

A Paradigm Shift in Poverty Alleviation through 'Micro Credit'

Md. Safayat Hossain*

Abstract

This study aims to replicate the concept of paradigm shift in science, coined by Professor Thomas Khun, with the concept of Micro-credit postulated by noble laureate Professor Yunus. As science shifts its paradigm pursuing the efforts of revolutionary scientist working outside the old theorems, in the same way, the concept of providing credit was transformed following the idea of Professor Yunus. The old theory of providing credit required so called feature of possessing "credit-worthiness"; whereas, Professor Yunus stated this perception as the igniter of vicious cycle of poverty and suggested for micro-credit. Micro-credit plan not only provides loan to the poor having no credit-worthiness, but also, aids them with credit management and supervision. Adding to the said note, Professor Yunus also compared the poverty stricken people with bonsai tree; on the point of having no opportunity for them, in our society to grow bigger.

Key Words: Paradigm shift, Micro credit, Social revolution

Normal and Revolutionary Science:

In quest of discovering the truth about the universe, scientists and philosophers gave birth to different theories in different time periods. It was Ptolemy who believed that the earth was stationary and the sun, the moon, and the planets moved in circular orbits around the earth. In 1514, Copernicus proved the hypothesis false and discovered that it is rather the sun that is stationary; the earth and the planets move around. Aristotle and Greek philosophers believed that the human race, and the world around it, had existed, and would exist, forever. But the landmark observations of Hubble proved Aristotle and Greek philosophers wrong and suggested that there was a time called the big bang when the universe was created from an infinitesimally small and infinite dense object. (Hawking, 1988, pp. 1-13)

Debate about the universe is unending; rise and fall of theories about the earth has become an apparent phenomenon of science. Some scientists believe that undulation of scientific theories takes science closer to the truth; once a truth is explored scientists look for another. Others believe that shift of theories from one paradigm to another results scientific revolution, and it is rather revolution than improvements through which science progresses. The proponent of later school of thought, who pioneered construction of a new framework to understand the pattern of scientific revolution through shift of theories, is a science historian and a philosopher – Professor Thomas Kuhn. In his decisive work, “The Structure of Scientific Revolutions”, Kuhn demonstrates the dynamic process of science by which scientific knowledge is acquired and evolves.

In his seminal work, published in 1962, Kuhn defines science as a dynamic, ever-changing process, not merely as the cumulative acquisition of knowledge. He argues science “as a series of peaceful interludes punctuated by intellectually violent revolutions” (Kuhn cited in Gelder, 1996). Kuhn

maintains that the progress of science always aims at detailing and refining the understanding of nature (Emory University, retrieved on 08/06/2011).

According to Kuhn, scientists fall into two categories: tradition bound typical scientists who work with normal science, and revolutionary young scientists who sweep old paradigms away. Typical scientists solve problems with the theories that they have been taught in the class rooms. They close their eyes to the research that might threaten existence of an old paradigm and that might give birth to a new one. Without being skeptic and an independent thinker, a normal scientist devotes himself mostly with the “mopping-up operations” – improving and refining the living paradigms. (Cassidy, 2002)

On the other hand young scientists, who drop out of the normal science, bring revolution in the process of scientific research. Though few in numbers, the revolutionary scientist strives to replace one conceptual view with another. Destroying earlier views and instituting new ones, revolutionary scientists, like Einstein, Lavoisier and Galileo, bring scientific revolution through which science progresses. (Cassidy, 2002)

Paradigm shift and scientific revolution:

Coined by Kuhn, the term paradigm is defined as “a collection of beliefs shared by scientists, a set of agreements about how problems are to be understood” (Kuhn cited in Gelder, 1996). Kuhn characterizes scientific development as a successive transition from one paradigm to another through a process of revolution, characterized by a detailed and refined discovery of the nature. He compares his idea of scientific evolution with Darwin’s idea of evolution of organisms (Emory University)

To elucidate his theory, Kuhn asserts that a paradigm shift qualitatively transforms and quantitatively enriches rudiments of science. A paradigm shift becomes evident when normal science builds up anomalies or a certain problem can't be resolved with accepted old theories. The revolutionary scientists, who are not obsessed with conventional theories, start thinking about the problems and sometimes propose solutions, giving birth to new terms and concepts, redefining conventions (Emory University, retrieved on 08/06/2011).

However, any abrupt shift in knowledge faces resistance, particularly at the outset from older scientists. Since the new theory stands out with no or limited evidence, it becomes logically incompetent. As long as evidence accumulates, the new paradigm becomes conspicuous. Text books, then, start to incorporate the shift – sometimes replacing old paradigm with the new paradigm, and sometimes presenting the new paradigm as an extension of the old paradigm. Kuhn alleges that text books distort evolution of science following the later way of presentation. He believes that science is not a linear process, which builds upon previous concepts. In science, a new paradigm destroys the meaning of old ones and stands out on its own. (Cassidy, 2002). As identified by Tang, a shift of belief can be regarded as a shift of paradigm, if it satisfies some criteria: (i) a shift in problem and problem solutions; (ii) a shift in methodologies; (iii) a shift of models; (iv) a shift in knowledge sought and attained; and (v) a shift in symbolic system (Tang, 1984)

Even though the idea of paradigm shift brings remarkable changes to the philosophy of science, it is criticized by a section of scientists and philosophers. Critics accuse Kuhn for imprecise use of the term 'paradigm' in his work. Since the ideologies of science are acquired through formal education, not through a deliberate process of examination and reflection,

to some scientists Kuhn's idea of revolutionary science is troublesome. Many philosophers and scientists refute the idea of normal science, too. (Cassidy, 2002)

Discarding the term 'normal science', Karl Popper, an influential contemporary philosopher and a critique of Kuhn, argues that normal scientists seem to be badly educated, victim of indoctrination; they might be considered as a danger to science and to the civilization. According to Popper, the source of theory is unimportant; scientists can introduce new theories or refine old theories through observations. A theory passes through several tests: if it is incompatible with scientific statements, scientists reject it. Popper believes that science progresses through theory validation – removing false theories and instituting true ones. (Pinter & Pinter, 1998). Watkins, another critique of normal science, claims that a paradigm shift is also possible within the span of the normal science by a normal scientist. With the puzzle-solving skill, a normal scientist tests an existing theory. If the result comes negative, it becomes a matter of prestige for the experimenter. The normal scientist then starts to resolve the puzzle and, in turn, becomes the part of revolutionary process (Pinter & Pinter, 1998).

Nevertheless, Kuhn's contribution to the advancement of scientific philosophy cannot be ignored. His book has been named as one of the top 100 compiled books that have shaped the thinking of humanity and also has been reported as the most-cited single work of 20th century. His profound influence on constructing new framework for understanding the power and limitations of science is invaluable. Embarking on his idea of scientific revolution, philosophers, from all areas of knowledge, frame, propose and evaluate new theories, and offer changes to the existing ones. From nuclear science to social science, contributions are judged as a shift of paradigm or

a mere extension of an existing paradigm. Social revolutions are not beyond that evaluation; social scientists identify a collective movement as a revolution, only when it destroys conventional beliefs and gives birth to a new wisdom. An apparent change in livelihood of human being is considered an obvious outcome of those revolutions. Looking through the lens of Kuhnian paradigm shift, the following section evaluates one such social revolution that transformed rural villages of third world countries in mid-eighties.

‘Paradigm Shift’ and Social Revolution:

Social revolution, as scholars define, reforms societies, ensuring justified distribution of rights and resources, creating opportunities for all, and changing lives of the people, particularly of those who live beneath the poverty line¹. Subsequent to a revolution, society progresses as fair share of resources is affirmed and chronic setbacks dissolve. With a view to bring revolution and transform societies, social scientists and philosophers are persistently offering models and theories; many of those, like Kuhn’s normal science, are nothing but mere replication of text-book knowledge and could hardly contribute towards social change. However, a few of those comes from some visionaries, whom Kuhn cited as revolutionary scientists, who dare to alter societies challenging conventions and establishing new wisdom.

¹ In economic literature, no standard definition for the term ‘poverty’ is found. Society at large considers poverty as the state of deprivation. According to a UN declaration that resulted from the World Summit on Social Development in Copenhagen in 1995, poverty is: *‘a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. Poverty depends not only on income but also on access to services (1995)’*. However, widely accepted international poverty line in the past was roughly one-dollar-a-day. In 2008, the World Bank revised this figure to \$1.25 a-day (Martin, Shaohua, & Sangraula, 2009), though countries have devised their own poverty lines to better understand poverty.

Professor Mohammad Yunus, one such revolutionary social scientist, offered a new branch of economic thought and introduced an eccentric form of institutional credit, called micro-credit, to be distributed among poor people to combat hunger and poverty. In late nineties, his theory came true as millions of poor people around the world changed their lives with micro-credit². Prof Yunus's idea got acknowledged with the Nobel Peace Prize of 2006 for establishing peace in the societies through alleviating poverty.

Micro-credit:

Though the idea of small loans can be traced back to the World War II, the term *micro-credit* was not coined before seventies. Micro-credit³, which is believed to be an extension of small loans, differs substantially from its predecessor. Unlike conventional small loan, micro credit is granted to poverty-stricken individuals designed to spur entrepreneurship. Micro credit recipients lack collateral, steady employment and a credible credit history and, therefore, cannot meet even the most minimal qualifications to gain access to traditional credits.

The old paradigm: theories on poverty alleviation:

Poor people mostly live at the mercy of others. They work as workers for their entire life and remain poor till their death. They are unable to get rid of the vicious cycle, which ends up with an income not enough to beat the

² By December 31, 2007, a total of 3,552 microfinance institutions reached more than 154 million poor people with credits. Of these institutions, 935 are in Sub-Saharan African, 1,727 are in Asia and the Pacific, 613 are in Latin America and the Caribbean with the remainder (85) in the Middle East and North Africa.

³ For further discussion on difference between micro-credit and micro-finance: Elahi, K. Q.-I., & Rahman, M. L. (2006), Micro-credit and micro-finance: functional and conceptual differences, *Development in practice*, 16, 476-483.

poverty line. Economists, earlier to micro-credit, posit that creation of employment is the best route to a poverty-free world, and hence suggest that creation of waged-employment could eradicate poverty from societies.

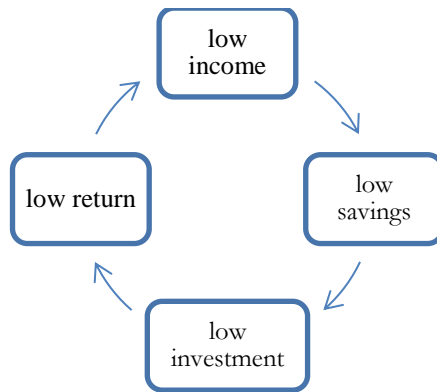


Figure 01: Vicious cycle of poverty

Rejecting this notion, critics, like Prof Yunus, argue that economists have created a world where poor people are supposed to spend their entire life working for others. It seems that poor people don't have the potential to start a business for their own; society has taken them as financially poor and intellectually locked. Taking example from civilization, Prof Yunus contends that our ancestors never looked for jobs when they were born, rather they worked for themselves; they were self-employed. They would have been extinct, we wouldn't be here, if they had looked for jobs. Absence of the word "self-employment" in economics text books has created trouble in real life. As textbooks eliminated the term, policy makers too abolished it from their minds (Yunus & Jolis, 2001).⁴ In a pre-micro-credit era, job creation was, thus, believed to be an effective tool to exterminate poverty.

⁴ Kuhn cited this text-book domination in the real life as a phenomenon of normal science.

Nevertheless, some improvements were made in the literature immediately after the World War II under the discipline named 'development economics'. Instead of offering employment as the single best measure, some economists proposed self-employment as an alternative tool to fight poverty. Crisis yet remained with the theory – as poor people approached for credits to start their own ventures, financial institutions asked the question: are poor people credit-worthy?

Credit for poor – crisis continues:

Financial institutions are imperative for the development of any economy. Credits from these institutions are considered lubricant for economic growth. Credits disbursed by these institutions have one characteristic in common – grant credit to those who have money and reject those who do not. The economic theory of credit⁵, thus, sets poor people aside – since they don't have money, they are not credit-worthy. Credit is in the bondage of collateral. Lending institutions have formulated rules, which favored a section of people, rejecting others. Prof Yunus, a banker to the poor, argues that just like food and shelter, credit is a human right; everyone, irrespective of gender, race, religion, and economic status, must have the equal access to it (Yunus & Jolis, 2001).

Neglected by the financial institutions, poor people are compelled to borrow money from social money lenders, known as usurers, who are very influential in the society. In exchange of money, poor people are charged usury – a high rate of interest, ranging from fifty to two hundred percent – on the borrowed amount. Prof Yunus claims that borrowers are in real difficulty to extricate them from burden of the loan. In most cases,

⁵ An important principle that governs credit granting is collateral covenant. Under this covenant, borrower must provide security (collateral) against borrowed money. Since poor people – most of them are landless – are incapable of providing any security, traditional financial institutions are reluctant to grant any credit to the poor people.

borrowers borrow again to repay prior loans. The only way to get out of this cycle is death (Yunus & Jolis, 2001).

Aids from development partners – a new dimension of crisis:

To improve socio-economic condition of third world countries, transfer of funds and supplements from developed countries was planned through creation of unilateral and multilateral agencies. Governments of third world countries were held responsible for distribution of those funds through related departments. This approach of distributing funds through local governments was widely known as top-down approach, which has later been proved ineffective. Lack of participation from target groups, and inefficiencies and bureaucracy of governmental system primarily cause the failure. (Elahi & Rahman, 2006).

Objecting to the developmental funds from first world countries, Prof Yunus contends that aids, grants and charities have devastating effects to the recipient country; these rob recipient's dignity, abolish income-generating will. Recipients become passive and satisfy themselves with these; a poor remains poor and waits for grants throughout his or her life. (Yunus & Jolis, 2001)

The new paradigm: a step toward creating a poverty-free world:

Refuting conventions, Prof Yunus initiated micro-credit through establishing the Grameen Bank⁶ – a bank dedicated to the poor people – in 1983, and distributing loans to the poor people, who were not credit-

⁶ The Grameen Bank is generally considered as the first modern microcredit institution, founded in 1976 by Muhammad Yunus. In 1983, it became an independent bank by government legislation. Grameen Bank and its founder were jointly awarded the Nobel Peace Prize in 2006.

worthy under normal economic theories. The idea of micro credit started with \$27 loan to 42 women of Jobra village, and since its inception the bank has distributed loans of \$6 billion. The current repayment rate is 98.6 percent which is much higher than any other traditional bank.

Instituting the new paradigm, Prof Yunus shatters an important principle of lending –collateral convents; poor people get easy access to credit without any collateral. With the credits in hand, people below the poverty line start to think about a business of their own. Micro credit opens up a new avenue for them: an avenue to unleash their potential, to become self-employed. In support of his assertion, Prof Yunus maintains that:

“Poor people are like bonsai trees. When you plant the best seed of the tallest tree in a six-inch-deep flower pot, you get a perfect replica of the tallest tree, but it is inches tall. There is nothing wrong with the seeds.....poor people are bonsai people. There is nothing wrong with their seeds. Only society never gave them a base to grow on. All that is required to get poor people out of poverty is for us to create an enabling environment for them. Once the poor are allowed to unleash their energy and creativity, poverty will disappear very quickly” (2008, p. 54).

Unlike traditional developmental efforts, micro-credit uses bottom-up approach instead of erroneous top-down approach. The bottom-up approach, which was endorsed by the World Bank in 1973, supports participatory method of interaction as an essential dimension of development. Under bottom-up approach, developmental programs are designed by the people who are concerned about target groups' problem, and are implemented by those who are interested in target groups' future. Eventually, the 'bottom-up' approach dominates policies of these-days bilateral and multilateral agencies (Elahi & Rahman, 2006).

Looking through the lens of Kuhn's paradigm shift, micro-credit revolution seems to construct a new paradigm, resolving anomalies of the old paradigm. According to Steinwand (2001), the idea of micro credit has been widely appreciated and is now considered as a shift of paradigm in development economics. The following table compares the improvements that the new paradigm has made over the old one.

Table 01: A comparison between the old paradigm and the new paradigm

The traditional view	The modern view
Institutional credit is only limited to the rich people, who are credit-worthy and are capable of repaying the borrowed money	Institutional credit is also available to the poor people without any collateral
Poor people aren't innovative and don't have the entrepreneurial skill, hence should only be considered for waged – employment	Poor people can be self-employed, if they are exposed to a new horizon of initiating businesses of their own
Social money lenders or the usurers are the lone source of money for the poor people	Money lenders have been replaced by micro-credit institutions; development agencies, like World Bank, IMF, became partners to the poor
A top-down approach is followed in distributing and monitoring aids and grants from the first world countries	A bottom-up approach has taken place as credits are directly distributed to the poor through NGOs
Creation of waged-employment for the poor people is an answer to the poverty	Opening up opportunities for self-employment is the shortest possible route to a poverty-free world

Conclusion:

The UN Millennium Declaration of 2000 has inspired the development efforts that have been made for centuries to improve standard of living of poor people. Of the eight goals⁷, fight against extreme poverty and hunger has been considered the top challenge. The visionaries, like Prof Yunus who is dreaming to send poverty to the museum, observe that development is impossible without the improvement of standard of living of bottom fifty percent people of the society. Unlocking deprivation, creation of opportunities for poor people is at the heart of development.

In a parallel examination with Kuhn's paradigm shift, micro credit seems to replace the conventions about poor people and their livelihood. Old knowledge about poverty has been replaced by new terms and concepts. In societies, conventional money lenders no more exist; poor people, especially women, are now entrepreneurs, making money out of their own businesses. With some limitations and criticisms⁸, micro credit has spread its wings all over the world. A new road towards development through micro credit has been constructed, with changed vision and accomplishments. What Professor Yunus considers a shift in thinking, is believed, by many, as a shift in paradigm.

⁷ The Millennium Development Goals represent human needs and basic rights that every individual around the world should be able to enjoy—eradicate extreme poverty and hunger; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat fatal diseases; ensure environmental sustainability and establish a global partnership for development.

⁸ Recently, there has been a debate about the effectiveness of micro credit in poverty alleviation. Research studies pertaining to this area exhibit mixed results. If micro credit fails to resolve this particular social anomaly, societies need to wait for another paradigm that will replace the existing one through a paradigm shift.

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