

# PROFITABILITY ANALYSIS IN HOSPITALITY ON THE EXAMPLE OF A SELECTED GASTRO-PRODUCT

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**ABSTRACT:** *The word profitability comes from English words "profit", which means earnings, and "ability", meaning power, capability. The profitability of a product signifies its ability to make a profit. All hospitality enterprises tend to profit in their business operations. This means that the goal of a hospitality facility must be directed towards the production of a quality product on demand and on time, at the lowest possible cost, with a maximum degree of capital turnover, while satisfying customers. A commercially successful product is the one that provides the producer with an acceptable level of profit. The profitability analysis on the example of a selected gastro-product was done in the "Careva Ćuprija" restaurant in Belgrade. The cost calculation of the selected menu was previously done and it served as a basis for four different profitability analyses. All the results were statistically analyzed by calculating the pre-defined parameters.*

**Key words:** *profitability analysis, hospitality, gastro-product*

## THE PROFITABILITY OF A GASTRO-PRODUCT IN HOSPITALITY

Profitability indicates the degree of fulfillment of the main goal of a company's business operations, and/or the degree of maximizing results in the long term.

The compliance with this principle is determined by analyzing the achieved net profit, operating profit, the achieved return on equity and total assets, the amount of leverage (loan) and interest coverage.

The key to achieving the business goal is in the introduction of effective cost management. Cost management implies detailed knowledge and constant checking of costs which are the basis of a profitable business. The costs should be defined first to be put in relation to the respective positions of income, then causes of a possible rapid growth in costs should be found and eliminated, business operations should be compared to the competition while paying attention that the quality of business is insured.

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Costs, collective incomes and profits are defined with a report on income - the financial plan. The financial plan is the sum of incomes, costs and profits of all profitable units and budgeted positions which are only carriers of expenditures. It is the task of management to provide the specified profit, given by the owner of capital or the Board of Directors (Tešanović, 2009).

Having examined items of the financial plan that concern his department the chef, as a manager of one of profitable departments of a hospitality facility, must successfully manage all the costs made during the production of food and services, including:

- production materials; labor; time of production and execution of a particular job; consumables and energy.

The profit brought by a gastro-product is a key element on which every manufacturer determines the value of their own product and makes the final decision on its fate.

Profitable planning of dishes and menus is a priority prerequisite of successful business operations of a gastronomic unit – the kitchen. It must be done systematically in compliance with current standards relating to the entire production and service course of the gastronomic product.

For clarity of all preparation phases of gastro-products and the proper formation of selling prices, the planning process must be done step by step (Vukic, Drljević, 2006), and in the following way:

- Creation of standard recipes and a book of norms;
- Standardization of cost specification;
- Standardization of portion costs;
- Standardization of portion size;
- Continuous monitoring of defined standards application;
- Planning prices of dishes present in the means of offer;
- Pricing of the dishes present in the means of offers;
- Control of profitability of dishes and menus;
- Final decision on the status of a gastronomic product.

## PRICE CALCULATION OF GASTRO-PRODUCTS

In the food and beverage sector of a hospitality facility, success is based on the correct pricing of gastro-products and menus.

The price of gastro product is the sum of all costs incurred in the course of its production and service. In order to get the selling price of a gastro-product, the sum of all costs is increased by the value of profits and value added tax (VAT).

The calculation procedure that calculates the cost price is called price calculation. One must approach with great care to calculating the cost price, for implementation and analysis of the principles of cost-effectiveness. The selling price is a point at which profit is generated. Incorrectly calculated cost price may have a negative effect on the final outcome of business operations.

The basis of calculation is the accounting sheet which shows the actual expenses for each profit unit. These data are supplemented by information on products and servic-

es turnover. Difficulties arise because of the variety of products and services involved in the turnover. Therefore, the actual costs are divided into product groups or their sub-groups (dishes *a la carte*, menu, etc.), and even some meals (which is very rare in practice).

Turnover and costs planning in the hospitality industry is a very complexed and demanding task. For turnover planning, it is necessary to have standards for all dishes on which the value of the basic material is calculated, as well as data from the last period such as total revenue, the cost of material, utilities, amortization, etc.

A turnover plan is made for the entire facility, and for each unit separately. The plan contains all the elements of cost estimation and provides the basis for calculating the margin.

By observing the food production and service costs, as elements of the economic strategies of a hospitality facility, we can divide them in:

- *Fixed costs* - which do not change for an extended period of time and these are: assets (their amortization); labor costs (salaries);
- *Variable costs* - which change with the increase in production and these are: the cost of material, cost of auxiliary material, the cost of production.

According to our regulations, the costs included in the cost price of a gastro-product are classified in the following order:

- Costs of production material – visible through the card of costs;
  - Amortisation of basic instruments of labour – reduction of the value of instruments of labour in relation to the duration of the basic asset  $A = \frac{\text{Value of asset}}{\text{Duration of the asset}}$  ;
  - Labor costs – salaries;
  - General production costs – costs of preparing and serving meals;
  - General costs of management and sales.

The final selling price is obtained when we add to these costs:

- Value added tax, or VAT,
- Profit or gain.

The calculation of prices in hospitality can be done in several ways depending on which profit sector it refers to (a calculation with equivalent numbers – it refers to the accommodation sector; additional one with the application of margin – it refers to food), the calculation time (progressive – in advance and retrograde – analytical); the quantity (individual – for individual dishes and collective – for the whole menu) etc.

In cases when there is a wider range of products, which is typical for food, it is difficult to determine the costs that indirectly affect the product.

Therefore, the method of calculating the cost price of foodstuffs with the application of margin is most often used.

*Margin* – represents the percentage of costs added to the acquisition value of the used basic material of individual products and services. (Lončar, 2007).

The margin in calculation includes all production costs and profit.

The margin is determined for a work organization as a whole, as well as for individual groups or subgroups of products and services. It cannot be the same for two different dishes for they involve different production costs. Thus, cold starters (mutton prosciutto or sheep cheese), for example, must have a lower profit margin than roast lamb, whose preparation process is more demanding regarding work and energy costs.

It is very important to calculate the margin accurately, because the incorrectly charged margin would result in the inability to cover the costs incurred, and the selling prices would also be incorrectly formed.

The margin is calculated by multiplying the difference between the planned turnover and the planned value of the basic material by 100 and dividing the product by the planned value of the basic material.

$$M = \frac{(PT - VBM) \times 100}{VBM}$$

Where  $M$  stands for margin;  $PT$  for planned turnover;  $VBM$  for the value of basic material.

The calculation of foodstuffs is done for either an individual dish or a group of dishes – the entire menu in the following manner: the amount of margin and the statutory value added tax, which is 18% for food and beverage services, are added to the cost of basic material.

$$C = VBM + M + VAT$$

Where  $C$  stands for cost price;  $VMB$  for value of basic material;  $M$  for margin;  $VAT$  for value added tax of 18%.

It happens very often that minor discount products (spices, mustard, butter and similar) are omitted in the process of formation of the cost price of a dish. When calculating the price of an individual dish, this will not play a major role, but if these small amounts are habitually omitted, it may present a significant factor after a certain period of time. In order to avoid this, products whose cost price in the process of preparation (recipe) is negligible or too small to calculate add up to Q factor in (%). Each has a value of 1%, so if a recipe has, for instance, three such items, the value of Q will be 3% of the total sum of the recipe.

An example for calculating the cost price is shown in table 1.

### ***Psychological determination of prices***

By determining the calculative cost price, the job of price formation is not over yet. The psychological effect of the price over consumers must be taken into consideration as well. Researching this effect, some western countries universities have reached very specific conclusions (*Miller and Pavesic, 1996*).

**Table 1. Example calculations for the cost of a gastro-product**

The name of a gastro-product: ROAST LAMB ON THE SPIT		The recipe code: .....					
Date: ...	Number of portions: 10					Price per portion ...	
Group of dishes: Roasts							
Ordinal number	Ingredients	Unit of measurement UM	Quantity gross Qg	Waste - tret WT - %	Quantity net Qn	Purchase price Pp	Purchase price according to the gastro-product recipe (Qg x Pp)
1.	baby lamb meat	Kg	5	50	2.5	499	2495
2.	Fat	g	200	/	200	167	33.4
3.	Salt	g	10	/	10	46	4.6
4.	Tomato	g	300	10	270	80	24
5.	Parsley leaf	bunch	1	/	1	10	10
			Q factor in %				none
Balanced cost price - BCP = 5000 RSD			Purchase price				2567.00
Price per portion - PPP = 500 RSD			Margin 65%				1668.55
Price per 1 Kg - PPKg = 2000 RSD			VAT 18 %				762.40
			Cost Price CP / RSD				4997.95

A price with an odd hundredth reduces consumer resistance because it provides an illusion of a discount; therefore, a price of €1.49 instead of €1.50 is seen as a better relationship between the price and the value. With prices with an odd hundredth, it is best to use 5 and 9 as two last figures. When prices are higher than €10, it is best that the last figure is not odd at all, but that the price ends in zero.

The figure on the left plays a major role in the difference between two prices. The difference between 89 and 91 is larger for a consumer, than the difference between 77 and 79, even though the difference is the same. This is important when one considers increasing prices. When the value of the figure on the left is increased, the sales may drop for a certain period of time.

The length of a price or the number of figures is important for creating a price difference. For example: the difference is more conspicuous in figures €9.99 and €10.25 than in €9.55 and €9.99, although it is much smaller in the first case.

Before a consumer purchases a commodity or a service, they must accept it as a certain value. The top limit at which a consumer would like to buy a product is important in fast food restaurants, where the price is more important than the quality, unlike exclusive restaurants where the quality is more important than the price.

### *Determining the price of the menu*

Once the cost prices of individual dishes are set, the price of the menu as a complete meal is determined.

Different categories in the menu have different acquisition and production costs. For calculating costs and earnings (gross profit), which are added to the purchase price of foodstuffs, when forming the total price of the menu, the safest thing is to consider the costs of the item with the highest costs. These are usually the costs of preparing and serving the main course. This can result in a price which is too high, which may have an adverse effect on the menu.

The list of dishes for a meal – the menu list must have a value in the eyes of consumers. The price of the menu must be presented in a way that creates an impression that the menu itself is worth more than its selling price.

The management often uses the trick to reduce the calculated price and costs by reducing the size of standard portions of items included in the complete meal. This form of price adjustment may be detrimental, because the reduction of the standard portion creates an impression that we denied the guest what he is otherwise used to get.

The safest thing is to monitor costs individually for each item, and then to calculate all amounts and form the price of a desired menu (*DEHOGA Deutscher Hotel – und Gaststättenverband 2002*).

## THE METHODS APPLIED WHEN ANALYSING PROFITABILITY IN HOSPITALITY

For every business facility, including a hospitality facility, to achieve the goal means to make profit. As previously shown, numerous factors affect the creation of profit, among which sales is the most important one, because it has to surpass expenses in order to create any profit.

In food production and service, the success is based on correct and systematic price formation, preceded by ensuring the quality of the production process and the product itself.

A commercially successful gastro-product, or an individual dish, is successful only if it provides an acceptable level of profit.

A commercially successful menu depends on two criteria:

- the menu must be profitable in a way that each item makes a profit;
- The most profitable items in the menu must have the best sales.

If a gastro-product, as an individual item in the menu, does not meet the criteria, it should be removed from the offer, which also signifies the end of its existence.

Removing a gastro-product from the offer is an easy process but still, it is more desirable that, before we remove the product as completely unprofitable, we check whether it meets the required quality standards and whether its price was formed in compliance with the appropriate criteria.

Because of constant oscillations of prices in the market, as well as fierce competition, it is necessary to occasionally check the menu and its individual items. There are several methods for evaluating (assessing) the success of a menu.

The most popular methods of profitability analysis are those that have passed the test of time, regardless of the more or less complicated way of formulation. The following methods are most often applied:

1. **GOAL VALUE ANALYSIS** – compares the contribution of the profit of each individual menu item with the average profit of the entire menu.

The method is determined by the following formula:

$$GV = A \times B \times C \times D$$

Where: GV is (Goal Value); A is 1 - % of food cost; B is the number of sold menus; C is the selling price; and D is 1 - (% of variable costs + % of food cost)

The target or goal line of profitability is the minimum line of sales; it shows how many items have to be sold in order to reach the limit for making a profit (*Miche and Ficher, 2005*).

The goal value is expressed in number and not in monetary terms or a percentage and is calculated in the following manner:

$$\text{Minimum value of sales} = \frac{\text{Goal value (total sales)}}{\text{actual cost of food (\%)} \cdot \text{actual selling price} \cdot \text{cost of food}}$$

2. **HURST SCORING METHOD** – provides an insight into the complete picture of business success.

According to Hurst, the result of a menu is calculated with the following formula:

$$RM = AGP \times \frac{TNSI}{TNSG}$$

Where: *RM* is the result of the menu; *AGP* is the average gross profit expressed in monetary terms; *TNSI* is the total number of sold menu items; *TNSG* is the total number of served guests.

The Hurst analysis is done periodically several times for the same menu, because a single result of the menu is not enough. More results of the same menu are compared only in the same restaurant for more restaurants involve numerous variables (Miller and Pavesic, 1996).

3. **KOTSCHERAR'S ANALYSIS OF MENU FACTORS** – checks individual menu items giving them numbers – numerical values, which represent a factor of an individual dish. The values obtained show to what extent each menu item meets the planned expectations in different elements which affect the cost price such as: gross profit, the standard of a dish, the variability of cost price of foodstuffs etc.

The Kotschevar analysis sets a standard mean value of 1.0 used to determine whether items in a menu are desirable or not, and shows their ranking in the menu which depends on whether their value is below or above the average (*Miche and Ficher, 2005*). Changes of numerical values of some menu items significantly influence one another. Management uses numerical values of dish factors as an indicator of changes.

4. **SMITH – KASAVANA METHOD** – more famous as menu engineering assesses the menu by measuring every menu item in terms of its profitability expressed through gross profit or contributive margin and per sale. These amounts are combined and each item is classified in one of four groups:

- stars – profitable and popular;
- plow horses – popular and unprofitable;
- puzzles – less popular but profitable;
- dogs – unpopular and unprofitable.

## THE RESULTS OF PROFITABILITY ANALYSIS OF A SELECTED GASTRO-PRODUCT

The evaluation of menus and their appraisal whether they are profitable or not is done in the following way. A selected gastro-product, i.e. a menu, with previously calculated costs, was first analyzed with Hayes-Huffman method of goal value analysis which determined the goal line of profitability (*Miche and Ficher, 2005*).

Then the profitability check was done with Hurst's method which provides an insight into the complete image of success. Individual menu items were analyzed with Kotschevar's method of menu factors. Finally, the menu was assessed by applying the Smith-Kasavana method which classifies each menu item into four groups according to its profitability and popularity (Miller and Pavesic, 1996).

### Gastro-products for processing

Gastro-products for processing are shown in the menu of the 'Careva Ćuprija' restaurant in Belgrade.

The menu with the price of 2040.00 dinars was prepared for and served to 25 people in the above mentioned restaurant, and consists of:

*"Careva Ćuprija" appetizer*

\*

*Grilled lamb chop with grilled vegetables*

*Tarator salad*

\*

*Brittle*

The calculation of the selected menu determining the gross profit of each individual item and the gross profit of the entire menu is shown in table 2.

### The results of Goal value analysis

The goal value analysis is used to check individual menu items and its results show the smallest quantity of an item that must be sold in order to reach the target – goal line of profitability.

The goal value analysis of the calculated menu was done in the following manner.

A profit plan (table 3) of every item and the entire menu in average was done, the required values were taken from the price calculation of the menu and some were done by the hospitality facility – as a percentage of other variable costs which is 24% for each item; the percentage of fixed costs is 11%.

Then the items of the menu were ranked according to their contribution to overall profit and the total contribution was calculated as a contribution to

Table 2. Calculation of the cost of the chosen menu in the "Careva Ćuprija" restaurant in Belgrade

Menu items	Number of sold items	Selling price of an item (RSD)	Average costs of food (RSD)	Total costs of food (RSD)	Total income (RSD)	Gross profit average (RSD)	Gross profit total (RSD)
Appetizer "Careva Ćuprija"	25	600.00	262.00	6550.00	15000.00	338.00	8450.00
Grilled lamb chop with grilled vegetables	25	1100.00	247.00	6175.00	27500.00	853.00	21325.00
Tarator salad	12	220.00	65.00	780.00	2640.00	155.00	1860.00
Brittle	25	120.00	50.00	1250.00	3000.00	70.00	1750.00
Total	87	2040.00	624.00	48140.00	50560.00	1458.00	33385.00

**Table 3.** Profit plan of items in a selected menu and average of items

Items in the menu	Sales (the number of sold items)	Cost price of food %	Other variable costs %	Fixed costs %	Total costs %	Gross profit total RSD	Net profit total RSD	Gross profit total %	Net profit total %
Appetizer "Careva Čuprija"	25	44%	24%	11%	79%	8450	4 650	56%	21%
Grilled lamb chop with grilled vegetables	25	23%	24%	11%	58%	21,325	14300	77%	42%
Tarator salad	12	30%	24%	11%	65%	1,860	924	70%	35%
Brittle	25	42%	24%	11%	77%	1750	1020	58%	23%
Average value of items	22	35%	24%	11%	70%	8346	5223	65%	30%

the profit of the entire menu which is shown in table 4.

**Table 4.** The selected menu items ranked according to their contribution to overall profit

Rank of items	Menu items	Net profit RSD
1	Grilled lamb chop with grilled vegetables	14300.00
2	Appetizer "Careva Čuprija"	4650.00
3	Brittle	1020.00
4	Tarator salad	924.00
Total profit		20894.00

According to the formula shown above, the goal value for every item was calculated, so in the end, the total value of the goal – the overall standard is compared with the standard value of an item.

Table 5 clearly shows that only one item surpasses the average goal value of 3940 with its individual goal value, and as expected, it is the main dish of the menu "Grilled lamb chop". The other items are more or less below the goal value.

According to the results of the analyses, the worst menu item is "Tarator salad" because it has a low goal value and it is not a popular item in this menu.

#### *The results of the Hurst scoring analysis*

The Hurst scoring analysis is a method of menu evaluation created to establish whether changes of a menu (increasing prices, removing an item or price adjustment) encourage profitability of the menu compared with its result. The advantage of this method is that it does not take away much time because it does not follow individual items.

After the calculation of the menu price had been done, the scoring analysis determined the following elements:

- average meal expressed in monetary terms, calculated by dividing the total sales (the amount of money) by the total number of sold items;

**Table 5 .The calculation of target values for all selected menu items**

GOAL VALUE – OVERALL STANDARD							
Formula							
$A \times B \times (C \times D) = GV$							
GOAL VALUE OF INDIVIDUAL ITEMS							
Standard value of the average		0.65	22	510		0.54	3940
Item	Average cost price (%)	A	B Number of sold items	C Selling price	Other variable costs (%)	D (1 – The sum of food costs and other variable costs)	Goal – target value
Grilled lamb chop with grilled vegetables	23%	0.77	25	1100	11	0.43	9105
Appetizer "Careva Čuprija"	44%	0.56	25	600	11	0.44	3696
Brittle	42%	0.58	25	120	11	0.47	818
Tarator salad	30%	0.70	12	220	11	0.59	1090

- average gross profit expressed in monetary terms, calculated by multiplying the average sales by the percentage of gross profit;
- percentage of the tested menu, obtained by dividing the total number of sold items by the total number of served guest in a certain period of time;
- result of the menu is calculated by multiplying the average gross profit expressed in monetary terms by the percentage of the tested menu.

Table 6 shows the results of Hurst analysis, according to which one may conclude that the selected menu is profitable because its formed price is 717 RSD higher than the price calculated with the scoring method of analysis.

**Table 6** .Result of Hurst scoring analysis of the selected menu

Appetizer "Careva Ćuprija" * Grilled lamb chop with grilled vegetables Tarator salad * Brittle		
Average meal	Average gross profit	Menu score
Total sales RSD = 50560 Number of sold items = 87 $50560 / 87 = 582$	Average meal in RSD = 582 % of gross profit = 65% $582 \times 0.65 = 378$ RSD	Total number of sold items = 87 Total number of served guests = 25 $87 / 25 = 3.5\%$
Average meal = 582.00 RSD	Average gross profit = 378 RSD	Menu score = 3.5%
Result of the menu	$378 \times 3.5 = 1323$	1323.00 RSD

### *The results of Kotschevar analysis of menu factors*

The menu factors analysis checks changes which have to be done before placing a menu in the market. Menu items are given numerical values indicating the extent to which they meet expectations in different elements such as: normative changes; cost price changes; gross profit and similar.

Prior to the analysis, it must be assessed what factors have a significant effect on the menu success. For some menu items, the profit provided through sales is important, and for others, their popularity is the reason why a guest often orders the whole menu.

The factor of an item is determined by setting a standard of 1.0, which represents the mean break point or profitability limit. A numerical factor of an item is determined by putting the sum of set break points of all menu items (1.0 for each) in relation to the percent of sale of the item. The percent of item sale is calculated by putting the total sale in relation to the sale of a specific item. Items whose numerical value is above the standard limit are profitable, and those whose numerical value is below the limit are unprofitable.

In order to be complete, the menu factor analysis must be done repeatedly on the same menu.

**Table 7.** Analysis of the selected menu with Kotschevar menu factor

Menu items	Number of sold items	Percent of items sale	Item value factor
Appetizer "Careva Čuprija"	25	28.7%	1.15
Grilled lamb chop with grilled vegetables	25	28.7%	1.15
Tarator salad	12	13.9%	0.55
Brittle	25	28.7%	1.15
Total	87	100%	4

**Table 8.** Analysis of the selected menu with Kotschevar menu factors with the change of the number of items sold

Menu items	Number of sold items	Percent of item sale	Item value factor
Appetizer "Careva Čuprija"	21	28.4%	1.14
Grilled lamb chop with grilled vegetables	21	28.4%	1.14
Tarator salad	12	16.3%	0.64
Brittle	20	27%	1.08
Total	74	100%	4

As shown in table 7, the menu item with a numerical value of 0.55 – Tarator salad is the weakest one. The appetizer and the main dish are the strongest items of the menu. When we consider group meals, the salad and the dessert are two items which guest most often leave out. This means that they are not according to guests' wished or that the norm of the prepared menu, i.e. the quantity of the prepared meal should be considered.

After the change of the number of sold items, the factor value decreased proportionally to the decrease of the total number of ordered menu items, which is shown in table 8.

#### *The results of Smith-Kasavana method – menu engineering*

This method of menu profitability assessment classifies every dish of a menu in terms of sale, as seen through the gross profit it brings.

The gross profit or contributive margin is calculated by subtracting total costs of food from the selling price of an item. Standard costs of food include all foodstuffs that are part of the item, as well as those served with it (such as various vegetable side dishes served with a main dish, or tartar sauce and lemon served with Viennese steak).

The analysis is performed in the following way:

- do a menu calculation which should contain: the contributive margin for every item, the total number of sold items, the selling price of each item, standard overall food costs, the total income of the menu, the total food costs of every item (standard costs X the number of sold items), the total contributive margin for every item, the percentage of the contributive margin (shown in table 9);
- the contributive margin is defined as HIGH or LOW depending on whether it is larger than the average contributive margin of the entire menu (it is obtained

**Table 9** .Calculation of gastro-products in the selected menu with the information necessary for the analysis

Menu items	Number of sold items	Selling price of an item	Costs of food	Total costs of food	Total income	C margin per item	Total C margin	Total C margin %
Appetizer "Careva Čuprija"	25	600.00	262.00	6550.00	15000.00	338.00	8450.00	56%
Grilled lamb chop with grilled vegetables	25	1100.00	247.00	6175.00	27500.00	853.00	21325.00	77%
Tarator salad	12	220.00	65.00	780.00	2640.00	155.00	1860.00	70%
Brittle	25	120.00	50.00	1250.00	3000.00	70.00	1750.00	58%
Total	87	2040.00	624.00	48140.00	50560.00	1458.00	33385.00	65%

**Table 10** . Results of the gastro-product profitability analysis by using the Smith-Kasavana method (menu engineering)

Menu items	C mix %	C mix category	C margin	C margin %	C margin category	Menu item category
Appetizer "Careva Čuprija"	100%	HIGH	8450.00	56%	LOW	PLOW HORSE
Grilled lamb chop with grilled vegetables	100%	HIGH	21325.00	77%	HIGH	STAR
Tarator salad	48%	LOW	1860.00	70%	HIGH	PUZZLE
Brittle	100%	HIGH	1750.00	58%	LOW	PLOW HORSE

when the total contributive margin of the menu is divided by the total number of sold items);

- the mix percentage (mix %) of every item is determined by dividing the sales of an item by the total number of sold items;
- the mix % is defined as HIGH or LOW by comparing each item with the average that depends on the number of items contained in a menu. If a menu contains 4 items, each of them is 25% of the mix. The item whose mix percentage is lower than 70% is considered low and vice versa;
- on the basis of calculated data, items are classified into one of four categories: *stars*, *plow horses*, *puzzles* or *dogs*.

As expected, the star of the menu (the most attractive and of the highest quality) is the main dish *Grilled lamb chop*, which is the reason why the menu is ordered. The plow horse, in most cases, thus in this case as well, is a dish which is, in a way, a representative or a trade mark of a facility such as “*Careva Ćuprija*” *Appetizer*, and its task is to present a good service at an acceptable price. In another case, a plow horse may be a traditional dish, known to most of the guests or may even be their motive to visit the facility, which can be the reason why its lower contributive margin is justified by a large operating turnover.

*Tarator salad* is an item with the high C margin and low popularity in the menu, which is the reason why its removal from the menu should be considered, and a different salad which would make larger sales as an individual item should be put in the menu.

The results of the profitability analysis done with the menu engineering method are shown in table 10.

## CONCLUSION

The goal of every hospitality management is a long-term success achieved through customer satisfaction, and the benefit of employees.

In order to have lower total costs of a company, a high level of quality of products and services, and larger work productivity, the management and employees must have a positive attitude towards work, must actively and professionally contribute to the improvement of work quality, and consequently improve the quality of gastronomic products.

The profitability analysis of a gastro-product was done on the basis of the menu selected in the ‘*Careva Ćuprija*’ restaurant in Belgrade. Prior to this, a costs calculation was done according to which four different profitability analyses were conducted. The Hayes-Huffman method of goal value analysis was done first, and it determined the target or goal line of profitability which showed that the average goal value of 3940 RSD was surpassed by only one item with its individual goal value, and as expected, it was the main dish – ‘*Grilled lamb chops*’. The other items were more or less below the goal value. Then the profitability check was done by using Hurst method which offered an insight into the overall image of success and which showed that the selected menu was profitable because its formed price is 717 RSD higher than the price calculated by using the scoring method of analysis.

Individual menu items were analyzed by using the Kotschevar method of menu factors, which showed that the appetizer and the main dish were the strongest items in the menu with the value factor of 1.55. Finally, the menu was assessed by using the Smith-Kasavana method which classifies each menu item in four groups according to their profitability and popularity, according to which the selected menu does not contain items of the dogs category, meaning that it can be regarded as profitable.

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