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SME´s business environment: The case of Croatia

1 Introduction

SMEs are a fundamental part of a competitive and stable economy. This role requires huge investments and they, in turn, require the approach to financial resources to a suitable extent and under suitable terms. However, entrepreneurs have various difficulties to deal with. These facts present strong arguments for ensuring a stimulating environment for small entrepreneurship around the world.

Small businesses are known for its vitality, flexibility, and variety. SME sector is praised because of its important contribution to economic development, job creation, reduction of regional development gaps, innovative capabilities and improvement of economic structure. Specificities of the SME embrace greater growth prospects and options (Sherr & Hulburt, 2001). A small firm adjusts more flexibly to changes of the market, representing a fertile ground for innovation. Employees in micro and small enterprises usually exhibit more than one job; organizational structure is simpler while communication among owner/manager and employees is of higher frequency and more fundamental.

The case of the current global financial crisis clearly shows how important are to maintain jobs and competitiveness by subsidies to small entrepreneurship. SME are important for the economic growth and its balance. In many countries they employ over 50% of the formal workforce (Ayyagari, Beck and Demirgüç-Kunt, 2007). Furthermore, small firms and mature firms have the highest levels of total employment while small firms and young firms have the highest rates of job creation (Ayyagari, Demirgüç-Kunt and Vojislav, 2011).

On the other hand, deficiencies of SME include limited managerial and financial resources, particularly in the stage of company growth (Kolaković 2006; Vidučić, 2005). It happens more frequently that an entrepreneur is not able to perform managerial function in times when number of employees is growing and/or organizational structure is getting more complex. They face a, higher failure rates, shorter asset maturities (Sherr & Hulburt, 2001), orientation to less competitive and more restrictive financial markets (Berger and Udell, 1998, Viducic, 2005).

Due to higher mortality rate compared to large enterprises, small businesses may encounter a problem when trying to employ adequate capital and highly qualified experts. Small enterprises are dependent (complementary) on large enterprises which may be the source of liquidity constraints.
2 Literature review and generation of hypothesis

The entrepreneurs' approach to financial resources is the issue that both developing and developed countries are very interested in. Literature examining small businesses underlines agency costs and informational asymmetry. The reasons for SMEs’ difficulties in ensuring external finance in appropriate amount and/or competitive terms, embrace issues such as higher uncertainty and imperfect information (Stiglitz, Weis, 1981; Harrison, Mason, 1991; Brigham, Gapenski, 2006A). Asymmetric information and clash of interests between different agents involved in lending process are further aggravated by qualitative factors such as lack of credit ratings, concentration of ownership and control in entrepreneurs’ hands (Fazzari et al, 1988; Riportela and Papis, 2006). Lack of: credit ratings and inadequate transparency and late introduction of credit and movable property registry lead to high requirements for collateral and personal equity which SMEs usually lack.

Obstacles for optimal financing of SMEs may include the very character of an entrepreneur – refusal to share control by emitting shares, refusal to apply for loans due to risk aversion – as well as the legal framework, e.g. bureaucratic procedures (Scherr and Hulburt, 2001, Barton and Gordon, 1987). Finally, lack of adequate experience and education, including financial illiteracy, and insufficient corporate finance knowledge, may as well undermine the financing structure and jeopardise the survival of a business.

Ownership of small businesses goes from one individual/family to wide ownership. However, in majority of SMEs major shareholders are the managers, leading to a disadvantageous position of minority shareholders. Due to high monitoring costs and informational asymmetries, besides having a limited access to credit market, small businesses face obstacles in raising outside equity (Bathala and Bowling, 2004), too. Internally generated funds as well as loans and equity from the main shareholders are the primary sources of capital. External funds are dominantly provided by a subject having informational/monitoring advantage mainly in form of credit extended by banks, suppliers as well as family and friends (Bathala and Bowling, 2004).

Recent research of SME finance in developing world confirms greater financial obstacles faced by SME than large firms (Beck, Demirgüç-Kunt, Laeven, Maksimovic, 2006, Viducic 2012, Kuntech, Ramalho, Rodríguez-Meza, Yang, 2012). Furthermore, SME in developing countries use less external finance, especially bank finance (Beck, Demirgüç-Kunt, Maksimovic, 2008). Study based on enterprises survey in all the regions of the developing world has delivered interesting findings (130 000 firms in 125 countries were embraced although micro firms with less than 5 employees were excluded). SMEs are more likely to be credit constrained than large firms. Furthermore, they finance their investments mainly through trade credit and informal sources of finance. Development stage of the financial sector was found to be of importance. Namely, in countries with high private credit to GDP ratio firms are less likely to be credit constrained. Furthermore, the share of external
funds used to finance investment is higher (Kuntchev, Ramalho, Rodríguez-Meza, Yang, 2012).

Regarding the sources of finance study shows that trade credit and informal sources are more important than equity and formal debt compared to large firms. Furthermore, the use of formal debt is relatively high in all regions (South Asia excluded), with tendency of lower levels of formal debt for SMEs than for large firms (Kuntchev, Ramalho, Rodríguez-Meza, Yang, 2012). When firms are grouped in four groups based on financial data, researchers received base for comparison across regions as well as countries (Table 1). The four groups are: i) fully credit constrained firms - FCC (firms that have no external loans because loan application were rejected or the firm did not even apply even though they needed additional capital), ii) partially credit constrained (PCC), iii) maybe credit constrained, and iv) not credit constrained (NCC) (Kuntchev, Ramalho, Rodríguez-Meza, Yang, 2012).

Table 1 Financially constrained firms in Eastern Europe and Central Asia (in%)

<table>
<thead>
<tr>
<th></th>
<th>World</th>
<th>ECA</th>
<th>Czech</th>
<th>Poland</th>
<th>Slovenia</th>
<th>Croatia</th>
</tr>
</thead>
<tbody>
<tr>
<td>FCC</td>
<td>16.5</td>
<td>9.5</td>
<td>1.2</td>
<td>7.2</td>
<td>0.0</td>
<td>5.8</td>
</tr>
<tr>
<td>PCC</td>
<td>22.3</td>
<td>18.1</td>
<td>17.5</td>
<td>11.6</td>
<td>9.2</td>
<td>14.1</td>
</tr>
<tr>
<td>MCC</td>
<td>22.5</td>
<td>31.1</td>
<td>33.0</td>
<td>31.7</td>
<td>52.1</td>
<td>40.6</td>
</tr>
<tr>
<td>NCC</td>
<td>38.7</td>
<td>41.3</td>
<td>48.3</td>
<td>49.4</td>
<td>38.7</td>
<td>39.6</td>
</tr>
</tbody>
</table>

Source: Kuntchev, Ramalho, Rodríguez-Meza, Yang, 2012, 2002 entreprenurs survey

Legend: FCC- fully credit constrained; PCC - partially credit constrained; MCC -maybe credit constrained; NCC - not credit constrained; ECA - Eastern Europe and Central Asia

In the whole developing world there were 16.5% fully credit constrained firms, while almost 45% were partially or maybe credit constrained. In the Eastern Europe and Central Asia (ECA) group there were 9.5% fully credit constrained firms. In the case of Croatia study reveals 5.8% fully credit constrained firms and almost 55% partially or maybe credit constrained firms.

The object of analysis in this paper is entrepreneurs’ perception of finance condition as a constraint on doing business and development. In regard to object of analysis the basic hypothesis are defined:

H 1: approach to finance and cost of finance represent significant obstacle for Croatian SMEs

H 2: Knowing current business framework and practice, information model of the entrepreneurs’ perception of constraints for operation and development in Croatia can be formulated.
3 MODEL FORMULATION

Information model of the entrepreneurs’ perception of constraints for operation and development in Croatia will be formulated. Growth model will be applied to determine interrelations of relevant factors, and their growth rates. Estimate of the current values of the model variables will be based on theoretical as well empirical research.

Banks are the most important source of external financing of SME in Croatia. Croatian financial system is bank-oriented. Banks are dominant financing institutions still. We have been witnessing the dominance of large and foreign banks (over 90% of banking assets). Although there is an increased interest of banks for SMEs, when granting loans, banks still rather support households than businesses, and prefer large enterprises to middle-size and small ones. Small entrepreneurs' access to loans depends on their credit rating, industry, market standing, size and regional characteristics. The bankers can also take into account the age, i.e. development stages of an enterprise.

The most important financial sources for start-up businesses are their own capital. This has been confirmed by the results of the research carried out in year 2008 (Viducic et all, 2009).The results showed that the owners' equity accounted for over 1/3 of the sources. Owners' equity used to participate to a much lesser extent in financing the investments in small entrepreneurship – only 19% of investments were financed from their own sources.

In order to shed light on the SMEs business environment a survey study is undertaken in the spring of 2013. The survey results presented in this paper are based on the written answers of the forty small and medium companies which agreed to participate, i.e. the sample presents 16 % of the total target population. The small number of the responses precludes strong statistical conclusions. However the coverage of the survey responses gives us a significant look at a broad range of SME in Croatia.

Recent research reveals changed scheme of SMEs investment finance in Croatia in year 2013. Retained earnings and depreciation participated in the new investment finance with 51%, resembling the practice of AC. Share of bank loans have increased, too. Long term bank credits participated with 18% (almost doubled) and short term credit share has increased from 14% to 20%. In the same time, the shares of leasing and concessional (subsidised) finance have declined.

Crisis has affected investment climate, including financing terms, and consequently the rate of investment which deteriorated across the country. Investment in year 2011 (32,990 bill. HRK) more than halved compared to pre crisis year 2007. In the same period number of investors in long term assets shrank by one third (Fina, 2012). The scheme of financing can be partly explained by the entrepreneurs' perceptions of the terms and availability bank loans, and other important obstacles to doing business in Croatia. Financial and economic crisis have strongly influenced conditions of operation and development of Croatian SMEs. Entrepreneurs find cost of finance as the most important constraining factor on doing business.

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and development. Approach to finance saved its high second rank. In the period of crisis banks have both taken more precocious approach to SMEs lending and increased interest rates/fees. So the smaller portion of the SME has managed to secure creditworthiness. Usually banks estimate SMEs as not being transparent enough, and not having favourable the profit-cost ratio compared to households and large companies. Furthermore, this situation may be explained by the hypothesis of foreign (Berger, Klapper, Udell, 2001) and large banks barriers (Berger, Kashyup and Scalise, 1995; Haynes et al., 1999, Goldberg et al., 2002, Volz, 2004). Large foreign banks prefer transaction lending as opposed to relationship lending and lack real understanding of local markets leading to preference of large enterprises lending. As a consequence characteristic of SME bank lending as perceived by entrepreneurs is excessive credit insurance along with time-consuming processing.

As far as the stimulating business environment is concerned, the possibility of financing to a needed extent and under favourable terms is one of the key factors of competitiveness and development, and as such perceived as a measure of quality of business environment. The research results show that cost of finance and access to finance are most important constraining factor in setting up and running the business of small entrepreneurs. Furthermore, small entrepreneurs in Croatia are significantly dissatisfied with the administrative barriers although relatively to a lesser extent than was the case in the pre crisis survey, which may be explained by increased law enforcement (Table 2). Supporting institutions and policies are still important obstacle although it appears that financial crisis has diminished its relative importance.

Table 2 Constraints on doing business in Croatia

<table>
<thead>
<tr>
<th>Constraint/importance</th>
<th>Rank 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs of finance</td>
<td>1</td>
</tr>
<tr>
<td>Access to finance</td>
<td>2</td>
</tr>
<tr>
<td>Administrative barriers</td>
<td>3</td>
</tr>
<tr>
<td>Supporting infrastructure</td>
<td>4</td>
</tr>
<tr>
<td>Working skills of employees</td>
<td>5</td>
</tr>
<tr>
<td>Legal system</td>
<td>6</td>
</tr>
<tr>
<td>Lack of entrepreneurship knowledge</td>
<td>7</td>
</tr>
</tbody>
</table>

Source: Survey

Information model of the constraint factors for operation and development of SMEs in Croatia has not been formulated so far. Based upon scientific hypothesis elementary variables of the model are defined. Based on the previous considerations values of the model variables for the base year 2013 are quantified (on a scale from 1 to 100, presuming that 100 presents optimal value of the variable impact) as follows: 1. Costs of financing – 23; 2. Supporting infrastructure – 32; 3. Administrative barriers – 28; 4. Approach to financial resources – 26; 5.

Quantification of the variables of the model will take into consideration synergy effects of the following scientific aspects: i) scientific theoretical aspects of individual variables of the model; ii) values and importance of variables of the model in the current period, i.e. 2013; iii) expected values of variables of the model in 2016 and iv) expected values of the variables in 2020. Model formulation is based upon previously determined model variables. We start with the assertion stating that "n" inter-reliant elements reflect the entrepreneur's satisfaction with bank's lending. The value of an individual variable of the model is expressed as \( y_i \) and \( y_{i,t-1} \) of the \( i \) variable in the period \( t \) and \( t-1 \).

An increase of the input value of the \( i \) variable of the model is defined by the relation (1):

\[
\Delta y_i = y_i - y_{i,t-1}
\]  (1)

An indirect growth rate of the \( i \) variable in relation with \( j \), is defined as the relation of the input growth of the \( i \) variable of model, \( \Delta y_i \) and the input value of the \( j \) variable of the model in the period \( t \), i.e. (2):

\[
r_{ij} = \frac{\Delta y_i}{y_i}
\]  (2)

where: \( i, j = 1, \ldots, n \), whereas \( y_{i,t-1} \neq 0 \).

Indirect growth rates can be expressed in a form of matrix of growth of the model variables (3):

\[
r_i = \begin{bmatrix}
    r_{11} & r_{12} & \cdots & r_{1n} \\
    r_{21} & r_{22} & \cdots & r_{2n} \\
    \cdots & \cdots & \cdots & \cdots \\
    r_{n1} & r_{n2} & \cdots & r_{nn}
\end{bmatrix}
\]  (3)

where \( t=1, \ldots, t \)

Indirect growth rates can be defined in relation to the inputs of the \( j \) variable of the model in the period \( t=1 \), using the relation (4):

\[
r_{ij} = \frac{\Delta y_i}{y_{j,t-1}}
\]  (4)

where \( i, j = 1, \ldots, n \).
The next inter-relation reflects the connection among the indirect growth rates (5):

\[
\frac{r'_{ijt}}{1 + r'_{ijt}} \quad \text{and} \quad \frac{r'_{ijt}}{1 - r'_{ijt}} \quad (5)
\]

where \( i, j = 1, \ldots, n \).

The matrix type can be determined through the external vector of the model variable. The vector of the growth of the model variables: \( \Delta y_{it} = (\Delta y_{i1}, \ldots, \Delta y_{in}) \).

The vector of the reciprocal values of the model variables is defined by the relation (6):

\[
\frac{1}{y_{ij}} = \left( \frac{1}{y_{i1}}, \ldots, \frac{1}{y_{in}} \right) \quad (6)
\]

where \( i, j = 1, \ldots, n \), whereas \( y_{i, t-1} \neq 0 \).

The growth matrix of the model of bank lending in Croatia defines the external vector of the growth of the coefficients of the model variables and the vectors of the reciprocal values (7):

\[
R_{pt} = \Delta y_{it} \left( \frac{1}{y_{ij}} \right) = \left[ \frac{\Delta y_{i1}}{y_{i1}}, \ldots, \frac{1}{\Delta y_{in}} \right] \left( \frac{1}{y_{i1}}, \ldots, \frac{1}{y_{in}} \right) \quad (7)
\]

If we analyze only direct growth rates, then the growth of a variable is expressed independently regarding the growth of the others. When we analyze indirect growth rates, that is, growth rates of the \( i \) variable in relation to \( j \) \( (i, j = 1, \ldots, n) \), it is possible to determine the structure of the growth of the variables and express all relationships via the growth matrix in the total system.

Based on previously elaborated basic researches and on assumed estimation of the variables for the years 2016 and 2020 (on a scale from 1 to 100), growth rates of the model variables have been obtained (Table 3).
Table 3 Values of the variables of the model for 2013 to 2016 period

<table>
<thead>
<tr>
<th>Variables</th>
<th>Inputs $y_{it}$</th>
<th>Growth 2020</th>
<th>Growth 2013/20</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Costs of finance</td>
<td>23</td>
<td>30</td>
<td>45</td>
</tr>
<tr>
<td>2. Supporting infrastructure</td>
<td>32</td>
<td>38</td>
<td>53</td>
</tr>
<tr>
<td>3. Administrative barriers</td>
<td>28</td>
<td>34</td>
<td>80</td>
</tr>
<tr>
<td>4. Access to finance</td>
<td>26</td>
<td>31</td>
<td>64</td>
</tr>
<tr>
<td>5. Lack of entrepreneurs knowledge</td>
<td>38</td>
<td>42</td>
<td>50</td>
</tr>
<tr>
<td>6. Legal system</td>
<td>34</td>
<td>43</td>
<td>86</td>
</tr>
<tr>
<td>7. Working skills of employees</td>
<td>33</td>
<td>36</td>
<td>57</td>
</tr>
</tbody>
</table>

We now show the growth matrix of the model through the variables in line with the present and future values in the 2013 to 2020.

The vector of the model growth is

$$\Delta y_{2020} = \begin{bmatrix} 22 \\ 21 \\ 52 \\ 20 \\ 12 \\ 52 \\ 24 \end{bmatrix};$$

The vector of the reciprocal model values is:

$$\frac{1}{y_{2020}} = \begin{bmatrix} \frac{1}{45} \\ \frac{1}{53} \\ \frac{1}{80} \\ \frac{1}{46} \\ \frac{1}{50} \\ \frac{1}{86} \\ \frac{1}{57} \end{bmatrix};$$

The external vector $y'_{2013}$ $\Delta y'_{2020}$ multiplied by $\frac{1}{y_{2013}}$ $\frac{1}{y_{2020}}$ determines the growth matrix of the information model Information model of the entrepreneurs` perception of constraints for operation and development in relation to the present values:
We are now about to show the growth matrix of the model (Table 4).

Table 4 Growth matrix of the model of the constraint factors for 2013 – 2020

<table>
<thead>
<tr>
<th>Model variable s (in%)</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>48,9</td>
<td>41,5</td>
<td>27,5</td>
<td>47,8</td>
<td>44,0</td>
<td>25,6</td>
<td>38,6</td>
</tr>
<tr>
<td>2.</td>
<td>46,7</td>
<td>39,6</td>
<td>26,3</td>
<td>45,7</td>
<td>42,0</td>
<td>24,4</td>
<td>36,8</td>
</tr>
<tr>
<td>3.</td>
<td>115,6</td>
<td>89,1</td>
<td>65,0</td>
<td>113,0</td>
<td>104,0</td>
<td>60,5</td>
<td>91,2</td>
</tr>
<tr>
<td>4.</td>
<td>44,4</td>
<td>37,7</td>
<td>25,0</td>
<td>43,5</td>
<td>40,0</td>
<td>23,3</td>
<td>35,1</td>
</tr>
<tr>
<td>5.</td>
<td>26,7</td>
<td>22,6</td>
<td>15,0</td>
<td>26,1</td>
<td>24,0</td>
<td>14,0</td>
<td>21,1</td>
</tr>
<tr>
<td>6.</td>
<td>115,6</td>
<td>98,1</td>
<td>65,0</td>
<td>113,0</td>
<td>104,0</td>
<td>60,5</td>
<td>91,2</td>
</tr>
<tr>
<td>7.</td>
<td>53,3</td>
<td>45,3</td>
<td>30,0</td>
<td>52,2</td>
<td>48,0</td>
<td>27,9</td>
<td>42,1</td>
</tr>
</tbody>
</table>
The research has provided the direct growth rates of the variables of model of entrepreneurs’ perceptions of the constraint factors (Table 4, Graph 1.). The highest growth rates will have variable administrative barriers (65.0 %) followed by: legal system (60.5 %), cost of finance (48.9 %), access to finance (43.5 %).

Graph 1 Direct growth rates of the model of the constraint factors

We now move to the graphic display of the model with the scheme of the direct and indirect growth rates (Graph 2).

Graph 2 Direct and indirect growth rates of the model
4. CONCLUSIONS

Empirical research undertaken reveals that entrepreneurs both highly ranked cost of finance and access to finance, as a constraint to business which confirms hypothesis 1. Bank loans are very important source of investment finance due to modest capacity of alternative sources of finance. Government should increase capacity of development bank and funds for economic cooperation in order to provide concessional terms lending and equity finance. Furthermore, guarantee schemes should be increased and strengthened. Promotion of alternative finance sources such as venture capital, as well as measures for deepening of financial markets and increase of financial discipline will enrich supply of equity capital and creditworthiness, too.

In order of shed light on current position as well as to predict future development of SME environment for operation and development in Croatia information model of entrepreneurs’ perception of constraints for operation and development is formulated. Based on determination of main factors influencing quality of SMEs business environment, their evaluation for the year 2013 and their projections for the year 2016 and 2020 construction of the model resulted. Implementation of growth matrix rendered direct and indirect growth rate of the variables. This confirms hypothesis 2. Formulated model gives information to the economic policy decision makers that are necessary to direct small businesses growth. Greatest improvement is expected in the field of administrative barriers and legal system, while important improvement is expected for cost of finance and access to finance. Lowest direct rates are observable for entrepreneurial knowledge and supporting infrastructure urging policy measures dealing with these constraints.

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