International Journal of Psychosocial Rehabilitation, Vol. 24, Issue 04, 2020
ISSN: 1475-7192

Increasing Efficiency of Catering Enterprises through Modernization

Kurbanova Rakhima Jamshedovna

Abstract--- *The provision of public catering establishments with material and technical equipment plays an important role in the rapid development of this sector, especially in meeting the needs of the people. They differ in the type of interaction, size and level of services provided. However, not all of them meet the requirements of the period. Therefore, it is necessary to improve the technical and technological modernization of public catering establishments.*

The article develops a method for determining the technical and economic level of service in public catering establishments based on technical and functional indicators.

Keywords--- *Modernization of Enterprises, Technical Level, Technical and Economic Level, New Equipment, Renewal of Fixed Assets, Efficiency, Service.*

I. INTRODUCTION

According to the experience of countries around the world, the service sector is one of the key factors in the development of the country's economy. At present, the total turnover of public catering establishments in Russia is estimated at 1,301 billion rubles. soums, in Germany - 3,400 bln. soums, and in the USA - 43 468 bln. soums, from 1% to 3% per year" [17]. The growing demand for catering and the effective development of this industry requires the search for and introduction of new approaches, forms and methods.

The development of public catering enterprises in the world, first of all, provides for the preparation of food on the basis of special technology, the development of communications, means of delivery of raw materials and products, technical and technological modernization of production processes. In this regard, one of the important tasks is the modernization of public catering, the implementation of targeted research to improve the quality of service.

It is known that the modernization of enterprises, first of all, requires improving the quality of products, expanding the range, meeting the requirements of standards, improving working conditions and improving the skills of staff. In the implementation, it is necessary to gradually strengthen the material and technical base of the enterprise, including the periodic replacement of equipment and technologies, which are its basis, with modern types with high economic performance. Naturally, in such a situation, "Which of them need to be updated?" a legitimate question arises. We propose to determine the technical and economic level of the enterprise on the basis of existing equipment and technologies. Because the main part of the material and technical base of the enterprise is the technical and economic level, which expands its range, meets the standard requirements, improves working conditions, and requires highly skilled workers. Modernization of the enterprise means, first of all, the introduction of innovative, new techniques in its production. Currently, a variety of techniques and equipment are used in public

Kurbanova Rakhima Jamshedovna, PhD, Senior Lecturer, Samarkand Economy and Service Institute.

DOI: 10.37200/IJPR/V24I4/PR2020493
Received: 14 Mar 2020 | Revised: 28 Mar 2020 | Accepted: 14 Apr 2020

catering establishments in the country. It is important to scientifically, theoretically and methodologically determine the directions of development of these outlets through technical and technological modernization. Consequently, this issue is one of the current issues that need to be studied.

Current normative documents (Interstate standard, Industry standard, Interstate standard 15467-79) state that the technical level is determined by comparing the main technical and economic indicators of the product. This situation shows that the necessary concepts are not strictly expressed in theory, and such an approach often does not allow comparing products with samples produced abroad.

The technical level describes the improvement of the product indifferently to the economic indicators, while the technical-economic level means the technical improvement depending on the economic indicators. Then it will be possible to fully compare the technical level of products with foreign samples.

There is no methodology for determining the feasibility of modernization of service enterprises. Therefore, we conducted an analysis of existing methods in other areas and developed an improved method for them.

II. THE MAIN PART

Research Methods

The services provided by public catering establishments in our country are an important part of the economy, which is carried out by many organizations and individual businesses. The development of public catering establishments serves to meet the diverse needs of the people. Modernization of public catering enterprises plays a special role in fulfilling such tasks. However, not all of them meet modern requirements. Therefore, "... renewal and modernization of spiritually and physically obsolete equipment, increasing energy efficiency in production, optimization of technological processes" [18] was identified as a priority.

According to VI Terekhin [2], this issue is considered in various methods modeled in high-capacity industrial enterprises. At the same time, the technical level of the product is considered as a multi-parameter function. That is, j - the technical level of the product is represented by the indicators Xi (i = 1, n):

$$K_{t\partial_j} = \varphi(x'_{ij}; x'_{i\acute{o}}; a_i)$$

There: the base value of the indicator $x'_{i\acute{o}}$ – i-;

a_i – i – indicator value (massive).

Additional economic indicators should also be taken into account when assessing the feasibility study. Then its coefficient can be expressed as follows:

$$K_{t\partial} = \psi(x'_{ij}; x'_{i\acute{o}}; З_{\ell j}; З_{\ell\acute{o}}),$$

Including: costs in $З_{ij}$ – l areas. (l=1,l)

From this mathematical model it can be seen that the technical level and the technical-economic level are not mutually exclusive, but complement each other. Therefore, we consider it appropriate to use both models in

DOI: 10.37200/IJPR/V24I4/PR2020493
Received: 14 Mar 2020 | Revised: 28 Mar 2020 | Accepted: 14 Apr 2020

assessing the modern innovative nature of the enterprise. Because the technical level shows how much the enterprise equipment has improved, the technical and economic level is directly related to the profitability of the enterprise.

There are also different views on the calculation of the technical and technical-economic level of the enterprise. The following common points should be taken into account in defining them:

- In clarifying the technical and economic indicators, it is necessary to determine their weighting coefficient with the help of experts or otherwise;
- Selection of key parameters in the calculation, for example, natural indicators (specific material capacity, specific energy capacity and value, specific current cost). Proposal to take the cost of labor productivity as a general indicator of the technical and economic level [3];
- Indicators of technical and economic level according to Interstate standard 15467-70 correspond to integral and complex quality indicators;
- The technical level is understood as the fact that the efficiency of the new machine over the years lags behind the average level of the industry [4];
- Determining the compatibility of the consumer value of the product and labor costs in determining the feasibility study;
- Determination of technical level is carried out by comparison with the most advanced production equipment in the world.

Above we have briefly analyzed the computational methods used to update equipment (tools, equipment, products, etc.) used in various fields. The results showed that such a calculation method was designed for an individual or a similar group. However, the application of this method for complex innovative renewal of its material and technical base on the scale of enterprise equipment leads to inefficient and complex calculations. Accordingly, based on the above, we proposed a method of calculating the feasibility of service, service enterprises using industrial calculation methods.

An important task is to study the impact of the application of advanced innovative techniques and technologies in the production of catering enterprises on its cost-effectiveness. For this purpose, we use the methodology of cost accounting for each manufactured product, work performed or service provided, proposed by V.I. Shalun. In this case, an innovative measure that produces the same amount of product or the least cost of the work performed is considered effective.

We propose to calculate the following integrated method, using the methods of calculating the efficiency of the introduction of new (innovative) equipment in the enterprise, mainly in industry:

1. Analysis of the state of the material and technical base (fixed assets) of the enterprise at the time of determining the technical and economic level;
2. Zoning of functional groups of material and technical base (fixed assets) of the enterprise and collection of information about them;

DOI: 10.37200/IJPR/V24I4/PR2020493
Received: 14 Mar 2020 | Revised: 28 Mar 2020 | Accepted: 14 Apr 2020

3. Determine the $К_{тд}$ for each functional group and take their average mathematical value as the technical and economic level of the enterprise:

$$K_{\hat{e}\grave{o}\ddot{a}} = \left[\frac{\sum_{n=i}^{i} \overline{K_{\grave{o}\ddot{a}ij}}}{n} \right]$$

There: n – number of groups;

4. $\overline{K_{m\partial ij}}$ – average value of $К_{тд}$ of computing object (equipment, tools, etc.) in each group:

$$K_{\kappa m\partial} = \left[\frac{\sum_{n=i}^{i} K_{m\partial is}}{n} \right]$$

There: n – number of objects in that group.

$К_{тдis}$ – coefficient of technical level of objects (equipment, tools, etc.).

$К_{тдij}$ – formula

$$K_{\grave{O}\ddot{A}} = \sum_{i=1}^{n} a_i \cdot P_i$$

is chosen for the calculation, where: - i is the weighting factor;

-i base value of the parameter;

to scale $a_{ir} = \gamma \frac{x'_{ir}}{x'_{i\ell}} a_{i\ell}$

Here: γ – is the coefficient of recalculation of the total assessment to find the actual value of the technical level ($К_{тд}^{*}$);

$a_{ir} = \gamma \frac{x'_{ir}}{x'_{i\ell}} a_{i\ell}$ In most cases, if it is γ =1, then it is $К_{тд}=К^{*}_{тд}$, and then the formula

is used, that is, the weight of the main indicators of the object of calculation (equipment, etc.) is taken into account.

5. Determining the cost-effectiveness of new equipment.

DOI: 10.37200/IJPR/V24I4/PR2020493
Received: 14 Mar 2020 | Revised: 28 Mar 2020 | Accepted: 14 Apr 2020

It is also important to know in advance the impact of the application of modern innovative techniques and technologies in the production of catering enterprises on the economic efficiency of the enterprise.

It is known that the main fund of a public catering enterprise consists of its buildings, structures, machinery and equipment, vehicles, tools, production inventory and other means of labor.

To study the condition of the fixed assets of the catering enterprise, we divide them into functional groups according to the above method. They include:

1. Means of production.
2. Furniture and inventory.
3. Buildings and structures.
4. Other equipment and inventory.

With this in mind, they are divided into the following groups, depending on which process they perform functionally:

1. Mechanical equipment.
2. Heating equipment.
3. Refrigeration equipment.
4. Cooling equipment

In determining the feasibility of the equipment, based on the general requirements, we used the indicators used in their efficient use. And calculations are performed using the given formulas.

III. RESULTS AND DISCUSSION

The technical and economic level of public catering establishments in the period of modernization has been determined. In particular, in the analysis of the fixed assets of the restaurant "Yulduz" *(Star)* in Samarkand, the functional groups on the method of determining the technical and economic level of the enterprise, depending on the tasks of organizing the sale and consumption of products in the production process: 1. Production equipment; 2. Furniture and inventory; 3. Buildings and structures; 4. Allocated to other equipment and inventory. Similarly, depending on which process a group of production equipment performs functionally: 1. Mechanical equipment; 2. Heating equipment; 3. Cooling equipment; 4. Divided into groups of cooling devices.

At the same time, the innovation update in each group was selected using the proposed method, comparing the technical and economic level. The renovation of the equipment used in the restaurant "Yulduz" *(Star)* in Samarkand was considered on the example of the selection of fryers, which are a heating device in it.

The fryer equipment operating in the enterprise was compared with the newly produced ones. In this case, the selected parameters of the calculated equipment were assumed to have the same weight, and the weighting coefficient on the indicators of the 1st and 2nd base (operating in the enterprise) equipment was calculated (Table 1).

DOI: 10.37200/IJPR/V24I4/PR2020493
Received: 14 Mar 2020 | Revised: 28 Mar 2020 | Accepted: 14 Apr 2020

Table 1: Calculation of the technical and economic level of heating equipment on the basis of a variable base of the restaurant "Yulduz" *(Star)* in Samarkand city

Equipments		**Indicators**				**Coefficient of technical-economic degree**			
		X_1 kg/hour	**X_2, кВт**	**X_3, kg**	**X_4, м^2**	**On the 1st base**	**On the 2st base**	**On the 1st base 2 in terms of base**	**On the 2nd base 1 in terms of base**
А	Electric fryer SEDF-20	20	7,5	9,0	0,36	1	2,52	0,9	2,28
Б	Deep fryer SEDF -16	16	6	18	0,2	0,57	1,5	0,7	1,49
Base									
1	SEDF -20	20	7,5	90	0,36				
2	SEF -5	8	4	25	0,11				
	Massive coefficient by indicators	0,25	0,25	0,25	0,25	Total			
		0,13	0,69	0,07	0,09	On the 1st base 2 in terms of base			
		0,14	0,44	0,21	0,19	On the 2st base 1 in terms of base			

Here: x1 - equipment productivity, kg / h; x2 - electric motor power, kW; x3-mass, kg; x4- occupied area, m2.

1) Calculate the weight coefficient on the basis of 1:

r =1 i =1 $$a_{11}^{*} = \frac{x'_{11}}{x'_{12}} \times a_{12} = 0.25 \times \frac{8}{20} = 0{,}1$$

r=1 i=2 $$a_{21}^{*} = a_{21} \times \frac{x'_{21}}{x'_{22}} = 0{,}25 \times \frac{4}{7{,}5} = 0{,}53$$

r =1 i =3 $$a_{31}^{*} = a_{31} \times \frac{x'_{31}}{x_{32}} = 0{,}25 \times \frac{25}{90} = 0{,}06$$

r =1 i =4 $$a_{41}^{*} = a_{41} \times \frac{x'_{41}}{x_{42}} = 0{,}25 \times \frac{0{,}11}{0{,}36} = 0{,}07$$

$$\sum_{i=1}^{4} a_{i2}^{*} = a_{11}^{*} + a_{21}^{*} + a_{31}^{*} + a_{41}^{*} = 0{,}1 + 0{,}53 + 0{,}06 + 0{,}07 = 0{,}76$$

we numerate a_{ij}^{*} and

$$a_{11} = \frac{a_{11}^{*}}{\sum} = \frac{0{,}1}{0{,}76} = 0{,}13 \quad a_{21} = \frac{a_{21}^{*}}{\sum} = \frac{0{,}53}{0{,}76} = 0{,}69$$

DOI: 10.37200/IJPR/V24I4/PR2020493
Received: 14 Mar 2020 | Revised: 28 Mar 2020 | Accepted: 14 Apr 2020

$$a_{31} = \frac{a_{31}^*}{\sum} = \frac{0,06}{0,76} = 0,07 \; a_{41} = \frac{a_{41}^*}{\sum} = \frac{0,07}{0,76} = 0,09$$

2) Calculate the weight coefficient on the basis of 2:

r=1 i=1 $$a_{12}^* = a_{12} \times \frac{x'_{12}}{x'_{12}} = 0.25 \times \frac{20}{8} = 0,62$$

r=1 i=2 $$a_{22}^* = a_{22} \times \frac{x'_{22}}{x'_{21}} = 0.25 \times \frac{7,5}{4} = 1,87$$

r=1 i=3 $$a_{32}^* = a_{32} \times \frac{x'_{32}}{x_{31}} = 0.25 \times \frac{90}{25} = 0,9$$

r=1 i=4 $$a_{42}^* = a_{42} \times \frac{x'_{42}}{x'_{41}} = 0.25 \times \frac{0,36}{0,11} = 0,81$$

$$\sum_{i=1}^{4} a_{i2}^* = a_{12}^* + a_{22}^* + a_{32}^* + a_{42}^* = 0,62 + 1,87 + 0,9 + 0,81 = 4,2$$

we numerate a_{ij}^* and

$$a_{12} = \frac{a_{12}^*}{\sum} = \frac{0,62}{4,4} = 0,14 \; a_{22} = \frac{a_{22}^*}{\sum} = \frac{1,87}{4,2} = 0,44$$

$$a_{32} = \frac{a_{32}^*}{\sum} = \frac{0,9}{4,2} = 0,21 \; a_{42} = \frac{a_{42}^*}{\sum} = \frac{0,81}{4,2} = 0,19$$

Total: $Kmo_1 = \sum_{i=1}^{4} a_i \frac{x_{ij}}{x_{oi}}$

1) According to 1st base

A. $$Kmuo_1 = 0,25 \times \frac{20}{20} + 0,25 \times \frac{7,5}{7,5} + 0,25 \times \frac{90}{90} + 0,25 \times \frac{0,36}{0,36} = 0,25 \times 4 = 1$$

Б. $$Kmuo_1 = 0,25 \times \frac{16}{20} + 0,25 \times \frac{6}{7,5} + 0,25 \times \frac{18}{90} + 0,25 \times \frac{0,2}{0,36} = 0,25 \times (0,8 + 0,8 + 0,2 + 0,5) = 0,57$$

2) According to 2nd base

A. $$Kmuo_2 = 0,25 \times (\frac{20}{8} + \frac{7,5}{4} + \frac{90}{25} + \frac{0,36}{0,11}) = 0,25 \times (2,5 + 1,8 + 2,6 + 3,2) = 2,52$$

DOI: 10.37200/IJPR/V24I4/PR2020493
Received: 14 Mar 2020 | Revised: 28 Mar 2020 | Accepted: 14 Apr 2020

Б. $Kmu\partial_2 = 0{,}25 \times (\frac{16}{8} + \frac{6}{4} + \frac{18}{25} + \frac{0{,}2}{0{,}11}) = 0{,}25 \times (2 + 1{,}5 + 0{,}72 + 1{,}81) = 1{,}5$

2 base conditions on 1st base

А. $Kmmц_2 = 0{,}13 \times 1 + 0{,}69 \times 1 + 0{,}07 \times 1 + 0{,}09 \times 1 = 0{,}13 + 0{,}69 + 0{,}07 + 0{,}09 = 0{,}9$

Б. $Kmmц_2 = 0{,}13 \times 0{,}8 + 0{,}69 \times 0{,}8 + 0{,}07 \times 0{,}2 + 0{,}09 \times 0{,}5 = 0{,}10 + 0{,}55 + 0{,}01 + 0{,}04 = 0{,}7$

1 base conditions on 2nd base

А. $Kmmц_2 = 0{,}14 \times 2{,}5 + 0{,}44 \times 1{,}8 + 0{,}21 \times 2{,}6 + 0{,}19 \times 3{,}2 = 0{,}35 + 0{,}79 + 0{,}54 + 0{,}60 = 2{,}28$

Б. $Kmmц_2 = 0{,}14 \times 2 + 0{,}44 \times 1{,}5 + 0{,}21 \times 0{,}72 + 0{,}19 \times 1{,}81 = 0{,}28 + 066 + 0{,}15 + 0{,}34 = 1{,}49$

The results of the analysis showed that under the same conditions, SEDF -20 indicators were found to consume more energy than both base devices. However, although the weight coefficients of the performance of this equipment are almost the same in comparison, its weight (metal capacity) is about 10 times less. The freshly produced, now commercially available fryers were compared with the availability in the database, and the results of the calculations were also included in Table 4. It can be seen that the newly proposed SEDF -20 is $K_{mu\partial} = 1$ with a similar base.

However, the base is $K_{mu\partial} = 2{,}52$ times larger than the other. Similarly we can see that SEDF - 16 is smaller than SEDF -20, $K_{mu\partial_1} = 0{,}57$ is smaller, and SEF -5 is smaller than $K_{mu\partial 2} = 1{,}5$. If we consider the conditions of the 2nd base on the 1st base in production, more precisely, the second one is obsolete, it is clear that it is superior to A devices ($K_{mu\partial} = 0{,}9$), B devices ($K_{mu\partial} = 0{,}7$), and taking into account its conditions (FNE-5). Similarly, it was noted that their technical and economic level was high in the case of the 1st base on the 2nd base (similar, only produced earlier in the year). $K_{mu\partial 2a} = 2{,}28$, $K_{mu\partial 2б} = 1{,}49$. On the basis of this method, other equipment available at the enterprise was calculated and their average technical and economic level ($K_{mu\partial 2} = 1{,}7$) was determined. The results of Table 4 show that most of the equipment has been updated in accordance with modern requirements, and shows that it is possible to determine the state of modernization - innovation of the enterprise. Similarly, the renovation of buildings and structures, furniture and inventory, etc. of the fixed assets in the enterprise has a great impact on increasing efficiency. Thus, the average technical and economic level of fixed assets of the enterprise is $K_{mu\partial} = 1{,}7$. It was found that the group of mechanical equipment used in it was $K_{mu\partial} = 1{,}59$ and the cooling equipment $K_{mu\partial} = 1{,}53$ was lower than the others.

During the analysis, the technical and economic level of group equipment in the kitchen "Urgut Fayz Savdo" and restaurant "Juma Fayz" in Samarkand region was determined and included in Table 2.

DOI: 10.37200/IJPR/V24I4/PR2020493
Received: 14 Mar 2020 | Revised: 28 Mar 2020 | Accepted: 14 Apr 2020

Table 2: Technical and Economic Level of Public Catering Enterprises in Samarkand Region and its Efficiency

№	Groups	$K_{тид}$			Эп минг сўм		
		"Yulduz" restaurant	"Urgut Fayz Savdo" canteen	"Juma Fayz" Restaurant	"Yulduz" restaurant	"Urgut Fayz Savdo" canteen	"Juma Fayz" Restaurant
1	Mechanic equipment	1,59	0,8	1,3	420	270	230
2	Heating equipment	1,7	0,5	1,2	2384,6	1164,3	2354
3	Freezing equipment	1,8	1,2	1,2	1289,7	754,5	574
4	Cooling equipment	1,53	1,2	1,3	600,3	356,7	543,2
5	Furniture accessories	0,94	0,85	0,84	0,5	0,3	0,3
6	Buildings and structures	0,84	0,6	0,4	0,011	0,4	0,2
7	Other equipment and tools	0,88	0,7	0,54	0,55	0,5	0,64
	Average value	1,34	0,8	0,9	670	363,8	528,6

The results of the calculations show that in order to improve the quality of service at the enterprise, it is necessary to replace the mechanical equipment and refrigeration equipment in production with modern ones. Because their technical and economic level is lower than that of other groups. Economic efficiency depends on the modernization of the technical and economic level of the enterprise. When the average technical and economic level of the enterprise is 1.34, the economic efficiency is 670,000 soums.

IV. CONCLUSION

Proposals have been developed to determine the technical and economic level of enterprises in order to accelerate the modernization of service enterprises, the introduction of innovations. It was confirmed that the equipment of public catering establishments in Samarkand region should be replaced with the necessary modern types.

Based on the factors influencing the innovative activity of the catering enterprise and the technical and economic level of the enterprise, proposals were developed to increase efficiency through the selection and replacement of new equipment. As a result, it was argued that the technical and economic level of public catering enterprises in Samarkand region is interrelated with its economic efficiency.

Therefore, the economic efficiency of the enterprise is greatly influenced by the technical level of technological equipment used in its production. Therefore, all equipment must be in good condition, in accordance with the operating regulations, they must be periodically serviced and replaced with new ones.

REFERENCES

[1] Terekhin V.I. Improving the efficiency of production of new equipment. –*Moscow, Economics*, 1987. – p. 220.

[2] Rosenplenter A.E., Shirokoradova B. Fundamentals of managing the creation of new technology. – *Kiev: High School; Prague: LFSWR,* 1984. - p. 60.

DOI: 10.37200/IJPR/V24I4/PR2020493
Received: 14 Mar 2020 | Revised: 28 Mar 2020 | Accepted: 14 Apr 2020

[3] Yampolsky S.M., Galuza S.G. Economic problems of scientific and technological progress management. – Kiev: *Science. – Dumka,* 1976. -p. 78.
[4] Shalun V.I. Catering to a new technical level. – *Moscow: Economics* 1987, - pp. 45-84.
[5] Pogozhev, I.B., Generalized Performance Indicators of Development Programs, Automated Control System and Operations Research. – Novosibirsk: *Publishing House of Computer Center of SB as USSR,* 1976. - p. 88.
[6] Pardaev M.Q., and others. Important factors of modernization, diversification and innovation-economic growth: Monograph. Navruz, 2014. - p. 104.
[7] Fedulin A.M., Platokov N.A. et al. Conceptual and usulological aspects of the formation of service science - synergy type science – Moscow: Collection of 2008. – pp. 65-68.
[8] Dynkin A.A.World economy: forecast up to 2020 – Moscow, 2007.
[9] Kuznetsov V.I. The main funds of public catering and their reproduction - *Moscow, MINH* 1975. - p. 6.
[10] Efimova O.P. The Economics of Food Service: A Training Manual. – Moscow: New Knowledge, 2008. - pp. 348-200.
[11] Berry Leonardo Servis Marketing Self Portraits: Jutrospeetion, Reflection, and Glimpses from the Experts. – Chicago: AMA, 2000.
[12] Leoit Theodore / Productoon Line Approach to Service// *Harward Business Revieve.* 1979. - p. 50.
[13] Norsis Ruby T/ The Theory of Consumers Demand. *New Haven/ Yale Uninversity Press.*1941.
[14] Samuelson P.A. (1958). An exact Consumption-Loan Model of Interest with or without the Social Contrivance of Money. *Journal of Political Economy,* 66 (6), - pp. 467-482.
[15] May 12, 2006 №0515 Uzstandard Agency. Classifier of services by types of activity of the Republic of Uzbekista. *UzST* 10: 2006.
[16] Kurbanova R.J. "Modernization of service enterprises and increasing the efficiency of their services." Monograph. – *Tashkent: Navruz Publishing House,* 2013.
[17] https://nsportal.ru\ /2017/10/21/sovremennye-tendentsii-razvitiya-obshchestvennogo pitaniya/
[18] Decree of the President of the Republic of Uzbekistan dated February 7, 2017 "On the Strategy of actions for further development of the Republic of Uzbekistan" PD - 4947 // *Collection of Legislation of the Republic of Uzbekistan,* 2017. № 6.

DOI: 10.37200/IJPR/V24I4/PR2020493
Received: 14 Mar 2020 | Revised: 28 Mar 2020 | Accepted: 14 Apr 2020