
The Degree of Profit Persistence in the Tourism Industry: The Case of Norwegian Campsites

Submitted 16/10/21, 1st revision 01/11/21, 2nd revision 20/11/21, accepted 07/12/21

Leiv Opstad¹, Johannes Idsø², Robin Valenta³

Abstract:

Purpose: To gain more knowledge about the profit rate and whether it persists over time for campsites. Many international articles have analysed the degree of profit persistence but in other sectors than campsites. This provides insight in how the market for campsites works. An analysis of profit persistence for Norwegian campsites is relevant for the rest of the tourist sector as well as campsites in other countries.

Design/Methodology/Approach: The study is based on public available data for the last 10 years for all Norwegian campsites and consists of 292 firms where 164 are included in this research. A quantitative approach (regression models) using panel data and system GMM estimators. Hypothesis testing.

Finding: The findings indicate that there is a positive significant profit persistence for those campsites with high initial profits. Furthermore, the relative profit rates depend on firm-specific factors. There is a significant positive correlation between growth and profit rate, and there is also a negative link between debt ratio and profit rate for firms with an initial low profit rate. Company size does not have significant impact on the profit rate.

Practical implications: The existence of profit persistence suggests an absence of well-functioning market. Companies can do it worse or better than the sector average over a longer period. This provides knowledge about which companies are resilient and weak. This is important information for banks and others who provide loans.

Originality/value: This study implements a method to identify the speed of adjustment to normal profit in the campsites sector. There are few studies that have applied this method for Norwegian companies and for campsites worldwide. By using GMM (general method of moments) one gets more consistent estimators than OLS (ordinary least squares).

Keywords: Profit persistence, profit rate, panel data, tourism, System GMM estimators, campsites.

Jel codes: D21, M21

Paper type: Research article.

¹NTNU Business School, Norwegian University of Science and Technology, 7491 Trondheim, Norway, e-mail: leiv.opstad@ntnu.no;

²Department of Environmental Sciences, Western Norway University of Applied Sciences, 6856 Sogndal, Norway, e-mail: Johannes.Idso@hvl.no;

³The same as in 1, e-mail: robinval@stud.ntnu.no;

1. Introduction

The prerequisite for an efficient market is that everyone has complete information about all relevant matters. In a credit relationship, the bank has an information asymmetry problem that results from the difficulty of credit risk assessment and the asymmetry of information appears to be a major constraint in the financing of a project (Tupangiu, 2017). The practical consequence of information asymmetry is market failure. This means that the market does not find the optimal solution with waste of resources as a result.

Creditworthiness has something to do with profit. The problem for creditors is that they cannot know what the future profit of the borrower will be. To reduce this problem, we suggest that banks and other creditors use the general method of moments (GMM) and examines the credit persistence in the industry.

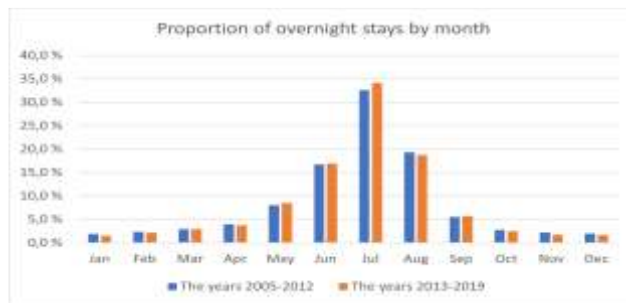
In this paper, we show how it is possible to say something about the future profit based on observations in the past. As a case, we have chosen Norwegian campsites, but in principle we could have chosen any industry.

There are many empirical analyses about profit persistence (Bhangu, 2020; Hirsch, 2018). Most are based on the contribution of Mueller (1986). The results reveal that high profits can last for a longer period and are an indicator that there is no great competition in the various markets. We are not aware of any published articles that have applied this method to Norwegian data. Some articles have investigated profitability over time in the tourism industry (Jeon *et al.*, 2006) but to the best of our knowledge, there has not yet been any study that has carried out such an analysis of campsites.

Tourism is an important industry in Norway. This is especially true in rural areas where the lack of work contributes to relocation and a decline in the population (Jean-Hansen, 1995).

In this study, we focused on a small but important part of this industry: camping tourism. The camping industry in Norway is seasonal, with July being the most popular month. In the period 2005–2020, 72% of overnight stays were sold in the three summer months of June, July and August. The distribution of overnight stays in the different months reflects the societal economic and social conditions and therefore also change somewhat over time. As shown in Figure 1, the proportion of overnight stays in July increased from 33.6% to 34.7% from 2005–2009 to 2015–2019.

Figure 1. Proportion of overnights stays by month in 2005–2009 and 2015–2019.



Source: Own study.

Due to the strong seasonal variations, many campsites are only open during the summer. Because customers tend to arrive only in the summer, it is challenging to organise the business and secure profits. There are many campsites scattered around the country, with few employees and many reporting negative profitability. While tents were the dominant form of accommodation in the 1960s, the situation has changed significantly since then (Table 1). Statistics Norway uses four categories of accommodation in its statistics: tent/caravan, motorhome/camper, cabin or seasonal contract. Seasonal contract means that the customer rents a specific area at the campsite for a longer period of time, generally over several years.

Table 1. Proportion of different categories of overnight stays at Norwegian campsites in 2019.

Category	Share in 2019 (%)
Tent/caravan	21.0
Motorhome/camper	21.7
Cottage	25.8
Seasonal contract	31.6

Source: Own study.

With this article we want to identify and clarify the level of profit persistence for campsites. Furthermore, other factors (primarily company-specific) will be included in the analysis to explain the development of profits for the various companies.

2. Literature Review

A growing body of research articles using dynamic panel model has applied the methodology of Mueller (1986) to analyse the existence of persistent profit. The author points out factors that may explain this such as: market power and market structure, technology, product differentiation and advertising, leadership and managerial control, cluster, entry barriers, growth, patents, risk, and the financial situation.

The last year's profit has a significant impact on the current profit, but there is significant variation in the effect (Gschwandtner and Hirsch, 2018; Hirsch, 2011), which is in line with suggestion of Mueller (1977) that the profit level of a firm can be stable over time. Many empirical studies confirm that profits persist among different sectors and economies over longer periods (Gschwandtner, 2012; Hirsch, 2018). In many analyses, one distinguishes between short-term profitability and long-term normal return (Hirsch, 2018). Some companies may have profits above normal over a longer period of time, and how long it takes to converge towards normal returns varies. Even the profit rate can persist over some years, but a considerable marked competition over time implies it will converge to the average level (Gschwandtner, 2005).

Firm-specific factors can have a substantial impact on the variance in profitability. Zouaghi *et al.* (2016) suggested those effects to be nearly 50%. Hirsch *et al.* (2021) testified a high degree of profit persistence in food retailing with data from France, Spain and Sweden. They suggested this was due to strong bargaining power with processors. The top competitors had a higher level of profit persistence, while independent supermarkets generated lower profitability than the others. Glen *et al.* (2021) reported that persistence of profitability is lower in developing than in advanced economies. Giotopoulos (2014) applied Greek data and found a higher level of profit persistence for firms operating within knowledge-intensive business services compared to less knowledge-intensive service industries.

Gschwandtner and Hirsch (2018) confirmed that labour-intensive sectors like the food processing tend to have less profit persistence compared with other manufacturing sectors. According to the theories of classical economics, firms will only increase production if this creates additional profits. If further production has a negative impact on profits, it is not rational for the company to increase production further. With different assumptions about the behaviour of the individual company, the picture becomes more complicated. A firm's growth (increased sales) can be an indicator of its ability to compete (Rassier and Earnhart, 2015). Therefore, it is not surprising that many researchers find a positive significant link between profitability and sales growth (Delmar *et al.*, 2013; Yurtoglu, 2014). Growth can be an important factor for survival and a source of motivation for improving the performance (Zouaghi *et al.*, 2016).

According to Jang and Park (2011), some empirical studies might be inconsistent with or fail to support this traditional theory. Some authors have argued that many companies want to maximise their weight rather than their profits (Mueller, 1972), which may result in greater market power. Moreover, many business leaders want to grow big, as this gives greater prestige and higher wages, among other benefits. Many companies can prioritise further growth and become larger even if this results in lower profitability, one can trade lower profit for further growth. Instead of maximum profitability, the strategy may be to achieve a specific level of profitability

combined with prioritising other tasks. If one has achieved a sufficient level of profitability, the companies might focus on other goals like increasing its size.

However, pursuing growth at the expense of profitability might be risky (Fitzsimmons *et al.*, 2005). For many firms, there is a trade-off, and one needs an acceptable level of profit to survive. Davidson *et al.* (2009) suggested that companies with low levels of profitability and low growth are not likely, over time, to achieve high profitability by expanding production. These firms will probably remain in a position with a low profit rate and lower degree of expansion than the average firm in the sector. According to Davidson *et al.* (2009), there are limited theoretical explanations for this empirical pattern. It may be that companies in such a position have other priorities or may be difficult to get out of the situation in which they find themselves.

Small and young companies might have difficulty establishing a competitive unit that would give an average profitability rate for the sector (Federico and Capelleras, 2015). According to Cowling (2004), there is a substantial correlation between growth and increased profit. But for larger and older companies with stable market shares, there is a tendency for a weak relationship between growth and profit. Other researchers have not found any significant link between short-run profits and firm growth (Gschwandtner and Hirsch, 2018)

Gschwandtner and Hirsch (2018) found a significant positive relationship between company size and profitability deviating from the norm in the food processing industry in the USA and EU. This is an indicator of economic of scale for this sector. Larger firms perform better than smaller ones. Giotopoulos (2014) also suggested differences depending on the size of the companies. Based on analysis of the manufacturing and service sector companies in four European countries (Belgium, France, Italy and the UK), Goddard *et al.* (2005) reported the existence of abnormal profits and a negative size–profitability relationship, but a positive link between market share and profitability. However, other researchers have not found that the size of the firm has any impact on profit persistence (Gschwandtner, 2005; Yurtoglu, 2004).

Scott and Pascoe (1985) reported that firms with higher debt ratios tend to be less profitable, while Eriotis *et al.* (2002) confirmed a statistically significant negative association between debt ratio and profitability. Companies that self-finance are also more profitable than those that finance investments by borrowing money. This indicates that the cost of financing through borrowing is higher than the benefit of the investment, or companies that prefer to self-finance the investment are more profitable than those that do not. Although there is a negative relationship between debt ratio and profit rates, there might still be a positive link between investment and profit margins. A negative correlation between debt ratio and profit rates would be in line with the results of other researchers (Ali and Faisal, 2020; Nunes *et al.*, 2009; Nguyen and Nguyen, 2020). Reasons for this negative association might also be to

avoid paying taxes or to prioritise more development and expansion instead of a higher profit margin (Ngo *et al.*, 2020). Goddard *et al.* (2005) noticed highly leveraged companies suffer because a higher proportion of the gross profits is needed to serve the debt. However, other researchers have reported a positive connection (Berger *et al.*, 2006; Dinh and Pham, 2020) or no statistical link (Baum *et al.*, 2006) between those two variables.

A decline in the rate of the national currency will increase the number of foreign visitors. Opstad *et al.* (2021) reported a currency elasticity of 0.8 for German guests visiting Norwegian campsites. If the Norwegian currency declines by 10%, one can expect 8% more visitors from those countries because it would be cheaper to travel to Norway; about 20% of tourists at Norwegian campsites are foreigners (Idsø and Opstad, 2021).

3. Research Hypotheses

Based on previous research and standard theories of corporate behaviour, the following hypothesis are postulated:

Hypothesis 1 (H1): There is a degree of profit persistence among the companies within campsites.

Hypothesis 2 (H2): There is a link between firm specific factors and profit rate.

The assumption is that different characteristics of the companies and structure of the campsites may cause profit deviations from normal to persist for a long time (H1). Examples of business-specific factors that may be significant are debt, size and focus on growth (H2) It is not clear whether the effects are positive or negative. The research shows a mixed result on these various factors.

4. Research Methodology

4.1 The Sample

In Norway, all limited companies, all state-owned companies and large sole proprietorships are required to submit their financial accounts to the public register (Brønnøysund Register Centre). The accounting information that companies submit is public, and the financial accounts for the last ten years can be downloaded by anyone. From the register, we obtained the financial accounts for the last 10 years for all Norwegian campsites. The study population consisted of 292 camping companies that submitted accounts every year from 2010 until 2019, including the terminal years. We have chosen to exclude observations with extreme values or incomplete data. Therefore, the number of enterprises was reduced from 292 to 164. By obtaining 10 years of accounts from each company, the total of number of accounts considered was 1,640. The companies that were not included in our survey were (Table 2):

1. Companies that ceased to exist for one reason or another in the period 2010–2019;
2. Companies that were established in the period 2010–2019.

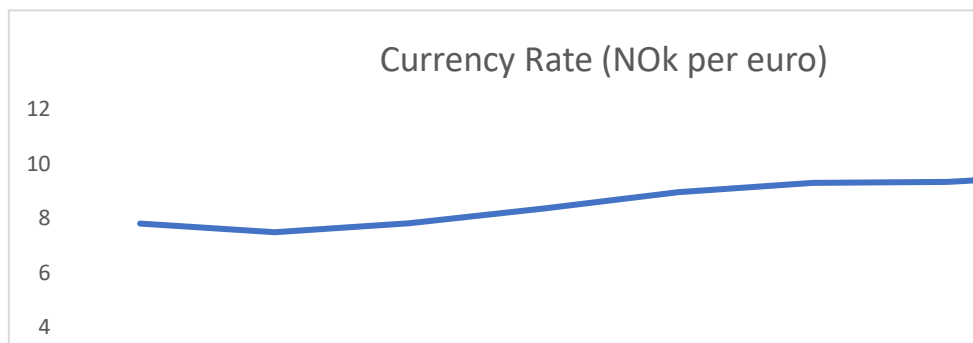
Since there has been a substantial fall the value of the Norwegian currency, this is included in the analyses (Figure 2).

Table 2. *Descriptive statistics*

	Mean (N=164)	Standard deviation	Min	Max
Sales (1000 Norwegian Krone)	6558	8554	466	84336
Growth	7.53	5.59	-8.42	33.58
Profit rates (%)	9.60	10.40	-35.09	47.18
Debt share (%)	104.4	90.7	7.7	4.80
Employment	16.3	14.9	3	82
Euro (NOK per euro)	8.65	0.86	7.47	9.85

Source: Own study.

Figure 2. *Exchange Rate 2010–2020*



Source: Norwegian Central bank.

4.2 Methods and Models

Many researchers (Bhangu, 2020; Gschwandtner, 2005) have examined profit persistence by applying the method from Mueller (1986). In this paper, we follow the same procedure, P_{it} expresses the profit for company I in period t . This is affected by cyclical fluctuations. To eliminate this effect, the average profit for sector this year is subtracted. The expression is divided then by the average profit. This gives the following equation for the normal profit of companies in years t :

$$(1) \quad \pi_{it} = \frac{P_{it} - \bar{P}_t}{\bar{P}_t}$$

The simple autoregressive (AR1) model is:

$$(2) \quad \pi_{it} = \alpha_0 + \lambda\pi_{it-1} + \varepsilon_{it}$$

The current profit (π_{it}) for company i is a function of the profits of the year before; ε_{it} is an error term with a constant variance and mean equal to zero. A positive value for π_{it} implies that firm i has a higher profit than the average for this year. Similarly, a negative value would represent a lower-than-average return. The coefficient of λ shows how much impact last year's profits have had on this year's profits. This coefficient of lagged profit shows the slowness or degree of adjustment from one year to the next towards the long-run equilibrium level. It measures the speed of adjustment of short-run profits (Gschwandtner, 2005). If there are large fluctuations in the profits of an individual company or if there are rapid changes towards the average, this will be expressed through a low value for λ . Conversely, if there are small fluctuations and high profits persist, the value of λ will be close to 1.0. In the literature, λ is interpreted as the short-run persistence parameter for profit; the higher the value of λ , the greater the degree of profit persistence within the sector. In the literature, one also operates with a persistence measurement for long-term steady-state equilibrium. This is defined as:

$$(3) \quad \hat{P}_i = \frac{\hat{\alpha}_i}{1-\hat{\lambda}_i}$$

This is a measurement of permanent rents (Gschwandtner, 2005). Many studies have expanded the analysis by including company-specific and other explanatory variables in the model (Hirsch, 2018; Hirsch *et al.*, 2021; Hirsch and Geswandtner, 2013). The extended model (AR2) for estimating the second step is:

$$(4) \quad \pi_{it} = \alpha_0 + \lambda\pi_{it-1} + \alpha_1 \log(\text{Growth}_{it}) + \alpha_2 \text{Size}_{i,t} + \alpha_3 \log(\text{Euro}_t) + \alpha_4 \log(\text{Dept}_{it}) + \varepsilon_{it}$$

Growth is measured as a relative increase in sales this year t and defined as follows:

$$(5) \quad \text{Growth}_{it} = \frac{\text{Sales}_{it} - \overline{\text{Sales}}_t}{\overline{\text{Sales}}_t}$$

Sales enter logarithmically. The number of employees is used as a measure of size. Because we do not have good data on total assets, debt is measured as a share of turnover. The exchange rate is included in the model specification because the value of euro has increased substantial since 2010 (Figure 2). This means that the Norwegian currency has fallen in value during this period. Growth, size and debt are

business-specific variables, while the euro exchange rate is the only exogenous non-firm specific variable.

In line with other studies (Jang and Park, 2011; Coad, 2007; Goddard *et al.*, 2005), this model is estimated using the GMM (General Method of Moments) system. There is an advantage to using GMM instead of OLS (Ordinary Least Squares) (Hirsch, 2018). Unlike OLS, GMM leads to consistent and unbiased λ estimators; however, by using GMM, one can only estimate the mean value of the persistence profit coefficient and not a value for each firm. Following Mueller (1986) and Gschwandtner (2005; 2012), the sample is divided into subgroups depending on the firm's initial profits. This analysis is based on the results in the first two years (i.e. 2010–2011). We then analyse how profits develop for the entire period (2010–2019) for the subgroups. An important question is whether the different groups converge to the average profit during the period. We are not aware of any previous paper applying this method for campsites.

5. Findings

A review of the accounts of all the 164 companies for the years 2010–2019 showed that, each year, more than 32% of the companies reported a negative result. Of the companies that had a deficit in a given year, almost 54% also had a deficit the following year (i.e. 17% of the population) and more than 31% (10% of the population) of the companies had losses in year 1, year 2 and year 3.

Table 3. Result from AR1

Variables	All ¹⁾	Initial Low π (Group 1)	Initial Medium π (Group 2)	Initial High π (Group 3)
$\Pi_{t-1}(\lambda)$	0.118* (0.069)	0.061 (0.097)	0.081 (0.086)	0.287** (0.116)
Constant (α_0)	-0.000 (0.075)	-0.695*** (0.161)	-0.161** (0.075)	0.634*** (0.165)
Observations	1,476	495	495	486
Firms	164	55	55	54

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

1) The value of α_0 is equal to zero since all observations in the sample are included

Source: Own study.

Table 4. Result from AR2

Variables	All	Initial Low π (Group1)	Initial Medium π (Group 2)	Initial High π (Group3)
$\Pi_{t-1}(\lambda)$	0.188** (0.083)	0.040 (0.116)	0.117 (0.100)	0.250** (0.114)

Log(Euro)	0.022 (0.044)	0.397*** (0.089)	-0.060 (0.063)	-0.231*** (0.076)
Growth	0.073*** (0.015)	0.065** (0.025)	0.076*** (0.017)	0.052*** (0.015)
Log(Debt)	-0.363* (0.198)	-0.449 (0.354)	0.226 (0.308)	-0.111 (0.191)
Employees	0.035 (0.053)	-0.013 (0.069)	0.132 (0.088)	-0.035 (0.120)
Constant(α_0)	2.110 (1.555)	-0.377 (2.563)	-3.736 (2.508)	3.967*** (1.413)
Observations	1,475	494	495	486
Firms	164	55	55	54

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Source: Own study.

Firms with negative profit tend to be in the same position in subsequent years. On average, 32.1% of campsite firms run a deficit, 17.2% for the following year and 10.2% for 3 consecutive years. Tables 3 and 4 confirm, to some degree, the persistence of profits.

A measure of permanent return can be calculated using Formula (3); the results are presented in Table 5.

Table 5. The value of \hat{P} (The values of \hat{P} is calculated from the result in Table 3)

	All ¹⁾	Initial Low π	Initial Medium π	Initial High π
\hat{P}		-0.740	-0.175	0.889

1) The value of α_0 is equal to zero since all observations in the sample are included

Source: Own study.

The short-run profit persistence parameter λ is strongly positive significant for all firms. This confirms H1. By dividing into subgroups this impact only remains for companies with high profits the first two years (Group 3). The value is close to 0.3. For group 1 and group 2, the value of λ is around zero and not significant. There is also different value for α_0 depending on the group. For those companies that started with low profits (Group 1), the value of this parameter is negative ($\alpha_0 = -0.7$), while the value is positive and for group 3 ($\alpha_0 = 0.6$). For the companies in the middle (Group 2), the value is close to zero. There are also substantial differences among the groups in the permanent equilibrium values (Table 5). There are minor changes in the profit persistence parameter based on inclusion of firm-specific factors and the exchange rates as explanation variables. For all observations, the value increases from 0.118 to 0.188, while the value declines for group 3 (from 0.287 to 0.250). For groups 1 and 2 there is no significant impact, and the values are close to zero.

There is a significant positive link between growth and profit rate for all groups. The logarithm of debts is significantly negative correlated with profits for all observations. For the subgroups there is no significant effect, but there is a high negative value for group 1. In this analysis, there is no correlation between the size of the enterprises (measured by the number of employees) and the profits of those companies. H2 is confirmed. The euro exchange rate has a significant positive correlation for companies with low profits for the first two years, while the effect is the opposite for those with high profits during this period.

6. Discussion

The results are consistent with previous research. The AR1 model shows a persistent significant positive profitability. A value of λ equal to 0.5 means that 12.5% of an abnormal profit year t persists two years later; the literature reports a substantial variation in the estimates of profit persistence (Hirsch, 2018). In this study, the coefficient (λ) is under 0.2 for the whole sample, while Hirsch (2018) reported a mean value of 0.407 from 36 different studies. The estimated values depend on the sector. For instance, empirical estimates from the food sector are below 0.1 and under 0.2 for the service sectors. A key factor to explain the level of profit persistence in a sector is the degree of barriers to entry the market (Gschwandtner, 2012; McMillan and Wohar, 2011).

Firms belonging to sectors with high barriers to entry tend to have profits higher the normal profits, while for companies connected to fields where it is easy for newcomers to start a business, the profit persistence parameter is reported to be rather low and under the normal rate. Another important factor is the level of competitiveness in the market. More competition among the firms results in lower profit persistence. Due to increased international competition in the US market, Gschwandtner (2005) estimated the mean value of the coefficient λ to decrease from 0.49 in the period 1950-1966 to 0.36 in 1985-1999. The value of λ in this analysis is considerably lower, but technology related to running campsites is relatively simple.

There are neither major financial nor technical obstacles in establishing a new camping place. This explains a low value of λ . Due to few entry barriers and simple technology, it is hard for a company to maintain over time a profit that deviates from the other enterprises. An interesting observation is the difference among the groups. Our data suggest that for groups 1 and 2 there is no persistent profit. If you have high profits for a year, it will be gone the following year. This is consistent with results from other parts of the service sector such as the restaurant industry (Schumacher and Boland, 2011).

However, for campsites that initially have high profits, there is a significant degree of profit persistence. Perhaps one explanation may be that it is not easy to gain access to attractive areas to place a new campsite. Well-established companies that

are strategically located in relation to customers may be able to remain more profitable than others over time.

In line with the findings of Gschwandtner (2005; 2012) and Yurtoglu (2004), this study found different pathways between the subgroups. Group 3 (high initial profit rate) converges to a profit persistence above average and a significantly positive value for the long-run profit rate (\hat{P}). The companies within this group have the slowest adjustment towards the mean values. For group 1 (low initial profit rate) the profit persistence remains below the average rate, and our analyses conclude with a negative value for \hat{P} . This is not surprising. Gschwandtner (2005) also reported significantly negative values for the firms with the lowest initial profit. What does this mean economically?

According to Gschwandtner (2005), negative values of \hat{P} are not a stable equilibrium solution. Firms with a negative profit rate or with a downward trend in profitability will sooner or later be driven out of business, unless measures are taken to improve performance. Group 2 (the middle) has little deviation from the average return during the entire period. Therefore, the coefficient λ is near zero and not significant, and the long-run equilibrium value is also close to null. Gschwandtner (2009) confirmed \hat{P} to be around zero for many groups of companies.

Most of the papers add firm-specific factors and other exogenous variables to the model (Hirsch, 2018). Inclusion of other explanatory variables had only small effects on the persistence profit in this study. Growth is significantly positively correlated with profit rates. Many international articles confirm this connection, and they discuss the reasons for such a link (Zouaghi *et al.*, 2016) If there is general growth within the sector and increased demand, companies that can take advantage of this opportunity and increase production may achieve increased profitability (Delmar *et al.*, 2013; Gschwandtner, 2012). The number of overnights at Norwegian campsites has increased by 12% from 2013 to 2019 (Idsø and Opstad, 2021). Notice that both growth and profit in this analysis are transformed to measure the relative deviation from the mean value of all campsites in the current year. In other words, the higher the growth relative to the average, the greater the profit relative to the average for all subgroups in this research.

The reason why there is no correlation between firm size and the profit rate may be that there are no economies of scale in this sector. Large capital investment is not required. If there are capacity constraints, one can acquire more space nearby (either buy or rent). The size of the company does not need to be a critical factor to ensure good profitability. Valenta *et al.* (2021) reported that small and medium campsites in Norway show higher growth than the large campsites, while large companies obtain more stable revenue than small ones. For the companies belonging to group 1 (low initial profit) there is a negative association between increased debt ratio and profitability, but it is not significant. Higher debt ratios result in more financial costs.

If companies fail to generate revenues accordingly, this will have a negative impact on profitability. There may be a time gap between investments and increased revenues. We cannot prove this in the present analysis where companies were analysed over a 10-year period. A negative correlation is consistent with other findings (Ali and Faisal, 2020). For groups 2 and 3 the impact is smaller, and it there are no significant impacts. For group 2, the estimated value is also positive. One explanation may be that these are well-established companies with stable production that are capable of exploiting higher investments and debt ratios to increase production and thus profitability. Furthermore, there may be differences in priority and product mix.

A depreciation of currency leads to increased (relative) profits for the least profitable campsites, compared to the most profitable ones which get a (relative) reduction in profits. We lack supplementary information to provide a good explanation for this difference. Since our model measures relative profit rate (compared to the average), it will not catch up a higher profit level for all companies due to the change in the currency rate.

A summary of this analysis is that there is a significant difference between group 1 and 3. Those with initial high profit perform well, while those belonging to group 1 struggle financially. This may indicate some of the same tendencies reported by Davidson *et al.* (2009). The only non-business-specific exogenous variable is the exchange rate. The results show that group 1 benefits from the depreciation of the Norwegian currency compared to the average, while group 3 comes out relatively poorer. In this analysis, we lack data to provide a good explanation for this deviation. It could be related to the difference in composition between domestic and foreign visitors, price strategies, capacity and more.

7. Limitations

An important limitation of this paper is that it relies on official statistics. This limits the access to factors that can capture business-specific aspects. By including more explanatory variables, one would be able to analyse in greater depth why there are different developments for campsites depending on the initial profits. Furthermore, several non-company-specific explanatory variables could also be included. There may also be errors in the report figures; the costs may not be correct. Because there is a significant tax on profits, it is also conceivable that not all income is recorded. We do not have information about whether this is the case for some companies.

Probably the larger companies are more professional than the smallest companies in accounting and in reporting correct figures. Larger companies are also better able to determine tax loopholes – so the figures, while more ‘accurate’ may not be reflecting the same types of information. There is also a weakness in the analysis in that we cannot estimate the value of the companies (i.e., assets).

8. Conclusion and Further Research

The degree of profit persistence is under 0.2 for Norwegian campsites. The speed of adjustment to the average level depends on the initial level of profit. Profit persistence seems to exist only for those with high initial profitability. There are obviously different pathways among companies depending on the initial profit rate.

For instance, if the initial profit rate is low, there is no long-run steady-state equilibrium: the companies struggle to achieve profits and handle the debts. On the other hand, there is a strong correlation between growth and profit rates for all companies. This study did not find any connection between size and profit rate. Further research is needed to determine why there are substantial differences among the firms depending on the initial profit rate. It is also interesting to know why the effect of weaker exchange rate is different depending on the initial level of profit rate in the companies.

References:

- Ali, A., Faisal, S. 2020. Capital structure and financial performance: a case of Saudi petrochemical industry. *Journal of Asian Finance, Economics, and Business*, 7(7), 105-112. <https://doi.org/10.13106/jafeb.2020.vol7.no7.105>.
- Baum, C.F., Schafer, D., Talavera, O. 2006. The effects of short-term liabilities on profitability: the case of Germany. *DIW Discussion Papers*, No. 635.
- Berger, A.N., Di Patti, E.B. 2006. Capital structure and firm performance: A new approach to testing agency theory and an application to the banking industry. *Journal of Banking & Finance*, 30(4), 1065-1102. <https://doi.org/10.1016/j.jbankfin.2005.05.015>.
- Bhangu, P.K. 2020. Persistence of profitability in top firms: does it vary across sectors? *Competitiveness Review: An International Business Journal*, 30(3), 269-287. <https://doi.org/10.1108/CR-12-2018-0087>.
- Coad, A. 2007. Testing the principle of ‘growth of the fitter’: the relationship between profits and firm growth. *Structural Change and economic dynamics*, 18(3), 370-386. <https://doi.org/10.1016/j.strueco.2007.05.001>.
- Cowling, M. 2004. The growth–profit nexus. *Small Business Economics*, 22(1), 1-9. <https://doi.org/10.1023/B:SBEJ.0000011568.42714.c9>.
- Davidsson, P., Steffens, P., Fitzsimmons, J. 2009. Growing profitable or growing from profits: putting the horse in front of the cart? *Journal of business venturing*, 24(4), 388-406. <https://doi.org/10.1016/j.jbusvent.2008.04.003>.
- Delmar, F., McKelvie, A., Wennberg, K. 2013. Untangling the relationships among growth, profitability and survival in new firms. *Technovation*, 33(8-9), 276-291.
- Dinh, HT., Pham, C.D. 2020. The effect of capital structure on financial performance of Vietnamese listing pharmaceutical enterprises. *Journal of Asian Finance, Economics, and Business*, 7(9), 329-340. <https://doi.org/10.13106/jafeb.2020.vol7.no9.329>.
- Eriotis, N.P., Frangouli, Z., Ventoura-Neokosmides, Z. 2002. Profit margin and capital structure: an empirical relationship. *Journal of Applied Business Research*, (JABR), 18(2). <https://doi.org/10.19030/jabr.v18i2.2118>.

- Federico, J.S., Capelleras, J.L. 2015. The heterogeneous dynamics between growth and profits: the case of young firms. *Small Business Economics*, 44(2), 231-253. <https://doi.org/10.1007/s11187-014-9598-9>.
- Fitzsimmons, J., Steffens, P., Douglas, E. 2005. Growth and profitability in small and medium sized Australian firms. *Proceedings of the AGSE Entrepreneurship Exchange*, Melbourne, Australia. <https://doi.org/10.2139/ssrn.123734>.
- Goddard, J., Tavakoli, M., Wilson, J.O. 2005. Determinants of profitability in European manufacturing and services: evidence from a dynamic panel model. *Applied Financial Economics*, 15(18), 1269-1282. <https://doi.org/10.1080/09603100500387139>.
- Giotopoulos, I. 2014. Dynamics of firm profitability and growth: do knowledge-intensive (business) services persistently outperform? *International Journal of the Economics of Business*, 21(3), 291-319. <https://doi.org/10.1080/13571516.2014.921364>.
- Glen, J., Lee, K., Singh, A. 2021. Persistence of profitability and competition in emerging markets. *Economics letters*, 72(2), 247-253. [https://doi.org/10.1016/S0165-1765\(01\)00425-6](https://doi.org/10.1016/S0165-1765(01)00425-6).
- Gschwandtner, A. 2012. Evolution of profit persistence in the USA: evidence from three periods. *The Manchester School*, 80(2), 172-209. <https://doi.org/10.1111/j.1467-9957.2011.02277.x>.
- Gschwandtner, A. 2005. Profit persistence in the 'very' long run: evidence from survivors and exiters. *Applied Economics*, 37(7), 793-806. <https://doi.org/10.1080/0003684042000337406>.
- Gschwandtner, A., Hirsch, S. 2018. What drives firm profitability? A comparison of the US and EU food processing industry. *The Manchester School*, 86(3), 390-416. <https://doi.org/10.1111/manc.12201>.
- Hirsch, S. 2018. Successful in the long run: a meta-regression analysis of persistent firm profits. *Journal of Economic Surveys*, 32(1), 23-49. <https://doi.org/10.1111/joes.12188>.
- Hirsch, S., Gschwandtner, A. 2013. Profit persistence in the food industry: evidence from five European countries. *European Review of Agricultural Economics*, 40(5), 741-759. <https://doi.org/10.1093/erae/jbt007>.
- Hirsch, S., Lanter, D., Finger, R. 2021. Profitability and profit persistence in EU food retailing: Differences between top competitors and fringe firms. *Agribusiness*, 37(2), 235-263. <https://doi.org/10.1002/agr.21654>.
- Idsø, J., Opstad, L. 2021. Use of campsites in Norway, what impact does change in exchange rate and income have? *Global Conference on Business and Finance Proceedings*, 16(2), 109-119.
- Jang, S., Park, K. 2011. Inter-relationship between firm growth and profitability. *International Journal of Hospitality Management*, 30(4), 1027-1035. <https://doi.org/10.1016/j.ijhm.2011.03.009>.
- Jean-Hansen, V. 1995. Regionaløkonomiske virkninger av reiseliv. TØI-report 315/1995 (In Norwegian); Norwegian Centre for Transport Research: Oslo.
- Jeon, S., Kim, J., Lee, S. 2006. The persistence of abnormal earnings and systematic risk. *Tourism Management*, 27(5), 867-873. <https://doi.org/10.1016/j.tourman.2005.05.003>.
- McMillan, D.G., Wohar, M.E. 2011. The persistence revisited: the case of the UK. *The Manchester School*, 9(3), 510-527.
- Mueller, D.C. 1972. A life cycle theory of the firm. *The Journal of Industrial Economics* 20, 199-219.
- Mueller, D.C. 1977. The persistence of profits above the norm. *Economica*, 44(176), 369380.

- Mueller, D. C. (1986). *Profits in the Long Run*; Cambridge University Press: Cambridge, UK, 1986.
- Ngo, V. T., Tram, T. X. H. and Vu, B. (2020). The impact of debt on corporate profitability: evidence from Vietnam. *The Journal of Asian Finance, Economics, and Business*, 7(11), 835-842. <https://doi.org/10.13106/jafeb.2020.vol7.no11.835>
- Nguyen, H.T., Nguyen, A.H. 2020. The impact of capital structure on firm performance: evidence from Vietnam. *Journal of Asian Finance, Economics, and Business*, 7(4), 97-105. <https://doi.org/10.13106/jafeb.2020.vol7.no4.97>.
- Nunes, P.J.M., Serrasqueiro, Z.M., Sequeira, T.N. 2009. Profitability in Portuguese service industries: a panel data approach. *The Service Industries Journal*, 29(5), 693-707. <https://doi.org/10.1080/02642060902720188>.
- Opstad, L., Hammervold, R., Idsø, J. 2021. The influence of income and currency changes on tourist inflow to Norwegian campsites: the case of Swedish and German visitors. *Economies*, 9(3), 104. <https://doi.org/10.3390/economies9030104>.
- Rassier, D.G., Earnhart, D. 2015. Effects of environmental regulation on actual and expected profitability. *Ecological Economics*, 112, 129-140. <https://doi.org/10.1016/j.ecolecon.2015.02.011>.
- Scott, J.T., Pascoe, G. 1985. Beyond firm and industry effects on profitability in imperfect markets. *The Review of Economics and Statistics*, 1985, 284-292. <https://doi.org/10.2307/1925508>.
- Schumacher, S.K., Boland, M.A. 2005. The persistence of profitability among firms in the food economy. *American Journal of Agricultural Economics*, 87(1), 103-115.
- Tupangui, L. 2017. *Information Asymmetry and Credit Risk. Finance: challenges of the future*, (1), 153-157. Universitaria Publishing House.
- Valenta, R., Idsø, J., Opstad, L. 2021. Does Gibrat's Law hold for Norwegian campsites? *Economies*, 9(4), 175. <https://doi.org/10.3390/economies9040175>.
- Yurtoglu, B.B. 2004. Persistence of firm-level profitability in Turkey. *Applied Economics*, 36(6), 615-625. <https://doi.org/10.1080/0003684042000217652>.
- Zouaghi, F., Hirsch, S., Garcia, M.S. 2016. What drives firm profitability? A multilevel approach to the Spanish agri-food sector. Report No. 873-2016-60917. ETH Zürich, AECP Group, Zürich, Switzerland. <https://doi.org/10.22004/ag.econ.244762>.