FINANCIAL PERFORMANCE IN MICRO AND MEDIUM SIZE RURAL COMPANIES

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While the rural economy has been traditionally associated with primary sector, the importance of primary sector in GDP and as the provider on employment in rural areas has been on decline. In Estonia the number of tertiary sector enterprises in rural areas has passed the number of primary sector enterprises. This indicates to the changing nature of rural economy where enterprises of non-primary activities, especially the tertiary sector, are the main source of growth in rural areas. As the rural economy has been changing, it is important to study the challenges faced by the rural enterprises in different sectors. The paper compares the financial performance of Estonian rural enterprises in three sectors: primary, secondary and tertiary, and analyzes three issues: labor efficiency, profitability, and production performance in rural companies of primary, secondary, and tertiary sectors using the data from Statistics Estonia. The period of 2005 to 2010 is studied. Main findings of the paper are as follows. First, labor efficiency in the tertiary sector is much higher than that in other sectors. The profitability of rural companies tended to decline. Although overall secondary sector’s share is declining, it still has the highest value added in rural areas. Rural companies cannot become the engine of the economic growth as the average value added of rural company was about twenty-five percent lower than in Estonian average company.

Key words: rural companies, productivity, economic sectors, Statistics Estonia.
JEL codes: R12, J24.

Introduction

While agriculture has an important role in shaping rural landscapes, its weight in rural economies is often low and declining (OECD 2006). While the rural economy is traditionally associated with primary sector’s activities (agriculture, forestry, fishing etc), the primary sector’s importance in the economy has considerably diminished. For example, in Estonia in 2011 the share of agriculture, forestry and fishing in the GDP was around 3.6 % in 2011 (Statistics Estonia 2012a). The share of primary sector enterprises in rural enterprises has been decreasing in the last decade and in 2007 the number of tertiary sector’s enterprises passed the number of enterprises of primary sector. By 2011 the tertiary sector accounted for half of the enterprises registered in Estonian rural areas and the share of primary sector among the rural enterprises has decreased to a third (Statistics Estonia 2012a). During the end of Soviet era in the 1980ies, the primary sector provided employment to half of rural population. However, there was a sharp decline in the 1990ies and 2000nds and in 2011 primary sector provides employment for just 12.6 % of Estonian rural population and 4.4 % of total population (Statistics Estonia 2012a). Tertiary sector provides employment for more than half of rural population.

As the nature of rural economy is changing, it is highly relevant to study the nature and the consequences of those changes. As rural development is the objective of state and EU policy, the present situation must be analyzed before making the de-
cisions. In order to develop new policy options for rural development, deciding if and where support is needed it is important to have an overview how are rural enterprises performing during and after economic crisis. In comparison with secondary and tertiary sectors, the traditional rural companies of primary sector already perform a minor part in the economy. As the tertiary or service sector has been steadily increasing in rural areas, it holds the key for future economic growth in rural areas. The objective of the study is to find out the strongest and weakest types of rural companies through the comparison of financial performance of primary, secondary, and tertiary sector rural companies. The objects of the research are Estonian rural companies. The period from 2005 to 2010 is studied.

For achieving the purpose, the following tasks are set according to the main objective:

- how many companies are located in rural areas in Estonia?
- what is the trend in the performance of rural companies over time?
- are there differences in rural companies’ financial performance, according to their size, and sector?
- what are the characteristics and trends in financial performance of rural companies?
- what are the key characteristics of rural companies and how do these compare to the rest of enterprises?

Following methods have been used in the present research: the financial analysis, monograph, analysis and synthesis

**Data and method.** Estonia is administratively divided into 15 counties that are in turn divided into local municipalities: towns and rural municipalities. In the present analysis rural area is defined in the same way as in Estonian Rural Development Plan 2007–2013 (Ministry of agriculture, 2008): rural municipalities and towns with less than 4000 inhabitants are regarded as rural areas. Enterprises registered in rural areas are regarded as rural enterprises. Estonian Commercial Code (1995) defines an enterprise as: a natural person who offers goods or services for charge in his or her own name where the sale of goods or provision of services is his or her permanent activity; or a company provided by law. Any natural person may be a registered sole proprietor. Therefore, the enterprises are both sole proprietors and companies. However, in the present analysis on companies are studied and the rural companies are defined as private limited companies, public limited companies, commercial associations registered in Estonian rural areas. Primary sector includes enterprises whose main activity is agriculture, forestry and fishing. Secondary sector includes mining and quarrying, manufacturing, electricity, gas, steam and air conditioning supply, water supply; sewerage, waste management and remediation activities, construction. Tertiary sector includes services. In the analysis the companies are divided into 2 size groups: microenterprises with up to 9 employees and larger companies with 10 or more employees.

In the financial analysis labor efficiency, profitability, and production performance is studied. Labor efficiency, as a measure of human resource management is a ratio, calculated by dividing sales revenue to employee. Profitability is measured by rate of return on assets (ROA) and is calculated by dividing net income to assets. Value added was used to measure production performance. Value added was calcu-
lated by summing sales, the change in unfinished products, and other business revenues, and subtracting expenses for goods, services, materials, taxes and other business expenses. The data used in the analysis is retrieved from Estonian Statistical Office’s database of financial data of enterprises (Statistics Estonia 2012b).

The paper is organized as follows. Firstly, in the next section, the primary, secondary, and tertiary sectors financial performance measures are defined through the examination of literature on financial performance of rural enterprises. Secondly, in the following section the performance of rural companies in different sectors is studied. In the last section conclusions are presented.

Financial performance indicators of rural primary, secondary, and tertiary sector enterprises.

Rural enterprises’ performance has been the object of investigation as number of studies has shown that rural firms differ from urban firms. Traditionally, rural enterprise has been the one of agricultural sector (Põder, 2011), and therefore there are several papers that investigate the financial performance of farms (Sonka, 1989; Mishra, 2001; Gloy, 2002; Nurmet, 2011).

In this study the research objective is wider, and the emphasis in the analysis is placed on rural company, in all its senses (primary, secondary, and tertiary sector). The results can be used by decision makers both in country and industry sector level. The primary sector of the economy extracts or harvests products from the earth. It includes the production of raw material and basic foods. Activities associated with the primary sector include agriculture, forestry, farming, hunting and fishing. The packaging and processing of the raw material associated with this sector is also considered to be part of this sector (Griffiths, 2011) The secondary sector of the economy manufactures finished goods. Activities associated with the secondary sector include metal working and smelting, automobile production, textile production, chemical and engineering industries, aerospace manufacturing, energy utilities, engineering, breweries and bottlers, construction, and shipbuilding etc. The tertiary sector of the economy is the service industry. Activities associated with this sector include retail and wholesale sales, transportation and distribution, entertainment, restaurants, clerical services, media, tourism, insurance, banking, healthcare, law etc.

Previous studies about rural enterprise performance have found that rural firms have better opportunities to survive and grow. Z. Acs et.al (2003) found in their study that start-up firms are more likely to grow rapidly in the most rural labor markets. L. Yu et al (2011) found, that many factors favor urban firm survival: urban firms are bigger, have better access to educated workers and water, are more likely part of a multiplant firm, and are more likely in growing sectors of the economy. Rural firms have advantages in that they are in markets with a lower public debt load and lower firm entry rates. M. Fritsch et al (2006) used the data of West Germany and found firm survival rates decline with increased population density. G. Bottazzi et.al. (2008) presented a comparative analysis of two crucial dimensions of firms’ performance: profitability and productivity on example of manufacturing and services Italian firms. They found that profitability and productivity are related with growth, what is the third important dimension of performance. G. Baker (2012) examined the relationship between formal strategic planning and financial performance in example of food
processing industries. Results indicated that use of strategic planning tools has a positive impact on financial performance.

From financial performance and productivity perspective, three measures indicating business financial performance were chosen: increases in labor efficiency, profitability, and increases in production performance.

Previous studies have used five performance measures to capture the indicator variables that reflect farm performance from three performance categories: financial, production, and human resource management. B. Gloy et. al. (2001) measured financial performance by liquidity, solvency, and profitability. It is important, that liquidity and solvency measures are indicators of financial stress in the short term (Katchova, 2010). An Operating Expense Ratio was included to measure production performance, while human resource management was measured by labor efficiency. All of these measures are ratios, which removed enterprise size effects.

**Results**

The companies located in rural areas are studied in the present research. We excluded sole proprietors from the data, and used only the data of financially active companies. According to the definition of Statistics Estonia, a company is considered to be financially active if it has financially performed during the observable year (Statistics Estonia, 2012a). The number of included companies from 2005 to 2010 can be seen on the figure 1, where rural companies consist about 28\% of all companies.

![Figure 1. Number of financially active companies in Estonia, including rural companies (2005–2010)](image)

*Source: Statistic Estonia.*

The number of financially active companies has grown from 42225 in 2005 to 58347 in 2010, while the number of rural companies has grown from 9489 to 16735. Measuring financial performance of rural companies, factors of rural company performance regarding the sector level and the size of the companies are analyzed. As can be seen from table 1, the larger part of rural companies belongs to tertiary sector. The overall trend is that the total number of companies is increasing. Prevailing type
of company is micro sized, employing up to 9 persons. The comparison of years 2005 and 2010 shows that the number of microenterprises has increased in all sectors. However, in case of the larger companies the number of enterprises has somewhat decreased in case of secondary and primary sector.

Table 1. Rural companies by size and sector level in 2005 and 2010

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<tr>
<td></td>
<td>Employees up to 9 persons</td>
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<td>Primary sector</td>
<td>768</td>
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<td>254</td>
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<td>Secondary sector</td>
<td>1729</td>
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<td>Tertiary sector</td>
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Although the number of micro sized rural companies is high, they employed only 35.6 % of all employees employed by rural companies in 2010. However, the share is growing, as in 2005 micro sized rural companies employed 20 % of total employees employed by rural companies. In case of Estonia total, micro companies employed accordingly 23.3 % and 29.8 % of those employed by financially active companies in 2005 and 2010.

The trends of productivity in the primary, secondary, and tertiary sectors rural companies were observed using the components of labor efficiency, profitability, and increases in production performance.

**Labor efficiency.** The observable period included years 2005–2010. The number of companies increased during the observable period, but employment decreased in years of financial crisis. Therefore the average number of employees per company diminished both in urban and rural companies. Labor efficiency, as a measure of human resource management is a ratio, was calculated by dividing sales revenue to employee.

![Figure 2. Labor efficiency by sector in microenterprises, in thousands of euros by employee (2005–2010)](source: Author’s calculations, data from Statistic Estonia 2012b)
Figure 2 compares labor efficiency across sectors in micro companies (employed up to 9 employees). Labor efficiency in primary sector was even higher than in the secondary sector during the period of economic crisis from 2008–2010. However, if we compare labor efficiency growth in Estonian’s primary sector with that in the secondary sector, there is a remarkable difference. Labor efficiency in primary sector has grown from 31,24 to 55,83 against the growth from 40 to 45,53 in secondary sector between 2005 and 2010. Figure 3 compares labor efficiency across sectors in larger companies that have 10 or more employees. Labor efficiency is permanently the lowest in primary sector enterprises, and the highest in tertiary sector enterprises.

![Figure 3. Labor efficiency by sector in larger companies, in thousands of euros by employee (2005–2010)](source)

**Profitability.** Profitability, measured by rate of return on assets (ROA) is a ratio, calculated by dividing net income to assets. The profitability of rural companies tended to decline during 2005–2010. The decline of rate of return on assets is a sign of worsen profitability in rural companies. In fact, rate of return on assets fell substantially in 2009 during the economic crisis, but has been slightly recovering in 2010.

![Figure 4. Return on assets by sector in microenterprises (2005–2010)](source)
Primary sector’s micro companies’ profitability performance has been better than that of medium companies. Comparing tertiary sector profitability with that of other sectors, we find that there is certainly a lot of space for improvement, especially in micro enterprises.

![Figure 5. Return on assets by sector in larger companies (2005–2010)](source: Author’s calculations, data from Statistic Estonia 2012b)

**Production performance.** Value added was included to measure production performance. Value added was calculated by summing sales, the change in unfinished products, and other business revenues, and subtracting expenses for goods, services, materials, taxes and other business expenses. The value added of all companies grew 22.4% from 2005 to 2010, accordingly from 6397987 thousand euro to 7832386 thousand euro. At that time the growth of value added in rural companies was 48.7% (from 1102311 thousand euro to 1639426 thousand euro in absolute numbers). The average value added of rural company was about twenty-five per cent lower than in average Estonian company. For instance the value added was 134.2 thousand euro per average Estonian company, and 98 thousand euro per average rural company in 2010.

**Table 2. Rural company’s average value added by sector and number of employees (2005–2010)**

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Comparing companies of different size in 2005 and 2010 it can be seen that value added has grown the most in companies with more than 10 employees: for instance that of primary sector’s companies was higher for 72 %, of secondary and tertiary sectors accordingly for 52 and 57 % in 2010. However, the average value added per tertiary sector micro sized company employed up to 9 employees was lower for 14 % in 2010 (23 thousand euro comparing to 27 thousand euro in 2005). Value added has substantially grown in primary sector micro sized companies: from 35 thousand 52 thousand euro per company, i. e. 49 %.

Conclusions

1. The total number of companies is growing, especially in tertiary sector.
2. Prevailing type is a micro sized company, employing up to 9 persons. Although the number of micro sized rural companies is high, they employed only 36 per cent of all employees employed by financially active rural companies.
3. According to the trends in labor efficiency and value added it can be seen that previous rural policies have given quite good results. Labor efficiency in primary sector was even higher than in the secondary sector during the period of economic crises from 2008–2010. There is a remarkable difference in labor efficiency growth in Estonian’s primary and secondary sector. Labor efficiency in primary sector has grown from 31 to 56 against the growth from 40 to 46 in secondary sector.
4. Nevertheless, rural companies cannot become the engine of the economic growth as the average value added of rural company was about twenty-five per cent lower than in average Estonian company. Of larger rural companies, the secondary sector enterprises have the highest value added. Primary sector has the lowest value added among all companies. The growth of value added in rural companies was 49 %. At that time the value added of all companies grew only 22 %.
5. Optimal combination of resources as capital and labor is needed in order to achieve better productivity. The profitability of rural companies tended to decline, and fell substantially in 2009 during the economic crisis, but has slightly recovering in 2010. For more precise suggestions about productivity rising instruments of a rural company the future research is needed.

References


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Santrauka


Reikšminiai žodžiai: kaimo įmonės, našumas, ekonomikos sektorius, statistika.

Jel kodai: R12, J24.