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## **Expanding female health capabilities in the South: Linking micro-credit participation and women's health**

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### **Abstract**

Reducing income poverty is a primary need for improving population health in the South, and a number of poverty alleviation strategies, such as micro-credit are being implemented. The principle of micro-credit is to provide the poor access to credit to improve their opportunities to engage in productive activities. Studies have demonstrated that female participation in micro-credit has positive impacts on the health and well-being of women. Less is known about the causal pathways involved.

The paper describes a conceptual framework linking female participation in micro-credit and the production of women's health. The framework, inspired by Amartya Sen's capability approach, is complemented by Michael Grossman's health production theory, and integrates the determinants of health. The framework traces four pathways (political, social, economic, and psychological) between micro-credit participation and health achievements. The framework illustrates that participants attempt to utilise her resources (financial, human, social) and increased capacity to convert resources (via autonomy) to maximize her health. The framework emphasizes *women's agency*, because women's autonomy is not only a valued output of participation, and the development of capabilities, but is *necessary* in the health production process. The framework is developed with empirical evidence from the literature, and the authors' own research in the Indian state of Kerala.

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## 1.0 Introduction

The health of the poor was and continues to be a priority in public health. This is particularly true in low-income countries where the burden of disease is the heaviest, and among women who experience greater rates and depths of poverty (Banger, 2002; UNDP, 1995; World Bank, 1993). To ameliorate population health in the South, efforts continue in order to develop interventions, which will break what is often labelled as the 'cycle of poverty and health'.

The relationship between poverty and health has been characterised as synergistic and bi-directional (Das Gupta & Chen, 1996; Wagstaff, 2001). On the one hand, poverty limits capacities to produce health. On the other hand ill health impoverishes, diminishing the potential of increasing economic well-being of individuals and households (Over et al., 1992; Krishnan, 1999). The inter-connectedness of poverty and health has led to the promotion of 'pro-poor health strategies' (Bloom & Lucas, 1999; Wagstaff, 2001). Pro-poor health strategies focus on and provide benefits for the poor, such as waiving user fees at health centres for those who are unable to pay. Alternatively, reducing poverty is a primary need for improving population health in the South (Lipson, 1998; Skold, 1998).

A number of different types of poverty alleviating strategies (PAS) have been implemented in the South. One particular type of PAS, micro-credit, has been sweeping across the developing world (Table 1). The general principle of micro-credit is to provide the poor access to credit to improve their opportunities to engage in productive activities. While Bangladesh has been a particular focus of the micro-credit movement, there are numerous schemes sprouting up in Asia, Africa, and Latin America. Promoted by national and state government, and non-governmental organisations (NGOs), micro-credit groups are voluntary groups engaged in collective saving and thrift activities for the purpose of securing credit. The thrust of the movement has been to especially engage women designed not only as a strategy for poverty alleviation, but also to increase women's access to resources and their power in household decision-making. Therefore, poor women are particularly targeted to participate (Table 1).

**Table 1. Micro-credit programs, and number of clients self reported for the developing world, 1999**

Region	No. of programs reporting	No. of clients reported	No. of “poorest” clients reported	No. of women clients “poorest” reported
Africa	455	3,833,565	2,617,861	1,526,267
Asia	352	18,427,125	10,498,656	8,316,313
Latin America & Caribbean	152	1,109,708	531,228	355,253
Middle East	16	46,925	28,807	15,680
<b>Developing world total</b>	<b>975</b>	<b>23,417,323</b>	<b>13,676,552</b>	<b>10,213,513</b>

Data source : 2000 Micro-credit Summit Campaign Report

There have been recent suggestions that participation in micro-credit may be beneficial to the health of the poor, particularly for women (Feurestein, 1997; Fisher, Holland & James, 2001; Patel, 2000). Micro-credit could impact on health through various pathways. The expansion of opportunities created by participation includes increasing assets and enhancing female autonomy, which are key determinants of women’s health (Amin, et al., 1998; Jacobson, 1993; MacCormack, 1988; Moss, 2002).

While there is increasing interest in measuring the impacts of micro-credit on health and well-being, there remains a need for greater understanding of the explicit processes and mechanisms involved. Acquiring such evidence is critical in determining an appropriate policy response. In general, policy makers in the South focus on the provision of health services, precluding greater efforts to increase opportunities of the poor to achieve health, such as through the participation in poverty alleviation programs (Lipson, 1998). Significant health externalities produced through participation in an SHG would promote a legitimacy of increasing alliances between poverty alleviation efforts and public health, and the development of what has been labelled as ‘healthy economic policies’ (Whitehead, Dahlgren & Gilson, 2001). The promotion of SHGs and other forms of micro-credit may be an important route to health development through positive influences on underlying causes of ill-health.

This paper develops a conceptual framework, rooted in Sen’s capability approach, that links micro-credit participation, and women’s health. Illustrative examples are drawn from the

literature and from the author's own research in an agricultural community in India's state of Kerala.

## **2.0 Linking micro-credit and health production**

The conceptual framework is inspired by Amartya Sen's capability approach. Sen's capability approach, rooted in welfare economics and political philosophy, has much broader implications. Sen himself encourages this approach be used for a "plurality or purposes" (Sen, 1993; p.49). Although the lack of specificity of Sen's framework permits such cross-discipline use, there is also a need for additional theorizing when applying Sen within a sub-discipline (Robeyns, 2000). Therefore, we complement Sen's approach with insight from health production theory.

### 2.1 Capability approach : health as functioning

Sen's capability approach, which focuses not on resources or primary goods, but rather on what these resources can do for people (Sen, 1979), is based on *functionings* and *capabilities* (Sen, 1985; 1992; 1993). Functionings are those "doings and beings" of a person, ranging from basic functionings such as being in good health, to more elaborate functionings, such as social integration. Capabilities, in turn, are derived from functionings, and are "the various combinations of functionings that a person can achieve" (Sen, 1992, p.40). While closely linked, these two concepts differ in that a functioning is an actual achievement, while a capability represents a freedom of achievement. Sen also refers to capabilities as a 'set of vectors' of functionings (Sen, 1985; 1992).

Accounting for human diversity is central to the capability approach (Sen, 1992). Individuals may have access to the same amount of a commodity, such as income, yet their resulting functionings, such as well-being, may differ from another individual. Sen (1992) attributes this to inter-personal differences in the *conversion* of resources into functionings. A resource is only useful if one can transform it into a useable format. Problems related to conversion may arise due to physical characteristics (e.g. metabolism, exposure to parasitic diseases), or more complex social issues (e.g. interactions with community) (Sen, 1992). To take an example of Sen's, consider two individuals who have the same basket of food. One person is plagued by an intestinal parasite, while the other is parasite-free. The first individual does not achieve an adequate nutritional status, while the other person flourishes. The inability of the former to convert (food) resources into (nutritional) functionings presents a barrier to a person's capability, and ultimately her achievable health status. The capability approach explicitly addresses the

relationship between commodities, that a person is entitled to, and her ability to convert them into functionings (Sen, 1985; 1992).

Sen has written specifically on health, referring to health as a functioning (1992), or more specifically an achieved functioning (Sen, 2002). He is particularly concerned with barriers to opportunities (e.g. poverty, epidemics) to achieve health, and the implications for social justice (Sen, 2002). Sen has also illustrated how conversion problems may reduce health functioning (Sen, 1992). Viewing health as a functioning does *assume* that a woman will choose (from her capability set) to produce *more and better* health. However, Sen argues that a health achievement is suggestive of a person's capability, "since we tend to give priority to good health when we have the real opportunity to choose" (Sen, 2002, p. 660). To strengthen the assertion that when a woman has the choice, she will choose *greater* levels of health, we turn to a theory specific to the health discipline.

## 2.2 Grossman's health production theory : health as production

Health production is most often associated with the work of Michael Grossman, who based his model on the theory of human capital to understand the demand for health and for healthcare (1972). Human capital theory proposes that individual income earning will increase through self-investment in health, education, and training. Grossman's notion of *health capital* demonstrated that health is unique in that it is both a consumption good, and an investment good. The former suggests that health is desirable for making people feel better, while the latter implies increasing income earning potential, by increasing the number of healthy working days. An individual begins with an initial *health stock*, which depreciates over time. Health stock can, however, be increased, through investments in health via inputs (e.g. medical care, diet, exercise, housing, education<sup>2</sup>), *over a period of time*. Health is produced not only through the consumption of inputs, but also by a woman's investment in time, leading to *accumulation* of health stock.

According to this theory, an individual will attempt to maximize her health, by exploiting opportunities to transform inputs into health, given the constraints in her life (e.g. budgetary). This theory is based on a *health production function*, which "shows how much health can be obtained for a given quantity of health input, given technical knowledge" (McGuire, Henderson & Mooney, 1988, p.130). The technology associated with the health production function is not

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<sup>2</sup> Grossman's study illustrated that education was a key input, enabling individuals to more efficiently produce health, by being better equipped to understand how to stay healthy, and how to use health inputs with their own time to produce health.

necessarily static, but likely varies across an individual's life span and socio-demographic characteristics, such as gender (Strauss & Thomas, 1998).

### 2.3 Conceptual framework for micro-credit and health production

The conceptual framework (Figure 1<sup>3</sup>, p.18) illustrates that micro-credit participants will attempt to utilise her resources (financial, human, social) and increased capacity to convert resources (via autonomy) to maximize her health, and her household's health, by combining these inputs within her household. The framework emphasizes *women's agency*, because women's autonomy is not only a valued output of participation, and of the development of capabilities, but is *necessary* in the health production process. The conceptual framework integrates the determinants of health, with a logical sequence of steps from participation to health, involving three different production functions ( $F_1, F_2, F_3$ ). These production functions are further explained within three major concepts related to the framework.

**First**, participation impacts on women's access to opportunities, by expanding her access to *resources*. There are two distinct sets of resources. First participation in and of itself is considered a resource, acting as the first input into the system ( $F_1$ ). The second set of resources are the outputs of participation, but are also inputs into opportunities to achieve health, in the form of financial, social, and human resources ( $F_2$ ). These resources are subsequently converted into opportunities for health through the injection of female autonomy, an output of participation in micro-credit.

**Second**, participation impacts on woman's health achievements through a systematic process involving all three production processes ( $F_1, F_2, F_3$ ). The acquisition of resources acquired through participation is converted into opportunities for health through female autonomy. Consequently, these opportunities for health are then converted into health through a number of individual, environmental, and social factors (not presented here).

**Third**, duration of participation plays an important role in the process of health production. The longer a woman has participated in micro-credit, the greater her propensity, to both gain opportunities for health and to achieve good health. This is the result of two separate processes. First, a woman's opportunities for and achievements of health will accumulate over time. Second, the longer a woman participates the greater her propensity to obtain benefits.

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<sup>3</sup> The framework does not include the multitude of other factors influencing health outcomes independently of participation in micro-credit, such as age.

These benefits could be economic (e.g. access to loans), social (expansion of social network), political (e.g. greater voice), or psychosocial (e.g. financial management capacities). The separate components of the framework are further specified below, followed by a discussion on the pathways between participation and health.

### 2.3.1 Participation

Participation in micro-credit involves a minimum set of activities, which generally includes attending mandatory meetings, and making a specified financial contribution. Participation enlarges woman's opportunities to reduce poverty through greater access to resources, and increased autonomy. The key financial resources are opportunities to engage in savings activities and accessing credit<sup>4</sup>. Table 2 shows data on savings and loans activities for women micro-credit groups, collected through a household census in Kottathara Panchayat (administrative unit) in Kerala's northern district of Wayanad. All women participating contribute to group savings on a regular basis, typically 10 Rupees per week. After 6 months of participation, members are eligible for a loan, which at the time of the survey was over 70% of women.

**Table 2. Basic data on savings and loan activities among female micro-credit members in Kottathara Panchayat, Kerala**

Number of adult women* living in Kottathara	5584
Number of women participating in micro-credit+	2054
Mean contributions to savings per year (Rupees)	650
Median contributions to savings per year (Rupees)	520
% of members who received at least one loan++	71
Mean number of loans taken	1.35
Median number of loans taken	1.00
Mean amount of loans taken (Rupees)	2361.8
Median amount of loans taken (Rupees)	1000

Data source : authors,

\*Adult women here are considered 18 years and older; 18 is the age that women can join SHGs and is also the age of marriage. Females under 18 can participate in 'child' SHGs.

+ includes women who participate in both *kudumbrasree* (government supported micro-credit) and NGO-supported groups.

++ This number is an underestimation because women can only receive a loan after a period of 6 months, which is about 3-4% of the women participating at the time of the survey.

<sup>4</sup> Access to credit does not necessarily translate into greater income or financial assets. Some authors have pointed out that credit for the poor often does not lead to exiting poverty because of the utilisation of loans for consumption purposes, and have made suggestions for re-designing micro-credit programs to serve these needs (Mosley & Hulme, 1998; Montgomery, 1996).

The link between participation in micro-credit and female autonomy is more difficult to ascertain, due to challenges in defining and measuring autonomy, particularly in different cultural contexts. There is an increasing body of literature on micro-credit and women's autonomy, or the broader concept of empowerment<sup>5</sup>. Here, we focus on autonomy, which includes several dimensions; women's mobility, control over finances, and decision-making powers each of which can impact on a woman's health (Bloom, Wypij, & Das Gupta, 2001; Rahman & Rao, 2002). A study in Bangladesh constructed indexes of women's autonomy and authority. They found that women who participated in micro-credit measured higher on these indexes, except in the southern region (Table 3).

**Table 3. Comparison of autonomy and authority indexes between female participants and non-participants in micro-credit in rural Bangladesh**

Region	Membership status	Autonomy index+	Authority index++
Central	Member	3.84	3.74
	Non-member	3.69	3.05
	t-value	1.83	5.52*
North-central	Member	3.76	3.90
	Non-member	3.18	2.84
	t-value	3.88*	5.74*
North	Member	3.87	3.47
	Non-member	3.62	2.93
	t-value	3.73*	6.40**
North-east	Member	4.00	3.04
	Non-member	3.67	2.36
	t-value	2.73*	3.99*
South	Member	3.43	2.90
	Non-member	3.16	2.76
	t-value	1.41	0.68

Data source Amin, Becker & Bayes (1998)

+ The autonomy index represents women's self reported autonomy related to husband's restrictions on their wives for the following activities; visiting parental home, visiting a hospital, visiting village market, helping a relative with money, setting aside money for personal use.

++The authority index represents women's self reported decision-making powers over decisions, including voting in an election, child's education in school, family planning, family day-to-day expenditures, going outside of home, medical treatment, entertaining guests, buying respondent's traditionally favourite things.

\*p<.01

<sup>5</sup> It should be highlighted that the link between micro-credit and empowerment/autonomy has elicited conflicting results. For an excellent overview see Kabear (2000).

### 2.3.2 General capabilities

SHG membership provides two types of inputs, which are both underlying determinants of health, and can have a broad impact on a woman's health status.

First, an increase in *assets* will enlarge a woman's opportunities to access commodities. These assets (financial, human, or social) are both an output of participation, but are also *general* capabilities for they provide the opportunities for other more specific or higher level capabilities. These assets are, therefore, inputs into the production of women's capabilities and health capabilities.

The second input, *female autonomy*, will contribute to the conversion of those assets and possibly other commodities, into capabilities to achieve good health. Without a mechanism for transforming the assets acquired through participating in credit programs, women who lack decision-making powers, and control over the allocation of resources, may not benefit from these additional assets. Instead of receiving personal gains, the assets may be purely consumed by the household. Naila Kabeer found different patterns of savings between men and women micro-credit members in rural Bangladesh (Kabeer, 2000). The most notable feature was the use of 'secret savings' practiced exclusively by female members suggesting a degree of economic autonomy, as well as the less traditional practice of opening up bank accounts in their own names (Table 4).

Autonomy, analogous to Grossman's proposition of education, can increase a woman's health stock for a given quantity of resource. Autonomy produces a transformative action to the benefit of the woman participants, by increasing power of and control over the use of resources. Female autonomy is also linked to assets as more autonomy helps gain more assets, and vice versa.

**Table 4. Saving patterns of micro-credit patterns, by gender (%) in rural Bangladesh**

Saving pattern	Faridpur		Mymmensingh	
	Male	Female	Male	Female
Cash at home	18	16	17	23
Bank account	25	20	20	9
Saving society	13	18	3	4
Lent on	-	1	-	6
Secret saving	-	12	-	6
No saving reported	44	45	61	54

Data source : Kabeer (2000)

### 2.3.3 Women and health capabilities

Women and health capabilities operate at two levels; as outputs of the development of general capabilities, and as health inputs. Health capabilities include the proximate (access to food, access to health care, healthy behaviours, and a healthy environment), social (social inclusion, social support, social influence), and psychological determinants of health (awareness, sense of coherence). Each of these variables may be considered as health capabilities, as each one provides greater opportunities for women to achieve health<sup>6</sup>.

Woman's capabilities are not determinants of health *per se*, but have the capacity to increase woman's sense of self and her power, which ultimately can improve her health. Here we include awareness, which may increase a woman's "global" awareness (e.g. awareness of women's legal rights or the political system), thereby impacting on health awareness (e.g. reproductive health rights). Also the development of a "voice" can contribute to greater political participation, influencing public health policies and programs.

A study of women micro-credit groups in Bangladesh found that women participants developed a greater awareness of their reproductive health compared to women who did not participate (Tables 5a and 5b). Moreover, women who participated for longer periods of time (more than 5 years) had developed a greater knowledge for pre and post-natal care compared to other members, demonstrating the *accumulative* effect described earlier.

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<sup>6</sup> See discussions on the analogy between capability and access to health care, or « opportunity to use health services » in Haddad & Mohindra (2003) or Perreira (1993).

**Table 5a. Odds ratios+ for knowledge of prenatal care among Bangladeshi women, by micro-credit participation status**

Membership status	Prenatal care		
	Tetanus vaccine <sup>a</sup>	Vitamin supplement <sup>b</sup>	Medical check-up <sup>c</sup>
Non-member	1.00	1.00	1.00
Member for <5 years	2.15**	2.19***	2.59
Member for >5 years	2.39**	3.79**	4.88***
Not eligible	1.86*	2.69*	2.28

Data source : Hadi (2001)

+ Odds ratios were adjusted for women's age, education, exposure to mass media, husband's occupation, and ownership of land.

\* p<.01, \*\*p<.05, \*\*\*p<.10

<sup>a</sup> Awareness about the need for TT vaccination during pregnancy.

<sup>b</sup> Knowledge about iron/vitamin supplementation.

<sup>c</sup> Ability to mention the need for routine prenatal health check-ups.

**Table 5b. Odds ratios+ for knowledge of postnatal care among Bangladeshi women, by micro-credit participation status**

Membership status	Postnatal care		
	EPI doses <sup>a</sup>	Diseases prevented <sup>b</sup>	Child survival <sup>c</sup>
Non-member	1.00	1.00	1.00
Member for <5 years	1.92**	2.58*	5.65*
Member for >5 years	2.21**	3.37*	6.61*
Not eligible	1.60	2.02***	4.23*

Data source : Hadi (2001)

+ Odds ratios were adjusted for women's age, education, exposure to mass media, husband's occupation, and ownership of land.

\* p<.01, \*\*p<.05, \*\*\*p<.10

<sup>a</sup> Correct knowledge about EPI doses.

<sup>b</sup> Participant's ability to correctly mention at least 3 EPI preventable diseases.

<sup>c</sup> Knowledge of at least 3 measures to prevent child death (e.g. breastfeeding, immunization).

### 2.3.4 Health achievements

The type of outcomes, or health achievements, obtained through micro-credit participation, does not focus on specific diseases, but rather on global health outcomes. These outcomes are nutritional status, morbidity, self-perceived health, and well-being. Health inputs, such as more quality food, and greater access to maternal health services can improve a woman's nutritional

status, such as decreasing anaemia. The other dimensions will be influenced by multiple health inputs and interactions among these factors.

Studies have found positive impacts on women's health achievements, although due to a time lag between program or policy effects and health status, this is often difficult to assess (Anand & Chen, 1996). A study in Bangladesh, found that female micro-credit members had significantly higher scores of self-perceived general health compared to poor female non-member (Ahmed et al., 2002). There has also been some interesting work on women's well-being in terms of freedom from domestic violence. Structured surveys and ethnographic research in Bangladesh found that participation in women's micro-credit could help to reduce violence against women by making women's lives more public (Schuler et al., 1996). This research suggests that women's access to credit and income-generation may have a positive role for women, not by income generation *per se*, but rather the recognised contributions they make to household welfare. For example, one of the women responded after joining the Grameen Bank;

In the past my father-in-law would never stop my husband from beating me. But after I joined Grameen Bank he said to my husband, "You had better stop beating and scolding your wife. Now she has contact with many people in society. She brings you loans from Grameen Bank. If you want to you can start a business with the money she brings!" (Schuler et al., 1996, p. 1738).

This is not to say that there is a linear relationship between participation in micro-credit and the reduction of violence against women. The same study found that the village where the women contributed the most to household earning also had the highest prevalence of beatings. Other researchers noted that women who join micro-credit might experience an initial period of heightened abuse when they join a group, but that violence is progressively reduced over time (Mushtaque, Chowdhury & Bhuiya, 2001). Earning independent incomes and increased social mobility and autonomy were noted to cause conflicts. Why then would women continue to participate in micro-credit schemes if their well-being is jeopardised? Women's agency, a "crucial aspect of "development as freedom"", is a separate, yet overlapping aspect of women's well-being (Sen, 1999, p. 203). Women's opportunities to make their own choices in the pursuit of their well-being may seek a 'better deal'. Schuler and her colleagues noted "The most empowered women typically emerge from a period of conflict with a new definition of their roles and status in the household" (Schuler et al., 1996, p. 1739) illustrated by the following response;

My husband used to beat me up and take my money. Now he can beat me a thousand times and I won't give him my money. I tell him, "you had better not beat me too much – I can live without you!" (Schuler et al., 1996, p. 1738).

The evidence discussed here indicates the need for a broad assessment of women's health achievements when assessing the impact of participation, and considerations related to women's own choices and values.

### 2.3.5 The pathways

Because there are multiple determinants of health (Frenk et al., 1991), and dimensions of health are influenced in different ways (Wagstaff, 2001), the pathways presented here are not exhaustive. Instead, four major pathways (economic, social, psychological, and political) are presented in a simplified format. These pathways are merely an illustration of the major forces involved, in reality each pathway will operate at a greater level of detail. The specificities of each pathway will also depend on local context, and the type of micro-credit scheme being implemented. Although each output of participation (resources or autonomy) may have individual impacts on women's health, the focus of the pathways is on how the two inputs function *together* to increase women's health.

#### *The "economic" path*

The economic path is the most straightforward path due to the close link between wealth and health, and because the primary objective of micro-credit is to reduce income poverty. Access to income increases a woman's opportunity to purchase health promoting goods and services, such as food and health care. Also, income often operates in conjunction with other key determinants of health such as education, and awareness, influencing health behaviours, and promoting salubrious environments. Greater economic autonomy will convert these economic resources by increasing personal control over how this income is consumed. Furthermore, social autonomy will create greater opportunities to travel outside her domestic household in order to participate in income-generating activities. And political autonomy will increase a woman's power over her own decisions on health seeking behaviours, and her capacity to reduce practices, which are harmful to health, by promoting healthy behaviours, and reducing hazardous practices.

#### *The "social" path*

The social path may operate at several levels. First, participation can help to increase social inclusion, which can raise women's quality of life, and may also help to reduce exclusion to health care. Second, a woman's micro-credit group can provide social support in the form of emotional (love, caring, sympathy, etc.), instrumental (assistance with tangible needs),

appraisal (help in decision-making and giving appropriate feedback), or informational (advice or particular information). Third, participation in groups, which are exclusively *female* can promote activities for the benefit of women (e.g. female organised campaigns against infanticide), as well as a secure base in which to participate in such activities. Fourth, greater social connections and participation can increase a woman's access to material resources, which could produce better health. Finally, social participation of women may influence societal norms by making women's lives more public (e.g. decreasing violence against women). Concomitant increases in social autonomy ensure women are able to be sufficiently mobile to participate in all of the above.

### *The "psychological" path*

Participation in a micro-credit scheme provides opportunities for women to engage in activities or gather information, which may help to develop their 'self'. Acquiring skills such as financial management, or incoming generation abilities can help increase a woman's self-efficacy. Not only does such development have implications for improving material conditions of a woman's life and that of her household, but greater self-efficacy can also impact upon a woman's health, by promoting healthier behaviours. Life experiences acquired through participation may increase a woman's generalised resistance resources, developing her sense of coherence. This can improve a woman's capacity to cope with stressors, reducing levels of stress and improving overall emotional well-being. Economic and social autonomy help to convert these psychological pathways by increasing women's control over finances and their own interactions with society.

### *The "political" path*

Acquiring a greater "voice" increases a woman's opportunity to participate in political processes, including influencing health policies and programs. Due to a persistent male bias in policymaking and in the development of health interventions, greater female voice in these processes could ensure more appropriate health care and health promotion programs. Micro-credit requires group decision-making, rotational leadership roles, and management duties, which can assist in the development of self-assertion. Furthermore, the uniquely women groups can lead to female solidarity promoting shared visions and goals combined with collective strengths. Increases in a woman's economic, social, and political autonomy can help convert her levels of self-assertion and female solidarity into a greater voice.

In an attempt to illustrate the pathways in practice, two examples are described below drawn from interviews with members of micro-credit groups in rural Kerala. These examples are framed by two major public health problems in Kerala, suicide, and alcohol. One of the largely neglected issues related to (male) suicide in Kerala have been the consequences for widows. The plight of widows in India, in general, has been sorely lacking from debates on development in India (Chen, 2000). And although public action in Kerala has led to comparatively better welfare of widows, economic and social exclusion continues to be present as illustrated by the first case.

### **Case 1 : Leela**

Leela<sup>7</sup> is a 33 year old widow from the *kanakkan* caste (scheduled caste) who has completed her 10<sup>th</sup> standard at school. Her husband committed suicide, leaving her widowed at the age of 27 years, with two small children. Following her husband's death Leela faced financial difficulties; her husband's brother and family offered no help. Nor did Leela own any land. As a young widow, Leela experienced what some in India have labelled as a 'social death'. She was blamed for her husband's death, excluded from community events, and socially ostracized by her neighbours. She moved out of her husband's house and returned to her natal village to live with her aging parents in Kottathara Panchayat. Here she worked as a *kuli* worker (agricultural labourer), while her parents cared for her children during the day. Leela experienced several episodes of sexual harassment, and was lectured by women of the inappropriateness of her presence in her few attempts to participate in religious and community activities.

Two years ago Leela joined *kudumbrasree* (government supported micro-credit program). After a period of time of regularly contributing to her group's savings, she took a loan and bought a milch cow. She had a second cow, and had received additional financial support (10, 750 Rupees) from a woman's organization and church. From the two cows she is able to extract 10 litres of milk a day. For each litre of milk she will receive about 10 Rupees from the Milk Society, earning her about 100 Rupees a day. She participated in the weekly meetings, which included not only savings and loan activities, but also tea and socialization.

Today, Leela continues to experience emotional pain from her husband's suicide, and her lack of status derived from not having a husband. However, gains in self-confidence and the ability to financially support herself and her family through self-employment have improved her overall well-being and emotional health. Moreover, she is able to remain closer to her children as she

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<sup>7</sup> Leela's name has been changed.

no longer needs to go out to the fields for work, laborious, unstable work, that left her exposed to the taunting and harassment of men. She has, however, recently developed an allergic reaction to milking on her left hand making it painful to milk the cows. Her father now assists her. She prefers to continue with her milk production activities despite this health problem, which is less significant to her than her overall well-being, and capacity to care for her children.

Joining kudumbrasree has not resolved all the issues faced by Leela, such as the social stigmatism of widowhood. However, through the economic and social pathways, we see that participation has enlarged her general capabilities. There were opportunities to access financial resources for Leela was able to obtain a loan enabling her to become self-employed, and social resources via the friendship and companionship of her group members. In turn, her health capabilities expanded as she was able to work in a healthier environment (from her parents home), where the work was stable, less strenuous, and she did not receive any harassment from other workers. Although her social mobility remains restricted by social norms, she has greater opportunities to participate in community life through SHG meetings and activities. Interestingly, the infection on her hand has not deterred Leela from continuing her work. This last point demonstrates that a production of greater health achievements (in terms of emotional health and overall well-being) outweighs a decline in physical health as chosen by Leela herself.

## **Case 2 : And the walls came tumbling down...**

Women in Kottathara Panchayat are often the victims of their husband's alcohol abuse either through physical or verbal abuse, or through the loss of household income diverted to their husband's drinking habits. Patriarchal norms make it difficult for individual women to confront their husbands, and address the problem.

During the period of 2002-2003, Self Help Group (SHG) members launched an anti-liquor movement. Women were upset that their husbands were spending their wages on alcohol, and returning home drunk after visiting a near-by toddy shop. They were also upset because the shop was (illegally) set up on a main road, where women would have to pass by enduring verbal abuse of men in the shop.

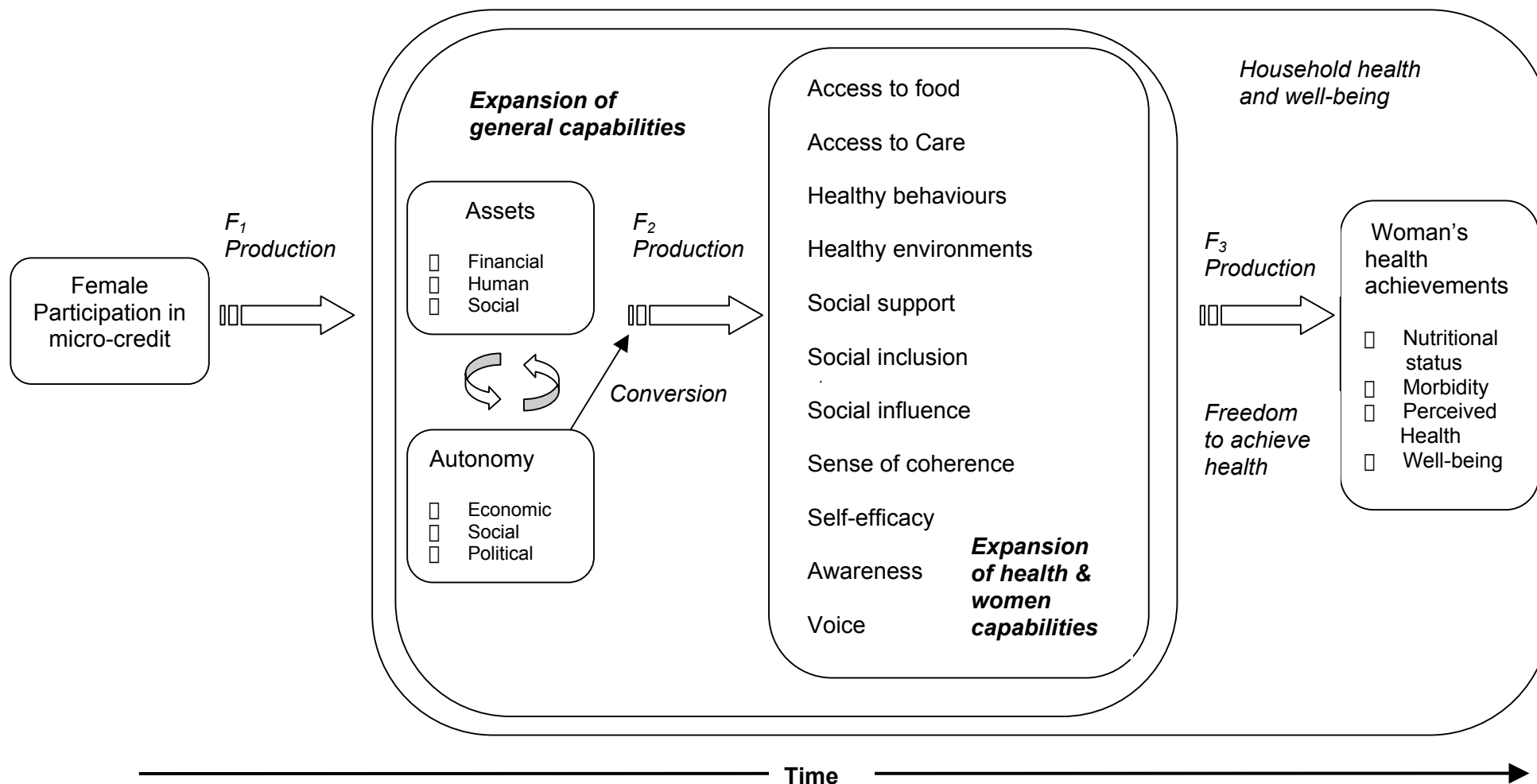
SHG members decided to organize themselves under the leadership of field staff of the supporting NGO, RASTA to protest the shop. Public meetings and rallies were held, and the women filed a petition with the police. Finally, the women destroyed the liquor shop, after which it was abandoned. After this event, husbands increasingly returned home sober, money in their pockets.

The second case provides an example of voice and collective action, illustrating the political pathway. The women expressed that diverting their husband from the local toddy shop would not have been possible at an individual basis. As one woman put it, *imagine we are sticks, if we are only one stick we can be easily broken, but if we are many sticks, then, it is not so easy*. This action demonstrated the elevated power of women through and with SHGs to use their 'voice capability' as a group to benefit individual SHG and community members. Furthermore, this collective effort reinforces female autonomy at the individual level, and strengthens solidarity through successfully bringing about purposeful changes in the community.

### **3.0 Concluding remarks**

Micro-credit appears to provide valuable opportunities for women from a public health perspective. Adopting Sen's capability approach has led to a framework of analysis that considers not only a systematic production process translating resources into achievements through the expansion of health capabilities towards more and better health, but also implicitly considers women's agency in the process. This has generated a series of pathways, that we hope prove to help illuminate pathways to better health of poor women.

Figure 1. Conceptual Framework : Pathways from female micro-credit participation to the production of woman's health



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