investment (ROI) changes from 89.7% to -1.9% when minimum wage is paid to the family labor, and to -121.9% when family labor is paid wages at market rate (Table 5.8). The productivity estimates based on economic-profit counting become negative indicating that Islamic microcredit investment as well suffers from low economic productivity. This lends supports to the thesis that the subsistent and microeconomic enterprises by nature are low income earning operations with low rate of return on investment. Microcredit borrowers deal with very low-return economic opportunities and are unable to pay high interest or profit to the credit lenders. Therefore there is no economic and moral support for the MCIs to charge a high rate of interest for the credit and for the IMCIs for charging a high rate of profit for the microcredit products.

However, in addition to the religious obligation for the Muslim borrowers, the Islamic microcredit has also one great economic advantage for the poor borrowers. The effective profit rate (20%) charged by the IMCIs is as low as two-thirds of the interest rate (30%) charged by the large MCIs (Alamgir et al., 2011).

### ***Potentials and Prospects of the Islamic Microcredit in Bangladesh***

For its religious stance Islamic microfinance has a special appeal and a great scope for integrating it with the *zakah*, *wakf*, and other kinds of *sadaka* (charity) for serving the

hardcore poor and poverty alleviation at the lowest investment cost (cost of capital financing). Therefore, there is a great need and scope for increasing the outreach of Islamic microcredit in the country. Reportedly, Islamic Development Bank (IDB) in collaboration with some local banks has a plan to set up an Islamic Micro-finance Institution (IMFI) as a means to reduce poverty. There is also a great scope for the masjid-centred structure of microfinance program similar to the kind (*Akhuwat*) now under experiment in Pakistan. '*Paroshi*' or Neighbourhood microcredit scheme is another prospective and suggested Islamic microcredit model. Under this model the rich members of the locality could be mobilized and encouraged for *mudaraba* and other Islamic credit transactions with their poor neighbours and relatives.

## Summary

During the medieval period the Prophet of Islam, in a way, introduced microcredit as a means for poverty alleviation. Microcredit is typically a petty collateral-free credit given to groups of poor members in the society for their socioeconomic emancipation. Microcredit and NGO are the two buzzwords in Bangladesh. Non-governmental organizations (NGOs) are organizations engaged in the promotion of economic and social development typically at grass-roots level. Interest-based microcredit (conventional system) is delivered typically through the microcredit institutions (MCIs) like Grameen Bank, etc., and NGOs cum MCIs like BRAC, ASA, PROSHIKA, etc. The interest-free based (Islamic system) microcredit is delivered by Islamic microcredit Institutions (IMCIs) like Islami Bank Bangladesh Ltd. (IBBL), Muslim Aid, Al-Fallah, Ahsania Mission, and a few more). Microcredit is claimed to be an effective tool for enhancing income of the poor through self-employed economic activities. It gained global recognition as a successful scheme for poverty alleviation. However, a surgical economic analysis by using economic-profit counting method reveals that its net economic benefit to the borrowers is at best marginal. In this survey of microcredit borrowers it is found that when self-employed family labor is paid wages at market rate, under the framework of economic-profit counting, economic productivity of credit for about 48% of all the conventional and Islamic microcredit borrowers is not enough to support payment of any interest or profit to the credit lenders. They have to compromise their normal wages for self-employed labor to be able to pay the high interest for the credit. An econometric analysis of the productivity of labor and microcredit also suggest that labor is relatively more productive than microcredit.

Similarly its social productivity in terms of job creation and women's empowerment at family level is also found to be low and marginal. In terms of job creation it has a limited success. It requires investment of about TK10,000 credit fund for a year for creation of one annual full-time self-employed job. Similarly it has a very little

or no success in terms of improvement of women borrowers' empowerment at the family. Even then about 90% of the borrowers prefer microcredit at so high interest rate, ostensibly to avoid compromising their socio-political rights and potentials at the hands of the local moneylenders or credit supplying relatives and friends. They appreciate and feel comfortable with microcredit from these institutional sources. They see microcredit as the saver of their socio-political rights and potentials and regard it as more of a credible social than economic program.

However, the microcredit program in Bangladesh has been found to be less dynamic and innovative to meet the challenges of the changing circumstances and social expectations. For it to be economically more credible and viable, and socially fulfilling there is now a demand for its reform. Its delivery system needs to be made flexible in terms of loan size, gender biases of clients, interest or profit rate policies, and disbursement and collection methods to make it suitable for both the very poor clients who are engaged in mere subsistent level activities, and the clients who are relatively solvent and are potential microentrepreneurs to be engaged in beyond subsistence level (growth generating) economic activities. Therefore, it is high time for its reform in terms of essence, structure, methodology & operational mechanism. However, in doing so it must not lose sight of and compromise its very fundamental goal – poverty alleviation and rural development.

Because of the fact that the poor microcredit borrowers deal with very low-return economic opportunities, it is unreasonable to believe that they can pay such a high interest. Microcredit, therefore, cannot be for business; it should be regarded as a social business for supporting development agenda. Its interest or profit rate policy should be accordingly aligned. Since under the Islamic microcredit system attitudinally microcredit is a social business, it is found more amenable and prospective for the needed reforms. Currently, with an effective profit rate of 20% (and below) charged by the Islamic microcredit institutions as against the effective interest rate of 30% (and above) charged by the large conventional microcredit financing Institutions, the Islamic microcredit is found more acceptable and advantageous for the poor borrowers. The success of the microcredit movement will depend on how skilful and innovative it is to serve the 'self-employment generating microcredit model' at the rate of interest/profit consistent with the natural low rate of return on investment in this sector of low income generating activities. However, its future success and sustainability may eventually lie on how skilful and prudent it is in innovating a separate credit package like 'growth-leading credit model' without diluting and affecting the 'self-employment generating microcredit model'.

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## Chapter 6

### **Population Debate and the Paradox of Global Population Stabilization Policy: *Actions of a Double-edged Sword***

Materials in this essay have been compiled from the following works: i. Alam, M.M., R. I. Molla, M.W. Murad, and K.M. Rahman (2009), “A note on Paradox of World Population Stabilization Policy”, *The Journal of Developing Areas*, USA., and ii. Alam, M.M., R.I Molla, K.M. Rahman and M.W. Murad (2011). Declining Work-Age Population Threats to Global Economic Sustainability, Unpublished research paper (Its extended abstract has been published in International Sustainable Development Research Society (ISDRS) Newsletter, Issue 2, pp. 12-14, Columbia University, New York).

By the end of 1999 world population reached 6 billion; by end of October 2011 it reached the mark of 7 billion; and by end of 2050 it is projected to reach the mark of 9.28 billion. This phenomenon of rapid population growth led to a decade long active debate surrounding the causes of the population problem and the desirability of population stabilization.

#### **World’s Population Debate**

For many years, especially since mid-1970s development economists and other social scientists have debated the seriousness of the consequences of rapid population growth. One side of the debate is that population growth is not the only, or even the primary, source of low levels of living and underdevelopment in most developing countries. The other side of it is that it would be naïve to think that rapid population growth in many countries and regions is not a serious intensifier and multiplier of the integral components of underdevelopment. The arguments of the debate on the consequences of rapid population growth can be summarized as below:

#### ***One side of the debate: Population growth is “not a real problem”***

1. The fundamental problem is not population growth per se but other issues like underdevelopment, world resource depletion and environmental destruction, population distribution, etc.
2. Population growth is an ambiguous issue deliberately created by dominant rich-country agencies and institutions to keep LDCs in their underdeveloped, dependent condition. It is argued that the over concern in the rich nation with the population growth of poor nations is really an attempt by the former to hold down the development of the latter in order to maintain and international *status quo* that is favorable to their self-interests. A radical view is that worldwide birth control campaigns are in fact manifestations of the fears of the developed world in the

face of a possible radical challenge to the international order by the people who are its first victims.

3. For many developing countries and regions, population growth is in fact desirable as an essential factor to stimulate economic development. Larger population provides the needed consumer demand to generate favorable economies of scale in production, to lower production costs, and to provide a sufficient and low cost labor supply to achieve higher output levels. This is clearly in contrast with the traditional 'orthodox' argument that rapid population growth had serious economic consequences that if left uncorrected, would slow down economic development.

***The other side of the debate: Population growth is "a real problem"***

Population growth is a real problem like an explosion of a bomb leading to the Global crisis. Population-poverty cycle theory is real and cannot be denied. Rapid population growth yields negative economic consequences and thus should be a real concern for developing countries. Population growth intensifies and exacerbates the economic, social and psychological problems like slow economic growth, poverty and inequality, education, health, food, environment, international migration, etc. associated with the condition of underdevelopment.

***Towards finding a common ground***

The debate finally landed to a consensus position that can be described as:

1. Population growth is not the primary cause of low levels of living, slow growth, income inequalities, or the limited freedom of choice that characterize much of the developing world. The fundamental causes of these problems lie in other issues and aspects of domestic and international development policy.
2. The problem of population is not simply one of numbers but involves the quality of life and material wellbeing. Thus LDC population size must be viewed in conjunction with developed country affluence in relation to the quantity, distribution, and utilization of world resources, not just in relation to indigenous resources of the LDCs.
3. But rapid population growth does serve to intensify problems of underdevelopment and make prospects for development that much more remote. It follows that high population growth rates, though not the principal cause of underdevelopment, are nevertheless important contributing factors in specific countries and regions of the world. Individuals, countries, and the world at large

would be better off if population were to grow more slowly. The consequences of rapid population growth should be neither exaggerated nor minimized.

In the discourse in this chapter, another dimension to the population debate has been added. It highlights on the need for population growth for producing required number of work-age population to cater the needs of increasing number of manpower for continuity of the growth and development in the future. It finds world's population stabilization program as a paradox in terms of future need for increasing number of work-age population for growth and maintenance of the civilization.

The world population exploded throughout the last century; it increased from 2.55 billion in 1950 to 6.396 billion in 2004, and is projected to reach 9.276 billion in 2050.<sup>3</sup> There is a hidden momentum of population growth; it has a built-in tendency to continue growing even after birthrates have declined substantially or declined to a replacement rate (i.e. parents have only two children to replace themselves). Accordingly, it is estimated that if population continues to grow at 1990 rates, the world population would reach to 694 billion by 2150; if it grows at a rate just one-tenth above the replacement rate it will reach the level of 12.5 billion by 2050 and 20.8 billion by 2150; and if it grows just at the replacement rate it will reach to 7.7 billion by 2050 and 8.4 billion by 2150 (Cohen 1995). These are obviously very large population numbers. However, these numbers are to be considered in conjunction with the limits of the earth's population carrying capacity.

During 1679 - 1994 there were 65 estimates on the earth's population carrying capacity. These estimates vary widely ranging from fewer than a billion to more than a trillion. These estimations were made taking sustainability as a necessary and sufficient condition so that the needs and aspirations of the present population can be met without compromising the ability of the future generations to meet their own needs. Based on the agricultural carrying capacity the earth's population carrying capacity was estimated to be only 902 million in 1945 and as high as 147 billion in 1967. In 1965 Walter Schmitt estimated the earth's population carrying capacity to be 30 billion. Ehrlich estimated even 3.5 billion as above the earth's capacity; Pimentel estimated 2 billion as the earth's maximum carrying capacity; and the Worldwatch Institute estimated it to be 11 billion. However, almost all the scholars seem to agree that the earth's human carrying capacity finally depends on the technological capacity (ability to unlock/create useful resources from the earth's nature and environment) and the social choices (life style, social structure, etc). Its biophysical carrying capacity sets the maximum population size that could be sustained biophysically under the given technological capabilities and its social carrying capacity sets the maximum size that could be sustained under the various social

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<sup>3</sup>United Nations, *World Population Prospects: the 2004 Revision* (New York: United Nations Population Division, 2005).

systems. It is worth noting that human ingenuity, through innovations and adaptations of social and industrial engineering and technology, has enabled dramatic increases in both the biophysical and the social population carrying capacity of the planet. Human ingenuity is capable of overcoming natural barriers. As a result, there are theories which even deny the existence of any finite carrying capacity at all. However, there are also theories which acknowledge that the limits of the earth's capacity are real, but recognize that human choice, now and in the future, will largely determine where those limits fall. The truth of the matter is that there is no single numerical answer, now or ever, to the question how many people the earth can carry; it can at best be conditional answer. But the bottom line is that the laws of thermodynamics inevitably limit the biophysical carrying capacity.

Larger population is often feared to be an obstacle to sustainable environment. However, studies show that environmental sustainability does not depend on population growth alone, but on misallocation and over exploitation/consumption of resources. Fast industrial/economic growth and misallocation of world resources are responsible for most of environmental pollution and degradation like carbon dioxide emissions. China, USA, India, Russia, Japan, Germany, Canada are the top seven countries in terms of total carbon dioxide emissions in 2009. However, in terms of per capita carbon dioxide emissions, high income (and low populated) countries as a group with high energy consumption produced 13.14 metric tons of carbon dioxide emissions; whereas low income (and high populated) countries as a group with low energy consumption produced only 0.93 metric tons carbon dioxide emissions in 2005 (Table 6.1). In the world context, the old argument of population stabilization for environmental competency therefore does not hold. Higher population is not alone a real obstacle for sustainable environment.

Table 6.1: Economy wise population, energy consumption, and CO<sub>2</sub> emission in 2005

Types of countries	Total population (Thousands of people)	Total Energy consumption (Thousand Tons of oil equivalent)	Total CO <sub>2</sub> emissions (Thousand Metric Tons)	Population density (People per square kilometer)	Energy consumption per capita (Kilograms of oil equivalent)	CO <sub>2</sub> emissions per capita (Metric tons)
High Income Countries	993379	5,429,405	12,783,303	28.6	5523.6	13.14
Middle Income Countries	3056307	4,579,559	12,457,695	44.1	1509.3	4.1
Low Income Countries	2458196	1,069,867	1,951,258	73.8	491.8	0.93
World	6514751	11,433,918	27,463,670	47.9	1778	4.27

Source: Earth Trends Database (2005)

Similarly, there is no convincing evidence that higher population is a hindrance for economic growth. Sen (1994) fairly and conclusively showed that famine and destitution have rarely been caused by population growth or size. He argues that there is no serious evidence to the fact that the rate of population growth is outrunning our ability to produce enough food to feed the earth's human population. Similarly, population growth may not be found to be the primary cause of low levels of living. But even then, traditionally, high population growth rate is considered as a hindrance to environmental and economic sustainability. As a result all over the world there is a strong emphasis on stabilization of population but without giving due consideration to its paradoxical impacts on future world economic and environmental sustainability and progress of civilization. Population stabilization policy makes world fertility level (projected) to fall below the replacement level by 2043. This will result in a declining work-age population paradoxically endangering economic and environmental sustainability particularly during 2050 and beyond. Trying to solve the problem it also, in turn, adds to the problem – the action of a double-edged sword.

### **Declining Work-Age Population is a Threat to Global Economic Sustainability**

Global population explosion is feared to lead to ‘population crash’. Many consider this fear as real. Failing to control population growth the humans risk the worst population crash. Earlier in 1950s there was a similar alarm on the danger of population explosion. In response to that warning the United Nations and the organizations under its umbrella, the national governments, the international developmental bodies, the non-government organizations (NGOs), and the researchers strongly emphasized on stabilizing the world population. Most countries took measures to arrest population growth. It is now envisaged that the annual growth rate of population will decline from 1.21% during 2000-2005 to 0.38% in 2045-2050 causing significant negative effect on the world economy<sup>1</sup>. It is feared that from 2050 onward the whole world will face the greatest problem of declining work-age population. At that time the work-age dependency ratio - the proportion of youth (under age 15) and old people (over age 65) to economically active adults (age 15-65) - will become higher and it will be more difficult for a declining economically active population to support an increasing economically dependent population. Declining of the work-age population will then generate low gross domestic product (GDP), low gross national income (GNI), and low tax revenue for the government. In this essay we examine the adverse effects of the world’s declining work-age population on the future world economy and reflect on the technological innovations as a way out for economic sustainability.

### **Fertility Rate and Population Structure**

One of the most serious effects of this population growth stabilization policy has been the continuous decline of the fertility rate and change in the population structure (Table 6.2). By 2043 the actual fertility level is projected to fall below the replacement fertility level<sup>4</sup>. The U.S. Census Bureau (2000, 2004, 2008) projected that the number of women in child bearing years would decline gradually from about 52.1% of total female population in 2010 to 45% by 2050 (Table 6.3). During the past years, in many developing countries the population under 15 years of age was growing rapidly, but now it has started declining. As a result the world youth population of the age 0-14 is projected to decline from approximately 26.5% in 2010 to about 20% by 2050 (Table 6.4). It is even more alarming that during the coming decades the world's elderly population will increase very rapidly as can be seen from the table. As a consequence of this historical decline of the youth population the ratio of the global labor force (age 15–64) to total population is expected to rise only slightly from near 64% in 2002 to near 66% in 2010 and then decline continuously threatening sustainability of the world economy in the coming decades (Table 6.5).

Table 6.2: World Average Fertility Rate per Woman

Year	Fertility Rate Per Woman	Year	Fertility Rate Per Woman	Year	Fertility Rate Per Woman
1997	2.84	2015	2.46	2033	2.23
1998	2.8	2016	2.44	2034	2.22
1999	2.76	2017	2.43	2035	2.21
2000	2.74	2018	2.41	2036	2.2
2001	2.7	2019	2.4	2037	2.2
2002	2.67	2020	2.38	2038	2.19
2003	2.66	2021	2.37	2039	2.18
2004	2.64	2022	2.35	2040	2.18
2005	2.63	2023	2.34	2041	2.17
2006	2.61	2024	2.33	2042	2.17
2007	2.59	2025	2.31	2043	2.16
2008	2.58	2026	2.3	2044	2.16
2009	2.56	2027	2.29	2045	2.15
2010	2.54	2028	2.28	2046	2.15
2011	2.53	2029	2.27	2047	2.14
2012	2.51	2030	2.26	2048	2.14
2013	2.49	2031	2.25	2049	2.13
2014	2.48	2032	2.24	2050	2.13

Source: U.S. Census Bureau (2000, 2008)

Table 6.3: Global Women of Child Bearing Age

<sup>1</sup> United Nations, *World Population Prospects: the 2004 Revision* (New York: United Nations Population Division, 2005).

<sup>4</sup> The replacement level of fertility: the level of fertility at which each successive generation of women produces exactly enough offspring so that the same number of women survive to have children themselves.

Year	2002	2010	2020	2030	2040	2050
% of Total Female Population	52.1%	52.1%	49.8%	48.2%	46.4%	45.0%

Source: Reproduced from U.S. Census Bureau (2004)

Table 6.4: Age Group-wise Projected Population as Percentage of Total Population

Year	Youth Population (age 0-14)	Young Population (age 15-29)	Middle-age Population (age 30-64)	Old-age Population (age 65 & over)
2002	29.0%	26.0%	37.9%	7.1%
2010	26.5%	25.5%	40.3%	7.7%
2020	24.8%	23.3%	42.4%	9.5%
2030	22.9%	22.1%	43.0%	12.0%
2040	21.4%	21.4%	42.6%	14.6%
2050	20.4%	20.2%	42.9%	16.5%

Source: U.S. Census Bureau (2004)

Table 6.5: Projection of Economically Active Population as Percentage of Total and Dependency Ratio

Year	Economically Active Population (age 15-64) <sup>a</sup>	Economically Inactive Population (age 0-14 and 64 & over) <sup>b</sup>	Dependency Ratio <sup>(b/a)</sup>
2002	63.9%	36.1%	56.5%
2010	65.8%	34.2%	52.0%
2020	65.7%	34.3%	52.2%
2030	65.1%	34.9%	53.6%
2040	64.0%	36.0%	56.3%
2050	63.1%	36.9%	58.5%

Source: Derived from Table 6.3

Spidla (2005) observed that the population decline is now a reality in more than a fifth of Europe. By 2050 the population in the European Union will decrease by almost 7 million and its work-age population will decrease by 55 million. By 2030 the work-age populations will most likely decrease by 21 million and the young-age people will decrease by 20 million. Whereas the number of old people of over 65 years will increase by more than 39 million and the number of persons of over 80 years will become almost double. It is more alarming that the elderly population will increase rapidly, almost doubling by 2020 and more than tripling by 2050. The elderly population will rise by over 9% and 17% of the total population by 2020 and 2050 respectively (US Census Bureau 2004).

## Population Growth Dynamics

The demographic history shows that it takes long time to change the direction of the trend of population growth. At present many developed countries like Switzerland, France, Japan, Germany etc, which have negative population growth rate, are trying to change their child bearing habits but without success. Many of these countries are already facing the problem of declining work-age population. All over the world life expectancy rate is increasing – death rate is decreasing and the old-age population is increasing. Under the circumstances stabilization of growth rate will require a decrease in birth rate (*Case-1*:  $B\downarrow - D\downarrow = 0$  in the Figure 1 below). Therefore, the countries trying to maintaining stable population or zero growth rate have to decrease their birthrates, which in turn will cause decrease in the work-age population. These countries are, thus, faced with the problem of having birthrate as a double-edged blade – trying to stabilize population through birthrate reduction gives birth to the problem of decrease in the work-age population.

Natural changes of Population growth rate where migration is not considered:  
Where, B= Birth Rate, D= Death Rate, 0= Zero Population Growth,  $\uparrow$ = Positive Growth,  $\downarrow$ = Negative Growth,  $\uparrow\uparrow$ = Higher Positive growth Rate than Opposite Component,  $\downarrow\downarrow$ = Higher Negative growth Rate than Opposite Component

**Case-1:**  $(B - D = 0)$  or  $(B\uparrow - D\uparrow = 0)$  or  $(B\downarrow - D\downarrow = 0)$

**Case-2:**  $(B\uparrow - D = +)$  or  $(B - D\downarrow = +)$  or  $(B\uparrow\uparrow - D\uparrow = +)$  or  $(B\downarrow - D\downarrow\downarrow = +)$

**Case-3:**  $(B\uparrow - D\downarrow = +)$  or  $(B\uparrow\uparrow - D\downarrow = +)$  or  $(B\uparrow - D\downarrow\downarrow = +)$

**Case-4:**  $(B\downarrow - D = -)$  or  $(B - D\uparrow = -)$  or  $(B\downarrow\downarrow - D\downarrow = -)$  or  $(B\uparrow - D\uparrow\uparrow = -)$

**Case-5:**  $(B\downarrow - D\uparrow = -)$  or  $(B\downarrow\downarrow - D\uparrow = -)$  or  $(B\downarrow - D\uparrow\uparrow = -)$

Figure 6.1: The catch of population stabilization policy

The way out of this catch is to abandon the population stabilization strategy and plan for positive population growth rate through increased child birthrate. Even then the effect will come only after a considerable time-lag. Because, in the first place, a change in people's child bearing habits in favor of larger number of children will take long time - let it be called 'Child Bearing Habitual Gap' - and again, after the habits change there will be a gap of another 15 years for the baby to turn into work-age - let it be called 'Work-age Formation Gap' (Alam, et. al. 2009). Moreover, the spread of deadly diseases, among other factors, is an important source of leakage in the population and labor force growth in many parts of the world. Projections suggest that by 2010, 45 million more people in the low- and middle-income countries will become human immunodeficiency virus (HIV) infected unless the world mounts an effective campaign to halt its spread. The World Health Organization estimates that each year 300–500 million cases of malaria occur and they cause 1.1 million deaths. Tuberculosis alone kills around 2 million people a year, most of whom are 15–45 years old. As a result, the population growth in coming years

and decades in these high fertility rate regions will not be enough to supply the required labor force even for their own regions.

### **Population Stabilization Limits Economic Growth and Technological Advancement**

The population growth stabilization strategy (zero growth) has a very strong negative impact on the future world economy. When the population growth rate is negative or zero, countries will have less work-age population and more old-age population. Government's main source of income is the tax revenue that comes from the active work-age peoples' income. For that reason, the declining work-age people will mean the decrease in the generation of government tax revenue. World Economic Outlook (2004) shows that during 1960–2000 per capita GDP growth is positively related to increase in the relative size of work-age population, and negatively related to increase in size of the elderly population. As a consequence of the increase in the life expectancy, the old-age population in the world is increasing and thus requiring additional cost for the old-age transfer payments. It is feared that during the coming decades of this century most of the countries, specially the developed countries, will face the problem of the low tax revenue available to meet the high subsidized expenditure for larger number of the old-age people. This will cause the governments to maintain deficit budgets all the time. In fact, Japan, Germany, Switzerland and some other countries are already under the threat of this phenomenon. In case of Japan, for example, it had a population of 123.5 million in 1990 and 127.8 million in 2005. It is projected to decline to 124 million in 2015 and to 115 million in 2030 (JILPT 2007b). Consequently, its working population will decline. Its total national labor force was 63.9 million in 1990 and 66.6 million in 2005; and it is projected to decline to 58.3 million at the end of 2030 (JILPT 2007a). In fact, Japan has already entered into a graying society. About 20% of its population is now above 65 years of age. This will increase to about 30% by 2020. Thus, Japan will face the challenge to replenish its labor force for maintaining the sustainable levels of its GDP and GNI.

However, due to the decline in the labor force, cost of production will rise and the cost push inflation rate will be very high in these countries. Therefore, an economic crisis is likely to prevail all over the world especially in the period after 2050. The decline in work-age population will also seriously affect the technological advancement, which is essential for the continued economic growth. Technological advancement means not only updating the technology in the existing sectors but also extending the technology in the new sectors. Overuse of the technology in a sector creates over capitalization and lower marginal gain. In such cases, updating the technology in the same sector will be less profitable than creating new technology in the new sectors. This will create demand for additional manpower. In OECD countries, there was a steady increase in labor engaged in research and development (R&D) during 1981-2005. During this period, it increased from

4.6 persons to 7.3 persons per thousand employed labor (in terms of percentages of the total employed labor the increase was from 0.5% to 0.7%). It may be noted that to reach to the current state of the technology in the G-5 countries the number of researchers in these countries grew 10 times from 0.25 million in 1950 to 2.6 million in 2005. To maintain the current level of technological growth through engagement of the same quality of researchers, it will require 26 million and 260 million researchers in 2060 and 2115 respectively (Weil 2009, p. 260). If these nations fail to engage the required number of researchers, it will lead to a stagnation of technological growth. Furthermore, the industrial revolution has not yet happened in many parts of the world. In the economic growth process, these countries should go through the path of industrialization. When industrialization process will start in these countries, huge labor force will be needed there. After reaching the maturity stage of industrialization, these countries will quickly move to the development of the service sectors. In most cases service sector is still labor intensive. Therefore, in the coming decades there will be a need for larger labor force in the world, and the country governments will be required to embark upon a sound manpower planning and a matching population growth rate policy.

### **The Way Out**

Short-term measures like import of labor from the labor surplus areas may be tried as a temporary solution of the problem. However, the long-term solution of the problem must be sought through population growth and the resultant growth in the work-age population. This necessitates a revision of the population stabilization policy in favor of a planned population growth.

### ***Temporary Measure: Immigration***

The labor-short industrialized countries are now trying to cope up with the situation through short-time importation and permanent migration of manpower mostly from the high fertility developing countries. This is done in different ways like granting of citizenship, permanent residence status (PR certificate, green card, diversity visa–DV, etc.), work permits to foreigners, accepting asylum seekers and refugees, admitting international students and permitting them to stay on to work after completion of studies, etc.. Under the DV scheme alone US receives every year 50,000 permanent immigrants from the developing countries. During 2005-2007 more than 1.1 million foreigners per year were granted permanent resident status in the USA (U.S. Department of Homeland Security, 2007). Most of the labor-short industrialized countries are currently using migration as a source of additional supply of labor to meet the growing demand. There has been a steady increase in the immigrant population in most of the OECD countries over the past years. In 2004, foreign born/foreign labor accounted for more than 11% of

the total labor force in most of these countries (Table 6.6). Even the newly industrialized countries like Korea and Malaysia are facing the same problem of shortage of labor force. They are managing by hiring foreign workers on temporary basis. Foreign labor in South Korea accounted for 1% of its total labor force in 2004. In 2007, Malaysia had 1.9 million (mostly low and semi-skilled) foreign workers which accounted for about 17% of its national labor force (Table 6.7). It is feared that China, with its ‘one-child per family’ population policy in force, may soon face labor shortage problem if it wants to maintain the on-going high speed of industrialization.

Table 6.6: Foreign-born Labor Force in 13 Selected OECD Countries, 1999 and 2004

Country	Foreign-born Labor Force		
	Thousands		% of Total Labor Force
	1999	2004	2004
Australia	2242	2474	24.9
Austria	440	585	15.3
Belgium	450	512	11.5
Canada	--	2567	17.5
France	3013	2987	11.3
Germany	4241	4800	12.2
Italy	213	1350	5.6
Japan*	126	192	0.3
Netherlands	684	929	11.1
Spain	645	2241	11.2
Sweden	428	606	13.3
United Kingdom	2293	2759	9.6
USA	17058	21995	15.1

\* It is termed as foreign labor

Source: Constructed from OECD (2006)

Table 6.7: Population and Labor Force in Malaysia, 2007

Population (million)	26.6
Working-age Group (million)	16.8
Labor Force ('million)	11.0
Number of Employed Persons (million)	10.6
Population Growth Rate (%)*	1.74
Projected Population 2025 (million) *	34.5
Projected Population 2050 (million) *	40.5
Foreign Workers (million) **	1.9

\*Available at: <http://www.prb.org>. \*\*Recorded on March 2006, Department of Statistics (Malaysia) (2006)

Source: Department of Statistics (Malaysia) (2007)

### *The Mixed-blessings of Immigration*

To the industrialized capital abundant host countries immigrants are additions to labor supply required to increase efficiency and productivity of their stock of capital, land, and natural resources. By increasing the supply of labor, immigration raises productivity of factors that are complementary to labor. More workers allow capital, land, and natural resources of the host countries to be fully and more efficiently exploited. Gains in productivity in turn increase income of domestic factor owners. Immigration thereby generates a surplus in the form of extra income to domestic factors. It also drives down local wages. During 1980 to 2000 wages of native US workers without a high school degree fell by 9% as a result of increase in labor force due to immigration through both legal and illegal sources; where the average wages fell only by 3% (Borjus 2003). Developing countries are source countries of most of the immigrants to the industrialized countries. To the source or sending countries, migration means reductions to their human capital stock with potential negative effect on their economic development. But at the same time, home remittances of the migrants are most important external source of capital required for development of these countries. Remittances are significantly higher in low-income countries. It constituted 6 to 40 percent of GDP in some of the developing countries in 2002 (OECD 2006). In 2006/07 fiscal year, it constituted 8% of GDP in Bangladesh. Home remittance is also the most important source of hard currency earnings of these countries. Thus, migrant remittances are regarded as compensation for human capital losses of the developing countries. In most cases, the primary motive for home remittance is for increased family consumption and welfare and not for investment and economic growth. But for it to play its crucial role as an effective means of growth and development more of it is needed to be channeled to productive than non-productive uses.

### *The Zero-sum Game of Migration*

However, in the world context, migration is a zero-sum game - an increase in the number of migrant population in the receiving country is just equal to a decrease in the number of population in the sending country. The developing countries are the source countries of most of the immigrants to the industrialized countries. There is an interesting international political economy of migration of labor from the developing to the developed countries. To the industrialized capital abundant host countries immigrants are additions to their labor supply. These additional workers (immigrants) are essential for increasing the efficiency and productivity of their stock of capital, land, and natural resources. To the source or sending countries migration means reductions to their human capital stock. This has a potential negative effect on their economic development, now and in the future. Therefore, immigration cannot be a sustainable solution for the world

economy. It requires world population to grow to meet the growing demand for labor for economic sustainability.

### ***Sustainable Solutions: Technological Innovations***

As noted earlier, a sustainable solution of the problem demands the world population to grow to meet the growing demand for labor for economic sustainability. To support the growing population there is a need for the earth's carrying capacity to increase. This requires the technological innovations to increase. Earlier we noted that the planet's capacity to support any sustainable size of population depends primarily on the sophistication of the society's life style (including distribution of population and resources) and the technological advancement. Higher is the affluence (more consumption and resource use) smaller is the size of population the earth can support; more equitable is the distribution of population and resources larger is the population the earth can support; and more sophisticated is the technology (greater capacity to unlock more resources from the nature) larger is the population it can support. Affluence is negatively, and equitable distribution of population and technological capacity are positively related to the earth's population carrying capacity. Therefore, the solution of the problem of declining work-age population should be sought through a policy of planned population growth supported by innovations in both social and industrial engineering and technology required for expansion of the earth's carrying capacity for increased population.

### ***Social Engineering and Technology***

Early human societies lived with little material possessions. However, over the time they invented and developed technologies to unlock from nature more and more resources necessary for supporting affluent life. In the process, they seem to have left the domain of 'simple living and high thinking'. Today they are turned into 'consumer societies' with a strong love for more and more affluent life, as if, they only 'live to eat'.

However, it may not amount to only a wishful thinking to envision that, in response to the ethical and environmental demands the future social engineering and technology advancement will be geared toward development of a practicable structure of a life style based on a 'slim-green' consumption choice founded on the principle of 'simple living and high thinking'. This life style of the society will result in resource saving, resource conservation, waste minimization, etc. It will enhance the earth's capacity to carry a larger sustainable population. In addition, it may also focus on the planned redistribution of population from the resource poor crowded countries to the

resource rich sparsely populated countries to temporarily reduce labor shortage problems in some countries and labor unemployment problems in other countries.

### *Industrial Engineering and Technology*

The future industrial engineering and technology development have the scope to focus on the following areas: (a) Labor saving technology; (b) Resource saving technology; and (c) Resources creating technology.

- a. *Labor Saving Technology*: The labor saving technology is to do with minimization of uses of labor. Since the work-age population is projected to decline and the environment is the great reservoir of untapped resources these two aspects will be prioritized for future technological development. These are possibly the most easily addressable and doable areas. For tackling the problem of the declining work-age population, development of more labor saving technologies is considered necessary. Since most of the modern technologies by nature are labor saving and resource consuming, more labor saving technology will necessarily mean the use of more resources.
- b. *Resource Saving Technology*: The resource saving technology, in terms of method, process and product, will enable the production of outputs with reduced resource uses. For instance, the energy saving bulb consumes less energy to produce same amount of light. The system of quicker growing livestock and poultry, genetically modified organism (GMO) and hybrid food etc. are other products of such technology. In future, increasingly more and more of such technologies are expected to be developed.
- c. *Resource Increasing Technology*: The resource increasing technology will be the most challenging achievements of the future societies on earth. Such technologies will be able to unlock new resources from nature and the environment of the earth, like finding or producing new outputs from the sea, desert, air, sunlight etc. Growing seaweed as a food item, solar energy like photovoltaic cells, wind mills, etc. are the products of such technology. Technological development in these fields is still at its infancy. So far only a narrow and minimum attention has been given in this direction. There are thus tremendous scopes for technological development in these mostly untapped areas. Future technological development should mostly focus on the cultivation of the desert, sea, and solar environment for creating more and more new renewable resources making the earth capable to support larger and larger human population. The resource increasing technology also includes the utilization of unused and rival resources like wastes for production purposes. In fact, the level of successes in the resource creating technology will largely determine if the earth can support the projected large sizes of the world population.

## **The Expectations**

With successes in the labor saving technology, economic sustainability may be maintained to an extent even with the declining work-age population under the present population stabilization policy. But with successes in the resource saving and resource creating technologies the world can, as a lasting solution to the problem, pursue a liberal population growth policy to overcome the threat of the world's declining work-age population. Therefore, for the lasting and sustainable solution of the problem, resource saving and resource creating technological development will be the most desirable courses of action for the benefit of the future generations.

But the development and the spread of technology have their limitations. We need to remember that the technology production does not follow a function of constant return to scale; doubling the researchers and other facilities will not double the output. This is a decreasing production function for two reasons: (a) Many researches are planned and carried out for the same invention and as such there are duplication of efforts and (b) the fishing out effects - to maintain the same technological growth rate now more researchers are required because the easiest discoveries, inventions, or innovations have already been made; the researchers today might have more difficulty making discoveries or new technologies. Like any innovation, the technological innovation is time consuming and uncertain. We may devote more time and resources in R&D but there is no guarantee of quick success. Its spread is equally time consuming. A technology spread to the economy as a whole may take several decades. For example, in 1964 Thring predicted that in 10 to 20 years' time robot would be widely used for all routine operations around the house (Weil 2009, p.264). But we are yet to see it nearly happened.

However, it may not be quite ridiculous and meaningless to imagine that the technological development of the future world will be such that many of the requirements of the present day life style will become irrelevant and redundant. Most of the private goods will become public goods and people will not have to travel out of home as much for office works, shopping, social visits, etc. Minimum attendance time at offices and workplaces, classes, hospitals, recreation places, shopping places, etc. will be required. Officers, workers, students, teachers, doctors, patients, and consumers may not require so much of physical contacts for their functions and operations. Professional jobs and services, learning, purchases, etc. can be done largely from distances (from homes or certain central locations). Homes of individuals will become their offices, workplaces, or class rooms. Society will be more ethical and health conscious and will prefer to return from consumerism. In fact, there are already many indications of this orientation of future technological development. This will produce an ethics and environment friendly 'slim-

green' life style based on a 'slim-green' market basket. The spirit of this may be observed in the life style of the Amish community in Pennsylvania, USA. Such a resource saving life style will enable the planet to support larger population.

## **Summary**

World's debate on population is not really yet over. Even though, by now a more or less consensus position seems to have been largely reached. But now, in this exercise another dimension to the debate has been added. The vision and arguments of this dimension of the debate are not in conformity with the conventional thinking and fear approaches to the world population problem. It follows a positive approach. Contrary to the conventional thinking, it envisions planned population growth as central to sustainable development.

World's emphasis on population stabilization policy for economic and environmental sustainability has led the fertility rate to fall and the work-age population for the future to shrink paradoxically, endangering the very economic and environmental sustainability. This will push the world to a serious economic crisis more particularly after 2050 when only a decreasing size of the work-age population will be available to look after an increasing size of the dependent population. Therefore, to maintain a sustainable economic growth and support the associated technological advancements in the future, there will be a demand for a larger labor force. Industrialized countries are now managing with the migrant population drawn mostly from the high fertility low income countries. But in the world context, this is only a zero-sum game. There is no increase in the stock of world's total labor force. Therefore, world population needs to grow to meet the growing demand for a larger labor force for economic sustainability. However, since the earth's population carrying capacity largely depends on the technological capability and the life style of the society the world should not be scared of a planned population growth. On the other hand, future social engineering and technological innovations may give birth to an ethics and environment friendly 'slim-green' life style founded on the principle of 'simple living and high thinking', which will increase the earth's population absorption capacity. Therefore, the appropriate solution for this worldwide potential problem must be sought through a policy of maintaining optimal rate of world population growth consistent with the growth of the social and industrial technology, the resultant life style of the people, and the increase in the earth's absorption capacity.

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## Chapter 7

### **Environment and Sustainable Development: *Impacts of Climatic Changes on the Rural Economy of Malaysia***

Materials for this essay have been compiled from the following works: i. Murad, M.W., Molla, R.I., Mokhtar, M.B. and Raquib, M.A. (2010), 'Climate change and agricultural growth: an examination of the link in Malaysia', *International Journal of Climate Change Strategies and Management*, UK, and ii. Alam, M., Siwar, C., Molla, R. I., & Talib, B. (2010), 'Socioeconomic Impacts of Climatic Change on Paddy Cultivation: An Empirical Investigation in Malaysia', *Journal of Knowledge Globalization*, Boston, USA.

Earth's total environment is constituted by the interacting ecosystems involving natural, physical, biological, and cultural elements. Natural element encompasses all living and non-living things occurring naturally on earth. It in effect includes climate, weather, and natural resources that affect human survival and economic activities. Physical elements are space, land forms, water bodies, climate, soils, rocks and minerals (i.e. the 5 elements: air, water, soil, flora and fauna, and solar energy - heat & light). They determine the character of the human habitat with its opportunities and limitations. Biological elements such as plants, animals, microorganisms and men constitute the biosphere. Cultural elements such as economic, social and political elements are essentially manmade features, which make cultural milieu.

The most challenging issue facing the civilization on earth now is the complex environmental problem. Rapid population growth and expanding economic activity are causing extensive environment damages. Greenhouse gases (GHG) and global warming are on the rise causing ozone depletion. Burning fossil fuel for energy in industrial processes, transportation, all developmental activities, and requirements for life management releases carbon dioxide to the atmosphere. The most important greenhouse gas is carbon dioxide, which is generated when we burn carbon-based fuels such as oil, coal, and gas. According to the Intergovernmental Panel on Climate Change (IPCC), the three main causes of the increase in greenhouse gases have been fossil fuels, land use, and agriculture. Carbon dioxide in the atmosphere is now at its rise. Nearly all climate scientists today believe that much of Earth's current warming has been caused by increases in the amount of greenhouse gases in the atmosphere, mostly from the burning of fossil fuels for development activities and maintain the life style guided by the mode of consumerism and the luxury of preference for diverse goods and services in the affluent economies. Therefore, global warming is primarily caused by development activities, the taste of consumerism, and unnecessarily excessive international trade volumes in the developed economies. It is therefore primarily a developed-country-caused problem. Although much of the accumulated greenhouse gases to date have been emitted by the

high-income countries, but now the rapid industrial growth in the developing countries in Asia and elsewhere is adding to the pollution and worsening the situation. Deforestation in developing countries causes losses of valuable biodiversity and the environmental services of cleaning the air and water. In addition, it is also a major source of harmful greenhouse gases. Greenhouse gases are accumulating on the Earth's atmosphere as a result of human activities. Therefore, the human-induced warming is expected to continue since pursuits of development will continue in developing and developed nations on the earth.

Global warming resulting from these kinds of exploitations of the environment has been the greatest global concern today. A great number of environmental issues have grown in size and complexity threatening the survival of mankind on earth. Therefore, the importance of controlling and reducing our indiscriminate release of pollution into the environment to save the physical environment and ecosystem from destruction and damage cannot be overemphasized. The environment economist and scientists have been passionately calling for conservation of environmental resources required for sustainability of development for the prosperous worlds of both today and tomorrow.

### **Global warming and International Collaborations for its Control**

Scientists are increasingly concerned about the potential long-term effects of global warming on our natural environment and on the planet. Of particular concern is how to understand how climate change and global warming, caused by anthropogenic or human-made releases of greenhouse gases, most notably carbon dioxide, affect human living on earth. These environmental issues are of international importance. It has been well recognized that environment issues like global warming and ozone depletion, acid rain, marine pollution, and biodiversity are not merely national but global issues, and hence must be tackled with international efforts and cooperation. Such collaborations on climate change and global warming issues include:

- The United Nations Framework Convention Treaty on Climate Change.
- The Kyoto Protocol on Climate Change treaty.
- The Western Climate Initiative to reduce regional greenhouse gases.

Because of the rise in global warming ice will melt and the global average sea level will rise. In colder climates, such warming, could bring longer growing seasons and less severe winters. Those in the coastal communities, many in developing nations, will experience increased flooding due to sea-level rise and are likely to experience more server storms and surges. Unfortunately, the poorest developing countries will be hit earliest and hardest by climate change, even though they contributed none or little to this problem. More so, their low incomes make it difficult to finance adaptation. The worst of

the impact will likely be felt by the very poor, who depend most on natural resources like rain-fed agriculture. According to the IPCC the developing world, particularly the poorest countries, can expect major consequences from global warming causing severe heat waves, hurricanes, floods from heavy rains, prolonged droughts, losses of valuable species, and crop and fishing losses. IPCC identified four zones highly vulnerable to greenhouse gas-induced climate change: sub-Saharan Africa because of drying, Asian mega-deltas because of flooding, small islands due to multiple sensitivities, and the Arctic. Sub-Saharan Africa will be hit particularly hard. By 2020 agricultural production and access to food in many countries and regions in Africa is projected to be severely compromised by climate variability and change. In Asia, millions of people live in low-lying areas which lie on the path of strong typhoons and are vulnerable to ocean or river flooding.

### **Environmental Sustainability**

Seventh Millennium Development Goal (MDG) is to ensure environmental sustainability. A good and responsible stewardship of the natural environment is essential for the prosperity and wellbeing of human society of today as well as of tomorrow. A wisely stewarded environment can produce environmental sustainability. Environment supports the earth's ecosystem. *When an ecosystem is healthy, it is considered as sustainable, meaning that all the elements live in balance and are able to reproduce themselves. There is usually biodiversity with a variety of living organisms and species in that environment.*

The term sustainability reflects the need for careful balance between economic growth and environmental preservation. Generally, it refers to meeting the needs of the present generation without compromising the needs of future generation. It means stock of overall capital assets - manufactured capital, human capital and environmental or natural resources capital - remains constant or rises over time. This implies that future growth and overall quality of life are critically dependent on the quality of the environment. To destroy the natural endowment indiscriminately in the pursuit of short-term economic goals penalizes both present and, especially, future generations.

God created the earth and all creations in it for use and benefits of human beings. God has given humans the right to exercise domination over the earth and all of its life forms, but only on the condition that they act as wise stewards in exercising their dominion with prudence and care. As stewards, they are expected to intervene, as required, to regulate and modify nature and the environment of the earth to suit their requirements for living, prosperity, and wellbeing (Lyn White, Jr., 1967). Therefore, most human actions are, in one way or other, directed towards winning over and regulating the earth's nature and environment. But such human actions often give rise to unwanted side

effects causing damage to the environment itself. Therefore, humans' religious ethics should guide them to enjoy and conserve the gifts of earth's natural environment in a balanced manner following the guiding *rule of justice (Al Adl in Islam)*. It is their moral duty to protect the environment from unnecessary exploitation and destruction. It is therefore essential to pursue a course of sustainable development ensuring environmental sustainability. The transition towards a sustainable world society will, therefore, require not only the transformation of existing organizational modes and models but also the creation of enterprises that are founded on the consideration of a holistic balance of environmental, social, and economic, and ethical concerns. The concept of 'sustainable entrepreneurship' as a way to promote this transition is gaining increasing attention (Hall *et al.*, 2010; Ivanko, 2008; Schaper, 2005) (Creech and Pass, 2008; Pastakia, 1998). Environmental entrepreneurship may be typically viewed as for-profit business enterprise that creates and responds to a market opportunity of the demand for more environmentally responsible goods and services, and that offers goods and services for servicing and protecting the environment. (Henrickson and Tuttle, 1997; Isaak 1997, 2002; Ivanko, 2008). Such social and environmental enterprises are considered as key to the development of a more sustainable society (Creech and Pass, 2008; Pastakia, 1998).

### **The Relationship between Climate Change and Agriculture**

It is widely accepted that an increasing variations in global climate change will have substantial impacts on agriculture and the environment, including water resources, fisheries, forests, wildlife, and ecosystems. Scientists predict that the enhanced greenhouse effect could intensify climate variability. For the agriculture sector, changes in temperature and/or rainfall could significantly affect production of agricultural farms. The predicted change in climate will directly affect the management of both crop and livestock in terms of decisions regarding seedling dates, crop variety choices, pests and diseases, livestock, water and other important factors. Agricultural practices that improve land use and management, through increasing and maintaining soil carbon stocks, can, if properly implemented, generate multiple benefits like i) climate change mitigation, ii) increased agricultural and food production, iii) pro-poor income generation, iv) environmental services, and v) improved resilience/adaptive capacity of farming systems. This constitutes an enormous opportunity for meeting a number of key global and national goals. The challenge is to ensure that the enabling means embodied in a new climate change agreement will encourage the agriculture sector and its farmers to generate these benefits under increasingly adverse conditions.

On the other hand, agriculture sector itself is a key source of global greenhouse gas emissions (14% or 6.8 Gt of CO<sub>2</sub> eq.). Fortunately, however, it has a high technical mitigation potential (5.5-6 Gt of CO<sub>2</sub> eq. per year by 2030) (Mueller, 2009). Mitigation

action in agricultural sector has strong potential co-benefits for sustainable development and climate change adaptation (improving agro-ecosystem resilience). . There is also potential to decrease emissions of other non-carbon greenhouse gases (N<sub>2</sub>O and CH<sub>4</sub>) through more efficient use of fertilizers and improved rice and livestock systems.

Climate change may increase the amount of arable land in high-latitude region by reduction of the amount of frozen lands. A rise in the sea level would result in an agricultural land loss, in particular in areas such as South and South East Asia. Erosion, submergence of shorelines, salinity of the water table due to the increased sea levels, could mainly affect agriculture through flooding of low-lying lands. Low lying areas such as Bangladesh, India and Vietnam will experience major loss of rice crop if sea levels, as feared, rise by the end of the century. Vietnam for example relies heavily on its southern tip, where the Mekong Delta lies, for rice planting. Any rise in sea level of no more than a meter will drown vast area of the paddy land, rendering Vietnam incapable of producing its main staple and export of rice (IRRI, 2007). Therefore, climate change and agriculture are deeply interrelated processes. Global warming is projected to have significant impacts on conditions affecting agriculture. The agricultural sector, in turn, is also a driving force in the gas emissions and land use effects on climate change. Climate change affects temperature, carbon dioxide, glacial run-off, precipitation and the interaction of these elements. These conditions determine the carrying capacity of the biosphere to produce enough food for the human population and domesticated animals.

Despite technological advances, such as improved varieties, genetically modified organisms, and irrigation systems, weather is still a key factor in agricultural productivity. The effect of climate on agriculture is related to variability in local climates rather than in global climate patterns. The 2001 IPCC Third Assessment Report concluded that the poorest countries would be hardest hit with reductions in crop yields in most tropical and sub-tropical regions due to decreased water availability and new or changed insect pest incidence. In Africa and Latin America, many rainfed crops are near their maximum temperature tolerance. Yields are likely to fall sharply for even small climate changes. Decrease in agricultural productivity of up to 30% over the 21st century is projected. Marine life and the fishing industry will also be severely affected in some places. Most agronomists believe that rapid climate change could harm agriculture in many countries, especially those that are already suffering from poor soil and climate conditions. The IPCC projected that by mid-21<sup>st</sup> century crop yields in East and Southeast Asia could increase up to 20%, while in Central and South Asia yields could decrease by up to 30%. The risk of hunger was projected to remain very high in several developing countries.

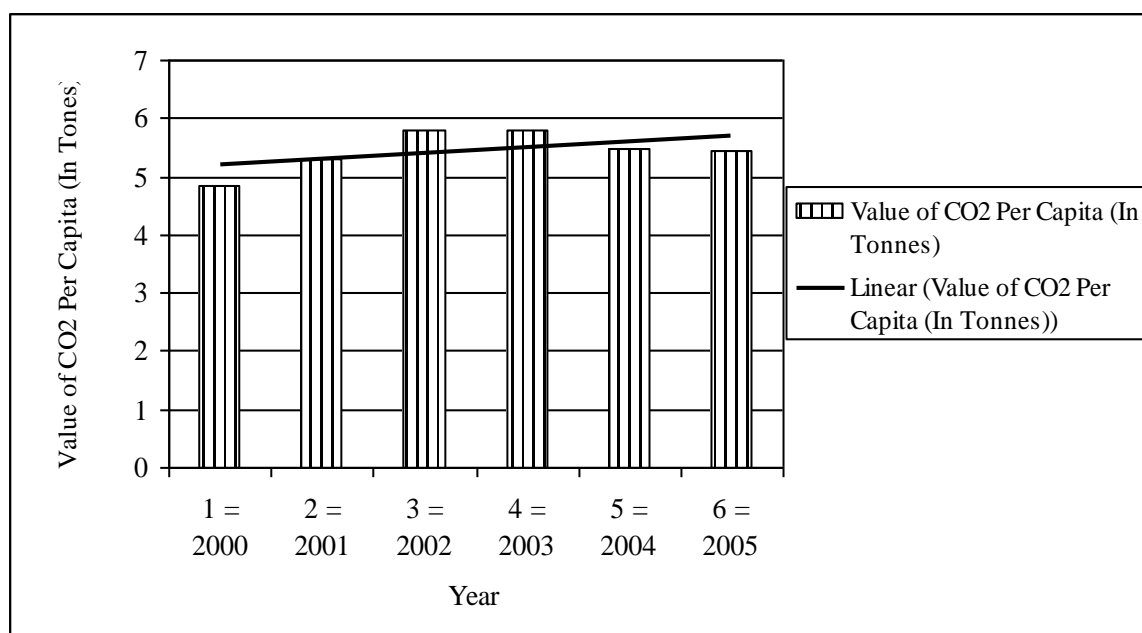
According to the United Nations Development Report emissions of carbon dioxide increased in Malaysia by 221% during 1990 to 2003. With this growth rate of

carbon dioxide emissions, Malaysia stands as the 26<sup>th</sup> largest greenhouse gas emitter in the world. This rapid growth in emissions has occurred even though Malaysia ratified the Kyoto Protocol and has taken several initiatives to use renewable energy to cut emissions. Based on its growth rate of emissions Malaysia is likely to move up on the list quickly. Therefore, in the fight against global warming, Malaysia needs to closely monitor the sources of its Greenhouse gas (GHG) emissions. The country is accordingly actively engaged in gaining knowledge on the effects of climate changes on her agriculture in order to be able to properly anticipate and adapt her farming.

### **I. Climate Change and Agricultural Growth: an Examination of the Two-way Link in Malaysia**

Malaysia has ratified the United Nations Framework Convention on Climate Change and Kyoto Protocol which aim to reduce the amount of greenhouse gases in order to deal with global warming. Malaysia, as a non-annex I country, is not obligated to reduce its greenhouse gas (GHG) emissions. This is due to the fact that the total amount of carbon dioxide (CO<sub>2</sub>) emission in the country is still much lower than most developed countries. Malaysia has undertaken a number of measures to reduce greenhouse gas emissions such as by improving public transportation and introducing cleaner fuels such as natural gas and bio-fuels. The country is also actively participating in the Clean Development Mechanism (CDM) under the Kyoto Protocol. Malaysia has developed programs to increase renewable energy share in its energy mix for energy supply security (Yen et al., 2008). At present, there are nine companies involved in energy generation using biomass, and one involved in fuel switching. The emission reductions from these projects were estimated to be 1,615,972 tones equivalent CO<sub>2</sub> per year (UNDP, 2006). Over and above, country has programs to adopt low CO<sub>2</sub> emission measures and technologies such as replacing oil and coal with natural gas and adopting clean coal technologies. Malaysia provides various fiscal incentives to encourage the use of renewable energy and to improve energy efficiency. The implementation of the above measures and strategies has enabled Malaysia to see a significant decline in its per capita CO<sub>2</sub> emissions starting from 2004 (Figure 7.1).

Figure 7.1: Per capita energy CO<sub>2</sub> emissions in Malaysia from 2000 to 2005



Source: Compiled from Energy Information Administration (2009)

Malaysia experiences relatively uniform temperatures throughout the year. The temperature changes in Malaysia ranging from  $+0.3^{\circ}\text{C}$  to  $+4.5^{\circ}\text{C}$  and rainfall changes ranging from  $-30\%$  to  $+30\%$ , and the mean temperature in the lowlands ranges between  $26^{\circ}\text{C}$  and  $28^{\circ}\text{C}$ , with little variation in the different months or across different latitudes (Table 7.I). Because of climate change, drought prone agricultural lands can become marginal or unsuitable for the cultivation of some of the crops, such as, rubber, oil palm, cocoa, and rice, posing a potential threat to national food security and export earnings. In addition, as much as 6% of land planted with oil palm and 4% of land under rubber may be flooded and abandoned as a result of sea level rise (Ministry of Science, Technology and the Environment, 2000).

Table 7.1: Climate change scenarios for Malaysia

Year	2020	2040	2060
Northern Hemisphere Summer			
Changes in Temperature	+0.3 to $+1.4^{\circ}\text{C}$	+0.4 to $+2.4^{\circ}\text{C}$	+0.6 to $+3.4^{\circ}\text{C}$
Changes in Rainfall	$-0.4$ to $+14\%$	$-0.7$ to $+23\%$	$-1.0$ to $+32\%$
Northern Hemisphere Winter			
Changes in Temperature	+0.4 to $+1.9^{\circ}\text{C}$	+0.7 to $+3.2^{\circ}\text{C}$	+1.0 to $+4.5^{\circ}\text{C}$
Changes in Rainfall	$-4.0$ to $+7.0\%$	$-7.0$ to $+12.0\%$	$-10.0$ to $+17\%$

Source: Ministry of Science, Technology and the Environment (2000)

The agricultural sector of Malaysia had experienced several problems and challenges in 1980s. The land problem was then considered as foremost, because more agricultural land was taken over for industrial, infrastructural, and housing purposes. Priority was given to manufacturing and industrial sector. As a result, there had been a persistent outflow of resources from agricultural sector to manufacturing sector. It, thus, retarded the agricultural growth. Worth noting that manufacturing sector was then able to offer higher wages and better conditions of work. As a result, agricultural sector had to offer higher wages merely to mitigate the outflow. Agricultural employment in 1990 was almost at the same level as in 1985 despite a larger workforce in the country. Table 7.2 depicts actual estimations for 2000 and 2005 and projected estimation for 2010, which were carried out in 2006 and show that until 2005 Malaysia did not have self-sufficiency in many important food commodities including rice, vegetables, fish, beef, mutton, and milk.

Table 7.2: Malaysia's self-sufficiency levels in food commodities, 2000-2010 (%)

Commodity	2000	2005	2010
	Percent		
Rice	70	72	90
Fruits	94	117	138
Vegetables	95	74	108
Fisheries	86	91	104
Beef	15	23	28
Mutton	6	8	10
Poultry	113	121	122
Eggs	116	113	115
Pork	100	107	132
Milk	3	5	5

Source: Malaysia (2006)

Because of the shortfall in agricultural outputs and inefficiencies of the agricultural sector, the Second National Agricultural Policy (1992-1997) was revised in 1998 and subsequently the Third National Agricultural Policy (1998-2010) was introduced. This new agricultural policy was founded on a vision of sustainable development of a dynamic agricultural sector which is commercialized, efficient and competitive, and its growth market-led. The principal aim was to maximize income through optimal utilization of resources. However, the objectives of this new policy were to achieve a balanced development between agriculture and the other sectors of the economy : a) to enhance the economic/structural integration of the sector with the rest of the economy, and in particular with the manufacturing sector; b) to achieve a higher level of expansion and development of the food industry sub sector; c) to achieve a wider and

more effective representation and participation of the *Bumiputra* (owners of the land, i.e. the indigenes/Malays) community in modern and commercial agriculture, agribusiness and agricultural trade; and d) to ensure sustainable development in agriculture.

Agriculture of any country has an important role in the carbon cycle. Evidences suggest that Malaysian agriculture has been associated with land clearance and some unsustainable practices, which may lead to substantial carbon emissions in the country. Agriculture affects the storage of carbon in the soils, and unsustainable agricultural practices may lead to the direct release of greenhouse gases, specifically methane and nitrogen emissions. Thus, climate change can affect agricultural sector and, likewise, agricultural practices can also affect climate. Using the linear regression model, this two-way link between climate change and agricultural growth in Malaysia have been analysed.

### ***Link between agricultural growth rate and climate change score***

Most agronomists believe that agricultural growth will be mostly affected by the severity and pace of climate change. . Climate plays a key role in determining agricultural growth. Within a climatic zone, the weather, as expressed by the amount of rainfall, sunshine hours, temperature, relative humidity and length of the drought period, results in year-to-year variability of agricultural production. In Malaysia, the primary concern related to climate change is the potential threat it poses to national food security and export earnings from plantation crops. Therefore, any unfavorable climate will negatively affect agricultural growth. The model has considered agricultural growth rate as the dependent variable and climate change score as the independent variable. The model has produced an interesting output, which is presented in Table 7.3:

Table 7.3: Regression output depicting the link between agricultural growth rate and climate change score in Malaysia

Regression Statistics					
Multiple R	0.44				
R <sup>2</sup>	0.20				
Adjusted R <sup>2</sup>	-0.21				
Standard Error	1.06				
Observations	4.00				
ANOVA					
	df	SS	MS	F	Significance F
Regression	1.00	0.55	0.55	0.49	0.56
Residual	2.00	2.24	1.12		
Total	3.00	2.79			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	4.14	0.74	5.59	0.03	0.95	7.32	0.95	7.32
Climate Change Score	-0.02	0.02	-0.70	0.56	-0.12	0.09	-0.12	0.09

Result shows that the link between agricultural growth rate and climate change score in Malaysia is proven to be negative, but insignificant ( $P > 0.1$ ). This simply means that a decrease in climate change score will result in higher agricultural growth for Malaysia, assuming other factors remain constant. This finding is compatible with the widely voiced assertion that climate change impacts the agricultural growth and its sustainability negatively. While considering the low and negative value of adjusted  $R^2$  (-0.21) and the level of significance produced by the model, it can reasonably be argued that the observed negative relationship between agricultural growth rate and climate change score has not yet reached an attention-craving situation in Malaysia. However, the model suffers from serious limitations like: 1) it has considered climate change score as the only independent variable, and 2) the observations covered a limited time period from 2006 to 2009, which may not be sufficient for determining the actual link between agricultural growth rate and climate change score.

While looking at the model's normal probability plot, which is a graphical technique for assessing whether or not a data set is approximately normally distributed, we can argue that data considered in the analysis are normally distributed and that model's dependent variable (agricultural growth rate) and independent variable (climate change score) are linearly correlated (Figure 2). Also with a higher  $R^2$  value (0.7578) of the normal probability plot it can be argued that the model's correlation coefficient (0.026) may be more important than its regression coefficient (2.475).

#### ***Link between per capita CO<sub>2</sub> emissions (in metric tons) and agricultural production index***

Agricultural practices make potential sink for greenhouse gases and thus the agriculture sector can play an important role in trying to limit the per capita CO<sub>2</sub> emissions. For example, the per capita CO<sub>2</sub> emissions from agriculture can be lowered by encouraging additional measures to reduce energy consumption in agriculture or by reducing rates of soil oxidation. In addition, more energy efficient farm equipment, less mechanical crop drying, less use of agricultural chemicals, less irrigation, and minimum tillage would all save CO<sub>2</sub> emissions. For ascertaining this link the regression model used per capita CO<sub>2</sub> emissions as dependent variable and agricultural production index as independent variable (Table 7.4):

Table 7.4: Regression output depicting the link between per capita CO<sub>2</sub> emissions (in metric tons) and agricultural production index in Malaysia

Regression Statistics								
Multiple R	0.94							
R <sup>2</sup>	0.88							
Adjusted R <sup>2</sup>	0.87							
Standard Error	0.62							
Observations	25.00							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1.00	64.05	64.05	165.23	0.00			
Residual	23.00	8.91	0.39					
Total	24.00	72.96						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-1.86	0.48	-3.91	0.00	-2.84	-0.87	-2.84	-0.87
Agricultural Production Index	0.08	0.01	12.85	0.00	0.06	0.09	0.06	0.09

The regression output reveals that there is a direct and significant link between per capita CO<sub>2</sub> emissions and agricultural production index in Malaysia. This finding indicates clearly that higher agricultural production is associated with and causing more per capita CO<sub>2</sub> emissions in the country, assuming all other relevant factors remain constant. This observation is also strongly supported.

#### **Link between per capita agricultural production index and per capita CO<sub>2</sub> emissions (in metric tons)**

Carbon dioxide is essential for plant growth. Rising CO<sub>2</sub> concentration in the atmosphere can have both positive and negative consequences. As discussed earlier per capita CO<sub>2</sub> emissions can be the function of agricultural production index. Conversely, per capita agricultural production index can also be the function of per capita CO<sub>2</sub> emissions. For example, CO<sub>2</sub> is one of the elements necessary for agricultural plants and trees at least for their normal growth. Without absorbing necessary CO<sub>2</sub> agricultural plants and trees cannot be grown well and efficiently and this situation will adversely affect the agricultural production. Studies indicate that crops will benefit from higher levels of CO<sub>2</sub> (Reilly et al., 1996; Allen et al., 1996; Van de Guijin et al., 1996). In fact, the higher levels of carbon dioxide are expected to help plants cope with the higher temperatures. The increase in carbon dioxide will consequently mitigate the potential damage of warming and may lead to an overall increase in crop yields. To explore and analyze this

relationship a linear regression model has been used taking per capita agricultural production index as the dependent variable and per capita CO<sub>2</sub> emissions as the independent variable. Output of the model is shown in Table 7.5:

Table 7.5: Regression output depicting the link between per capita agricultural production index and per capita CO<sub>2</sub> emissions (in metric tons) in Malaysia

Regression Statistics								
Multiple R	0.81							
R <sup>2</sup>	0.66							
Adjusted R <sup>2</sup>	0.64							
Standard Error	2.70							
Observations	15.00							
ANOVA								
	df	SS	MS	F	Significance F			
Regression	1.00	187.20	187.20	25.68	0.00			
Residual	13.00	94.76	7.29					
Total	14.00	281.97						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	81.26	3.75	21.70	0.00	73.17	89.35	73.17	89.35
Per Capita CO <sub>2</sub> Emissions (In Metric Tons)	3.54	0.70	5.07	0.00	2.03	5.05	2.03	5.05

The model generated a positive coefficient value (3.54) for per capita CO<sub>2</sub> emissions with a highly significant probability value ( $P < 0.01$ ). This simply means that the link between per capita agricultural production index and per capita CO<sub>2</sub> emissions is proven to be positive in Malaysia. It is interesting that this finding does not contradict with the observations we have had in the previous two models. The model reveals that an increase in per capita CO<sub>2</sub> emissions, which is necessary for agricultural growth, may increase per capita agricultural production index. This observation is strongly supported by the facts that the proportion of the variation in the dependent variable is little and that the model has produced a considerably higher adjusted  $R^2$  value (0.64).

The findings obtained from the above three regression models reveal that agricultural growth in Malaysia is being impacted by climate change phenomenon, and that agricultural growth is also believed to be connected with the release of CO<sub>2</sub> emissions in the country. A summary of the links between climate change and agricultural growth in Malaysia is presented in Table 7.6.

Table 7.6: A summary of the links between climate change and agricultural growth in Malaysia

OLS Model	Dependent Variable	Independent Variable	Link (+/-)	Significant Level	Decision
Model 1	Agricultural growth rate	Climate change score	Negative	P>0.1	Not significant
Model 2	Per capita CO <sub>2</sub> emissions	Agricultural production index	Positive	P<0.01	Highly significant
Model 3	Per capita agricultural production index	Per capita CO <sub>2</sub> emissions	Positive	P<0.01	Highly significant

The estimations obtained above give evidence to the effect that climate change and agricultural growth are negatively linked in Malaysia. The estimations also reveal a positive link between per capita CO<sub>2</sub> emissions and agricultural production index for the country. The same link has also been evident between per capita agricultural production index and per capita CO<sub>2</sub> emissions for Malaysia. In effect, an increasing level of per capita CO<sub>2</sub> emissions in the country is proven to have both detrimental and beneficial effects on its agricultural growth. For example, the link between per capita agricultural production index and per capita CO<sub>2</sub> emissions is proven to be positive, but an increasing level of per capita CO<sub>2</sub> emissions in the country is proven to have detrimental effects on the agricultural growth. The overall effect of climate change on Malaysian agricultural growth will actually depend on the balance of these effects. The agricultural stakeholders need to adapt to and find ways to mitigate the damages of climatic variations in order for them to sustain agricultural productivity and maintain food security.

## II. Socioeconomic Impacts of Climatic Changes on Paddy Cultivation in Malaysia

Since agriculture is heavily dependent on climate, changes in the climatic factors result in year-to-year and area-to-area variability of crop production which largely affects the social, and economic, and health statuses of the farming community. Climatic change therefore adversely affects agriculture and all its relevant stakeholders. Among all the stakeholders farmer community is the most vulnerable group due to their full dependency on agriculture. Impacts of climatic change on agriculture vary from period to period, area to area, and country to country based on economic, social, political, and environmental condition of the locality. Like in other countries in this region, climatic change has adversely affected Malaysia's agriculture in a variety of ways in different parts of the country. Its fisheries, forestry, and livestock and crop cultivations have been seriously affected by the climatic change. Through a sample survey of paddy farmers in the integrated agricultural development area of the state of North West Selangor the following assessment has been made on the nature and magnitude of socio-economic impacts of the climatic changes on paddy farmers (Alam et al., 2010).

### *Nature and Impacts of the Climatic Changes*

Total yearly rainfall in Malaysia is increasing but its monthly variation is too high. The most vulnerable states in terms of fluctuation in rainfall and temperature are Sabah, Terengganu, Kelantan, Sarawak, Kedah, Perlis, and Perak (NAHRIM 2006). The effect of lower rainfall can be somehow controlled through introduction of proper irrigation system. But the problem of over rainfall at any particular time is not controllable. Over rainfall especially at the end of the crop cycle or at the maturity period, causes serious damages to crops. It is found that the most vulnerable groups of people are the poor and hardcore poor engaged in agricultural activities and having relatively larger number of household members (NRS 2001). Since these farmers are dependent on agriculture, their family income declines with the decline in agricultural productivity and production. Change in climatic factors, therefore, affect directly and indirectly the social and economic sustainability of the farmers. Climatic changes cause crop damages leading to low productivity and high production cost, income losses to farmers, increase in seasonal unemployment rate, and increase in poverty level.

A projection shows that maximum monthly precipitation will increase by up to 51% in the states of Pahang, Kelantan, and Terengganu, and the minimum precipitation for the entire Peninsular Malaysia will decrease by 32-61% (NAHRIM 2006). However, the annual rainfall will increase up to 10% in Kelantan, Terengganu, Pahang and North West Coast, and decrease by up to 5% in Selangor and Johor. This variation of climatic factors will make the agricultural system vulnerable. Temperature above 25°C may cause decline in grain mass and grain yield. In Malaysia average temperature in rice growing areas is about 26°C. Farm yield of paddy in Malaysia vary from 3 - 5 tons per hectare as against the potential yield of 7.2 tons. It is also reported that paddy yield declined between 4.6%-6.1% per 1°C temperature increase under the present CO<sub>2</sub> level. In a recent study it has been found that a 1% increase in temperature leads to 3.44% decrease in current paddy yield, and .03% decrease in paddy yield in next season. A 1% increase in rainfall leads to .12% decrease in current paddy yield, and .21% decrease of paddy yield in next season. Rainfall variability increases the level of environmental stress that affects the capability of the system to maintain productivity. A Projection (NRS 2001) shows that given the CO<sub>2</sub> (ppm) as 400 and variation in temperature as 0.3°C and above, variation of

rainfall by more than 0.4% by the year of 2020 will cause reduction in paddy production and earnings of farmers (Table 7.7).

Table 7.7: Projection of Revenue Changes (RM) for Paddy Production with Variations of Temperature and Rainfall at Certain Level of CO<sub>2</sub>

Year 2020			
	Variation in Temperature (°C)		
	0.3	0.85	1.4
Variation in Rainfall	Change in Revenue (RM/ Ha)		
14%	-554.2	-554.2	-554.2
7%	-291.8	-291.8	-291.8
0.4%	0	0	0
0%	0	0	0
- 0.4%	0	0	0
-7%	-264.5	-251.9	-224.0
-14%	-529.0	-504.3	-488.0

\* Revenue calculated as paddy price per 100kg Super Grade= RM55.00 & Normal Grade= RM51.69

Source: NRS 2001

### *Farmers' Assessment on the Socioeconomic Impacts of Climatic Change*

The perceived impacts of climate change on the socioeconomic status of the paddy farmers in the study area have been analyzed and discussed in this section.

Table 7.8: Paddy Farmers' Perception on the Socioeconomic Impacts of Climatic Changes

Perceptions Issues	Observation Scale*					Weighted Average Value of Scale	S.D.	Agreed (4 & 5) Observation	Disagreed (1 & 2) Observation
	1	2	3	4	5				
Frequency of Respondents					Frequency of Respondents				
Paddy production is not profitable due to low productivity	18 9.1%	17 8.6%	28 14.1%	36 18.2%	99 50%	3.91	1.34	135 68.2%	35 17.7%
Paddy production is Profitable then other crops due to higher government support and subsidy	1 0.5%	8 4%	56 28.3%	51 25.8%	82 41.4%	4.04	0.95	133 67.2%	9 4.5%

Climate related factors- sunlight, rainfall- cause health problems	2 1%	9 4.5%	41 20.7%	70 35.4%	76 38.4%	4.06	0.93	146 73.7%	11 5.6%
Part time work in Agriculture is more profitable than full time	24 12.1%	13 6.6%	49 24.7%	85 42.9%	27 13.6%	3.39	1.17	112 56.6%	37 18.7%

\*Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = No Comment, 4 = Agree, 5 = Strongly Agree

Source: Survey Data

### ***Profitability of Paddy Cultivation***

From the IADA records, it is observed that currently 38.4% of households or 44.7% population of the study area have per capita income below RM 6,387; and 65.7% of the households or 72.8% of the population have per capita income below RM 12,775. However, 67% of the farmers seem to believe that because of greater government subsidy and support, paddy cultivation is still better than cultivation of other crops (Table 7.8). IADA has the target to ensure an annual income of RM 24,000 for each farmer from paddy production to retain them in farming.

Government subsidy for agricultural sector is increasing each year. The subsidies for urea and compound have been continuing since 1979. The incentive for land preparation and organic fertilizer has been continuing since 2007. Incentives for use of urea fertilizer and pesticide were introduced in 2008, and are still been continued. However, unless the adverse effects of climatic change are not reduced or removed and productivity is increased, government support and subsidy cannot produce a sustainable and progressive paddy sector, in particular, and the agriculture in general.

### ***Impacts on Farmers' Health***

Climate change has many negative impacts on human health, because a wide range of diseases - vector-borne, water-borne and respiratory - have links to climatic changes. Climatic factors are directly connected to incidences of diarrhea, skin disease, malaria, *kala-azar*, dengue fever and other illnesses. Other health-relevant factors, such as dehydration, malnutrition, and heat stress, especially among elder farmers, are closely linked to climate factors and food production. Nearly 74% of the sample farmers either feel or strongly feel that they are having health problems due to changes in the climatic factors (Table 7.8).

### ***Interest in Full-Time Engagement in Farming***

Due to climate change, farmers' active involvement in agriculture is declining. Only 18.7% of the farmers view that full time engagement in agriculture is more profitable than part time engagement. Nearly 57% of the respondents support part time engagement for more family earnings or income. That indicates, that many farmers are searching for off farm job and trying to reduce their involvement in agriculture from full time to part time engagement. They feel off farm employment has scope for more income earning.

### ***Policy Actions Required for Avoiding the Impacts of Climatic Change***

Change in climatic factors is a continuous and long term process. Its effects and solutions are similarly a long time and a painstaking process. It is also widely accepted that strict mitigation efforts alone will not be sufficient to avoid significant impacts of climatic change (IPCC 2007). It is therefore important to balance between measures against the causes of climatic change and measures to cope with its adverse effects.

Climatic factors are exogenous and uncontrollable variables; only adaptation with the changing nature of these factors is the way to cope with the problem. Adaptation at the local level is essential for comprehensive and effective development and implementation of programs including ecological, social and institutional systems on the ground. Agricultural adaptation options need to ensure, through technological developments, government programs, farm production practices, and farm financial management, decrease in the adverse effects of climatic changes (Smit and Skinner 2002).

Technological adaptation is most important to deal with the problem in the long run. To remedy the problem, improvement of technology needs to reach such a level to control the climate factors. Based on the high uncertainty of such technological advancement in short period, adaptation related technology is more important as a short term solution, such as, development of resource management based technique: protect crops from excessive rainfall, solve water logging problems etc., crop development: varieties of crops, rainfall tolerant plants etc., crop cycle change: shift the timing of crop cycle, reduction in the timing of crop cycle etc. The production and farm management practices need to be updated with the changes in climatic factors. Farmers should understand the crop rotation, crop portfolio, and crop substitutions. They have to take all precautions against all the uncertainties like low rainfall and heavy rainfall.

Like in many other countries, changes in climatic factors have negative impacts on productivity of paddy cultivation in the study area of Malaysia. Projections of climatic change and its adverse effects on paddy productivity and socioeconomic status of the

farmers have been found alarming. As many as 68% farmers strongly perceive that climatic changes have caused profitability of paddy cultivation to decline. Many farmers are trying to reduce their involvement with agriculture. As a result, as many as 56.6% farmers are inclined to prefer part-time to full-time engagement in paddy cultivation. Among the paddy producing farmers, 68.2% agree that paddy production is not much profitable due to low productivity, but 67.2% of farmers feel that because of heavy government subsidies and incentives paddy cultivation is still better and more profitable than production of other crops. But it needs increase in productivity and growth to make the sector viable and sustainable.

## **Summary**

With reference to the link between climate change and agricultural growth rate in Malaysia in terms of three sub-objectives, the empirical results of the study reveal three important observations for Malaysia: a) the link between agricultural growth rate and climate change score is proven to be negative, but insignificant ( $P \leq 0.1$ ); b) the link between per capita CO<sub>2</sub> emissions and agricultural production index is found to be direct and highly significant ( $P \leq 0.01$ ); and c) the link between per capita agricultural production index and per capita CO<sub>2</sub> emissions is proven to be positive and highly significant ( $P \leq 0.01$ ). Also, an increasing level of per capita CO<sub>2</sub> emissions in the country is proven to have both detrimental and beneficial effects on its agricultural growth. For instance, agricultural growth in Malaysia is found to produce significant effects on climate change, primarily through the production and release of CO<sub>2</sub>.

With reference to the impacts of the changing nature of climatic factors on paddy cultivation, it has been found that the changing nature has different impacts on paddy farming based on areas, periods and crops. Farmers are the most vulnerable group who are affected both directly and indirectly through climatic changes. It is found that due to climatic changes productivity and profitability of paddy cultivation have declined in the Integrated Agricultural Development Area in North-West Selangor, Malaysia. Farmers perceive that paddy cultivation is no longer profitable due to low productivity as a result of climatic changes. They now prefer part-time to full-time engagement in paddy cultivation. Heavy government subsidy and incentives are not enough; it requires increase in productivity and profitability of paddy cultivation for making it a viable and sustainable sector. All efforts of mitigation and adaptation must be pursued to counter the adverse impacts of climatic changes and increase the productivity of paddy cultivation in the area.

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Survival of the Fittest  
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