



PUBLIC-PRIVATE PARTNERSHIP MODELLING TO FOSTERING COMPETITIVE PERFORMANCE OF SMALL- AND MEDIUM-SIZED ENTERPRISES IN THE BULGARIAN COSMETICS AND PERFUME INDUSTRY

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ABSTRACT

This material is focused on presenting some attainable modelling for establishing public-private partnerships /PPPs/ to promote competitiveness of small- and medium-sized enterprises /SMEs/ in the Bulgarian cosmetics and perfume industry. The *goal* is to study the market performance of SMEs in this sector and to offer successful transition to PPP with Universities and Research Centers, which concentrate investment resources to offer new biotechnological schemes for creation of new classes of cosmetics and perfumes. The *research methods* include a study of classical models of SME competitiveness to offer adequate models for transition to PPP to build competitive organic production in the context of the circular economy and the "Green Deal" of the EU. The *results* of the study are aimed at orienting SMEs to adopt ideas for investing in new biotechnological equipment and intensive partnership with public structures of the Bulgarian scientific environment - Institutes, Research Centers and Universities, as bearers of research potential for testing and implementation of new industrial solutions in the Bulgarian cosmetics and perfume industry during the programming period 2021-2027. *Conclusions* are related to the derivation of a body of recommendations for the application of an adequate for the Bulgarian reality model of PPP for Bulgarian SMEs in the field of cosmetics and perfume industry.

Key words: public-private partnership /PPP/, small- and medium-sized enterprises /SMEs/, cosmetics and perfumery industry, circle economy, Green Deal

INTRODUCTION

Recent available information, related to cosmetics and perfume industry indicate that EU cosmetics market was valued at € 78,6 billion in 2018, which turns EU in the largest market for cosmetic products in the world [1]. This translates into economic reality of EU member states as

numerous available options to organize and produce high-value added cosmetic products, fit to trade within and without EU. In addition, there is strong international competition on the global market in terms of supplying etheric oils as one of the main resources of aroma compounds from plants, which are further processed to produce high-end products. According to the botanical taxonomy, the categories of economically important plants are organized into the following four main groups: food crops, fiber crops, root crops and oilseeds. And, the economic core of creating valuable and marketing-plausible products is found at organizational and

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production capability of an enterprise to gain extracts from plants. It has to be added that: “Extracts from plants, which include essential oils, latex (for rubber or balata), vegetable oils, pectins, starches, and waxes, have a plethora of uses in industry, food, perfume, and cosmetics” [2]. Therefore, extracts from plants and plant products, in general, may be a basis for good business for numerous stakeholders – both domestic and international. In this sense, it is of great importance that Bulgarian companies – which are primarily Small- and Medium-sized Enterprises /SMEs/ - 99,8% of all companies in the country [3, p. 22] – to get strongly involved into competitive production and trade within the biggest cosmetics market in the world. The share of employed in Bulgarian SMEs in 2018 was estimated at 75,7%, and the added value they generate was computed at 65,3% of all added value in the economy of the country [3, p. 5]. Thus, on the one hand, SMEs play a significant economic role in Bulgarian economy, but – on the other, they lack innovations as drivers for economic advancement, based on R&D-fueled businesses. Bulgaria remains second to last of all EU countries in terms of innovations for 2019, as measured by the European Innovation Scoreboard [4]. This is one of the reasons to find a gap between private Bulgarian SMEs and state-run and state-funded University and Research Centers, which may be abridged by introducing public-private partnerships /PPPs/ and organize partnership networks for building economically sustainable value chains.

METHODS

This research is stationed on reviewing some recent data, trends, and technologies related to cosmetics and perfume industry. In particular, we contribute some private consulting expertise to this research, in order to illustrate historical evolvement of market processes, which had significantly changed private SME businesses in the cosmetics and perfumery.

Thus, the goal of the research is to test the hypothesis that adoption of public-private partnership models may bring greater bi-lateral competitiveness for private SMEs and state-financed University and Research Centers, which are involved into utilizing plants for the needs of

cosmetics and perfumery. The study is based on literature review and private consulting experience to describe, analyze and deliver conclusions and recommendations in this field.

Having into consideration the complexity of the problem, there is one main research task – namely, to substantiate the argument of applying modern economic formulas, such as PPP-contracts to overcome inherited legislative and economic paradigms of fragmentary thinking and organizing high-class competitiveness for Bulgarian SMEs, dealing into the cosmetics and perfume industry.

RESULTS

Plants of economic value may be grouped in terms of their business utilization as plants for the food industry, cosmetics industry, and pharma industry. In dependence of what their natural compounds are used for, production processes may be set to use classical technologies to extract or new technologies. At present, there are registered 311 databases with 3’624’464 vegetation plots, according to the Global Index of Vegetation-Plot Databases (GIVD) [5], while at EU level, there are 89 databases with 1’669’239 vegetation plots, of which 87% are georeferenced, according to the most recent report of the European Vegetation Survey of 2020 [6]. These databases demonstrate all characteristics of plants, which are geo-referred and have exact topical locations on a certain territory, which is a good point of departure to step upon biogeographical analyses to suggest what kind of plants may be viable for industrial usage by the SMEs in Bulgaria.

The data for Bulgaria demonstrate that there are analyzed 5’901 small plots of vegetation, called “releves” [7]. These plots of vegetation shall be subject to update and economic estimate, in order to suggest an appropriate competitive model for Bulgarian SMEs involved into cosmetics and perfume industry, which come as a partial issue, related to the greater goal of fully investigating the natural capitals of Bulgaria. This is a challenging task, related to both active involvements of interested private stakeholders and proactive policy-making to install regenerative management of natural resources.

Traditionally, Bulgarian SMEs in the cosmetics and perfumery business are focused on production activities, based on oil-bearing crops, and in particular – on essential oil-bearing crops, such as Bulgarian rose and lavender, for example. And SME's factories may produce end-products such as essential oils and other products.

Prevailing technologies for producing essential oils are obtained by water-steam distillation of plants. For instance, there are 275 micro elements in the oil-bearing rose. The traditional producing method is hydro-distillation. The oily components that come to the surface are decanted, while the rest of the water is distilled a second time until the final extraction of the oil. The mixture of the two stages gives the final product. Next to this classical technology, where much waste is generated and many organic compounds remain underutilized, is the problem of heavy labor to pick-up, and sort raw materials. For example, there are some estimates for labor-intensity of rose picking that there is a need between 2'800 kg. to 3'000 kg. of raw material to obtain 1 kilogram of a rose oil.

Although international prices of a kilogram of rose oil varied significantly in between € 4'000 to € 7'000 in the last years, still there is much room to exploit the economic value of the rose oil further the value chain, as it used by international players to produce high-class perfumes, creams, soaps, and shampoos. Furthermore, if new technologies are adopted – the end-products may be further personalized to correspond to human microbiota on skin and hair, for example. These types of products may be sold at higher pricing to high-end customers.

Unfortunately, to a great extent these market possibilities remain away of Bulgarian SMEs as this requires employing new forms of contractual relations, such as PPP, where confidentiality clauses are strictly observed and intellectual property rights are clearly defined. At present, this task remains unsolved for Bulgarian state-funded Universities and Research Centers to the best of our knowledge.

It is not only the case with the rose oil. For instance, lavender oil is used as a good remedy for treating burns. It is also used to relieve

headaches and neuralgia. For this purpose, healing lavender baths are used or the sore spot is rubbed with lavender alcohol. It is widely used for inhalation in bronchitis and hoarseness, due to its strong antiseptic and antimicrobial properties. Lavender oil kills many bacteria, especially streptococci. Lavender oil has been found to have mild sedative properties. For this, it is used to treat for migraines, neurasthenia, nervous palpitations. Furthermore, in therapeutic doses, lavender oil can excite the central nervous system, and help to normalize the functions of the autonomic nervous system. It can be used against insomnia, stress, neurosis, bad mood, reduced performance, general weakness and a tendency to lower blood pressure. Lavender oil also has a deodorizing effect.

Recently, it is fashionable to use different oils in aromatherapy, and the therapeutic effect is achieved by aromatizing the air indoors. Also, some SMEs may organize production of concrete from various herbs and plants, such as pines, which have antiseptic, anti-inflammatory and expectorant actions. Pine oil neutralizes unpleasant odors in rooms and thus purifies the air.

International data demonstrate data Bulgaria is ranked 15th in the World in terms of exporting etheric oils, valued at \$ 88 million in 2019 [8]. This figure seems to be quite small within the EU and global distribution of market shares. Hence, Bulgarian SMEs do need to reconsider their production and organizational strategies and try to act in a more coordinated and consistent mode, if they need to catch-up with the big businesses in EU and abroad. They definitely need to pair with Universities and Research Centers to bring own modern technologies and products and export them at higher market prices and capitalize on own inventions, patents, trademarks, and other intangible marketing assets related to corporate branding.

Another example, which Bulgarian SME could reconsider, in order to retrieve market gains is to reconsider organizing production of different concretes. For instance, geranium concrete strengthens the nervous system and stimulates cardiovascular activity; it can be used as an

antiseptic for flu and colds; it also has an anti-cellulite effect. The dill concrete, for example, has expectorant and sedative effects; this concrete has a vasodilation effect and lowering blood pressure effect. Coriander concrete eliminates fatigue and the feeling of nervousness; it also acts as an appetite stimulant. Another example could be the production of concrete from thyme; it is a wonderful antiseptic and analgesic for respiratory infections, rheumatism and arthritis; it stimulates blood circulation and stimulates the removal of toxic substances from the skin; it is also used as a dietary supplement; and so on.

These concretes may be placed on the international market in a range of € 700 to € 1'000 kg., in dependence of the type of concrete,

quantity, and quality demanded. In fact, there are very many herbs and plants in Bulgarian nature (such as, chamomile, calendula, mint, yarrow, and numerous others), which may be utilized for business-scale purposes, if available international technologies are adopted, and different stakeholders in Bulgaria join efforts to match their business and academic interests fairly.

There are some recent sources of information, which demonstrate that in the recent years the annual turnover of Bulgarian companies for the sector of retail trade for pharma and medical goods, cosmetics, and toiletries ranges from a little bit less than € 1,5 billion to a little bit over of € 1,7 billion per year.

Table 1. Exports of Bulgaria to Top Trading Partners for Cosmetics and Perfume Products

2019	In million Euro		
Country	Etheric Oils (including concretes)	Ready Beauty Products	Products to use before and/or after shaving / deodorants / bath products
USA	45		
France	18		
Spain	2		
UK		5	10
Denmark		6	
Italy		6	7
Romania			9
Greece			7

Source: [9, p. 72]; Adapted Table

Table 2. Annual Turnover of Bulgarian Companies for the Sector of Pharma & Medical Goods, Cosmetics, and Toiletries /In millions, BGN/, 2016-2019

Years	2016	2017	2018	2019
Retail Trade Data for the Sector of Pharma & Medical Goods, Cosmetics, and Toiletries	2 919	3 100	3 530	3 337

Source: [8, p. 183, Table 2]; Adapted Table; BGN to EUR is a pegged rate at 1,9558

On the other hand, speaking of exporting power of Bulgarian cosmetics and perfume products, it has to be stressed upon that Bulgarian companies trade with EU member states mainly, as listed in the table below. There are three categories of cosmetics and perfume products, which are

detected by UNCTAD/WTO and published for 2019.

As it may be seen from Table-1 the market for etheric oils is crucial for Bulgarian SMEs, as it is the largest of all three product categories. This is why, the examples with producing and selling

etheric oils and concrete from various plants must be taken into serious reconsideration from Bulgarian SMEs. This is because, in practice – they are selling a resource, and not a high-class end-product, which they could achieve, had they invest in new technologies, and modern R&D programs for delivering high-end products.

Combined statistics from **Table 1 and Table 2** stand to mean that Bulgarian SMEs of cosmetics and perfumery industry rely mostly on their domestic market performance, rather than internationalizing their end-products within EU and abroad. This could be overcome as a problem by introducing the popular forms of public-private partnership contracting with R&D institutions, and Universities to engage to do for-profit researches.

In practice, if state-funded Bulgarian Universities and Research Centers, on the one hand, and private SMEs, on the other – demonstrate inner will and capabilities to establish fair business relations, there are numerous public-private partnership forms, which may solve the equation. For example, there are partnership to design-build-finance-operate /DBFO/ a joint business research facility, or buy-build-operate /BBO/ land lots to set up such a facility for joint use and business exploitation. Thus, it comes the issue of employment of adequate PPP-model for adoption by interested stakeholders.

Firstly, adoption of a PPP-model refers to strictly compliance with the recent EU legislation – rules, regulations, policies, recommendations, and other legal documents. Secondly, the agenda for introducing the Green Deal in EU requires generating minimum-to-none waste from such kind of production processes to keep nature clean and make it cleaner, and this may be achieved by joint agreement of all interested public and private stakeholders, only. Thirdly, it is economically reasonable to install a few public scientific centers and/or Universities as modern R&D facilities, which may utilize their working time and human expertise in split for academic and industrial purposes. It won't be sustainable each and every SME to invest and run multi-million R&D facility with the real possibility not to pay-back the investment and generate negative, none, or insignificantly small financial returns.

In support of this, it may be observed from **Table 3** the structure and shares of SMEs within Bulgarian economy and the obvious necessity of introducing high-class public R&D facilities to serve as gravity centers for SMEs and path-find new technologies, products, innovations, and patents, based on fairly agreed PPP contracts, which stipulate costs-and-benefits split along with business negotiations on risk sharing.

Table 3. Structure and Shares of Non-Financial Enterprises in Bulgaria, 2018

Types of Enterprises					
Micro	Small	Medium	Total SMEs	Large	Grand Total
317 834	23 245	4 337	345 416	678	346 094
91,8%	6,7%	1,2%	99,8%	0,2%	100,0%

Source: [3, p. 22, Table 1]; Adapted Table

CONCLUSION

In general, PPP models are taken to deliver greater openness, hearing, and transparency in public-private relations, and this is the very essence to pair public Universities with private businesses for the benefit of the whole society. This could be a successful model for Bulgarian public R&D facilities and Universities to partner for-profit with interested private companies, which need to invest into new technologies to

stay abreast and play competitively both on domestic and on international markets.

PPP contracting could be pivotal to drive forward both Bulgarian sciences, and Bulgarian businesses, as fair bargaining and risk sharing is the core concept of public-private partnership. It will have a dual role – to modernize Bulgarian Universities through private investments into Bulgarian science, and to deliver advanced

technologies and high-end products to interested private stakeholders at domestic prices. However, the public and private sectors are far apart in Bulgaria, when discussing businesslike partnerships with Bulgarian public Universities. In fact, Bulgaria introduced its first PPP Law in 2013, and few years later the PPP stipulations were transposed into the new Concession Law – in force from 2019), but there is not much national practice on PPP contracting. On the one hand, this is the main drawback for any further reasoning on the issue. On the other hand, this leaves much room to introduce appropriate PPP modeling into Bulgarian economy.

In summation, this study demonstrates that Bulgarian SMEs could extract greater economic value on international markets by processing etheric oils further to a greater class of high-end cosmetics and perfume products, rather than selling etheric oils as a resource to international market players. And this may turn into a reality, indeed, only if Bulgarian public Universities and R&D Centers are given the legal chance to be capable of commercial transferring of market worth technologies or end-products to private SMEs, based on PPP contracts – fairly negotiated and remunerated.

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