2.2. POVERTY REDUCTION BY FINANCIAL INCLUSION OF WOMEN - EVIDENCE FROM SERBIA

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Abstract

This paper reviews current thinking on relationship between financial development and poverty alleviation, as a subject getting more important in the policy of financial institutions as well as in state social and economic policies. For that purpose in the paper has been researched the importance of the poverty alleviation and financial loan support to women in Serbia in 2014 with a seasonal dynamics, around which was situated the scope of the paper. Survey targeted all client segments defined on the main statistical base of Serbia for poor and low income inhabitants, and covering geographical regions where operates a financial institution which loans were researched, based on a random sample. Mathematical and descriptive statistical methods were used, as well as a typical fitting measure, Coefficient of determination, for measure of fitting the trend-line with the empirical data. The hypothesis formulated as possible impact of micro finance on poverty decrease proved as positive through influencing on sustaining jobs, indirect and induced, created jobs. Main findings supported the importance of the micro lending together with innovations in products: education, training and business skills upgrading to female clients in poverty alleviation and wealth sustainability.
INTRODUCTION

Women present half of the world’s population. There are research evidences on the female entrepreneurs as one of the fastest growing entrepreneurial populations today, as innovative, job and wealth creative making significant contributions to economies in terms of gross national product. Candida Brush, Nancy Carter, Elizabeth Gatewood, Patricia Greene, Myra Hart (2006); Elaine Allen, Amanda Elam, Nan Langowitz & Monica Dean (2007). These trends are supported by data of the Global Entrepreneurship Monitor (GEM) on women entrepreneurs as those creating, running and growing businesses across, not only in traditional but in all industrial sectors. Women in transition countries full of employment problems and these less developed countries are motivated by necessity in starting business, and motivation like to fulfill an opportunity on the market or innovation are more evident as starters in developed economies.


From the other side, according to the UNIFEM (2009) women bear a disproportionate burden of poverty, making up the majority of low paid work and informal sector, Mirjana Radovic-Markovic Grozdanic, Boris Jevtic (2014); Grozdanic Radmila, Mirjana Radovic-Markovic, (2009) of most economies, Suzy Cheston and Lisa Kuhn (2002, p.8 b). Development cannot be effective and efficient if women are excluded from development process. A great number of countries today treat in their normative and policy gender equality as a matter of development effectiveness, World Bank, (2002, p.1) based on the Beijing Platform.
for Action of 1995 (BPFA, Women and Poverty, Strategic Objective A.3.) having recognized women’s access to financial resources as an important strategy for poverty reduction.

It is believed that they reach higher repayment rates Aminur Rahman, (1999); beside what targeting women is also to enable them equal access to financial services. According to Linda Mayoux (2002b), microfinance is being promoted as the key strategy for empowerment and poverty alleviation. Microfinance services are also more often directed to women, but still, the proportion of women participating in these programs is not so high. According to the SOCR’s data (2009) there were 3,552 microcredit institutions reported having around 154 million clients and around 106.6 million of whom were among the poorest when they took their first loan. According to SOCR (2009) 83.4 percent were women.

Women credit discipline with microfinance loans is sometimes used to measure the success of MFIs, Anne Bunning, (2004). From the aspect of poverty reduction impact, argue that the impact of poverty reduction should be continuously assessed rather than taken for granted. Statistics on repayment alone do not often mean an increase in income. As women can also the money to repay take from other resources it can possibly lead to greater indebtedness, and can women in some cases pose even greater burden on them, causing recycling of debt Katharine Rankin, (2002).

The aim of this paper is to better understand the shortcomings of finance initiatives and understand the importance of the broader context in poverty alleviation efforts, proposing a closer look at income generation possibilities and empowerment of women, two, as having better access to loans for women can gave positive impact to poverty reduction to whole family, especially in rural areas and less developed communities.

LITERATURE FRAMEWORK

Poverty reduction

The poverty is a complex phenomenon with its monetary and non-monetary definition:

- Monetary - it implies the one-dollar a day poverty line introduced by the World Bank in the 1980s, Peter Townsend, (2006, p.5);
Part II. Income Inequality & Discrimination and Poverty

- Nonmonetary – underlies the importance of social capital.

Day poverty line was introduced by the World Bank (1980). Some authors: Susan Johnson and Ben Regally, (1997); Susan Holcombe, (1995), have pointed out three definitions of poverty with two common denominators - income and empowerment. Empowerment is used as criteria for determining the desirability of a development intervention. As cultures and class very much differ, it becomes a highly difficult concept to measure but, the importance of addressing women’s empowerment even if the desired outcomes and goals of empowerment are culturally relative is very important. Besides that, the gender inequalities and discrimination against women as contributing directly to the perpetuation of poverty has been more and more recognized among theorists as well as world organizations concerning research on poverty of women.

**Women and financial support**

Financial services provided by formal institutions do not reach all segments of population, especially the luck of small loans for women in and do not have the opportunity of breaking away from the poverty circle by making use of their skills. Further, for women the lack of experience and illiteracy make it more difficult to deal with formal credit services. The concept of micro lending appeared as more successful answer to these problems, starting as an initiative in a developing country, as Bangladesh focusing on small loans provided to the poor and have been promoted... “To address the concerns and needs of poor households that markets and governments fail to adequately meet”. Ranjula Swain (2008, p.193). Acclaimed as an effective means of poverty reduction micro landing was incorporated into mainstream development agendas.

Markets started two decades ago be considered as not mechanisms for achieving only economic growth, but also political freedom and social justice with the assumption that the poor should be given better access to the market, satisfying both the neo-liberal philosophy of the importance of the market, and bottom-up approach to development.

To satisfy the need for the better access to market for women Juliet Hunt and Nalini Kasynathan, (2001), the structure of rural economy and absence of investment opportunities are left as opened issues of the stagnation and low productivity in rural areas, seasonal characteristics, which credit alone cannot solve Alexandra (Bernasek, (2003, p.375). Further, persisting in informal sector...
only reinforces women’s presence there leaving them with little opportunities to climb out of poverty.

An assumed link between credit and empowerment of women namely, small credits increases women’s income and their control over that income, brings along transformation in the society, social attitudes and perceptions change and women’s status is enhanced as their knowledge and skills are upgrading and increasing their participation in household decision making. Access to resources alone is very important, but it does not automatically translate into empowerment or equality. Some authors would see women to have the ability to use the resources to meet their own goals, to reach further the social goals. Loans to women are often considered as a household resource rather than resource to women. That is why to understand the contribution of finance to women empowerment through decision making regarding the use of credit, managing enterprises supported by credit, paid or unpaid labor used, control of the marketing of products and through keeping and using any income generated. That differs in the case when the women were single, divorced or widows (in less developed countries, where most rural women are vulnerable to patriarchal ideology, related prevailing social norms and intra household gender relations). Very popular models of lending to women are:

- **Group based lending**, model pioneered by Bangladeshi Grameen Bank-which provides access to credit on the basis of social collateral in the societies where women are not socially isolated, and can get access to wider information and support networks for economic activity and groups for change in women’s position. Social sanctions and peer enforcement are used to guarantee repayment of loans;

- **Lending through Confide guarantees**, model pioneered in Italy – provides access to credit on the basis on multi-guarantee schemas of some cooperatives or associations of farmers, crafts, solo trades, micro entrepreneurs.

**FEMALE ENTREPRENEURS**

According to the Serbian Government Strategy for the Development it is expected that SME’s generate up to one million new jobs in Serbia (Gov. Offices, 2014). Up 51.3% of the total population in Serbia make women. Based on information available from multiple sources CEVES, (2014); Marija Babovic, (2012); Radovic -
Markovic, (2007b), it is clear that the economic potential of women in Serbia is not sufficiently used. Comparative research shows that in 2007, among women aged 18-64 years were only 7.9% entrepreneurs GEM, (2009). Research from 2009 indicates increase of female entrepreneurs in Serbia (14.9%) Marija Babovic, (2012c). If Serbia is compared with other European countries, the proportion of females who run companies is below average. National Agency for Regional Development has been commissioned by the government to promote women entrepreneurship. Women Opportunity Index shows that Serbia is low rated and a presence of fewer entrepreneurs among Serbian females than males implicates a non-equal society Radovic – Markovic, (2007d). Females are more likely to be unemployed or short term employed due to employers' obligation to pay maternity allowance and childcare absence.

**METHODS AND MATERIALS**

**Indicators**

In this research are used official statistical indicators on monthly household income (net, which is the total of all incomes of family members from labor, pension, capital ad other activities, formal and informal in cash or goods, deducted for the monthly rate of loan and divided by number of household members) as a tool for poverty assessment of the bank clients interviewed, and according to that, the clients have been classified into further categories.: Very poor, Poor, Low income clients and others.

Indicators so calculated for the analysis are: available net monthly total household income (P); monthly rate of credit (K) it any; and number of household members (N). If \( P - K / N \) = total of income was just enough for food, the client was categorized into a group of Very poor; if \( P - K / N \) = total of income was enough for food, and for costs of health and apartment, the client was categorized into group of Poor, and if \( P - K / N \) = the total income was above to be Poor, but lower the sum of average consumption, has been categorized into a group of Low income clients. Alike were analyzed the measures of the share of Bank loan clients which were, according to the monthly discretionary income, as per the official definition of Absolute and Relative Poverty in the Republic of Serbia, categorized in two poverty categories: Low income and Others clients (Table 2).
The surveys were targeting all client segments and covering all geographical regions where the financial institution which has been taken so far in 2014, 65 client interviews were carried out across Serbia, with complete answers them 57 (45 men vs. 12 women, 41 agro vs. 16 business clients, 54% of interviewees were 45-60 years old while 35% were 30-45 years old).

**Key findings**

There were used *Coefficient of determination* \((R^2)\), which represents the relative measure of fitting the trend-line with the empirical data. Therefore, this coefficient represents the level of the explained variability in corresponding theoretical model. In the case of the time series, the estimated value of the coefficients of determination are equal \(R^2 = 0.9309\) (Sustained-series) and \(R^2 = 0.8828\) (Created-series), respectively. This means that 93.09% of contribution towards in the prediction of sustained jobs dynamics can be explained according the appropriate trend-line. Similarly, the fitted trend-values can explain 88.28% of contribution towards in the prediction of created jobs dynamics.
Part II. Income Inequality & Discrimination and Poverty

Researched has been the relationship between two poverty categories described above, related to the numbers of sustained and created jobs. In the first part of the analysis, these values were stratified by five regions:

**Table 3: The impact of sustained jobs in the first half of 2014 (breakdown per region)**

<table>
<thead>
<tr>
<th>Regions</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>130</td>
<td>271</td>
<td>419</td>
<td>489</td>
<td>359</td>
<td>237</td>
<td>1,905</td>
</tr>
<tr>
<td>II</td>
<td>89</td>
<td>179</td>
<td>186</td>
<td>179</td>
<td>149</td>
<td>98</td>
<td>880</td>
</tr>
<tr>
<td>III</td>
<td>369</td>
<td>492</td>
<td>561</td>
<td>572</td>
<td>368</td>
<td>386</td>
<td>2,748</td>
</tr>
<tr>
<td>IV</td>
<td>429</td>
<td>797</td>
<td>1144</td>
<td>1314</td>
<td>949</td>
<td>874</td>
<td>5,507</td>
</tr>
<tr>
<td>V</td>
<td>293</td>
<td>438</td>
<td>561</td>
<td>617</td>
<td>634</td>
<td>527</td>
<td>3,070</td>
</tr>
<tr>
<td>Total</td>
<td>1,310</td>
<td>2,177</td>
<td>2,871</td>
<td>3,171</td>
<td>2,459</td>
<td>2,122</td>
<td>14,110</td>
</tr>
</tbody>
</table>

*Source: Research results*

For the research of the relationships between the impact of sustained and created jobs, per region, related to poverty categories of the Bank loan clients was used the *model of Multiple Regression Analysis*, in which were interpreted five levels of impact jobs described above as the realizations of the appropriate multidimensional input variables. Similarly, two above described poverty levels: “Low income” and “Others clients” we interpreted as the components of (two-dimensional) output variable. However, it is usually that every of poverty categories level be interpreted as a single output variable. In this way, it can be formed the appropriate Multiple Regression Model (MRM), as the theoretical model of “fitting” the relationships between the (sustained and created) jobs impact, classified per region breakdown, and two poverty categories levels described above. MRM represents, approximately, multi-functional dependency of the region levels jobs impact (as input variables), related to the every poverty categories level, which is observed as the appropriate output variable. Regression coefficients, estimated according to empirical data, in this case represent the predictive power of measuring outreach to the poor of each region, individually. In this way, greater values of these coefficients indicate a greater impact of the corresponding region within the individual categories of poverty, and vice versa.
Table 4: The impact of created jobs in the first half of 2014 (breakdown per region)

<table>
<thead>
<tr>
<th>Regions</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>89</td>
<td>253</td>
<td>143</td>
<td>206</td>
<td>52</td>
<td>61</td>
<td>804</td>
</tr>
<tr>
<td>II</td>
<td>63</td>
<td>103</td>
<td>96</td>
<td>65</td>
<td>39</td>
<td>36</td>
<td>402</td>
</tr>
<tr>
<td>III</td>
<td>198</td>
<td>376</td>
<td>308</td>
<td>286</td>
<td>118</td>
<td>183</td>
<td>1,469</td>
</tr>
<tr>
<td>IV</td>
<td>869</td>
<td>509</td>
<td>662</td>
<td>752</td>
<td>539</td>
<td>322</td>
<td>3,653</td>
</tr>
<tr>
<td>V</td>
<td>326</td>
<td>306</td>
<td>245</td>
<td>164</td>
<td>132</td>
<td>51</td>
<td>1,224</td>
</tr>
<tr>
<td>Total</td>
<td>1,545</td>
<td>1,547</td>
<td>1,454</td>
<td>1,473</td>
<td>880</td>
<td>653</td>
<td>7,552</td>
</tr>
</tbody>
</table>

Source: Research results

Table 4 shows the estimated values of multiple regressions between in the case of both poverty categories, regarding to the Sustained and Created jobs impact of each of regions. In the second column of the Table 4 are given estimated values of the regression coefficient whose represent the proportion of the certain region Sustained impact within the Low-income poverty category. As can be seen, the highest (positive) estimate, equals 7.368, corresponds to the region II. This is followed by region of IV at 4.372, while the other regions have negative estimated coefficients values. This is especially pronounced in the region III that has the most negative-estimated regression coefficient, equals -8.156. This is basically a "positive" fact, and it suggests that any investment by the OBS loan in these regions decrease the number of Low-income clients. According to obtained regression coefficients, we can create the appropriate predictive regression model of Low income, where Sustained jobs impact of regions represents predictor variables.

The predictor equation in raw score is as followed:

\[
\text{Low income} = 2817.48 - 1.090 \text{ region I} + 7.368 \text{ region II} - 8.156 \text{ region III} + 4.372 \text{ region IV} - 6.388 \text{ region V}
\]

The quality of the obtained regression relationships, i.e. the degree of agreement the obtained regression function with the empirical, observed data is expressed by two quantitative indicators:

1. **Multiple Coefficient of Determination** \((R^2)\) is a relative measure of fitting the regression line with the empirical data, as the level of the explained variance in the corresponding regression model.
2. Aikike’s information criteria (AIC) are a quantitative indicator of a general agreement of the theoretical, fitting model in relation to the given set of empirical data. This criterion is very widely used in practical applications, as a measure of quality of “fitting” the empirical data with the corresponding statistical and theoretical model. Within a given class of theoretical models, the most convenient will be the one for which is realized the minimum values of the AIC. This means that the theoretical model will be more competitive if the value of the AIC is lower, primarily negative.

Based on the previously described indicators, the quality of the obtained regression model can be considered as follows. In the last two rows of Table 5 it can be seen that the estimated value of the coefficient of determination is $R^2 = 1$, i.e. the whole of contribution towards the prediction of the Low income can be explained by obtained model. Also, the extremely small negative value of the Aikike’s coefficient, $AIC = -302.41$, confirms the fact that the obtained regression model is a very adequate theoretical model of dependency the Low-income level regarding to the Sustained jobs impact, per regions.

**Table 5: Multiple regression analysis of the poverty categories levels related to the regions jobs impact**

<table>
<thead>
<tr>
<th>Predictor variables</th>
<th>Sustained Low income</th>
<th>Sustained Others</th>
<th>Created Low income</th>
<th>Created Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>2,817.479</td>
<td>61.919</td>
<td>647.35</td>
<td>696.51</td>
</tr>
<tr>
<td>I</td>
<td>-1.090</td>
<td>1.116</td>
<td>2.242</td>
<td>2.153</td>
</tr>
<tr>
<td>II</td>
<td>7.368</td>
<td>-1.269</td>
<td>8.075</td>
<td>15.766</td>
</tr>
<tr>
<td>III</td>
<td>-8.156</td>
<td>1.313</td>
<td>-2.500</td>
<td>-3.376</td>
</tr>
<tr>
<td>IV</td>
<td>4.372</td>
<td>-0.395</td>
<td>0.292</td>
<td>0.744</td>
</tr>
<tr>
<td>V</td>
<td>-6.388</td>
<td>0.885</td>
<td>-2.418</td>
<td>-3.652</td>
</tr>
<tr>
<td>Multiple R-squared</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>AIC</td>
<td>-302.41</td>
<td>-317.84</td>
<td>-323.57</td>
<td>-315.11</td>
</tr>
</tbody>
</table>

*Source: Research results*

In the following, we considered the prediction of the Others-income category in depending on the Sustained jobs impact levels of regions. In the third column of Table 5 it can be seen their estimated regression coefficients. Compared with the previous, they are relatively lowest, and, as expected, these values have an “opposite” character. Namely, each positive Low-income regression coefficient
corresponds to negative coefficient of Others-income, and vice versa. The highest estimated value corresponds to the region III, equals 1.313. Then, it follows I region with coefficient equals 1.116, and V with 0.885. The other estimated values of regression coefficients are negative. On the other hand, the estimated value of the coefficient of determination $R^2=1$, as well as the Aikike’s coefficient $AIC = -317.84$ confirm (again) the fact that it is in this case obtained regression model adequate. Thus, the Others-income of the OBS loan clients depends significantly on the Sustained jobs impact per region. The appropriate predictor equation in raw score is as followed:

$$\text{Others} = 61.919 + 1.116 \text{region I} - 1.269 \text{region II} + 1.313 \text{region III} - 0.395 \text{region IV} + 0.885 \text{region V}$$

In the third part of the multiple regression analysis, we analyzed the dependence of the Low-income in relation to the Created jobs impact, where levels are taken per regions, again. The results are shown in the fourth column of the Table 5. The highest value of corresponding estimates of regression coefficients has, as in the first case, the region II, equals 8.075. On the other side, the regions of III and V have the similar, negative estimated values of regression coefficients which equal, approximately, -2.500. Therefore, similarly as in previous case, the investment by the bank loan in these two regions effect on the reduction the number of Low-income clients. Finally, the R-squared coefficient, as in the previous two cases equals $R^2=1$, and the Aikike’s coefficient equals $AIC = -323.57$. Thus, the obtained regression model in a very qualitative manner describes the observed dependency. The predictor equation in raw score is as followed:

$$\text{Low income} = 647.35 + 2.242 \text{region I} + 8.075 \text{region II} - 2.500 \text{region III} + 0.292 \text{region IV} - 2.418 \text{region V}$$

In a last part of analysis, were explored the dependence of the others bank’s clients in relation of the Created jobs impact, per regions. The results of multiple regression analysis are shown in the fifth column of the Table 5. The convincingly largest estimated value of the regression coefficient corresponds to II region, equals 15.766. Then, it follows the region I, which has the estimated regression coefficient equals 2.153, as the region of IV equals 0.744. The other estimated values of regression coefficients are negative. Thus obtained the regression model is also of high quality, as well as the previous three models. This is evidenced (again) by the extremely low value of the Aikike’s coefficient ($AIC = -315.11$). On the other hand, the R-squared coefficient is (again) extremely high ($R^2=1$).
Therefore, obtained theoretical model is adequate in describing the dependency of Others-income clients related to the Created jobs impact, per regions. At last, the predictor equation in raw score can be written as followed:

\[ \text{Others} = 696.51 + 2.153 \text{ region I} + 15.766 \text{ region II} - 3.376 \text{ region III} + 0.744 \text{ region IV} - 3.652 \text{ region V} \]

**DISCUSSION AND CONCLUSIONS**

Financing initiatives gender oriented, researched in this paper have proved to be an important tool in development process. Through innovative approach they have managed to give opportunity of access to finance to those who were previously denied such access and who have often been excluded from development programs, these are mainly women. Recognizing positive effects women have on household welfare as well as financial sustainability of micro loans bank policies, they became the major recipients of micro lending services. While both positive effects mentioned call for continued provision of loans to women, they nevertheless have to be considered in more detail if they are to be used as arguments for targeting women to achieve poverty alleviation. Spending the loan on household consumption serves well in the short term. But at the same time, it does not leave room for investment in business that might be beneficial in the long term. Aiming for financial sustainability might push women into greater indebtedness and decrease additional services - might otherwise offer such as - business training and gender awareness rising, education, skills upgrading by loan providers, or the public sector, which could form the basis for a more efficient use of loans. Examination of the link between finance initiatives, empowerment and income generation showed that such links should not be taken for granted, since the context in which these initiatives take place has to be taken into account. However, awareness of the complexity of broader environment is the precondition to the understanding that finance initiatives targeted to women alone cannot be considered the silver bullet for poverty reduction.

**REFERENCES**

2. Babović, M. (2012), Profil preduzetnica u Srbiji, Skraceni izveštaj na osnovu polazne studije o preduzetništvu zena u Srbiji,