

# INNOVATION STIMULATES THE FORMATION OF A SYNERGISTIC "EFFECT" IN THE ENTERPRISE

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**Abstract.** *In this paper we describe the formation of synergistic "effects" soputstvuyushy to the economic effect due to the introduction to the activities of enterprises (for example, catering services and products catering), innovative techniques and technologies.*

**Keywords:** *synergetic, effect, catering services, innovation, techniques and technologies*

## I. INTRODUCTION

At the beginning of the separation of synergetic as a separate area of scientific research, G. Haken was the first to introduce the concept of "synergetic", meaning by this a science that studies systems consisting of a large number of parts, components or subsystems, in a word, details that interact in a complex way with each other [1, 2]. It is advisable to point out that the main goal of interaction of such systems is synergy, i.e. the combined functioning of two or more factors, characterized by the fact that it significantly exceeds the effect of each individual component and their sum [1, 4]. Thus, the synergistic "Effect" is always the result of the transformation of simple production systems into more complex ones.

In general, a synergistic "Effect" is a positive result of the system's activity in relation to the results of its components. This effect is described by the formula " $2 + 2 = 5$ ". This means that the total result of the activity of any system is greater than the sum of the results of the individual organizational elements of this system. By its nature, the synergistic effect is an organizational effect, therefore the task is to find a set of elements and so connect them with each other, using progressive forms of organization, in which synergy would provide a qualitative and quantitative increase in both the potential and the results of the functioning of the system and its components.

In the conditions of market relations and globalization of the world economy, the management of enterprises strives to maximize the efficiency of their activities by increasing

competitiveness, enhancing innovation and investment activity, developing and applying innovative technologies. One of the most effective ways for enterprises to achieve the above goals is currently innovation as a source of synergy.

Growing competition in the period of economic globalization requires the search and implementation of new methods of management for more efficient operation of domestic enterprises. It is known that one of the most promising methods of improving the production sphere of the economy is the introduction of innovation, which stimulates the formation of a synergistic effect.

Among the indicators of efforts to generate synergistic effects can be distinguished [3,4]: increase in profits; reduction in operating costs (costs); reducing the need for investment (due to the internal effect).

However, it should be noted that, according to the law of synergy, for any organization there is such a set of elements (resources) in which its potential will always be either significantly greater than the simple sum of the potentials of its constituent elements, or significantly less [5,6].

## **II. THE MAIN PART**

### **Research Methods**

The purpose of our work is to explain the formation of a synergistic "Effect" in an enterprise, as a result arising from the introduction of innovative techniques and technologies in the organization of customer service at the enterprise (for example, buffet service).

Let us emphasize that the synergistic effect is formed at different levels: from local (starting from a group of workers united by a common task) to global, due to the integration of countries. Starting from the scale of the enterprise, this effect is created by the interaction of material production and production infrastructure (5). In the modern economy, most goods are continua, which are the basis for the formation of a synergistic effect. The effect is most pronounced in the restaurant industry and in trade. The structure of tourist services and restaurant facilities,

Therefore, a synergistic effect of functioning and a synergistic effect of renewal can be distinguished. The latter is formed when at least a few elements of technology and services are updated [6]. This situation, first of all, refers to a comprehensive service, primarily a tourist one.

Based on the foregoing, we will consider the formation of a synergistic "Effect" accompanying the economic effect due to the introduction of innovative equipment and technology in the activities of enterprises (for example, buffet service in the central bus station of the city of Samarkand).

The central bus station has several buffets to serve tourists and the public. Buffets belong to catering establishments and are supplied with food, goods and products of their own production. For modern consumer service, buffets have modern and relatively outdated catering equipment. For example, in the buffet organized on the ground floor, there are PVCS-1-0.5 "Penguin-V" display counters, 4 BS; buffet counter; BSh-3 multi-profile cupboard, KN-50M boiler and LSB-6M thermostat (for cooking hot drinks).

For washing pantries and cutlery, there are 3 bathtubs and for their support, 2 pcs of a rack-cabinet for dishes and cutlery.

For the sale of products in the buffet, there is a barman 4 times, for washing used dishes a dishwasher is 2 times.

The buffet is open every day for 12 hours (from 8 am to 8 pm), the turnover for one day, on average, is about 20 million soums. To organize timely customer service in the buffet, a modern method of customer self-service is organized. However, due to the lack of modern vending machines, queues are constantly formed during peak hours and reduce its efficiency. Accordingly, the analysis of the buffet's work showed that for accelerated service it is advisable to use innovative equipment and technology, i.e. modern vending machines for goods and products.

For the formation of a synergistic effect, which determines the economic effect, we recommend the following innovative automatic machines for the automatic sale of products: AT-25 (for the sale of drinks) 1 piece AT-151 (coffee, cocoa) 1 piece. AT-556 (piece not chilled products) and 2 pcs. P-2 for counting metal coins and a mechanic will also be required to service this equipment.

Based on the complexity of assessing the synergistic effect, especially regarding consumption, an assessment can be made only on the basis of a comparison method, which causes its inaccuracies, but an approximation to the correct result is provided by long-term studies aimed at isolating various components of the effect from the overall result. To calculate the economic effect to the innovative synergistic effect, a summary table was compiled (Table 1).

Table 1.

Summary table for calculating the economic efficiency of the buffet.

Indicators	unit of measurement	Comparison options	
		Basic	New
Turnover per day	million soums	20	20
Equipment annual working day	day	350	350
Annual turnover	million	7000	7000

	soums		
Wholesale price of each equipment:	million soums		
showcase counter		4,47	
PVCS-1-0.5 "Penguin-V"		6,2	
Boiler KNE-50M		2,69	
thermostat LSB-6M		2,45	
Wardrobes for sideboards BSh-3		5,88	
Pantry stand BS-4		1,37	
Washing bath VMSM-1		2,5	
tableware cabinet IIIXII		1,27	
AT-251 assault rifle			8,16
AT-151 assault rifle			12,2
AT-551 assault rifle			14,5
AT-453 assault rifle			13,5
P-2 coin changer			4,5
Total area occupied by equipment	M2	31,9	
Area for the installation of machines	M2		8,3
Number of employees in 1 shift	human	2	0,5
Hourly taryf workers	Thousand. sum		
Bartender 4 ranks		0,850	
dishwashers of the 2nd category		0,743	
mechanic 4 times for service. automat			0,853
Equipment depreciation rate.	%		
For showcase counter PVCS-1.-0.5		12	
Boiler KNE-50M		24,3	
For thermostat LSB-6M		18,1	
For cupboard BSh-3		15,7	
For autta buffet stands BS-4, AT-151			15
R-2 assault rifle			13
Service cost calculations:	Thousand. sum		
Counter - showcase, PVCS-1-0.5		13,2	
Boiler KNE-50M		7	

Thermostat LSB-6M		8,8	
Washing bath VMSM-1		4,1	
Equipment waste	kw		
Counter showcase		0,266	
boiler KNE-50M		6	
Thermostat LSB-6M		0,4	
AT-151 assault rifle			4,5
AT-251 assault rifle			0,6
AT-453 assault rifle			0,75
AT-556 assault rifle			1,1
exchanger R-2			0,78

The calculation of the effectiveness of the modernization of the canteen equipment was carried out according to the methodology of the Ukrainian Research Institute of Comparative Calculation of the Basic with the New Option. In this case, the annual expense for the purchase of a new one and the cost of exchange, also for maintenance, are calculated.

Table 2. Summary calculation of reduced costs and annual economic effect.

(million sum)

Indicators	Comparison options	
	Basing	new
Total volume of capital investments in fixed assets	1803,5	17382,1
Reduced capital investments in fixed assets $E_n * K$ ( $E_n = 0.15$ )	270,5	2607,3
Operating costs per annual production volume	7414	4600
Reduced costs per annual output	7684,5	7207,3
Annual economic benefit		477,2

#### IV. CONCLUSION

So, as you can see, all the work done to improve the service at the bus station buffets showed that due to the innovation of technology and technology, a synergistic effect is formed that contributes to obtaining economic efficiency, as well as social and other efficiency. Therefore, it is advisable that this practice should be extended to other buffets and catering establishments in general.

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