Sustainability of Microfinance Outreach: Insights from Assam's MFI Model

Dr. Gopal Kumar Sarma

Assistant Professor in Economics

B.B.K. College, Nagaon, Barpeta, Assam

Abstract:

This study investigates the sustainability of microfinance outreach in Assam, India, with a specific focus on the Credit Support Programme of RGVN (CSP-RGVN). Drawing on data from 2001 to 2007, the research evaluates three key dimensions: operational performance, financial sustainability, and dependency on subsidies. The findings reveal a substantial expansion in outreach, as evidenced by a compound annual growth rate (CAGR) of 22.68% in the number of active borrowers. While the program consistently maintained operational self-sufficiency, it achieved financial self-sustainability in only two of the six years under review. Although the subsidy dependence ratio demonstrated a declining trend, indicating reduced reliance on external support, full elimination of subsidies was not attained. Importantly, the analysis did not identify a definitive trade-off between outreach growth and sustainability. The results underscore that, despite operational strength, financial sustainability continues to pose a significant challenge. The study concludes that CSP-RGVN has made commendable progress in expanding outreach and reducing subsidy dependence; however, achieving comprehensive financial self-sufficiency remains an ongoing concern. To enhance long-term sustainability, the paper recommends strategic measures such as reducing operational costs, increasing interest income, and exploring equity-based funding options.

Key words: Microfinance, Sustainability Outreach, Self-sufficiency, Subsidy dependence

1. Introduction

Poverty, in its most severe manifestation, is frequently associated with a deficiency of productive assets or opportunities for generating income. In this regard, access to credit and savings is crucial for the economic advancement of impoverished individuals, as it not only mitigates risks in unstable economic environments but also enhances investment efficiency within an economy (Besley, 1995). Consequently, even modest financial interventions have the potential to transform the economic circumstances of disadvantaged individuals. However, providing financial services to the impoverished has historically been challenging, primarily due to market failures within the formal banking sector (Hulme & Mosley, 1996). Factors such as high default risks and the absence of collateral continue to exclude low-income groups from accessing formal credit (Hermes and Lensink, 2007). Despite decades of international development efforts since the 1950s, poverty alleviation through credit-based programs has often been unsuccessful because of issues such as fund misallocation, unsustainable subsidies, and poor loan recovery rates (Morduch, 1999; Khawari, 2004). Furthermore, traditional financial institutions have been unable to meet the unique credit needs and delivery preferences of the impoverished (Jindal 2008). To address these gaps, microfinance emerged as an innovative institutional mechanism in Bangladesh in the late 1970s. Inspired by the success of Grameen Bank, similar models proliferated globally across diverse socioeconomic contexts. By December 2006, more than 3,300 microfinance institutions (MFIs) had reached over 133 million clients worldwide, of whom approximately 70% were the poorest and over 85% were female (Haris, 2007). While the expansion of MFIs has been remarkable, concerns persist regarding the sustainability of these programs as their outreach increases. This tension forms part of the "Microfinance Triangle," which encompasses outreach, sustainability, and impact (Zeller

and Meyer, 2002). Debates continue between two schools of thought: the "Poverty Camp," which prioritizes outreach, and the "Sustainability Camp," which emphasizes financial viability (Morduch 2000). Some argue that these objectives are at odds, while others view them as mutually reinforcing (Rhyne, 1998). Sustainability, in this context, is not merely about current success but the program's capacity to support the impoverished in the long term (Schreiner 1997). Financial self-sufficiency and high repayment rates are critical, but they must also be assessed alongside costs and other performance indicators to be effective. In India, microfinance operates under two primary models, with the MFI-led approach gaining traction in recent years. As of March 2005, this model served approximately 7.3 million clients with an outstanding loan portfolio of ₹1,600 crore (Ghate, 2007). In Assam, where rural poverty is prevalent and access to institutional finance is limited, MFIs have been active for over a decade and have gradually expanded their presence. According to Census 2001, 87.1% of the state's population resides in rural areas, and during 1999–2000, 36.09% were below the poverty line, of which 97.48% were in rural regions (Indiastat.com). Employment conditions remain poor, with a workforce participation rate of only 35.8%. Furthermore, the All India Debt and Investment Survey (NSSO, 2003) reported that non-institutional sources still account for 42.1% of the state's credit, with moneylenders contributing a significant portion. This reflects the urgent need to strengthen institutional credit mechanisms.

Compared to the southern Indian states, Assam hosts a relatively limited number of Microfinance Institutions (MFIs). Prominent entities in this sector include Rashtriya Gramin Vikash Nidhi (RGVN), ASOMI, and Bandhan, which predominantly operate as Non-Governmental Organizations (NGOs) and are registered under various legal frameworks, such as the Societies Registration Act and the Indian Trust Act. Although the Self-Help Group–Bank Linkage Program (SBLP) remains the predominant model in the state, the MFI model is growing. The two models differ in their objectives and delivery mechanisms: NGOs under the SBLP often engage in a variety of activities, whereas MFIs primarily focus on credit delivery through Self-Help Groups (SHGs) and Joint Liability Groups (JLGs). Despite the limited outreach of MFIs in Assam, the discourse surrounding the trade-off between outreach and sustainability is becoming increasingly pertinent. Given that MFIs function as semi-formal institutions, ensuring their long-term financial viability is essential. While initial evaluations of profitability and repayment rates appear promising, a more comprehensive assessment using sustainability indicators, such as Operational Self-Sufficiency (OSS), Financial Self-Sufficiency (FSS), and the Subsidy Dependence Index (SDI), is necessary for a holistic understanding. Repayment rates alone do not provide a complete measure of financial health, as they do not account for the costs associated with recovering loans. This study aims to investigate the outreach–sustainability trade-off within Assam's MFI sector, with a particular focus on a mature institution, Credit and Savings Program-Rastriya Grameen Vikash Nidhi (hereafter referred to as CSP-RGVN). The rationale for selecting CSP-RGVN lies in its operational maturity, which may enable it to achieve economies of scale and the potential for financial self-reliance over time. The central question posed is whether the expanding outreach of MFIs, such as CSP-RGVN, aligns with long-term sustainability. The remainder of this paper is organized as follows: Section I introduces the topic and methodology of the study. Section II reviews the literature on outreach and sustainability issues. Section III details the CSP-RGVN lending model. Section IV presents an analysis of outreach and financial sustainability, while Section V offers concluding remarks. This study relies on secondary data from sources such as the Reserve Bank of India (RBI), the Statistical Handbook of Assam, and annual reports from RGVN. Key indicators such as OSS, FSS, SDI, and the Subsidy Dependence Ratio (SDR) are computed using the audited financial statements of CSP-RGVN.

2. Outreach and Sustainability: A Review from Existing Literatures
2.1. Conceptual Framework for Measuring Sustainability:

In light of persistent poverty and the global proliferation of microfinance institutions (MFIs), outreach is regarded as a critical objective from both social and business perspectives. However, a significant challenge arises concerning the sustainability of microfinance programs, as it has been observed that only a small percentage of MFIs can operate without subsidies (Hulme and Mosley, 1996). While outreach and impact are inherently complementary in achieving

microfinance sustainability, they are not universally aligned; in some instances, outreach and sustainability are competitive. Sustainability often necessitates the reduction or elimination of subsidies in microfinance, alongside a robust recovery rate that can further enhance program outreach. A focused examination of this concept can be illustrated through outreach depth. For instance, when an MFI serves a population segment living below the poverty line, the likelihood of poor repayment increases in the event of adverse economic shocks, raising the delinquency rate. Even a minor delinquency rate can result in significant annual loan losses, necessitating increased loan loss provisions and, thus, elevating costs (Rosenberg, 1999). Consequently, the sustainability of microfinance has become a complex and contentious issue from various perspectives and is a key principle of the Consultative Group to Assist the Poor (CGAP). Commonly, microfinance sustainability implies a program's permanence. Within microfinance, sustainability can be assessed at multiple levels—both institutional (group and individual) and in terms of organizational, managerial, and financial aspects of the program. However, the financial sustainability of MFIs has emerged as the focal point of mainstream microfinance analysis, often overshadowing client sustainability. In defining microfinance sustainability, Woller et al. (1999) adopted Brinkerhoff's definition, which describes sustainability as the "ability of a program to produce outputs that are valued sufficiently by beneficiaries and other stakeholders that the program receives enough resources and inputs to continue production." Pollinger et al. (2007) defined sustainability as the capacity to cover annual budgets, including grants, donations, and other forms of fundraising. Acharya and Acharya (2006) referenced Sharma and Nepal (1997) to elucidate the concept of microfinance institution sustainability, where sustainability signifies excess operating income over operating costs. This perspective, rooted in banking, encompasses the financial and institutional viability of MFIs. Overall, sustainability is not an end in itself but a means to the ultimate goal of improving the conditions of the impoverished (Schreiner, 1997:63-64). In a broader context, the sustainability of microfinance encompasses various levels. However, this study focuses on the financial sustainability of microfinance institutions (MFIs). Financial sustainability implies that income from microfinance services should exceed the costs of providing these services. Therefore, self-sufficiency serves as an indicator of the financial sustainability of MFIs.As the microfinance industry matures, the definition of self-sufficiency has begun to slender (Ledgerwood, 1999, pp. 216-17), and currently, sustainability refers only to two levels of sustainability by the most of the people associated with this industry. These are *operational self-sufficiency* (OSS) and *financial self-sufficiency (FSS).*

Operational Self-Sufficiency (OSS) indicates whether sufficient revenue has been generated to cover direct costs, excluding the cost of capital but including any actual financing costs. Given that not all MFIs incur financial costs equally, financing costs are excluded for the sake of simplicity. The formula for calculating OSS is: [Operating Income / (Operating Expenses + Provision for Loan Losses)]. In contrast, Financial Self-Sufficiency (FSS) reflects the actual financial health of MFIs. It is evident from the definition that OSS only accounts for operating income and expenses, along with a provision for loan losses, but does not include the cost of capital, which can provide a more accurate depiction of financial sustainability. Therefore, FSS includes the adjusted cost of capital, in addition to the components in OSS. Vinelli (2002) defines FSS as income derived from operations divided by the operating expenses incurred, thus excluding revenue from subsidies. Conversely, Pollinger et al. (2007) describe self-sufficiency as the ability of organizations to survive and enhance their asset base solely through income derived from lending and related operations. Subsidies are a crucial factor in analyzing the sustainability of microfinance, in general, and MFIs, in particular. Most microfinance programs worldwide are subsidized in various ways, raising questions about their sustainability among academics and researchers. Even prominent institutions like the Grameen Bank of Bangladesh may experience high repayment rates but still rely on subsidies due to their significant focus on the social sector (Morduch 1999). It is also observed in the Philippines that replicating Grameen-type MFIs can be sustainable and significantly increase their outreach, but they are not entirely independent of subsidies (Seibel and Torres, 1999). The issue of subsidy dependence has garnered attention from researchers such as Yaron, Hulme, Mosley, and Khandker, who developed indices to examine the subsidy dependence of microfinance institutions (MFIs). The rationale behind these indices is to assess the social cost associated with such subsidies and to highlight

the detrimental effects of subsidies on credit (Yaron, 1992). The Subsidy Dependence Index (SDI), first developed by Yaron, assesses and quantifies subsidy dependence and measures the extent to which the lending interest rate would need to be increased to cover all operating costs if any subsidies received by the MFIs were removed (Hulme and Mosley, 1996:43). Consequently, the concept of a subsidy-free break-even rate for MFIs supports the argument for upward revisions of interest rates for poor borrowers. The SDI, as calculated by Yaron, is a fraction of (Subsidy / Loan Portfolio * Lending Interest Rate). The most intriguing aspect of the index calculation is the subsidy component, which comprises various cost revenues and cost elements. A modified version of the formula was devised by Hulme and Mosley (1996), who employed new notations and simplified the calculation process.

The Subsidy Dependence Index (SDI) reflects the subsidy reliance of an MFI, and its calculation traditionally considers only the income derived from the loan portfolio. However, it is evident that MFI's revenue sources also include earnings from investments and other activities beyond the loan portfolio. Furthermore, because cost components are associated with all these revenue segments, the SDI appears limited in its assessment of subsidies. Consequently, Khandker proposed the Subsidy Dependence Ratio (SDR) to provide a more comprehensive understanding of an institution's financial health. The rationale for adopting this ratio is grounded in the argument by Kahndakar and Khalily (1995), who posited that the SDI compares subsidies solely with revenue from lending, despite Development Finance Institutions (DFIs) also generating revenue from investments in non-loan assets, such as treasury bills. In principle, a DFI can reduce its subsidy dependence by increasing revenues from loans or investments. Therefore, the SDR suggests that subsidies should be compared with revenue from loans and investments (Schreiner and Yaron, 1999).

2.2. Empirics of Microfinance Sustainability:

Numerous empirical studies have been conducted on the sustainability and self-sufficiency of microfinance by various researchers and practitioners in different contexts. Brewer et al. (1996) examined the performance of Small Business Investment Companies (SBICs) from 1958 to 1996, highlighting the potential risks associated with subsidized funding. To enhance self-sufficiency, targeting different segments of the micro-business population can facilitate value generation by lending to individuals with superior credit histories, given their enhanced capacity to manage debt and lower the default rates. Vinelli (2002) posits that mission drift may occur when lenders prioritize profit by seeking borrowers who are easier and less costly to serve rather than striving to develop better and more affordable products. Regarding pricing and self-sufficiency, Gulli (1998) argues that institutions must impose adequate interest rates to cover their costs. Tang, Painter, and Bhatt (2002) suggest that reluctance to charge the maximum legally permissible interest rates and fees contributes to ongoing institutional reliance on subsidies, hindering programs from covering expenses and risk costs through operations. Acharya and Acharya (2006) found in their study in Nepal that clients prioritized individual sustainability over institutional sustainability, resulting in a 'trickle-up' effect for microfinance institutions to achieve institutional sustainability. The authors observed that small farmers' perspectives on sustainability are utility-focused and directly linked to their lives and livelihoods, encompassing benefits, income, and the economic survival of the family. From the perspective of small farmers, a local institution's ability to eliminate local indebtedness, sharecropping, and bonded labor is crucial for institutional sustainability. Adongo and Stork (2005) discovered that microfinance significantly promotes the sustainability of micro-enterprises by enhancing the management of their financial activities. However, regarding subsidized funding, no microfinance institution in Namibia was found to be independently financially sustainable. This finding suggests that if the costs of providing non-financial services are managed separately from those of financial services, financial sustainability could improve. Robbinson (2001) conducted an in-depth study of the microfinance market in Indonesia, revealing that microfinance institutions can be profitable, sustainable, stable, and widespread, enabling millions of the world's poor to build enterprises, increase income, and gain self-confidence.

3. Rashtriya Gramin Vikash Nidhi- Credit and Savings Program (RGVN-CSP): Context and Credit Delivery Methodology:

The Credit and Savings Programme (CSP) was initiated in 1995 as an action research initiative by Rashtriya Gramin Vikaskh Nidhi (RGVN), a prominent non-governmental organization in northeastern and eastern India. The purpose of this study was to evaluate the effectiveness of micro-credit interventions in the northeastern region. The CSP represents the core microfinance initiative of RGVN and operates independently from its other programs focused on NGO support and poverty alleviation. The primary objectives of the CSP are to facilitate credit access for the impoverished, mitigate exploitation by moneylenders, and foster self-employment opportunities. The program is specifically designed for individuals who cannot secure credit from the formal financial sector. The Credit and Savings Programme is implemented through an extensive network of unit and area officers.

3.1 Credit Delivery Modes of CSP

The Credit Support Program (CSP) administers credit through two primary delivery mechanisms: group and individual delivery methods. Within the group delivery method, credit is extended to economically disadvantaged women and men via self-help groups (SHGs) and Joint Liability Groups (JLGs). Conversely, the Entrepreneurship Development Loan (EDL) is categorized under individual lending methods. To facilitate a comprehensive understanding of the program's costs and mechanisms, a succinct overview of the three methods is provided below.

Self-Help Group (SHG): SHGs within the CSP framework consist of 10-20 female members who have no prior experience managing funds. Each group is required to have a leader and treasurer. The formation of SHGs is predicated on the notion that they will be self-sustaining, even in the absence of external credit. Savings are mandatory before loan disbursement. The loan amount per member ranges from Rs 4,000 to Rs 12,000, with an annual flat interest rate of 10% and administrative costs of up to 5%. The loan repayment schedule for this segment is either weekly or monthly.

Joint Liability Group (JLG): CSP also extends credit through JLGs, which are similar to the Grameen model of JLGs. Typically, these credit groups comprise to 5-6 members, both male and female, who have prior experience in fund management. Members must have comparable income cash flows to form groups. Unlike the SHG model, this method does not require a leader or a treasurer. In a JLG, members are both individually and jointly liable for their actions. The loan amount per member ranges from Rs 3,000 to Rs 25,000, with interest rates between 7% and 10% per annum (flat), contingent on the periodicity, and an administrative cost of up to 5%. Repayment schedules are either weekly or monthly.

Entrepreneurship Development Loan (EDL): This is an individual loan program, and eligibility is restricted to SHG members with a commendable repayment record for the last three loans and JLG members with a good repayment record for the last two loans. It is intended for SHG members who have attained a certain level of credit absorption capacity and who demonstrate entrepreneurial potential. Under this credit delivery mode, the loan amount ranges from Rs. 15,000 to Rs. 25,000, with a flat interest rate of 10% and an administrative charge of up to 5%. Repayment is scheduled weekly or monthly.

CSP's Process of Intervention: CSP conducts an area survey to gain a comprehensive understanding of the operational potential in the target area. The selection of an operational area involves several procedures, including a survey of bank availability, interaction with the Gaon Panchayat, an assessment of the bank's Non-Performing Assets (NPA) in the area, a target client survey, an analysis of credit needs, and a competitor analysis (including other NGOs and banks). Following the selection of the area, the next step was to form suitable groups for credit disbursement. The following steps were meticulously implemented in selecting the client groups. The field supervisors or credit officers aid in group selection. In the case of SHGs, weekly group meetings are held for three months when the group begins the process of saving a minimum of Rs 10/- per member per week. After this, for another three months, SHGs are encouraged to revolve the savings within members at a rate of interest decided by them. During this period, observations are made on self and credit discipline, and system development. Credit to

SHGs begins only after six months. In the case of JLGs, credit begins as soon as the group is formed. In addition, the MFI provides training for groups on group cohesiveness, bookkeeping, and credit discipline.

4. Results, Analysis, and Discussion:

4.1. Outreach and Operational Performance during 2001-02 to 2006-07:

The Credit and Savings Program marked its 13th year of operation in May 2008. Before delving into the trade-off between outreach and sustainability, it is important to review the program's operational performance, which includes its outreach efforts. Initially, in March 1996, the program operated with only four field offices across four districts in Assam. By March 2008, it had expanded to more than 32 field offices in 12 districts. This expansion reflects a 240% increase in district coverage and a 158% rise in client outreach, with active borrowers growing from 28,174 in March 2002 to 44,722 by 2008. This represents a compound annual growth rate (CAGR) of 22.68% for the period from 2001-02 to 2007-08. Additionally, the head office reports that approximately 90% of borrowers are women.

Table 1: Year wise Operational Highlights of CSP-RGVN

| Particulars	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08
No of area offices	3	3	3	3	6	7	7
No of field offices	10	10	9	13	22	32	32
No of Field Staff	55	53	54	50	70	120	161
No of Districts covered	5	5	8	8	9	10	12
No of active groups	2493	2291	2353	979	1557	3227	7952
No of active members (1st cycle)	28174	30089	30939	31674	30578	44279	62849
No of Active borrowers	28174	30089	30939	13526	15859	24147	44722
Outstanding portfolio (Rs in Lakh)	396.83	434.25	374.68	406.6	615.24	1322.34	2695.38
Average loan size on Outstanding portfolio (Rs)	1408.49	1443.21	1211.03	3006	3879	5476.2	6026.97
Total no of loans	42055	43970	44820	62233	70091	85935	117854
Cumm. Amt loan disbursed (Rs in Lakh)	1756.22	2309.59	2821.79	3246.07	3928.52	5721.07	9461.1
Avg loan size on disbursement	4176.01	5252.65	6295.83	5215.9	5604.89	6657.43	8027.82

Source: Head Office, CSP-RGVN

While the growth rate is indeed inspiring, the trend over the period is neither smooth nor uniform in nature. This is evident in Chart 1, where the annual growth rate dropped from 22.3% in 2001-02 to 6.8% in 2002-03, and even showed a negative growth of 56.3% in 2004-05. However, this trend subsequently recovered. Several factors could

account for this negative growth rate of the economy. One plausible explanation is client dropout, completion of repayment terms, and upgrading clients to higher loan sizes under JLG and EDP.

As discussed in Section 2, there are generally two distinct modes of credit delivery based on the number of members involved in the project. In the case of Self-Help Groups (SHGs), the number of clients is smaller than that of (JLGs), and both represent separate modes of credit delivery. Additionally, loan sizes in the former are smaller than those in the latter. When clients in these groups demonstrate fiscal discipline and establish a solid credit history, they become eligible for individual loans. Once the repayment period for clients in the group mode concludes, they may opt for a larger loan, indicating a decrease in active borrowers. Furthermore, some clients may exit the program due to delinquency, leading to loan write-offs and a subsequent decline in the outreach numbers.

Chart 1: Growth in Operation of CSP during 2001-02 to 2006-07
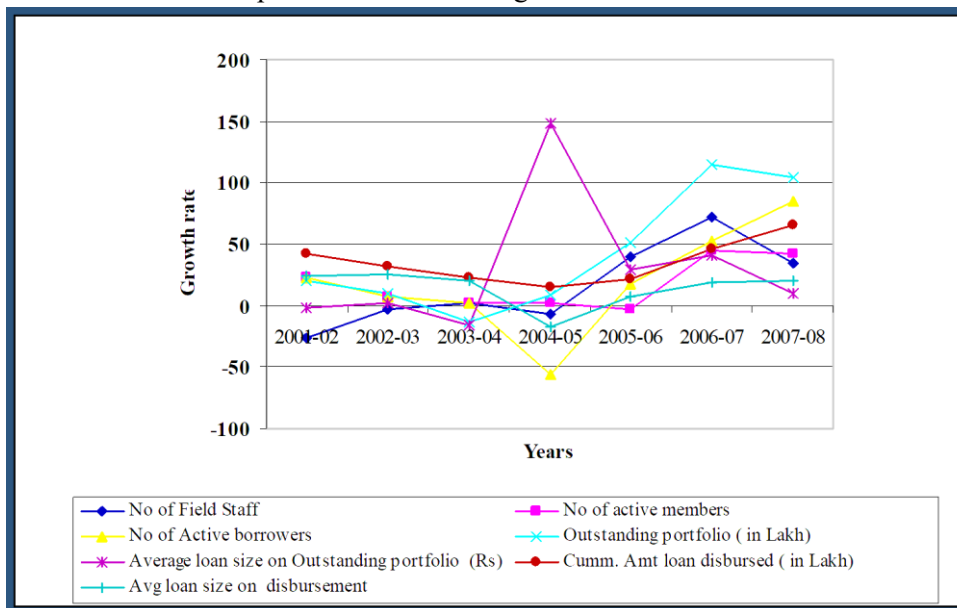
Source: Author's calculation

4.2. Financial Performance and Sustainability of the Program

From the analysis above, it is evident that the program has a significant client outreach for the reference period, with the cumulative loan disbursement amount growing at a 77.0% CAGR, while the outstanding loan amount shows a growth of 97.0% CAGR for the same period. The expansion of the loan portfolio suggests the program's profitability. However, the audited financial statements for various years confirm that the MFI made a profit in the fiscal years 2003-04, 2005-06, and 2006-07. It is crucial to determine whether these profits stem from the program's business activities or the subsidy component. This issue is significant because if an MFI like CSP-RGVN, which has been operational for over 13 years, cannot reach clients profitably, the supposed win-win proposition may be questioned. Therefore, to assess the MFI's financial health, OSS and FSS have been adapted for financial matters, and SDI and SDR have been used to analyze the program's sustainability.

Table 2: Calculated Indicators of MFI for the period 2001-02 to 2006-07
(Figures are in percentage)

Financial Year	OSS	FSS	SDI	SDR
2001-02	129.22	82.32	46.77	0.78
2002-03	165.55	98.4	15.2	0.62
2003-04	169.19	105.7	-12.71	0.7
2004-05	121.87	81.77	43.31	0.86
2005-06	121.8	87.14	47.75	0.67
2006-07	153.39	106.66	31.4	0.18

Source: Calculation done by author

Table 2 reveals that throughout the period, the OSS consistently exceeds 100%, indicating that the MFI can cover its operational costs from its operational income, allowing for provisions for loan losses. However, a closer examination of the FSS, which includes adjusted capital costs, offers a more accurate picture of an MFI's financial sustainability. As shown in Table 2, the calculations indicate that the MFI was financially self-sustainable in only two fiscal years (2003-04 and 2006-07). This suggests that MFI has significant work to achieve financial self-sustainability. Furthermore, the rates for these two years are not particularly impressive. Regardless of the implications of these ratios, they fall short of depicting a true picture of economic sustainability, which requires an examination of the SDI and SDR. It is evident from Table 2 that the MFI is less dependent on subsidies throughout the period. The dependency ratio never exceeded 50%, implying that the MFI could achieve long-term sustainability. The trend over the period shows that subsidy dependence was negative in 2003-04, suggesting that the MFI might be able to offset its social costs in the future. As an alternative to the SDI, Khandker developed the SDR to assess MFIs' dependency on subsidies by calculating income from loans, investments, and other sources. Therefore, this ratio provides a more detailed picture of sustainability. The analysis reveals that the SDR indicates greater subsidy dependency than the SDI during this period. Moreover, dependency does not uniformly decrease over time. For instance, with a dependency of 0.78 in 2001-02, the ratio declined to 0.62 the following year, increased to a maximum of 0.86 in 2004-05, and then declined in subsequent years. Although the ratio suggests that the MFI is not fully subsidized, it remains more subsidy dependent. However, the trend since 2004-05 indicates a continuous decrease in subsidy dependency. The ongoing debate regarding the trade-off between outreach and sustainability suggests that as outreach increases, subsidy dependence increases. As shown in Chart 1 and Table 1, the number of active borrowers increased during this period. However, indicators of subsidy dependence present a contrasting picture in our analysis, prompting the calculation of the Pearson correlation coefficient, as shown in Table 3, to examine this inference.

Table 3: Correlation of SDI and SDR with Outreach, FSS and OSS

	Outreach	FSS	OSS
SDI	-.681 (.136)	-.763 (0.77)	-0.897
SDR	-.202 (.701)	-.719 (.107)	-.421(.406)

* Correlation is significant at the 0.05 level (2-tailed)
 Source: Author's calculation

Table 3 shows that for the sample MFI, only the SDI has a significant negative relationship with OSS. This indicates that as SDI increases, OSS decreases, supporting the argument that an increase in OSS reduces MFI's dependence on subsidies. Although FSS was similarly related to SDI and SDR, these relationships were not significant. Table 3 also highlights a negative relationship between outreach and both SDI and SDR, with a high correlation between SDR and outreach, although neither is statistically significant. Consequently, this relationship cannot be confirmed, suggesting a potential trade-off between outreach and program sustainability. It is crucial to analyze the relationship among the calculation components of SDI and SDR to identify the factors closely connected with SDI and SDR.

Table 4 clearly indicates that SDR is negatively correlated with the loan portfolio, profit before tax, and total annual concessionary borrowed funds at a 99% confidence level, and with investment at a 95% confidence level, all of which are highly significant. While the relationships with the first three variables align with the commonly accepted notion, the correlation with the latter variable is contrary to this notion. It is generally believed that as concessionary borrowed funds increase, the dependency on subsidies also rises, resulting in a positive correlation. For SDI, no single calculation component showed a significant relationship with the indicator.

Table 4: Correlation of SDR and SDI with various calculation component

Calculation Component	SDR		SDI	
	Coefficient	Sig. (2-tailed)	Coefficient	Sig. (2-tailed)
Loan portfolio	-0.964**	0.002	0.073	0.89
Investment	-0.876*	0.021	0.141	0.79
Average annual equity	.a	.	.a	.
Total financial resources	-0.876*	0.021	0.141	0.79
Operating cost	-0.868*	0.024	0.258	0.622
Average concessionary interest rate	0.588	0.219	-0.623	0.187
Market interest rate for conc. fund	-0.49	0.323	0.545	0.263
On lending interest rate	.a	.	.a	.
Total annual concessionary borrowed fund	-0.919**	0.009	0.145	0.783
Subsidies	-0.753	0.083	0.038	0.942
Profit before tax	-0.946**	0.004	-0.107	0.841

a. Cannot be computed because at least one variable is constant.
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Source: Calculation done by author

To examine the issue further, an analysis of the cost-income pattern per borrower over the period is taken, as shown in Chart 2.

Chart 2: Expenditure as a percentage of Income for the period 2001-02 to 2006-07
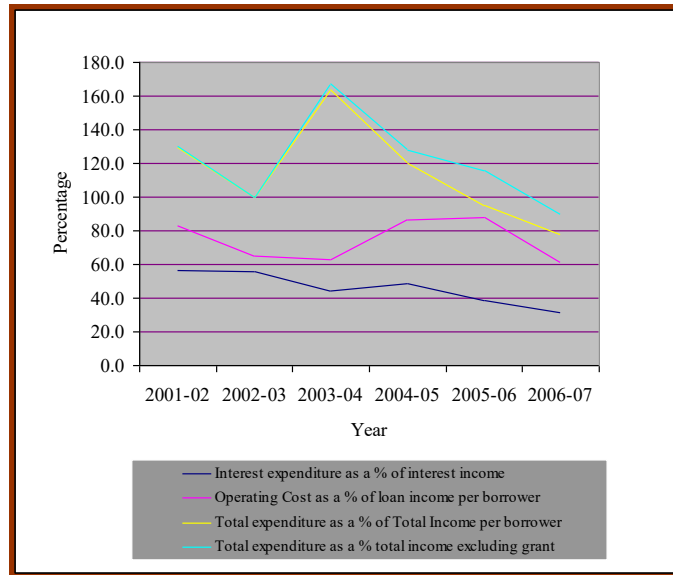
It is argued that for a microfinance institution (MFI) to achieve financial sustainability, it must generate profits. To grasp the fundamentals of financial sustainability from the perspective of an income-expenditure statement, various components of annual financial statements were analyzed. As illustrated in Chart 2, it is evident that the interest on borrowed funds (the MFI's interest expenditure) as a percentage of interest earned on loans decreased over the reference period. This indicates that, from an interest perspective, the MFI can potentially profit and continue providing microfinance in the future. However, this is only part of the story, as an MFI's expenditure encompasses not only interest expenses but also administrative costs, loan loss provisions and operating costs. Therefore, to gain a more comprehensive understanding of income and expenditure, the ratio of total expenditure to total income, excluding grants and expressed as a percentage, was considered. Chart 2 reveals that although this ratio has decreased over the period, it does not follow a smooth pattern. Specifically, the ratio declined from 167% in 2003-04 to 115.8% in 2005-06, and finally to 89.9% in 2006-07. Thus, while the MFI appears profitable from the perspective of interest income and expenditure, a broader view of income and expenditure presents a different picture, showing that, except for one year, the MFI cannot make a real profit without grants. This confirms that the MFI analyzed relies on subsidies for its financial operations and is not financially self-sufficient.

5. Conclusion:

This study provides a comprehensive analysis of the sustainability of microfinance outreach in Assam, India, focusing on the Credit and Savings Program (CSP) of Rashtriya Gramin Vikash Nidhi (RGVN). The research, based on data from 2001-2007, offers valuable insights into operational performance, financial sustainability, and subsidy dependence. The findings reveal significant outreach growth, with active borrowers increasing at a 22.68% Compound Annual Growth Rate (CAGR). While the program consistently achieved operational self-sufficiency, financial self-sustainability was attained in only two of the six years examined. The decreasing subsidy dependence ratios (SDI and SDR) indicate progress towards reduced reliance on subsidies, although complete elimination was not achieved. Notably, the study did not identify a clear trade-off between outreach expansion and sustainability. Despite operational self-sufficiency, financial sustainability remains a persistent challenge for CSP-RGVN. These findings underscore the complex dynamics of microfinance operations and highlight the ongoing efforts required to

achieve full financial self-sufficiency. To address these challenges, strategic initiatives such as reducing operating costs, increasing interest earnings, and exploring equity funding options are recommended. This research contributes to the broader understanding of microfinance sustainability and provides a foundation for future studies in this critical area of development economics.

References:

Acharya, Y.P. and Acharya, U., 2006, Sustainability of MFI from Small Farmer's Perspective: A case study of rural Nepal, *Institutional Review of Business Research Papers*, Vol. 2, No. 2, pp. 117-126

Adongo, J. and Stork, C., 2005, "Factors Influencing the Financial Sustainability of Selected Microfinance Institutions in Namibia", NEPRU Research Report No. 39, The Namibian Economic Policy Research Unit

Besley, T., 1995, "Savings, Credit and Insurance" in Behrman, J and Srinivasan, T.N. (eds) *Handbook of Development Economics, Volume 3A,* Elsevier Science, Amsterdam, pp. 2125-2126

Brewer, E., Genay, H., Jackson, W.E. and Worthing-ton, P.R., 1996, Performance and Access to Government Guarantees: The Case of Small Business Investment Companies, *Economic Perspectives*, Vol.20, No.5

CGAP, Key Principles of Microfinance, Accessed from http://www.cgap.org/gm/document-1.9.2747/KeyPrincMicrofinc_CG_eng.pdf

Clark, H., 2002, *Microfinance Distance Learning Course*, United Nations Publications, New York

Conning, J., 1999, Outreach, sustainability and leverage in monitored and peer-monitored lending, *Journal of Development Economics*, Vol. 60, No. 1, pp. 51–77

Ghate, P., 2007, *Indian Microfinance: the Challenges of Rapid Growth,* Sage Publications, New Delhi

Gulli, H., 1998, *Microfinance and Poverty: Questioning the Conventional Wisdom,* Washington, DC: Inter American Development Bank

Harris, D., 2007, "The State of the Micro credit Summit Report 2007", Retrieved from www.

Hermes, N. and Lensink, R., 2007, The Empirics of Microfinance: What Do We Know? *The Economic Journal,* Vol. 117, No. 517, pp. F1-F10

Hulme, D. and Mosley, P., 1996, *Finance Against Poverty Vol. 1*, Routledge, New York, pp.16-17

Jindal, K., 2008, "Regulatory Framework for MFIs" in Karmakar, K.G. (ed), *Microfinance in India*, Sage Publications, New Delhi, pp. 57-66

Khandker, S.R. and Khalily, B., 1996, "The Bangladesh Rural Advancement Committee's Credit Programs: Performance and Sustainability", World Bank Discussion Paper No. 324, World Bank, Washington D.C

Khawari, A., 2004, Microfinance: Does it Hold its Promises? A Survey of Recent Literature, HWWA Discussion Paper No. 276

Ledgerwood, J., 1999, *Microfinance Handbook: An Institutional and Financial Perspective*, World Bank, Washington, D.C.

Morduch, J., 1999, The Role of Subsidies in Microfinance: Evidence from the Grameen Bank, *Journal of Development Economics*, Vol. 60, No. 1, pp. 229–248

Morduch, J., 2000, The Microfinance Schism, *World Development*, Vol. 28, No. 4, pp. 617-629

NSSO, 2003, "All India Debt and Investment Survey: NSS 59th Round", Government of India

Pollinger J. J., Outhwaite, J. and Guzmán, H.C., 2007, The Question of Sustainability for Microfinance Institutions, *Journal of Small Business Management*, 45(1), pp. 23–41

Rhyne, E., 1998, The Yin and Yang of Microfinance: Reaching the Poor and Sustainability, *Micro Banking Bulletin*

Robinson, M.S., 2001, *The Microfinance Revolution: Sustainable Finance for the Poor*, World Bank Publication, Washington DC

Rosenberg, R., 1999, Measuring Microcredit Delinquency: Ratios Can Be Harmful to Your Health, Occasional Paper No. 3, Consultative Group to Assist Poorest

Sa-Dhan Microfinance Resource Centre, 2003, Sustainability of Microfinance Interventions, Perspective Paper No. 4, pp. 1-20

Schreiner, M. and Yaron, J., 1999, The Subsidy Dependence Index and Recent Attempts to Adjusts It, *Savings and Development*, Vol. 23, No. 4, pp. 375-405

Schreiner, M.J, 1997, "A Framework for The Analysis Of The Performance And Stainability Of Subsidized Microfinance Organizations With Application To Bancosol Of Bolivia And Grameen Bank Of Bangladesh", Unpublished Doctoral Dissertation, Graduate School of The Ohio State University

Seibel, H.D. and Torres, D., 1999, Are Grameen Replicators Sustainable, and Do They Reach the Poor? The Case of Card Rural Bank in the Philippines, The *Journal of Microfinance*, Vol. 1, No. 1, pp. 117-130

Sharma, S.R. and Nepal, V., 1997, *Strengthening of Credit Institutions /Programs for Rural Poverty Alleviation in Nepal*, United Nations, Economic and Social Council (ECOSOC) for Asia and Pacific, Bangkok, Thailand

Tang, S. Y., Painter, G. and Bhatt, N., 2002, "Microcredit Programs in the United States: The Challenges of Outreach and Sustainability", in Carr, J. and Tong, Z.Y. (Eds.), Replicating microfinance in the United States, Woodrow Wilson Center Press, Washington, D.C., pp. 191-221

Woller, G.M., Dunford, C. and Warner, W., 1999, Where to Microfinance, *International Journal of Economic Development*, Vol. 1, No. 1, pp. 29-64.

Yaron, J., 1992, Assessing Development Finance Institutions: A Public Interest Analysis, World Bank Discussion Paper No. 174, World Bank, Washington, D.C..

Zeller, M. and Meyer, R.L., 2002, "Improving the Performance of Microfinance: Financial Sustainabilty, Outreach and Impact" in Zeller, M. and Meyer, R.L. (eds), *The Triangle of Microfinance: Financial Sustainabilty, Outreach and Impact*, The Johns Hopkins University Press, Baltimore, pp. 1-14