PROFITABILITY PATTERNS IN THE HUNGARIAN PÁLINKA INDUSTRY

THE PERFORMANCE OF THE COMMERCIAL DISTILLERIES

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Abstract

The paper analyses the profitability of the Hungarian pálinka sector. First, all the distilleries with legal entity are identified in order to gain comprehensive economic data of the industry. Based on the M&A Research Catalyst database (2018), altogether 461 distilleries were identified. After descriptive statistics, a panel regression model was calculated in order to identify profitability patterns, measuring the net revenues, EBIT and the profit level of the companies. Economic data of business years 2009-2017 were analysed. Special attention was given to the type of the distilleries (commercial vs. contract).

Initial results suggest that significant differences exist among the distilleries. Commercial distilleries are significantly bigger in all terms of each economic indicator. However, panel regressions do not always prove the importance of the distillery's type (commercial vs. contract) on all profitability levels. On the contrary, the size and the age of the company highly affects

the level of profitability. The bigger (in terms of total assets) and the older is the distillery, the higher level of profitability is expected.

Key Words: pálinka industry, commercial distilleries, contract distilleries, profitability

Összefoglalás

A cikk a magyar pálinka szektor jövedelmezőségét vizsgálja. Első körben beazonosításra kerültek a magyarországi jogi személyiséggel rendelkező pálinkafőzdék. Az M&A Research Catalyst üzleti adatbázis alapján összesen 461 főzde (bérfőzde és kereskedelmi főzde) adatai (értékesítés nettó árbevétele, üzemi eredmény, adózott eredmény, mérlegfőösszeg, saját tőke, foglalkoztatottak száma, alapítás éve, székhely, telephely) kerültek beszerzésre a 2009-2017 közötti üzleti időszakra vonatkozóan. A leíró statisztikákat követően kiszámításra kerültek panel regressziós modell alkalmazásával a különböző jövedelmezőségi szinteket (nettó árbevétel, EBIT, adózás utáni eredmény) befolyásoló és meghatározó tényezők – különös figyelmet fordítva a főzde típusára (kereskedelmi-, illetve bérfőzde).

Az eredmények azt mutatják, hogy jelentős különbségek vannak a különböző főzdetípusok között. A kereskedelmi szeszfőzdék gazdasági szempontból szignifikánsan nagyobbnak tekinthetők. A panel regressziós eredmények azonban nem minden esetben támasztják alá a jövedelmezőséget, figyelembe véve a szeszfőzde típusának (kereskedelmi-, vagy bérfőzde) fontosságát. Sokkal inkább a vállalat mérete és az életkora befolyásolja a jövedelmezőség szintjét. Minél nagyobb (a mérlegfőösszeget tekintve) és minél idősebb egy adott szeszfőzde, annál magasabb jövedelmezőség szint várható esetében.

Kulcsszavak: pálinka szektor, kereskedelmi főzdék, bérfőzdék, jövedelmezőség

Introduction

Pálinka is a fruit-only distillate that can only be produced with this name in Hungary (the only exception is apricot pálinka, which can be used in four provinces of Austria). In Hungary, the production and consumption of pálinka has a centuries-old tradition.

According to the current regulations (Act LXVIII. of 2016 on excise duty), there are three ways to make alcoholic products (distillate or pálinka) from fruit. It is called private distillation, when someone produces alcohol from own fruit using an own distillation apparatus. When someone makes the product from own fruit in a contract distillery, we are talking about contracted distillate. When a company makes – typically from purchased raw materials – commercial distillation, then the product made here is only allowed to be called pálinka. Commercial distilleries usually also deal with contract distillation, but most distilleries carry out hire work only. It is important to emphasize that products from private and contract distilleries can only be referred to as a distillate and cannot be officially called pálinka (Harcsa, 2016a), moreover, only pálinka is considered to be a Hungaricum, the very special and famous products of Hungary (Harcsa, 2017).

The purpose of this study is to examine the profitability of distilleries, which are exclusively engaged in contract distillation (hereinafter referred to as contract distilleries) and those which also carry out contract and commercial activities (hereinafter referred to as commercial distilleries). As private distillation cannot be considered as an independent business activity, this segment of the sector is not included to our investigation.

In the period preceding the change of regime, a total of seven state-owned, large commercial enterprises were engaged in the production and distribution of spirits. The state generated tax revenues from the sale of various spirits, therefore, public health aspects were not really considered. However, it is important to note that the name of pálinka at that time did not refer to the technology or the place of origin; according to jargon, such products were made by alcohol and different flavourings with "cold fermentation". Before this, between 1952 and 1971, 'half-distillation' was in effect, meaning that half of the pálinka distilled in the official distillery could be given to the producer, the other half being owned by the state. Before the end of the socialist era, there were approximately 800-1,000 council or cooperative owned contract distilleries, after that they were privatized. The number of contract distilleries gradually decreased after the change of regime. One reason for this was that the owners had to deposit an excise deposit in order to obtain the operating license (Kopcsay, 2008). However, there was an increase in the number of commercial distilleries as well (Fodor, Hlédik, & Totth, 2011).

In the meaning of the word 'pálinka', the change was brought by the new Hungarian Codex Alimentarius, which came into force on 1st July 2002. According to this, pálinka or fruit

distillate is a spirit drink obtained exclusively by alcoholic fermentation and distillation of fruit or fruit must. This was followed by the 148/2008. (X. 1.) FVM - EszCsM - GKM joint regulation which laid down the rules of the production of pálinka (Kopcsay, 2008). The most important parameters of quality pálinka and the establishment of the National Pálinka Council to represent the sector were laid down in Act LXXIII. of 2008.

The Act XC. of 2010 allowed the production of tax-free distillates. A theoretical difference was drawn between the tax implications of private and contract distillation. Private distillation was tax-free, while contract distillation had a "tax" of 0 HUF. Under the Directive of 92/83/EEC, „member states may be allowed to apply reduced rates or exemptions for certain regional and traditional products" provided that this does not result in distortions of competition. However, according to this directive, the reduced rate may not be less than half of the national rate of excise duty. Hungary has breached this directive by abolishing the excise duty of pálinka. From 1 January, 2015 - at the behest of the European Union - for one litre of pálinka distilled in contract distillery with an alcohol content of 50%, the tax is 835 HUF, however, if the given distiller exceeds the preferential volume limit of 86 litres, the tax will automatically be doubled. With the elimination of the excise tax relief, the turnover of the contract distilleries significantly decreased (Harcsa, 2016a).

Looking at the tendering activities of the commercial and contract distilleries, it can be concluded that the majority of the commercial distilleries, and only in a few cases - typically to a much lesser extent - the contract distilleries received or receive subsidies. The subsidies were mainly spent on the purchase of machineries and technological refurbishment (Kaposzta, Ritter, & Kassai, 2015; Kassai et al., 2016). Today, in Hungary, the majority of the costs of both contract and commercial distilleries are the costs of raw materials, corporate overheads, labour and packaging (Harcsa, Kovács, & Nábrádi, 2019; Lakner, Kasza, & Ács, 2014).

Finally, it is important to emphasize that although there is a good relationship between tourism and pálinka producers, there are only a few cases where there is conscious cooperation (e.g., tasting, plant visits, product sales) between the different actors (Kaposzta et al., 2015).

Materials and Methods

Firstly, we identified companies with legal personality in Hungary, which operate as commercial or contract distilleries. To do this, we compared the list of 30 June, 2017 of contract and commercial distilleries received from the Central Excise Department of the National Tax and Customs Administration, with the M&A Research Catalyst business database, in which companies principal or secondary activity - according to certificate of incorporation - was "to produce distilled spirits". In addition to this, the most important economic data of the 461 identified distilleries (net income, EBIT, profit after tax, total assets, equity, number of employees, year of establishment and headquarter) were downloaded from this business databases for the business years of 2009-2017.

Afterwards, we investigated the differences between the two types of distilleries using econometric methods with the software package of STATA version 15.0. The charts were made with the software version of ArcGIS 10.2.

First, we performed a two-sample t-test on certain economic characteristics (plant size, number of employees, age) to determine whether there is a statistically significant difference between the two types of distilleries. After that, we performed panel regression calculations on the factors influencing the profitability of distilleries in the Hungarian pálinka sector as follows:

$$\text{Revenue} = \alpha + \beta_1 \text{Total assets}_{ij} + \beta_2 \text{Number of employees}_{ij} + \beta_3 \text{Age}_i + \beta_4 \text{Commercial distillery}_i + \varepsilon ij$$

$$\text{EBIT} = \alpha + \beta_1 \text{Total assets}_{ij} + \beta_2 \text{Number of employees}_{ij} + \beta_3 \text{Age}_i + \beta_4 \text{Commercial distillery}_i + \varepsilon ij$$

$$\text{Profit after tax} = \alpha + \beta_1 \text{Total assets}_{ij} + \beta_2 \text{Number of employees}_{ij} + \beta_3 \text{Age}_i + \beta_4 \text{Commercial distillery}_i + \varepsilon ij$$

The variables used in the panel regression models are described in Table 1.

Table 1.   *Description of variables used in panel regression models*

| Variable	Description
Revenue	Dependent variable, the net sales revenue of a given distillery in a given year, in EUR
EBIT	Dependent variable, operating profit of a given distillery in a given year, in EUR
Profit after tax	Dependent variable, the after-tax profit of a given distillery in a given year, in EUR
Total assets	Total assets of the given distillery in a given year
Number of employees	Number of employees in the given distillery in the given year
Age	Number of business years closed since the establishment of the distillery
Commercial distillery	Dummy variable, set to 1 if the distillery is a commercial distillery and 0 if the distillery is a contract distillery

Source: Own editing

Results

Nearly three-quarters of the 461 distilleries is contract distillery (345 distilleries, 74.84%), while the remaining 116 distilleries are commercial. If we take a look at the location of the distilleries (see Figure 1 and Figure 2), we can conclude that the majority of both types of distilleries are located in the capital (22 contract and 6 commercial distilleries have their headquarters there), moreover, that contract distilleries much more cover the whole country. The latter are most concentrated in the northern part of the country; Miskolc, Debrecen and Nyíregyháza serve as a location of 4-4 contract distilleries. These figures also show that the north-eastern part of the country is the most important one for the location of the pálinka distilleries.
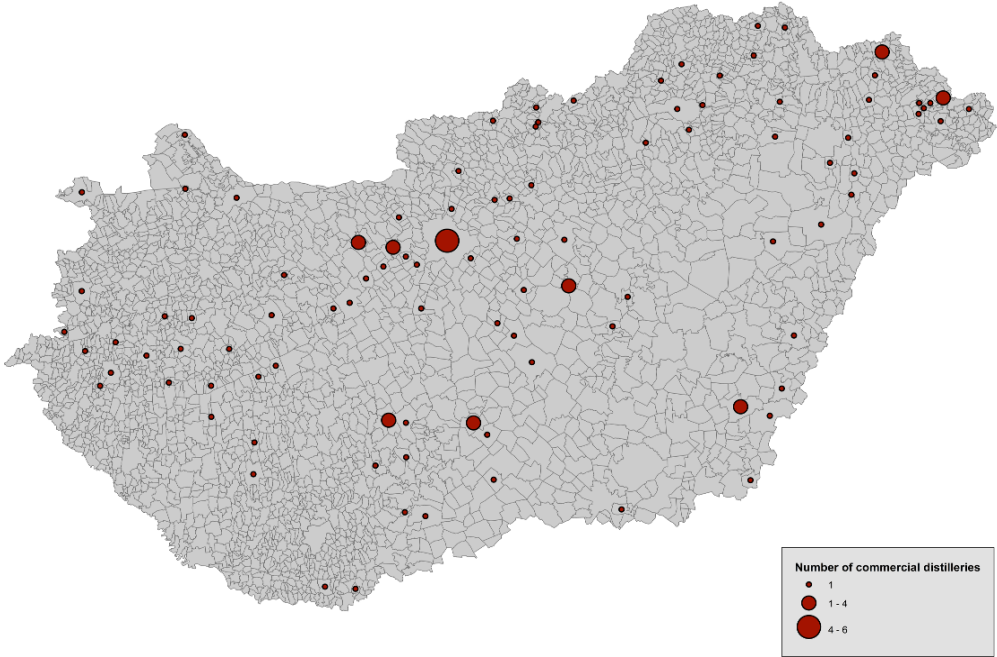
Source: Own editing

Figure 1. Location of the identified commercial distilleries by their headquarters
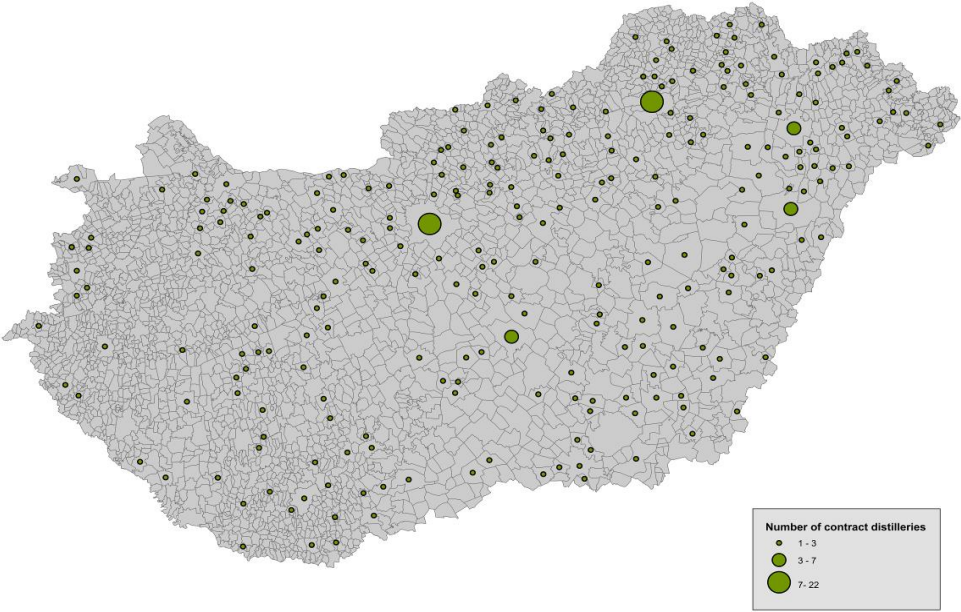
Figure 2. Location of the identified contract distilleries by their headquarters

Source: Own editing

Comparing some of the economic characteristics of the different types of distilleries, it can be concluded that commercial distilleries are significantly different from contract distilleries. Commercial distilleries have an average of total assets of nearly eight times the size, employ more than four times as many employees, and have nearly 2.5 more closed business years than contract distilleries.

Table 2. Averages of the most important economic characteristics for different types of distilleries

	Commercial distillery	Contract distillery	t-test	significance level*
Total assets (EUR)	1 643 795	206 854	- 13.91	***
Number of employees (FTE)	20.33	5.00	- 13.83	***
Age (year)	15.80	13.46	- 2.35	***

*Note: *** p<0.01

Source: Own editing

Finally, we tested the influence of the examined factors on the most important profitability levels.

The total assets have a positive (and statistically significant) impact on all the three levels of profitability: the higher the distillery is, the higher its revenue, EBIT and profit. For instance, if a distillery's total asset is 1 EUR more, than its revenue ceteris paribus (c.p.) is expected to increase by 0.325 EUR. However, the number of employees only has an impact on revenue: if a distillery employs 1 person more, its revenue c.p. is 60.673 EUR higher. The number of closed business years - like the total assets - has a positive impact on all the three levels of profitability, the longer a distillery has been operating, the higher its level of profitability is expected to be. In the case of profit after tax, a distillery that has one more closed business year, its profit expected to be 6.332 EUR higher.

Finally, the distillery type has a proven explanatory power for operating profit and profit after tax, which suggests that if the total assets of a contract distillery and a commercial distillery is

the same as the number of employees and the number of closed business years, EBIT and profit after tax will be lower in the case of the commercial distillery.

Table 3. *Factors determining the different levels of profitability*

	Revenue	EBIT	Profit after tax
Total assets	0.325	0.117	0.095
	(11.80)***	(30.11)***	(29.57)***
Number of employees	60,673.301	70.154	-130.832
	(16.24)***	(0.15)	(0.33)
Age	62,086.180	7,928.946	6,332.152
	(7.68)***	(8,94)***	(8.51)***
Commercial distillery	79,585.916	-55,801.789	-47,062.300
	(0.51)	(3.39)***	(3.40)***
_cons	-922,218.573	-126,349.395	-99,570.827
	(6.64)***	(8.30)***	(7.80)***
N	2,033	2,213	2,211

Note: standard errors in parentheses, * $p<0.1$; ** $p<0.05$; *** $p<0.01$

Source: own editing

Discussion

Based on the location of each type of distillery, it can be stated that while contract distilleries penetrate the country more evenly, they are concentrated in the major fruit-growing regions, in the meantime, this trend is not observed in the case of the commercial distilleries. This is basically due to the different business models of the two types of distilleries. In the case of contract distilleries, private individuals in possession of their own fruit mash use the technical

and professional assistance of the distilleries for the distillation, entrusting them with the final stage of the distillation process. In their case, it is crucial to look for contract distilleries that are geographically close to their place of residence and their fruit-growing areas, thus minimizing the cost of distillation. In contrast, commercial distilleries typically buy the raw material, so in their case, besides bulk purchasing, the specific transport cost is not so decisive, thus the proximity of fruit-growing areas is not necessarily a primary consideration in choosing a location.

As far as the most important economic characteristics of distilleries are concerned, commercial distilleries have a much larger plant size. On the one hand, this is due to the historical tradition (the successors of the alcoholic businesses, which existed before the change of regime, still operate typically as commercial distilleries) and on the other hand, typically the commercial distilleries choose the more expensive technology in their investments, often involving tender sources (Kaposzta et al., 2015; Kassai et al., 2016). Contract distilleries usually use traditional low-cost little caldron technology. This is consistent with the findings of Harcsa (2016b): it would only be profitable for a contract distillery to buy more modern distillation equipment (with tower distillation methods) if all the economic conditions were adequate, even though their operating costs are lower.

The number of employees in commercial distilleries is much higher than in contract distilleries. This is explained by the fact that commercial distilleries usually operate all year round, and in the case of commercial distilleries which also carry out ancillary activities (e.g. hospitality), the business activity is continuous. In contrast, contract distilleries are much more seasonal and thus have lower average of employment rates.

The higher average age of commercial distilleries is due to the fact that the fluctuation is much higher among the contract distilleries, especially after the "golden age" of contract distilleries (2010-2014), when contract distilleries did not have to pay excise duty. From 2015, contract distillation is subject of excise duty again, which dramatically decreased the turnover and also the number of the contract distilleries (Harcsa, 2016a).

Several conclusions can be drawn in terms of the relationships affecting different levels of profitability. Since pálinka production can be considered as a technology-intensive activity, the potential for economies of scale is clearly supported by the fact that the larger a distillery is, the

higher its revenue, operating profit and profit after tax. However, the number of employees has a positive impact only on revenue.

The older a distillery is, the more likely its profitability will be higher. This can be interpreted in the case of contract distilleries that are more likely to fail, the longer the company has been in business, the more stable is its customer base, who - despite the changes in the law - use the services of the given contract distilleries.

Based on the results of the panel regression model, commercial distilleries are at a disadvantage compared to contract distilleries in terms of EBIT and profit after tax. Therefore, when we are looking at the profitability of the pálinka sector, it can be concluded that contract distilleries dominate in terms of number and geographical coverage, however, commercial distilleries are much larger, have a higher level of employment rate and typically they operate for a longer time. According to our calculations, the most profitable distilleries - based on the data of 9 years - are older, contract distilleries with large plant size and high employment rate. At the same time, profitability can be examined in many other dimensions (e.g., geographical indications, tax changes, marketing activity), which are subjects of future research.

Acknowledgement

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