Association for Information Systems
AIS Electronic Library (AISeL)

BLED 2010 Proceedings

BLED Proceedings

2010

Slovenian Micro Enterprises and eOpportunity Challenge

Borut Werber
University of Maribor, borut.werber@fov.uni-mb.si

Anja Žnidaršič
University of Maribor, anja.znidarsic@fov.uni-mb.si

Follow this and additional works at: http://aisel.aisnet.org/bled2010

Slovenian Micro Enterprises and eOpportunity Challenge

Borut Werber

University of Maribor, Slovenia

borut.werber@fov.uni-mb.si

Anja Žnidaršič

University of Maribor, Slovenia

anja.znidarsic@fov.uni-mb.si

Abstract

The paper investigates use of Internet in Slovenian micro enterprises, using data derived from 134 businesses. Data for the main study was collected via structured interviews with owners or top managers of micro enterprises between October and December 2009. The study showed that formal education of the manager and/or owner, his or her age, computer and IS knowledge and skills, size of the business (number of employees), the investments in hardware and software and level of Internet use (eBusiness, eBanking…) are positively associated with the micro enterprise success. Based on our survey and on the review of literature, recommendations have been given how to be more effective and efficient in introduction of eOpportunities to micro enterprises.

Keywords: Micro enterprises, Internet, eBusiness

1   Introduction

In Slovenia, there were 105,272 enterprises registered in sections of activities C-K of the Standard Classification of Activities (NACE) in 2007; 92.8% of them were micro enterprises, 5.7% were small enterprises and 1.5% were medium-sized and large enterprises (Matek and Butalič, 2009). The overall share of individual private entrepreneurs was 58.1% and of limited liability companies 35.9%. Enterprises organised in other organisational forms represented only 6.0% of all enterprises. Despite the large difference in the number of enterprises between micro (1-9 total employees), small (10-49 total employees) and medium-sized enterprises (50-249), each of these

three size classes generated around one fifth of total turnover. Among them most persons were employed in micro enterprises (27.4%), followed by medium-sized (20.8%) and small enterprises (18.0%) (Matek and Butalič, 2009).

No generally accepted definition of a micro enterprise can be found in the research literature. The most common criterion for a micro enterprise is the total number of employees, often combined with some financial indicators, such as annual turnover and firm's assets. In absence of a precise definition, micro enterprises are defined in different context in various business cultures. Sometimes, the definition of a micro enterprise depends on the industry (Jungwoo, 2004).

In an investigation in Slovenia in 1999 (Werber and Zupančič, 2005) the following definition of small company stated in the accounting legislation in Slovenia was used: a small company is any enterprise that meets at least two of the following three criteria: (1) the company employs less than 50 employees, (2) annual turnover is less than 280 millions SIT (about 1.3 million €) and (3) total assets are less than 140 millions SIT (about 0.65 million €). From 122 included firms the average number of total employees was only 5.7.

On 6 May 2003 the Commission of the European Communities (2003) adopted Recommendation 2003/361/EC regarding the definition of micro, small and medium-sized enterprises (SMS) in Community policies applied within the Community and the European Economic Area. Within the SME category, a micro enterprise is defined as an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million (Neuberger and Räthke, 2009, Davies et al., 2006). Slovenia as Member State of EU accepted this Recommendation which replaced Recommendation 96/280/EC as from 1 January 2005.

Due the results from the investigation in 1999 (Werber and Zupančič, 2005), recent Slovenian statistical data and present legislation we decide in 2009 to investigate micro enterprises.

2   Background

Micro enterprises are a major component of all economies and are generally considered to be flexible, adaptive organizations. The influence of micro enterprises in the entire economy is increasing. It is generally accepted that e-commerce contributes to the advancement of SME business in developing countries (Kapurubandara and Lawson, 2007). More people than ever are employed by micro enterprises and many more are starting their own businesses. Micro enterprises sometimes act as incubators for future economic giants. The role of small and medium-sized enterprises (SMEs) in economic development and economic growth for both developed and developing countries has been increasingly recognized (Yang and Chen, 2009).

Micro enterprises cannot be treated as downscaled versions of large companies (Rohde, 2004), due to differences in organization, management style, business practice and information systems (IS). However, the available evidence on the size–efficiency relation seems to strongly indicate that there is a positive association between firm size and technical efficiency, and there are also substantial and persistent productivity differences between SMEs and large firms (Yang and Chen, 2009). A recent

investigation showed that SMEs generally do not take full advantage of networking opportunities (Širec and Bradač, 2009).

Small firms generally lag behind medium and large companies in adopting and implementing computerization (Lee et al. 2009, Jungwoo, 2004). This is due to severe constraints on financial resources, lack of in-house expertise, and a short-term management perspective imposed by a volatile competitive environment.

On the other hand, micro enterprises demonstrate a high level of ability to adapt to changes in the environment. They use IT for automation of existing processes, rather then for decision support, or to increase flexibility of the firm and gain competitive advantage. While large firms are typically capital and equipment intensive, labor-intensive micro enterprises may be able to increase productivity and provide value added services through increased computerization and digitization (Lee et al. 2009).

Slovenia started investing in ICT later than the leading developed countries, just as other new EU member states (NMS). A more dynamic push in ICT investment occurred in 1999, reflecting increased concerns associated with Millennium bug on one hand and the prospects of the introduction of value-added tax in second half of 1999. But while other NMS are increasing their ICT investments in recent years, Slovenia has not followed such dynamics. The share of investments in GDP in Slovenia is lower than the average in EU 15 as well as lower than in most NMS. Also, trend performance of Slovenia regarding ICT expenditure in GDP during the period 2001–2004 was negative (Bučar et al., 2006).

International communications technologies such as the World Wide Web have created an environment that presents advantages to individual firms (Jungwoo, 2004). The Internet is gaining commercial viability and is particularly suited to small business, where it enables [them] to keep doors open 24 hours a day, at minimal cost, to customers all over the world. With access to increasing markets through out the world, businesses, including those in rural areas, have a unique opportunity to expand from the traditional and local, to the global. Whether a firm trades online with customers or not, however, the Internet can give firms the advantage of increased profile, in that it can allow companies to present information to potential customers and provide another channel for the purposes of brand building, advertising, and marketing (Galloway, 2007).

As stated from Davies et al. (2006) very little has been published on best practice approaches to managing eBusiness change for SMEs, particularly at the level of the small business. SMEs are however increasingly implementing more advanced eBusiness solutions, and in turn could benefit from adopting a more informed manner to taking on some of these change management challenges.

3   Research approach

After having reviewed the literature on small enterprises and eBusiness, a structured interview framework was developed to help address the research objectives. We classified use of Internet in seven levels. Lowest level (1) is characterized by use of Internet only for information searching, second level was (2) use of e-mail, followed by (3) simple hosted web page, (4) advanced web page with own domain, (5) eBanking, (6) eBusiness and as higher level (7) an Internet based business where majority of business applications are on Internet. We expected (Figure 1) that use of Internet will depend

upon characteristic of business (Yang and Chen, 2009, Lee et al. 2009, Jungwoo, 2004, Rodhe, 2004 …), characteristics of the owner (Koellinger, 2008, Andersson and Flore´n, 2008, Jeon, 2006…) and annual turnover (Jangwoo, 2004, Wiklund et al. 2009…).
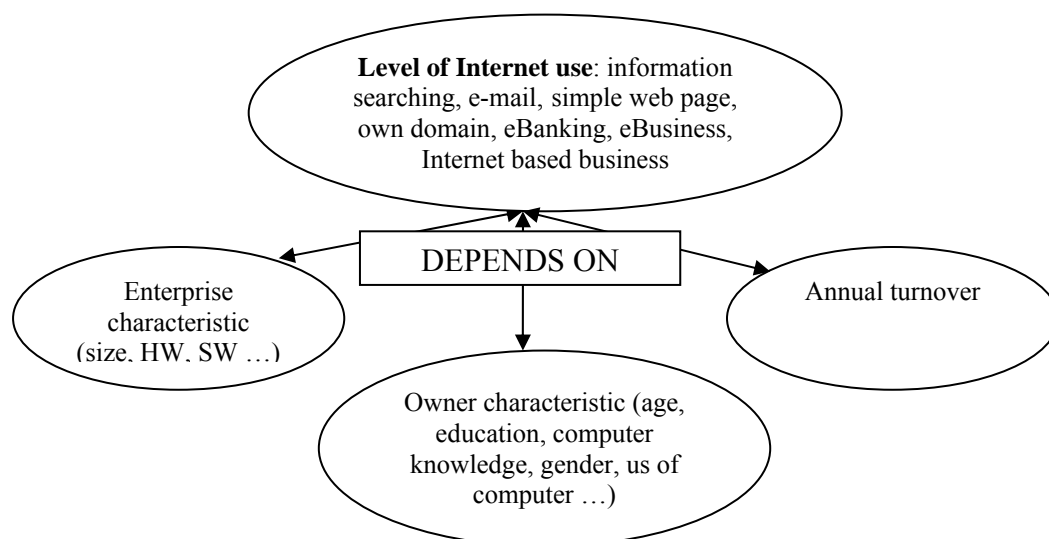
Figure 1: Research model

Based on this premise, we proposed the following null hypotheses:

H1: There are no differences in average annual turnover between enterprises with different level of Internet use

H2: The average number of employees is not statistically different among enterprises with different level of Internet use

H3: There are no differences in average value of owner computer knowledge between enterprises with different level of Internet use

H4: There are no differences in average owner age group between enterprises with different level of Internet use

H5: There are no differences in average number of employees between enterprises that use eBusiness and those that don't use eBusiness

H6: There are no differences in average value of owner computer knowledge between enterprises that use eBanking and those that don't use eBanking.

H7: There is no association between level of owner's formal education and use or non-use of local networks

H8: There are no differences in average value of owner computer knowledge between enterprises that use local networks and those that don't use local network

H9: There are no differences in average number of employees between enterprises that use local networks and those that don't use local network

H10: There are no differences in average annual turnover between enterprises that use eBusiness and those that don't use eBusiness

H11: There are no differences in average annual turnover between enterprises with different level of HW investments

H12: There are no differences in average annual turnover between enterprises with different level of SW investments

H13: There are no differences in average HW investment between enterprises with different level of SW investments

H14: There are no differences in average annual turnover between enterprises with owner with different formal education.

H15: There are no differences in average annual turnover between enterprises that use local networks and those that don't.

The study was conducted in two stages: preliminary pilot interviews and the main study. The interview was tested in 36 selected small and micro enterprises. Several contacts with respondents helped to improve the accuracy and relevance of the interviews. Interviews were conducted between June and July 2009 by second year part-time master level students at the University of Maribor. Out of the total of 36 interviews only 16 met the criteria for inclusion in main study.

Data for the main study was collected via structured interviews with owners or top managers of micro enterprises between October and December 2009. Several other studies (e. g. Wiklund et al., 2009; Lee et al., 2009, Koellinger, 2008, Jeon, 2006) showed that this group plays a dominant role in decision-making in micro enterprises. In the interview, mostly closed-response questions were asked. Except for demographic data, respondents either rated statements on scale 1 to 5, or responded to multiple choice questions. In total, 118 interviews were conducted. With merge of 16 interviews from preliminary study our sample consisted of 134 micro enterprises.

4 Results

4.1 Characteristics of the enterprises participating in the study

Respondents who supplied data came from a wide variety of business backgrounds and sizes. The overall share of individual private entrepreneurs was 56% and of limited liability companies 40%. Enterprises organized in other organizational forms represented only 4% of the sample. Among 134 enterprises, 44% were family owned. The average number of total employees was 3.4, including the owner of the enterprise. Three years ago average number of total employees was found 3.2. The largest share of enterprises came from service sector (16%), manufacturing (13%), construction (13%) and retail (10%). Others were from tourism (8%), agriculture (7%), wholesale (6%), transportation (4%) and other (23%). The average existence time of micro enterprises was 12.3 years. Most small enterprises (24%) reported annual turnover (Figure 2) between 21.000 and 68.000 €. Annual turnover more than 209.000 € was reported in 22% of micro enterprises (Figure 2). Majority of enterprises (80%) outsourced accounting and bookkeeping to an external partner who specialized in selling accounting services to small companies.
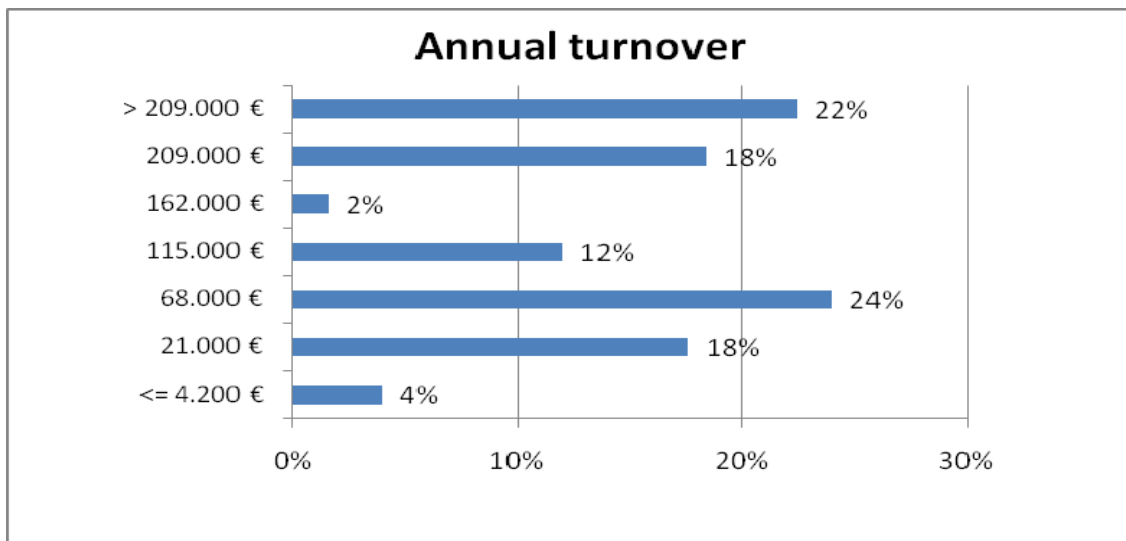
Figure 2: Micro enterprises by their annual turnover

4.2 Characteristics of the respondents

Majority of respondents (76%) was owner of the business, 10% were executive directors, 7 % owner relatives and 7% were some other employees. The age of most of them (45%) was between 31 and 45 years, 34% between 46 and 55, 10% were older than 55 years. Only 2% were between 21-25 and 9% between 26 and 30 years. There were 72% male and 28% female respondents. Their formal education was in most cases secondary school (50%), 12% vocational level, 11% higher, 23% graduate and 4% postgraduate. Majority of respondents (40%) self-estimated of their computer knowledge (Figure 3) as neither god, neither bad. Twenty–one percent of respondents estimated their computer knowledge as poor or very poor.
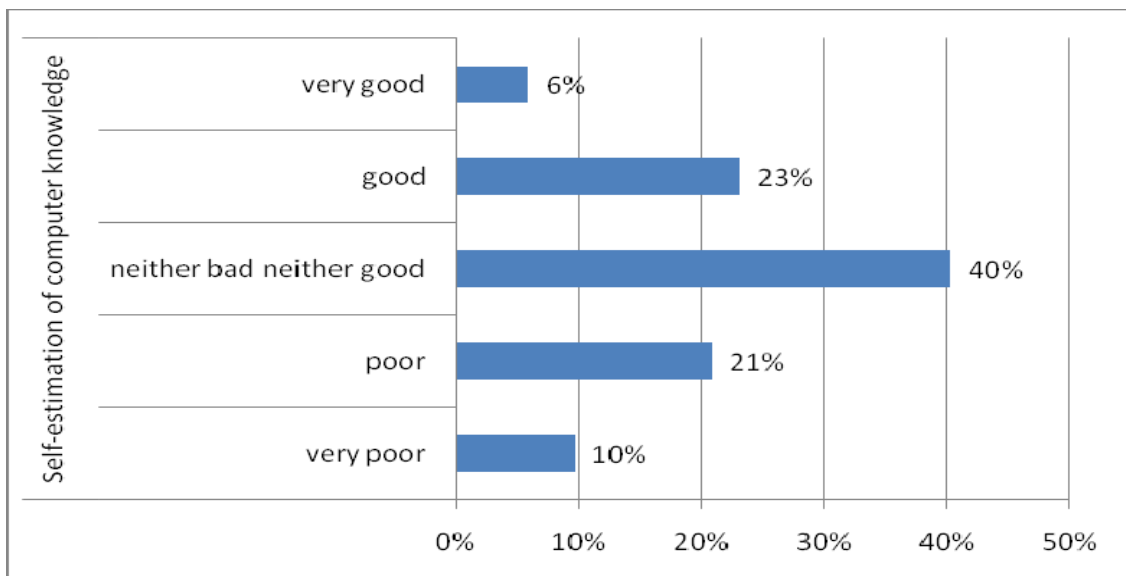

Figure 3: Self-estimation of computer knowledge by respondents

4.3   Computer hardware

The average number of laptops per company was 2.6, desktops (1.5), workstations (0.2) and network server (0.4). If we sum up all computers companies from our sample had 4.7 computers per organization (1.4 computers per employee). Micro enterprises in our sample had on average 8.9 years of computer experience. Thirty-for (34%) enterprises have local network, 38% used an UPS for emergency power supply in case of power failure and 14% use a "bar-code" system for product identification. In average, micro enterprises invest 1539 € per year in computer hardware or computer hardware services and 880 € in software or software licences.

4.4   Computer software

Most enterprises (95%) use some version of the Windows system (XP, Vista, NT). From various other operating systems, 5% of the enterprises use Linux. In 93% of all companies (Figure 4) general programs (word processor, spreadsheets, databases…) were installed, but only a few of them used them to analyze data from the database or to prepare customized reports. These tools were mostly bought together with the computers, which may explain why they were not much used. Insufficient computer knowledge and skills of the owners/managers and employees may be a possible explanation for the non-use of software tools. Relatively low self-assessment of computer knowledge and skills, found in our study, supports this assumption.
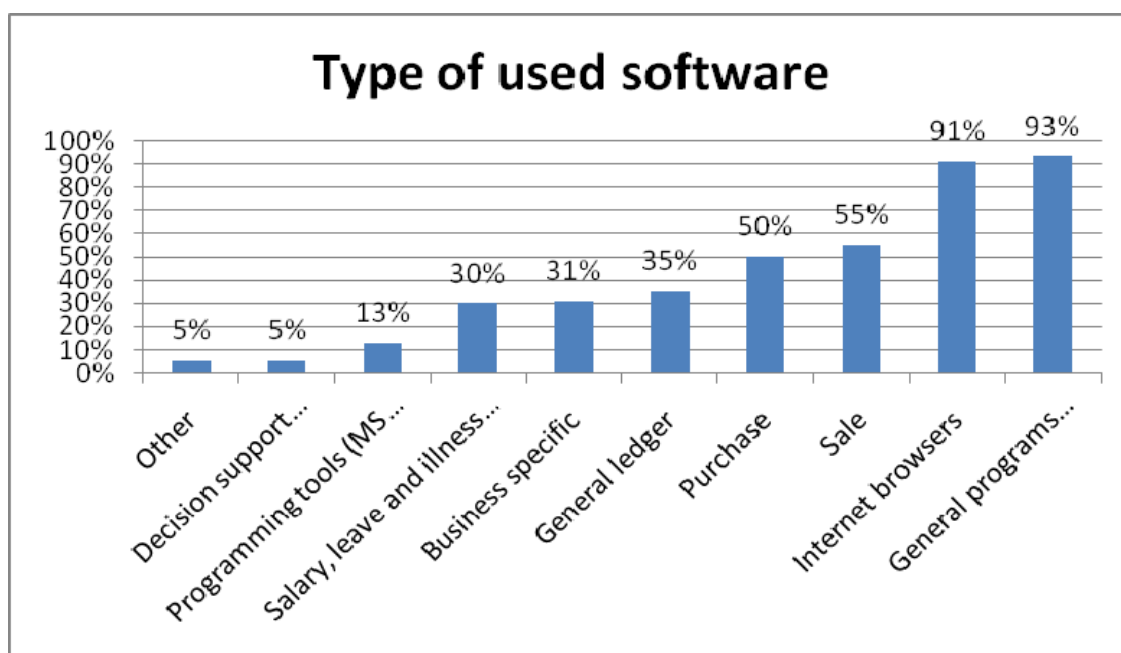
Figure 4: Type of software used by micro enterprises

Only 13% of businesses used some type of package for application development (MS Access, Visual Basic …), and 5% had applications for decision support.

4.5   Use of Internet

Almost all (98.5%) of the enterprises had Internet connection. Not surprisingly, Slovenian micro enterprises mostly use the Internet for e-mail (94%), followed by search for information (92%), 80% used Internet for electronic banking, and 65% for

some kind of electronic business with their partners. Web pages are used in 51% of enterprises for their business advertising (simple hosted web page) and in 37% for advertising of their products and services (their own domain). Internet based business programs are used in 19% of enterprises while 14% of surveyed enterprises offered their customers the possibility to buy products/services over the Internet.

4.6 Results of hypothesis test

The t-test, analysis of variance (ANOVA) and chi-square test were used in hypothesis testing. Tests were performed using SPSS Statistics version 17.0. With an analysis of the data from 134 micro enterprises in the sample, we found that:

(1) The first null hypothesis H1 was tested with analysis of variance. The enterprises report their annual turnover in categories therefore we changed the answers into mid-values of corresponding intervals before the analysis. The descriptive statistics are shown in Table 1.

Similar to Jangwoo, (2004) the level of Internet use has statistically significant positive effect on annual turnover (F=3,010, p-value is 0,009<0.01; so we reject null hypothesis H1 at 1% significance level. The enterprises on second level of Internet use (who use Internet just for information searching) have the lowest annual turnover on average. Enterprises that use Internet for eBusiness have the highest average annual turnover.

	Annual turnover		Number of employees		Owner computer knowledge		Owner age (1)	
Level of Internet use	Mean (€)	Std. Dev	Mean	Std. Dev	Mean	Std. Dev	Mean	Std. Dev
1 Information searching	**21833.3**	**19629.9**	**2.3**	**0.58**	**1.7**	**1.16**	**4.7**	**1.16**
2 Use of e-mail	**57009.1**	**65807.7**	**3.1**	**1.83**	**2.6**	**1.24**	**4.9**	**0.79**
3 Simple hosted web page	**45650.0**	**36521.5**	**1.8**	**0.50**	**2.8**	**0.5**	**3.3**	**0.96**
4 Advanced web page with own domain	**125000.0**	**78426.4**	**3.8**	**3.19**	**3.3**	**1.86**	**4.3**	**0.82**
5 eBanking	**112200.0**	**88988.5**	**3.5**	**2.23**	**2.7**	**0.87**	**4.5**	**0.87**
6 eBusiness	**173750.0**	**72604.9**	**3.5**	**2.03**	**3.5**	**0.78**	**4.2**	**0.93**
7 An Internet based business	**128147.6**	**91511.6**	**3.6**	**2.14**	**3.4**	**0.96**	**4.2**	**0.78**

---

1 Age is measured as: 1 - under 20 years, 2 - 20 to 25 years, 3 - 26 to 30 years,

4 - 31 to 45 years, 5 - 46 to 55 years and 6 – over 55 years.

Table 1: Characteristic of enterprises with different level of Internet use

(2) The average number of employees is not statistically different among enterprises with different level of Internet use (ANOVA: F=0.642, p-value is 0.697>0.005; so we accept the null hypothesis H2 at 5% significance level).

(3) The owner's computer knowledge has statistically significant positive effect on level of Internet use (ANOVA: F=3.558, p-value is 0.003<0.01; so we can reject null hypothesis H3 at 1% significance level).

The lowest computer knowledge on average have owners of enterprises on first level of Internet use (average 1.7 on 1-5 scale from very poor to very good). Enterprises on 6th and 7th level of Internet use (eBusiness and business applications on Internet) are owned by respondents with higher computer knowledge (Table 1).

(4) The owner age group has statistically significant effect on level of Internet use (ANOVA: F=2.339, p-value is 0.036<0.05; so we can reject null hypothesis H4 at 5% significance level).

Owners/managers of enterprises on third level of Internet use (simple hosted web page) have on average the lowest age between respondents. The average age of owners/ managers in enterprises with the lowest level (first and second level) of Internet use was the highest (Table 1).

(5) We performed the mean difference test (the t-test) and found that the average number of employees has statistically significant positive effect on use of eBusiness (t=1.932, p-value is 0.031<0.05; so we can reject the null hypothesis H5 at 5% significance level).

In enterprises that use eBusiness, have on average 3.7 employees. The average number of employees is 0.8 lower in enterprises where they do not use eBusiness (Table 2).

Enterprises which...	Number of employees		Annual turnover	
	Mean	Std.Dev	Mean	Std.Dev
... use eBusiness	3.7	2.39	131924.0	89299..0
... do not use eBusiness	2.9	1.55	83807.0	75988.1

Table 2: Characteristics of enterprises which use/do not use eBusiness

(6) There are statistically significant differences between enterprises which use eBanking and those which do not in the average of owner computer knowledge (We used T-test for group comparison, t= 2.034, p-value is 0.044<0.05; so we can reject null hypothesis H6 at 5% significance level).

Owner's self estimated computer knowledge was rated 3.0 on average in enterprises where the use eBanking, and 2.6 in enterprises with no use of eBanking (Table 3).

Enterprises which...	Owner computer knowledge	
	Mean	Std.Dev
... use eBanking	3.0	1.03
... do not use eBanking	2.6	1.07

Table 3: Characteristics of owner in enterprises which use or do not use eBanking

(7) Chi-Square test was used to investigate association between use of local network and formal education of owners. We found that the use of local network is positively associated with owners formal education (Pearson Chi-Square=9.103, p-value is 0.002<0.01; so we can reject the null hypothesis H7 at 1% significance level). The higher is the formal education, the higher is the percentage of enterprises where local network is used. In enterprises where the owner has high school education or less only 24% of enterprises use local network, on opposite in enterprises were owner's formal education is university or postgraduate level 50% of enterprises use local network.

(8) There are statistically significant differences between enterprises where they have local network and those with no local network and owner computer knowledge (t-test for group comparison: t=5.225, p-value is 0.000<0.05; so we can reject the null hypothesis H8 at 5% significance level).

In enterprises with local network is the average estimate of computer knowledge 3.6, which is higher compared to enterprises with no local network - 2.6 on 1-5 scale (Table 4).

Enterprises which …	Annual turnover		Owner computer knowledge		Number of employees	
	Mean (€)	Std. Dev.	Mean	Std. Dev.	Mean	Std.Dev.
… use local network	169412.8	81543.73	3.6	1.01	4	2.37
… do not use local network	80107.7	72729.64	2.6	0.95	3.1	2.06

Table 4: Characteristics of enterprises which have/ do not have local network

(9) The average number of employees has statistically significant positive effect on use of local network (t-test was used: t=2.103, p-value is 0.038<0.05); so we can reject the null hypothesis H9 at 5% significance level). Enterprises with local network have on average 4.0 employees and enterprises with no local have on average one employee less.

(10) There are statistically significant differences between enterprises which use eBusiness and those which do not in average annual turnover (t-test: t=3.102, p-value is 0.003<0.01; so we can reject hypothesis H10 at 1% significance level). The use of eBusiness has positive effect on annual turnover of enterprises. The annual turnover is on average 48.000€ higher in those enterprises which use eBusiness than in those where they do not use eBusiness (Table 2).

(11) The HW investments has statistically significant positive effect on average annual turnover (Pearson correlation coefficient is 0.239, p-value is 0.007<0.01; so the null hypothesis H11 can be rejected at 1% significance level). The higher is it's investment in hardware equipment; the higher is annual turnover of the enterprise (Table 5).

		Annual turnover	Investments in HW (purchase, repair, service, installation,..)	Investments in SW (purchase, installation, maintenance,,..)
Annual turnover	Pearson Correlation	1	**,239**[**]	**,230**[*]
	Sig. (2-tailed)		,007	,011
	N	125	125	122
Investments in HW (purchase, repair, service, installation,..)	Pearson Correlation			**,361**[**]
	Sig. (2-tailed)			,000
	N			130
Investments in SW (purchase, installation, maintenance, updates,)	Pearson Correlation			1
	Sig. (2-tailed)			
	N			130

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 5: Correlations of investments in HW an SW and annual turnover of the enterprises

(12) Correlation between the average annual turnover and investments in SW is statistically significant and positive (Pearson correlation coefficient is 0.230, p-value is 0.011, and it is significant at 1% level) which means that enterprises with higher investments in SW also have higher annual turnover (Table 5).

(13) The level of HW investment has a statistically significant positive effect on SW investments (Pearson correlation coefficient is 0.361, p-value is 0.000 and it is statistically significant at 1%; so we can reject the null hypothesis H13).

So, higher is amount of investments on HW, higher is also amount of investments on SW (Table 5).

(14) There are statistically significant differences between formal education of owners in annual turnover (ANOVA: F=3.236, p-value is 0.015<0.05; so the null hypothesis H14 can be rejected at 5% significance level).

For example, annual turnover of enterprises where owners have technical secondary school (IV.) is on average 78.225€, on another hand in enterprises where owners have university degree annual turnover is on average almost two times higher, approximately 150.000€.

(15) There are statistically significant differences between enterprises with and without local network in average annual turnover (ANOVA: F=6.011, p-value is 0.000<0.01; so the null hypothesis H16 is rejected at significance level 1%).

Enterprises with local Internet have on average 169.412 € of annual turnover, in the meantime the annual turnover of enterprises without local network is two times smaller (Table 4).

The results of analyses are summarized in Figure 5. Numbers in frames represents P-values from hypothesis testing. Only hypothesis H2 (The average number of employees is not statistically different among enterprises with different level of Internet use) didn't confirm our assumption so this relation is marked with cross lines. Numbers with * represent significance at the 0.01 level, and numbers with ** significance at the 0.05 level.
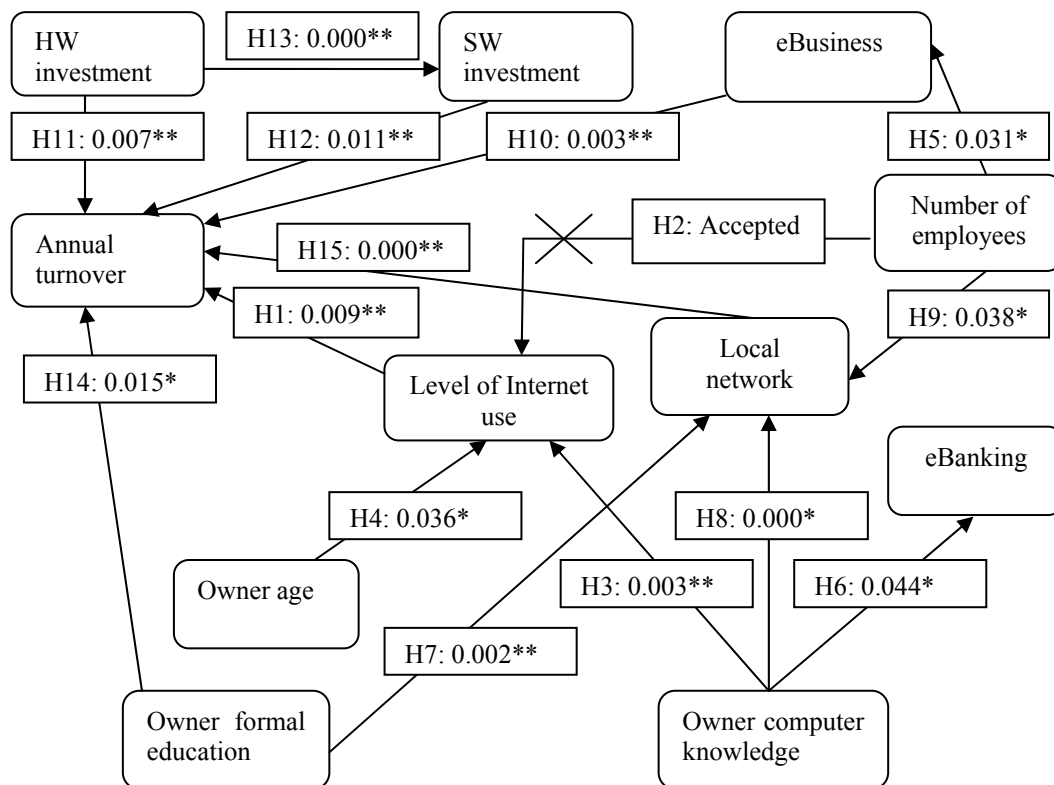
**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Figure 5: Results of hypotheses test

We also analysed differences between enterprises from different sectors, but we didn't find any statistically significant differences. We found that all (100%) enterprises from sales sector in our sample used eBusiness. On the second and the third place there were enterprises from transport (83.3%) and "other" sector (78.9%) not listed in the questionnaire (such as computer or IT service, interior design engineering, consulting, law firm, funeral services,…). The lowest percentage of using eBusines was in sector of tourism (20%) and agriculture (33%).

If we compare average annual turnover between enterprises in different sectors who use or don't use e-Business, wholesale is on fist place with 232.500€, followed by manufacture with 158.643 € and others 152.766 €. Only enterprises from construction, who don't use eBusiness have a slightly higher average annual turnover (119.700€) then those using eBusiness (104.929€).

5   Conclusion

Micro enterprises in Slovenia are relatively well equipped with information and communication technology (1.4 computers per employee), but they are rather far from exploiting its full potential. As concluded in Lee et al., (2009) our results show that it is imperative for micro enterprises to adopt computerization to achieve improvements in business performance. Similar to Wiklund et al. (2009) and Jungwoo (2004) our investigation showed that owners/ managers personal attitudes directly and/or indirectly influence on business growth and success. Implementation and successful operation of computerized business is strongly related to characteristics of the owner/manager (formal education, age, computer knowledge and skills). Micro enterprise owners/managers in general recognize and value IT, but they use it mainly to support daily operations of the business rather than to support decision-making (5%), and are mostly not aware of its strategic and organizational impact. Most of them also don't use end-user friendly PC based development tools, such as databases (13%), which are readily available to most companies participating in our study. This may also indicate the lack of computer knowledge and skills in micro enterprises.

According to our findings and findings reported by Riemenschneider and Mykytyn, (2000) in order to take full advantage of the existing technology, eBusiness and eComerce, current owners and managers of micro enterprises are aware that they should increase the level of their computer skills and knowledge, stay informed about new trends, developments in the IT and communication area, and acquire technical and managerial competences needed to effectively manage the IS. Training in using of PC based end-user tools, and their use for data analyses may also help owners, managers and employees of micro enterprises to gain self-confidence in using IT, and better exploit the available technology. Because of that, investments in education and training are unavoidable. Since majority of enterprises (80%) outsourced accounting and bookkeeping to an external partner they should also consider outsourcing IT and IS as suggested by Rohde (2004).

Suitable policy interventions from government and active support from the private sector are needed to address the issue of eOpportunities (Kapurubandara and Lawson, 2007, Jeon et al., 2006). The government needs to take leadership to facilitate a regulatory environment, improve national infrastructure (Bučar et al.) and continue to help with ICT education. The government and Chamber of Commerce and Industry of

Slovenia should inform, consult and involve micro enterprise in business and finance opportunities of EU.

References

Andersson S. & Flore´n H. (2008). Exploring managerial behaviour in small international firms, *Journal of Small Business and Enterprise Development*, Vol. 15, No. 1, pp. 31-50, DOI 10.1108/ 14626000 810850838.

Bučar M., Stare M. & Jaklič A. (2006). eStrategy and ICT Investment in Slovenia, 19th Bled eConference, eValues, Bled, Slovenia, June 5 - 7, 2006, pp. 1-13.

Burke E. A., FitzRoy R. F. & Nolan A. M. (2008). What makes a die-hard entrepreneur? Beyond the 'employee or entrepreneur' dichotomy, *Small Bus Econ*, Vol. 31, pp. 93–11, DOI 10.1007/s11187-007-9086-6.

Davies A., Evans C. Parfett M. & Emery A. (2006). eBusiness Change Management in SMEs: An Initial Investigation, 19th Bled eConference: eValues Bled, Slovenia, June 5 - 7, pp. 1-12.

Jeon B., Han K. & Lee M. (2006). Determining factors for the adoption of e-business: the case of SMEs in Korea, *Applied Economics*, Vol. 38, pp. 1905-1916.

Jungwoo L. (2004). Discriminant analysis of technology adoption behaviour: a case of Internet technologies in small businesses, *The Journal of Computer Information Systems*, July 1, pp. 1-9.

Kapurubandara M. & Lawson R. (2007). SMEs in developing countries need support to address the challenges of adopting e-commerce technologies, 20th Bled eConference eMergence: Merging and Emerging Technologies, Processes, and Institutions, June 4 - 6, 2007, Bled, Slovenia, pp. 1-15.

Koellinger P. (2008). Why are some entrepreneurs more innovative than others?, *Small Bus Econ*, Vol. 31, pp. 21–37, DOI10.1007/s11187-008-9107-0.

Galloway L. (2007). Can broadband access rescue the rural economy? *Journal of Small Business and Enterprise Development*, Vol.14, No. 4, pp. 641-653, DOI 10.1108/14626000710832749.

Matek M. & Butalič S. (2009). Rapid reports, No. 6/2009, 14 BUSINESS ENTITIES No 1, Statistical office of the Republic of Slovenia, pp. 1- 12.

Neuberger D. & Räthke S. (2009. Microenterprises and multiple bank relationships: The case of professionals, *Small Bus Econ*, Vol. 32, pp. 207–229, DOI 10.1007/ s11187-007-9076-8.

Lee S. M., Kim J., Choi Y. & Lee S. G. (2009). Effects of IT knowledge and media selection on operational performance of small firms, *Small Bus Econ*, Vol 32, pp. 241–257. DOI 10.1007/s11187-007-9095-5.

Riemenschneider C. & Mykytyn P. (2000). What small business executives have learned about managing information technology, *Information & Management*, Vol. 37, pp. 257-269. DOI 10.1016/S0378-7206(99)00052-X

Rohde F. (2004): IS/IT outsourcing practices of small- and medium sized manufacturers, *International Journal of Accounting Information Systems*, Vol. 5, pp. 429-451.

Širec, K. & Bradač B. (2009). How does networking impact the SMEs growth. *Organizacija*, 42(2), 59-66, DOI: 10.2478/v10051-009-0003-4.

The commission of the European Communities, (08.08.2007): Commission recommendation of 6 May 2003 concerning the definition of micro, small and medium-sized enterprises, Official Journal of the European Union, L124, pp. 36-41. http://europa.eu/legislation_summaries/enterprise/business_ environment/ n26026_en.htm, 3.5.2010.

Yang C. H. & Chen K. H. (2009). Are small firms less efficient? *Small Bus Econ*, Vol. 32: pp. 375–395. DOI 10.1007/s11187-007-9082-x.

Werber B. & Zupančič J. (2005). Information system adoption in small companies - model of key issues. In: JAŠKOVÁ, Mária (ur.). ECON '05 : [selected research papers], Research works proceedings, Vol. 12, Ostrava: Technical University of Ostrava, Faculty of Economics, pp. 355-367.

Wiklund J., Patzelt H. & Shepherd A. D. (2009). Building an integrative model of small business growth, *Small Bus Econ*, Vol. 32, pp. 351–374. DOI 10.1007/s11187-007-9084-8.