MSE's play an important role in the social economic development of the country. The sector contributes towards economic growth, employment creation, poverty reduction and development of an industrial base. They are important for raising efficiency of a country owing to their flexibility and low production costs. They act as breeding grounds for entrepreneurship innovation and invention hence a reservoir for employment. MSE's must therefore be nurtured to grow beyond social level, this has been noted in Machakos municipality of Machakos District, that MSE's have recorded notable growth through the assistance of MFIs, however the formal banking sector has now tailored a micro credit scheme in empowering the SME's in terms of credit provision among other small lenders. The study sought to analyze the contribution of microfinance institutions on growth of medium and small scale businesses in Machakos municipality through credit provision. The study design used a cross sectional sampling strategy; a total of 50 respondents from MSEs were randomly selected from different strata's and 5 MFI's were studied for the purpose of this study. The data was gathered using questionnaires, interviews and observation. The data was analyzed by use of Microsoft Excel and use of Statistical Package for Social Sciences (SPSS). Based on the result of the survey it was found that MFI's play a major role in credit provision to the MSEs, and this credit has contributed a major part in the growth of the business in terms of asset base, level of stocks, services and the number of employees the business can sustain. It also indicated that the credit services in businesses which do not show increased profitability, changes in stock levels and services are used to sustain the business and avoid possible collapse. Some suggestions and recommendations from the study are that the government should address the main problems that medium and small enterprises encounter in accessing credit, by creating an enabling policy environment through simplifying and harmonizing licensing requirements, reduction of taxes and enhance access to relevant information through seminars and workshops. The government through the CBK should develop appropriate standards which recognize the special nature of micro finance institutions and strengthen them through integrating their operations in the main stream banking sector. The CBK should also make it a requirement for banks to have a separate micro finance credit line of service to take care of the needs of the MSEs as evidenced by K-Rep Bank, Equity Bank and Family Bank.