MONITORING OF ASSORTMENT COMPOSITION
OF RATIONAL CLOTHING FOR OLDER AGE WOMEN

МОНИТОРИНГ АССОРТИМЕНТНОГО СОСТАВА
РАЦИОНАЛЬНОГО ГАРДЕРОБА ДЛЯ ЖЕНЩИН ПОЖИЛОГО ВОЗРАСТА

E.K. NARIBAYEVA, K.K. ABILKALAMOVA
Э.К. НАРИБАЕВА, К.К. АБИЛКАЛАМОВА

(Almaty Technological University, Republic of Kazakhstan)
(Алматинский технологический университет, Республика Казахстан)
E-mail: kamilya.abilkalamova@mail.ru

The article determines the efficient assortment products that form the collection in the "rational clothing" for older age women based on the analysis of existing collections and identification of the coefficient of rationality.

В статье проводится мониторинг рационального ассортиментного состава изделий, которые формируют коллекцию в системе "рациональный гардероб" для женщин пожилого возраста на основе анализа существующих коллекций и выявления коэффициента рациональности.

Keywords: rational clothing, older age women, assortment composition of collection, coefficient of rationality.

Ключевые слова: рациональный гардероб, женщины пожилого возраста, ассортиментный состав коллекции, коэффициент рациональности.

In 1881 the Society for Rational Dress (Rational Dress Society) was founded. The basic principle of the Society was the following: "to help people choose in accordance with their personal taste and notion about the convenience of the style of clothing, which combines health care, comfort and beauty; to resist constant changes of fashion which does not correspond to any of these requirements"[1].

In 1985 Donna Karan created a unique in its kind, and definitely an impressive collection titled 7 Easy Pieces.During the show, 8 models defiled who were dressed in black skintight bodysuit and tights. Each walk of models was accompanied by donning of an additional item of clothing – skirt, dress, trousers and other products, which together represented the effect of interchangeability.

From the point of view of design and ways of selling products as more promising is considered the development of multi assortment clothing collections. Such approach allows large enterprises preserve the specialization streams, reduce the number of developed models; for small enterprises, the development of such collections is even more promising, as there is a wardrobe designed for one user, which is convenient for potential consumers and corresponds to modern trends in merchandising [2].

Today fashion designers have the concept of "rational clothing" – a minimum set of interchangeable things that make up the maximum number of options in combining them together.

However, one may enquire: What wardrobe can be considered as a rational?

The study proved that the competitive position of the organization of retail trade mostly depends on such a factor as the level of rationality of its proposed assortment of products [3].

The level of rationality of assortment is determined by calculating the same coefficient. The coefficient of rationality of an assortment of goods is an indicator of the relative, the higher the value, the more relevant compared to competitors' assortment of products to the

trade organization of consumer preferences and the more favorable position of such an organization in comparison with competitors[4]. Therefore, comparison of competitive position of different goods organizations on the market is possible by comparing the rationality coefficient of assortments of these organizations [3].

Drawing an analogy between the organization of trade with its assortment of goods and the wardrobe with its assortment of products, it is possible to apply the method of identifying the coefficient of rationality assortment of products for identification of rationality assortment composition of a wardrobe.

Not less than fifty collections are analyzed in assessment of quantitative parameters of the collection, and not less than fifteen for qualitative analysis [2]. In the experiment, 64 collections in the system of "rational clothing" were analyzed with the emphasis on older age women represented in catalogs of "WENZ", "Alba Moda", "MONA", "Meyer mode", "Creation I" of autumn – winter 2014/2015 season. Today in Almaty within the intensity of the market with a variety of clothing there are no practical garments presented in the system of "rational clothing" designed for older age women. Nevertheless, while conducting polls and interviews with employees of centers of online clothing shopping, it was revealed that more than 50% of the regular clientele are women over 50. It connotes the lack of clothing that meet consumer preferences of women in this age group.

In assessment of the rationality of products' assortment there should be determined the sum of products' indicators which are the most important to target buyers i.e. properties of assortments and their significance. The following are included into the properties of an assortment of goods: Cb –coefficient of breadth; Cc – coefficient of completeness; Cs – coefficient of stability; Cn – coefficient of novelty [5], [6], [4], [7].

In defining the coefficient of breadth we used the actual number of products in the collections and it determined from equalization:

$$Cb = (Bact : Bbas), \qquad (1)$$

where Cb – coefficient of breadth; $Bbas$ – basebreadth, the sum of products in two compared collections; $Bact$ – actual breadth; an actual amount of products in each separate collection.

Defining the coefficient of completeness was based on the sign of completeness and interchangeability as a basic requirement for rational clothing and it determined from equalization:

$$Cc = (Cbas : Cact), \qquad (2)$$

where Cc – coefficient of completeness; $Cbas$ – base completeness, the common amount of types of sets in two compared collections; $Cact$ – actual completeness, ; an actual amount of sets in each separate collection.

An indicator of novelty is defined as the number of new products in the general list for calculation of the coefficient of novelty; the number of items was used in each of the analyzed collections that are underrepresented on the market of the city, such as jackets, cardigans, dresses, pullovers, tunics, etc. and it determined from equalization:

$$Cn = (N : Bact), \qquad (3)$$

where Cn– coefficient of novelty; N – amount of new products; $Bact$ – actual breadth.

In defining the coefficient of stability, we used the quantity of products which are in steady demand among consumers and widely represented on the market of the city. They are: pants, skirts and a variety of blouses, basically, knitted. Among older consumers we often see those who rarely change their formed throughout life tastes, preferences and defining this indicator is very important and it determined from equalization:

$$Cs = (S : Bact), \qquad (4)$$

where Cs – coefficient of stability; S – amount of the names of products in each collection, which use steady demand for consumers; $Bact$ – actual breadth.

The coefficient of rationality – relative index and it reflects mean value taking into account the real values of Cb –coefficient of breadth; Cc – coefficient of completeness; Cs

– coefficient of stability; Cn – coefficient of novelty multiplied on the corresponding weighting indicators [5], [6], [4], [7]:

$$CR = \frac{CbWb + CcWc + CsWs + CnWn}{4}. \quad (5)$$

In assessing product quality, it is important to reasonably perform the selection of quality indicators. Indicators in assessing the quality of a product are called determinants. The choice of indicators in identification of quality is reduced to finding the weighting factor of separate indicators in assessing the overall quality of products [8].

The expert method (as the most common) was used to identify the weighting indicators of breadth, completeness, novelty and stability. The following activities were consistently completed in expert assessment: selection of the group of experts, preparation of a poll, survey of experts, parsing the expert assessment and analysis of the results.

10 older age women i.e. over the age of 56 participated as a group of experts in identification of the rational assortment composition of a wardrobe for older age women.

Experts needed to give ranking evaluation for indicators of breadth, completeness, novelty and stability from the most important to the least important.

The weighting factor of each indicators determined from equalization [8]:

$$g_j = \frac{nm - S_j}{0,5nm(m-1)}, \quad (6)$$

where m – number of the estimated indicators; n – amount of experts.

The weighting factor of indicators of breadth, completeness, novelty and stability according to the expert evaluation are shown in Table 1.

Table 1

The experts	Rationality indicators (B, C, N, S)				
	B (the number of products in one collection)	C (the number of kinds of sets in one collection)	N (the number of new products)	S (products with stable demand)	$\sum R$
1	2	3	4	5	6
1	3	2	1	4	10
2	4	1	2	3	10
3	4	2	1	3	10
4	3,5	1,5	1,5	3,5	10
5	4	1	2,5	2,5	10
6	4	2	1	3	10
7	4	2	1	3	10
8	3	2	1	4	10
9	3	1	2	4	10
10	4	1,5	1,5	3	10
Statistics expert assessments					
S_j	36,5	16	14,5	33	-
$nm - S_j$	3,5	24	25,5	7	-
g_j	0,06	0,4	0,42	0,12	$\sum 1$

The rationality of assortment composition was determined at several stages. At the first stage 64 collections were divided into 32 pairs and by calculation and paired comparison of the coefficients of rationality within each pair 32 collections went to the second stage. Consistently calculating the coefficients of rationality at every stage, 16 out of 32 collections

went to the 3rd stage, 8 collections – 4th stage, 4 collections – 5th stage, 2 collections – 6th stage which were evaluated the most rational assortment composition in the collection. The coefficients of rationality at the sixth stage for each analyzed collection are given in Table 2.

#	Cb	Wb	Cc	Wc	Cn	Wn	Cs	Ws	The coefficient of rationality assortment
C-32	0,43	0,06	0,27	0,4	0,67	0,42	0,33	0,12	0,454805195
C-59	0,57	0,06	0,91	0,4	0,63	0,42	0,38	0,12	0,705422078

Assortment composition of the "collection 32" and the "collection 59", as a result of all stages have the most rational assortment products which are given in Table 3.

#	Assortment composition of the collection								Total number of products
Collection 32	Suitjacket	Blouse	Tunic	Pullover	Trousers	Skirt			6
Collection 59	Suitjacket	Waistcoat	Blouse	Blouse	Sweater	Pullover	Trousers	Skirt	8

Identification scheme of the most rational assortment composition on the basis of paired comparison is presented in Fig. 1.
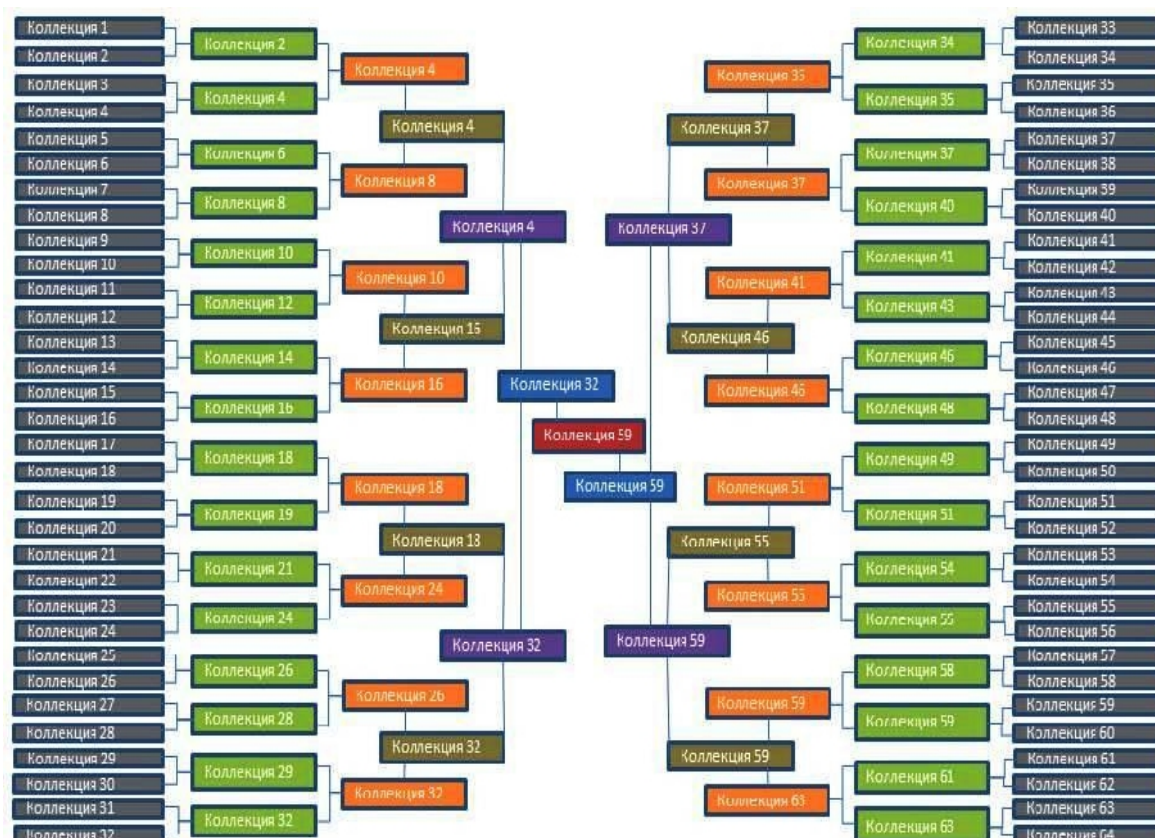

Fig. 1

Assortment composition of the "Collection 59" includes jacket, skirt, trousers, blouse, pullover, waistcoat and other blouse presented in Fig.2.

Fig. 2

CONCLUSION

1. Through the analysis of the existing collections and defining the coefficient of rationality it was identified the rational assortment composition of everyday clothing for a modern working older age woman.

2. However, we shouldn't forget that in assessing the rationality of an assortment composition of a wardrobe the indicator of completeness of the range was defined according to the number of possible sets. In its turn, the combination of products forming a set depends on the number of composite model and features of products. Therefore, further work is needed to define the most rational model of products that form a rational wardrobe. This will enable getting the greatest possibilities of combination and interchangeability of items of clothing for a consumer, and make a designer's job more productive.

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