The Measurement of the Economy of Scale of Microfinance Institutions: A Case of MC2 Cameroon
Rovier Djeudja, Franz Heidhues
University of Hohenheim, Department of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Germany

Introduction
In many developing countries including Cameroon, microfinance has been growing substantially. Its objectives are to improve the efficiency, outreach and sustainability of formal rural finance systems often based on development banks. The availability of small loans and well-adapted savings instruments to the poor constitute key tools in the fight against poverty. According to the study on the decentralized financial system in Cameroon published in 1997, Cameroon counted on this date more than 389 institutions of microfinance, and the number increased over time. The decree MINFIB/MINAGRI No 0015/036 of January 15, 2002 closed more than 388 institutions of microfinance, without counting various voluntary or involuntary closings. Consequently, there is a problem of sustainability and effectiveness of rural microfinance in Cameroon.

Objectives
- Analyze the transaction costs, the operation costs and the volume of saving and credit activities of 10 microfinance institutions (MC2) in the West Province who have been operating for at least five years.
- Determine factors which limit growth and efficiency of the institutions.

Method
- Descriptive analysis: Analyze different balance sheets and operating accounts.
- Econometric analysis: Use of the Cobb-Douglas function to determine the ability of those institutions to generate economies of scale.

Results
- The transaction costs account for on average 80% of the total operation cost and 69% of the total income.
- Interest and innovative products such as “Flash Cash” instrument account for an average 53% of the total income.
- The unit transaction cost and the unit total cost according to the volume of activity (saving and credit) are at 0,51 FCFA and 0,64 FCFA respectively.
- The scale parameter of scale of credit volume and savings is significantly < 1. That indicates a substantial potential for the institutions benefit from economies of scale.

Table 1: Coefficient and parameter of scale of the performance index of MC2

<table>
<thead>
<tr>
<th>Variable dependante</th>
<th>Coefficient</th>
<th>r²</th>
<th>Paramètre d'échelle Epargne</th>
<th>Paramètre d'échelle Crédit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coût total des opérations</td>
<td>11,428**</td>
<td>0,482</td>
<td>0,072</td>
<td>0,48**</td>
</tr>
<tr>
<td>Constante Epargne</td>
<td>(229,158)</td>
<td>(499,955)</td>
<td>(32,963)</td>
<td></td>
</tr>
<tr>
<td>Constante Crédit</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F: 0,468**

The numbers between bracket give the value of t
The signs * ; ** give the levels of significance to 5% and less than 5%.

Conclusions
- Transaction costs play an important role in the efficiency and sustainability of microfinance institutions.
- To be sustainable and efficient in the long term, MC2s should increase their activities (savings and credit) within the range of reasonable risks.