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COST-EFFECTIVENESS OF CAPITAL PROFIT ORIENTED CORPORATIONS IN RESIDENTIAL SOCIAL CARE SERVICES: MANAGERIAL RECOMMENDATIONS AND BARRIERS IN CZECH REPUBLIC AND EUROPE

Abstract:

This study explores the cost-effectiveness of capital profit-oriented corporations in the developing residential social care service sector of the Czech Republic. Data envelopment analysis (DEA) is used to evaluate the profit efficiency of 24 companies with available financial data from 2022. The results reveal substantial differences in efficiency, with only three companies achieving a score of 51-100%. The most efficient companies demonstrate knowledge spillover from foreign ownership, strategic capacity growth, staff training, and cooperation with the public sector. The paper concludes that the sector is underdeveloped and geographically concentrated. Managerial recommendations based on the leading companies' strategies highlight the importance of process improvement projects, integrated healthcare and social service provision, and a data-driven approach through regional social care service plan development.

Keywords:

Capital profit-oriented corporations; Residential social care services; Cost-effectiveness; Data envelopment analysis (DEA); Profit efficiency

JEL Classification: L25, L32, I18

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Introduction

Institutional residential care remains the most common method of long-term care organization in the country. Private for-profit facilities, particularly those providing eldercare, are still in their early stages of development. There are numerous burdens associated with the for-profit sector; for example, family members regard institutional residential care as a last resort and personal failure (Hronová & Souralová, 2018; Hronová & Souralová, 2019). This paper examines the context in the Czech Republic and provides insights into the profitability and market context of the growing for-profit sector of Residential Social Care Services.

This sector is experiencing increased demand due to demographic development, and there are concerns that the availability of residential social services for the elderly in the Czech Republic is below the EU average. Uncertainty in the sector presents both risks and opportunities for the private sector. Poor economic policies have resulted in a complex financing system and disconnected departments in the health and social sectors, particularly for geriatric care (Škampová et al., 2014; Maresova et al., 2020). Studies have identified gaps in the spatial accessibility of nursing services for the elderly in the Czech Republic, with a focus on capacity, human resource availability, and budgetary expenditures in residential facilities (Vrabková et al., 2021).

Furthermore, the macroeconomic costs and benefits of residential care activities for the elderly have been investigated, emphasizing the importance of addressing the need for such care. According to Langhamrová et al. (2018), there is an estimated 8 billion euros in underinvestment to meet the growing demand for residential care.

The international evidence shows that this sector is complex, and in terms of marketing, there are many segments based on the type of client and their needs (elderly, homeless, palliative care, dementia, etc.), making this sector knowledge-intensive, and providers must be aware of their segments as well as their in-house organizational social-care and health-care related capabilities.

In the field of mental health services, integrating mental healthcare and social care is critical for providing comprehensive care to individuals, including treatment, crisis care, preventative care, and day-to-day support. This places a high demand on management style, which must include a well-defined medium-term social care plan, organizational information system, and positive relationships with external (public mostly) stakeholders and also professionals such as community psychiatric nurses or mental health support workers (Stamboglis & Jacobs, 2019).

Effective collaboration between healthcare services and care home staff has been identified as critical to improving healthcare outcomes in care homes (Gordon et al., 2018). Improving service delivery in residential care settings entails increasing access, continuity, affordability, health and social care coordination, and care quality, especially in long-term residential care settings (Woo et al., 2011).

Customizing residential care to individual needs through modular health services can encourage self-sufficiency and improve care quality (Soffers et al., 2014). Residential social care staff training programs should proactively address health and aging issues in order to promote healthy aging among residents (Northway et al., 2017). District mental health services must be strengthened to promote social inclusion and comprehensive healthcare for people suffering from mental illnesses (Robertson et al., 2021).

To summarize, the relationship between service providers' quality, costs, and profitability is complex. There are few studies that concentrate on for-profit companies in the residential care service sector. It appears that higher quality social services are a source of profitability, with larger facilities outperforming smaller (up to 6 beds) service providers (Xiao et al., 2023).

Materials and Methods

The data sample was obtained from the company monitoring portal (Imper, 2024). According to this database, 50 capital (for-profit) business corporations with the legal forms a.s. (non-publicly traded joint stock company) and s.r.o. (limited liability company) operates in the Czech Republic's Residential Social Care Services sector in 2024. Only 35 companies published their financial statements between 2018 and 2024. To date, only 24 companies have published their financial reports for the fiscal year 2022 (Table 1). Managerial recommendations are based on strategic document analysis, company monitoring and web portals analysis of the top companies. The sample is heterogeneous in terms of all financial indicators, and we can see higher standard deviations than mean values. The exceptions are personal, labour, and production costs, but the standard deviation remains very close to the mean value.

Table 1: Summary statistics, financial figures in thousands of CZK.

Variable	Obs	Mean	Std. Dev.	Min	Max
EBT	23	4,459.09	12,222.60	-7016	55319
EBIT	23	5,478.96	14,140.86	-9108	64708
EVA	22	388.18	7,143.72	-26421	11742
Turnover	24	90,620.50	75,640.35	8960	299129
EAT	24	4,159.75	11,917.55	-7016	55319
Sales	24	66,896.67	60,161.47	4	233978
Production costs	24	32,064.29	25,787.27	4217	107446
Personnel costs (total)	24	45,975.46	35,969.04	4383	124255
Labour costs (wages)	23	35,250.61	27,524.42	3256	93294
Total assets	24	65,331.88	125,092.50	708	557197

Current assets	24	25,877.79	34,007.58	708	129441
Short-term receivables	24	10,841.75	20,666.90	0	102231
Equity	24	28,882.50	90,241.92	-53546	390077
Long-term liabilities	24	20,015.63	40,714.28	-13407	142539

The most common legal form is limited liability company (18 companies). The median company is a medium-sized service provider with 50-99 employees (Table 2) and has been in the market for 17 years. The youngest company was founded in 2018, and the oldest in 1993. A large percentage of companies (41.66%) are based in Prague.

Table 2: Size categories, Czech Residential Social Care Service providers in 2022

Employees	**Freq.**	**Percent**	**Cum.**
10 - 19	2	8.33	8.33
20 - 24	2	8.33	16.66
25 - 49	3	12.50	29.16
50 - 99	7	29.17	58.33
100 - 199	6	25.00	83.33
200 - 249	2	8.33	91.66
250 - 499	2	8.33	100.00

This heterogeneous sample necessitates a nonparametric approach. Data envelopment analysis (DEA) allows for the estimation of technical efficiency and profit maximization. The suggested approach is to evaluate output-oriented profit maximization (Bansal et al., 2021); however, there is no widely accepted method for calculating profit efficiency, and some industries have specific inputs in addition to labor and fixed assets, as well as specific outputs other than profit. The added value is the ability to provide some useful decomposition (Juo et al., 2015) as well as introduce slacks in output and input prices.

This paper only provides basic results for an output-oriented model with constant and variable returns to scale. The chosen inputs are labor costs, production costs (expenses for material purchases, energy, and other outsourcing), and earnings after taxes (EAT). The result table considers all non-positive profit companies inefficient and excludes them from DEA. This approach provides an initial look at industry efficiency without more detailed decomposition.

The discussion and managerial recommendations are based on a comparison of the most and least efficient companies, as well as their strategies and business models.

Results

The results indicate that this sector is still developing, and there are variations in profit efficiency as measured by the output-oriented data envelopment analysis efficiency score. There are only three companies that achieve 51-100% technical efficiency. The others are between 1 and 50% technical efficiency or at a loss.

We can see that economic value added reflects the efficiency score, but it is not strongly correlated (correlation coefficient 0.12). AHC Senior centrum Nový Bor a.s. is the most efficient company, while Czech One Prague s.r.o. ranks second in technical efficiency. Both companies are medium-sized (55-199 employees) with mixed ownership (domestic and foreign) and operate in the social care for the elderly sector in the capital city district (Prague).

Table 3: Data envelopment results, constant and variable return to scale, output orientation, Czech Residential Social Care Service providers in 2022

Company	**Constant return to scale**	**Variable returns to scale**	**Economic Value Added**
AHC Senior centrum Nový Bor a.s.	1.00	1.00	6,089
Czech One Prague s.r.o.	0.52	0.75	8,789
Domov třetího věku s.r.o.	0.47	0.51	11,742
Vysočinské nemocnice s.r.o.	0.16	0.16	3,105
SeneCura SeniorCentrum MOPT a.s.	0.15	0.24	3,758
Senior-komplex Praha Třebešín s.r.o.	0.14	0.14	Not available
SeneCura SeniorCentrum Klamovka s.r.o.	0.11	0.11	4,252
AHC Centrum následné péče Sedlec-Prčice a.s.	0.09	0.09	2,161
Czech - real CB, s.r.o.	0.08	0.08	6,394
IGF Care Centre Třebíč s.r.o.	0.07	0.07	1,202
SeneCura SeniorCentrum Písek a.s.	0.05	0.05	712

JIPRO-CASH s.r.o.	0.04	0.04	-748
Centrin CZ s.r.o.	0.03	0.04	-4,251
DS Zbůch s.r.o.	0.03	0.03	-515
Jihoměstská sociální a.s.	0.03	0.03	-927
Domov Kunšov s.r.o.	0.01	0.01	29
Dům pro seniory Uničov s.r.o.	0.01	0.01	-118
Péče Těně, s.r.o.	At loss		-1,719
SeneCura SeniorCentrum HŠH a.s.	At loss		-3,311
Senior-komplex s.r.o.	At loss		-377
ProSeneo s.r.o.	At loss		Not available
Soukromý dětský domov, s.r.o.	At loss		-59
CCK servis s.r.o.	At loss		-26421
TOREAL, spol. s r.o.	At loss		-1247

Conclusion and Discussion

This exploratory study revealed that the profit sector (approximately 50 providers in the market) remains underdeveloped, with significant differences between service providers. Based on 24 observations of all companies with reported 2022 financial statements, the results suggest that there is some degree of knowledge spillover from foreign owners (parent foreign company) that contributes to higher profit efficiency and positive economic value added.

It was confirmed that there are still gaps in spatial accessibility (Vrabková et al., 2021), as the majority of profit-oriented companies operate in the capital city district and its surroundings (Stredočeský Kraj). Also, if there is a link between profitability and product quality, we cannot confirm the scale hypothesis (Xiao et al., 2023); our findings indicate that the largest companies are on both sides of the profit efficiency scale and the economic value added as well.

Managerial recommendations are based on strategic document analysis (annual reports, organizational values, vision), ongoing and past projects, and certifications published in the top two companies as they are the "technological frontier" (Acs et al., 2013), which other service providers can adapt to and overcome by gaining a competitive advantage.

The most efficient company previously completed a European Social Fund project aimed at improving process maturity and the quality of social service delivery. They can provide both healthcare and social services from their facilities. They collaborate with the public sector, and their strategy focuses on capacity growth and staff training. The second most efficient company is one that values employee feedback and shares best practices. This suggests a good starting point for the company's design thinking (Rösch et al., 2023) approach, as well as suggestions for improvement (versioning and prototyping) that can improve the overall quality of services provided. They also have extensive experience developing regional social services plans that are based on market research analysis and negotiation with public sector stakeholders. The company has a clearly defined vision and mission.

There are some limitations to consider. We only studied one year and did not consider short-term tactical organizational plans to achieve higher dynamic capabilities (Baía & Ferreira, 2019). Talent acquisition or intense investment activity can reduce profits and retained profits to a minimum in the short-term period. Future research should consider longer time periods, control for short-term profit strategies, and increase investment intensity to improve efficiency. Because this industrial sector is very small (around 50 companies), future research can use a mixed methods approach; however, it appears that the DEA efficiency score did not achieve normality or approximative normality in 2022. The representativeness is only limited by data availability, and companies that are late with the mandatory publication of financial statements typically deal with financial issues, so we can expect to miss some companies with low efficiency scores.

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