

Organisational and economic characteristics of the baby food products market in Ukraine and EU countries

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Abstract

This article presents the results of the study of problematic issues of organisational-and-economic character concerning the provision of children with baby food products in Ukraine and European Union countries. It is established that the marketing feature of baby food products in Ukraine is its sales from pharmacies. It has been proved that the cost of baby food products in EU countries and in Ukraine have no price gradation depending on the degree of economic development of the country. The dynamics of development of the Ukrainian market of baby food products, as well as the dynamics of the cost of baby food products in Ukraine, depending on their dispensing place, have been analysed. It is established that the cost of baby food products is somewhat lower in pharmacies.

Keywords

nutrition support, neonatal period, infant nutrition, baby food market

Introduction

Nutrition support is the main factor that determines the level of adaptation of the newborn child to the external environment, the possibility of its physical and psychological development and the condition of its immunological resistance. These findings have been considered by several scientists in recent years (Gertosio et al. 2016; Harding et al. 2017).

The neonatal period and infancy are periods of critical sensitivity to malnutrition since an intense formation and stabilisation of functional features of different systems of the child's organism occur at this time. Nutritional deficiencies in the neonatal period and during the first year of life cannot be compensated in the subsequent periods. There are no doubts that maternal milk is ideal nutrition for children for the first year of life. Breastfeeding pro-

vides normal growth of the newborn, protects it against infections, prevents the emergence of dyspeptic manifestations such as diarrhoea and nausea and promotes the mental development of the child. In November 2017, the World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF) issued new guidance to promote breastfeeding in health facilities. In the joint WHO and UNICEF, the guidelines for "10 steps to successful breastfeeding" were formulated, the main item of which is ensuring and observance of necessary conditions for the implementation of exclusively breastfeeding newborns (Ten steps to successful breastfeeding, revised 2018. <http://www.who.int/nutrition/bfhi/ten-steps/en/>). However, according to WHO and UNICEF statistics (Enabling women to breastfeed through better policies and programmes: Global breastfeeding scorecard 2018. <https://www.who.int/nutrition/publications/infantfeeding/global-bf-scorecard-2018.pdf?ua=1>), less than one half of newborns begin breastfeeding in the first hour after birth; 41% of infants less than 6 months of age are exclusively breastfed and only in 23 countries of the world, more than 60% of infants receive breast milk. Instead, many infants, both in Ukraine and in other countries of the world, are fed artificially or with a mixture of artificial and natural feeding.

The maximum equivalence of artificial infant formula (AIF) ingredients by the quantitative and qualitative composition to analogous components of female milk is the main principle for selecting a baby food product (BFP). Therefore, the problem of an appropriate choice and providing a child with complete nutrition, i.e. with existent high-quality milk mixes, is real.

Based on our previous investigations (Krychkovska et al. 2018), the scientific interest in the manufacturing of BFP is completely understandable, since in the case of artificial feeding (AF), ready for use infant formulae are a substitute for mother's milk and when breastfeeding, it is necessary to introduce complementary foods. Accordingly, the assortment of BFP is extremely wide and its research and analysis for rational using require meticulous attention.

The aim of the research was to study some of the important organisational-and-economic issues regarding the provision of children with BFP in Ukraine and EU countries.

Materials and Methods

The studies' design included the collection of data on the assortment of BFP and its prices in all countries under consideration. Information was obtained in pharmacies, stores and special markets by the direct observation method. The study provided the observation of 10 pharmacies, 3 specialised supermarkets and 3 regular stores in each country. The investigation was conducted in August 2018. The prices for BFP were converted into a single currency – the euro in accordance with the ex-

change rate (Narodowy Bank Polski: <https://www.nbp.pl>; National Bank of Ukraine: <https://bank.gov.ua>). The exchange rate on 1 August 2018 was 32.1 UAH (Ukrainian Hryvna) and 4.21 PLN (Polish Zloty) per €1, respectively.

A descriptive and cross-sectional investigation of more than 100 units of BFP for children under 1 year, those being the most popular BFP well-known European manufacturers (HIPPI, Milupa, Nestle Gerber, Humana) in Ukraine and in 3 selected European countries (Poland, Germany, Austria) was undertaken.

Information about the composition of BFP and features of use were obtained from the secondary information (official material of the manufacturers of the investigated segment of the market) (Welcome to HIPPI: <https://www.hippi.com>; Humana for mommy and me: <https://www.humana-baby.com>; Willkommen bei Milupa: <https://www.milupa.de>; Nestle: Good food for Good Life: <https://www.nestle.com>).

The common methods of descriptive statistics have been used for investigation.

Results

According to statistics (Global breastfeeding scorecard: https://www.unicef.org/nutrition/index_100585.html), in Ukraine 65.7% of children are exclusively breastfed at the age of 0-3 months; 64.6% of children – 4-6 months; 37.9% of children in the period from 7 to 12 months; 22.0% of children – up to 2 years.

We have discovered, in Ukraine, the leaders in manufacturing of BFP are specialised companies: "Khorol dairy canning enterprise of BFP" (Poltava region), "Southern cannery" (Kherson), "Odessa cannery enterprise of BFP"; "Galacton" (Kyiv), "Favor" (Kyiv), "Prydnipro enterprise" (Dnipro), "Lustdorf" (Vinnytsya region), "Wimm-Bill-Dann Ukraine" (Kyiv region) and "Yagotyn creamer" (Kyiv region). The companies of EU countries are the largest importers of BFP to the Ukrainian market, their production totalling 64% of all imports of BFP. These are manufacturers of such well-known brands as "Nutricia" (Netherlands), "Nestle" (Switzerland), "Hipp" (Germany), "Heinz" (Germany), "Gerber" (Poland) etc.

Table 1 provides information about BFP of the leading manufacturers available at the time of the study in supermarkets and pharmacies in Ukraine (Lviv, Kyiv), as well as in specialised stores "Rossmann" in Poland (Krakow, Warsaw) and specialised stores in Germany (Potsdam) and Austria (Vienna).

The manufacturing method of identification (marking) of products that will be exported to different countries, does not allow the complete comparison of one type of BFP by the weight of packaging. However, comparison of BFP prices proves that they are almost identical in the four investigated countries after conversion. The results of the conducted analysis for the possible affordability of people in investigated countries showed that the BFP of

Table 1. Types of BFP, their composition and price in Ukraine and EU countries.

№	Type of BFP	Manufacture	Energy value,		Cost, €			
			kcal/100 gr	Carbohydrates	Ukraine	Austria	Germany	Poland
1.	Combiotic 1	HIPP	66	7.30	9,76		8.85	9.26
2.	Combiotic 2	HIPP	499	54.70	9.82		8.45	
3.	Combiotic PRE	HIPP	66	7.00	11.96		11.95	
4.	Combiotic HA 2	HIPP	70	7.70	7.43			
5.	Combiotic HA1	HIPP	69	6.90				10.92
6.	Apple juice	HIPP	15	3.50		1.09	1.00	
7.	Apple-grape juice	HIPP	51	0.20	0.97			
8.	Bio Combiotic	HIPP	66	7.30		9.99		
9.	Bio-apple juice	HIPP	49	12.00		1.19		
10.	Bio-fruit-carrot juice	HIPP	44	9.80		1.19		
11.	Bio-milk corn-wheat porridge	HIPP	216	32.10		3.95		
12.	Bio-milk oatmeal with apple	HIPP	236	35.50		3.95		
13.	Bio-milk semolina porridge	HIPP	197	29.10		3.95		
14.	Carrot juice	HIPP	28	8.20				0.70
15.	Creamy-spinach pure with potatoes	HIPP	60	7.30		1.09	1.01	
16.	Dairy-free buckwheat porridge	HIPP	43	0.30	2.44	2.30	2.45	2.27
17.	Dairy-free wheat porridge with apple	HIPP	429	64.60			3.75	
18.	Early carrot puree	HIPP	30	5.00	0.57	0.69	0.64	0.61
19.	Following milk Combiotic	HIPP	70	7.80			9.75	
20.	Fruit apple-apricot puree	HIPP	50	0.30	1.20	1.0	1.17	1.18
21.	Infant Formula Combiotic	HIPP	66	6.90			9.75	
22.	Kids Milk Combiotic 1+	HIPP	51	5.00		8.65		
23.	Kids Milk Combiotic 2+	HIPP	48	5.00		8.65		
24.	Mashed apple	HIPP	51	11.20	0.82	0.95	1.00	0.92
25.	Mashed apple with 7 grains	HIPP	67	14.10		1.05		
26.	Mashed apple with non-carbonated water	HIPP	15	3.50		0.99		
27.	Mashed apple-banana with cake	HIPP	74	15.10		1.05		
28.	Mashed apple-cherry with non-carbonated water	HIPP	16	3.80		0.99		
29.	Mashed apple-strawberry-raspberry	HIPP	52	11.40		0.95		
30.	Mashed bio-chicken	HIPP	108	6.00		1.75		
31.	Mashed carrot and potato	HIPP	43	5.50		0.73	0.69	0.71
32.	Mashed carrot-rice with salmon	HIPP	65	6.80		1.35		
33.	Mashed meat from turkey	HIPP	105	5.20	1.28			
34.	Mashed melon with turkey	HIPP	59	5.70				1.16
35.	Mashed peach-apricot	HIPP	86	17.20		0.95	0.95	
36.	Mashed plum	HIPP	69	16.00		0.73	0.69	0.71
37.	Mashed plums and pears	HIPP	59	12.10		0.95		
38.	Mashed potatoes and beef	HIPP	66	7.70		1.79	1.15	
39.	Mashed potatoes with rabbit	HIPP	65	2.80	1.54			
40.	Mashed pumpkin, potatoes, bio-beef	HIPP	64	7.30		1.35		
41.	Mashed veal with vegetables	HIPP	106	6.2	1.28	1.31	1.26	1.28
42.	Mashed vegetable potato-pumpkin	HIPP	48	7.50			0.85	
43.	Mashed vegetable with turkey and rice	HIPP	70	8.2	1.63			
44.	Mashed vegetables and meat	HIPP	70	8.20		1.65		
45.	Milk rice porridge	HIPP	379	85.10	2.57	2.54	2.49	2.45
46.	Milk semolina porridge	HIPP	197	29.00				5.75
47.	Milk semolina porridge with banana	HIPP	75	10.40		1.25		
48.	Milk semolina porridge with carrots	HIPP	379	81.50				2.85
49.	Multyfruit juice with vit. C	HIPP	30	6.80	1.15	1.09		
50.	Organic	HIPP	70	8.10			7.95	
51.	Pear puree with flakes	HIPP	66	14.6	1.78			
52.	Pre HA Combiotic	HIPP	66	6.90		10.99		
53.	Puree with bio-beef	HIPP	106	6.00		1.75		
54.	Risotto with carrots and turkey	HIPP	68	7.50				1.28
55.	Semolina porridge with carrots	HIPP	379	81.50			3.75	
56.	Smiling kids	HIPP	197	29.10			3.75	
57.	Dairy-free porridge flour	Humana	38	7.120	2.99			
58.	Following milk Humana	Humana	489	56.60	9.13		9.45	9.20
59.	Humana 1	Humana	489	56.60	4.93	5.01	4.99	5.04
60.	Humana 2	Humana	489	56.60	10.65	10.54	10.35	10.50
61.	Humana HA	Humana	65	7.20	9.94	10.01	10.04	9.96
62.	Humana Infant Formula	Humana	489	56.60			10.95	
63.	Dairy-free multigrain porridge	Milupa	73	14.18	1.3			
64.	Dairy-free semolina porridge	Milupa	439	66.70	1.3		1.95	
65.	Dairy-free semolina porridge with banana	Milupa	428	63.90			3.75	
66.	Mashed apple-pear	Milupa	46	0.10	0.69			
67.	Mashed apples	Milupa	43	0.10	0.62			

№	Type of BFP	Manufacture	Energy value, kcal/100 gr	Carbohydrates	Ukraine	Cost, €		
						Austria	Germany	Poland
68.	Mashed zucchini	Milupa	51	0.10	0.56			
69.	Milk rice porridge	Milupa	197	33.00	1.65			
70.	Powdered infant milk	Milupa	65	8.50	2.87			
71.	Puree vegetables with cauliflower	Milupa	17.7	0.30	0.75			
72.	Daily-free bio-porridge with 7 grains	Milupa	211	31.60		2.49	1.95	
73.	Daily-free rice porridge	Milupa	382	84.40		2.49	1.95	
74.	Daily-free semolina tiny porridge	Milupa	384	84.80		2.49		
75.	Milk corn-rice porridge with fruits	Milupa	220	33.30		3.25		
76.	Milk porridge with butter cupcakes	Milupa	217	33.90		3.25		
77.	Milk semolina porridge with vanilla	Milupa	222	32.90	3.16	3.25		
78.	Milk semolina traditional porridge	Milupa	216	36.00		3.25	9.45	
79.	Milumil 1+	Milupa	63	8.30		6.75		
80.	Milumil 2	Milupa	68	8.70	4.61	8.99	8.99	
81.	Milumil 2+	Milupa	50	6.50		6.75		
82.	Milumil 3	Milupa	66	8.40		9.95		
83.	Milumil Pre	Milupa	66	7.30		12.99	9.45	
84.	BEBA Optipro	Nestle	67	8.40		10.95		
85.	BEBA Optipro 1	Nestle	67	8.00		13.99		
86.	BEBA Optipro 2	Nestle	449	59.60		10.95		
87.	BEBA Optipro 3	Nestle	67	8.30		12.95		
88.	BEBA PRO HA 1	Nestle	67	7.80		18.99		
89.	BEBA PRO HA PRE	Nestle	67	7.8		18.99		
90.	BEBA OPTIPRO PRE	Nestle	68	7.50		15.49		
91.	Buckwheat porridge	Nestle	382	79.00				1.28
92.	Dairy-free rice porridge	Nestle	383	86.5	1.1			
93.	Milk rice porridge	Nestle	427	71.2	1.42			1.78
94.	Milk semolina porridge	Nestle	426	67.00				2.73
95.	NAN Optipro HA 1	Nestle	513	59.90				11.87
96.	NAN Sensitive	Nestle	513	59.90	7.76			11.02
97.	Nestogen 1	Nestle	500.6	57.1	2.88			
98.	Nestogen 2	Nestle	483.9	51.5	5.5			
99.	Rice porridge	Nestle	383	86.50				0.95
100.	Apple and grape juice	Gerber	54	12.90	0.75			1.07
101.	Apple juice	Gerber	47	0.20	0.75			0.83
102.	Mashed apple	Gerber	46	0.20	0.81			
103.	Mashed banana	Gerber	90	13.5	0.81			
104.	Mashed carrot	Gerber	32	5.00	0.75			0.71
105.	Mashed carrot and potato	Gerber	43	5.50				0.69
106.	Mashed chicken	Gerber	94	4.70	1.01			
107.	Mashed meat from turkey	Gerber	72	4.00	1.26			1.07
108.	Puree vegetables with broccoli	Gerber	18	1.40	0.81			0.35
109.	Puree vegetables with cauliflower	Gerber	13	0.20	0.6			
110.	Rabbit puree with broccoli	Gerber	52	5.6	1.39			
111.	Vegetable puree with chicken	Gerber	76	8.60	1.01			0.76

the well-known European producers is least accessible to Ukrainian people. In 2018, the average monthly salary in Ukraine totalled 8867 UAH, which is equivalent to €283.6, for example, in Poland the average salary is 4353.55 Zł, which is equivalent to €1034.1.

In Ukraine, BFP are sold in pharmacies and stores, at the same time in EU countries – only in specialised stores. Therefore, we have carried out a comparative analysis of prices for BFPs that are sold in pharmacies and stores in Ukraine (Lviv). The results of the study are presented in average prices (Table 2).

It was established that the costs of BFPs in the stores (supermarkets, shops) were 8.89% higher than in pharmacies. The costs of the BFPs in specialised kid's stores "Antoshka" (Ukraine) were 3.31% lower than in other stores and markets. The total costs of the BFPs in the specialised kid's stores depended on the price of the "Humana" products company, which is higher than in the simple markets.

Amongst the channels for sales of BFPs in Ukraine, the hypermarkets and supermarkets consisted of the largest part – 60.9% in monetary units and 65.3% in physical terms. There are significantly smaller ratios having specialised kid's stores (16.9% in monetary units and 6.4% in physical terms), drugstores (11.2% and 7.9%, respectively) and mini-markets (9% and 12.9%, respectively). The most significant increase in the level of BFPs sales is observed in the mini-market (27.7% in physical units and 28.3% in monetary terms). The high sales growth was also found in hypermarkets/supermarkets (18.9% and 21.4% in physical and monetary terms, respectively).

To guarantee the BFP's quality, the current systems of safety and quality monitoring was constantly introduced. The results of our investigation showed that Khorol dairy canning enterprise of BFP (Order of the Cabinet of Ministers of Ukraine No 870. On Approval the State

Table 2. The results of comparative analysis of prices on BFP in Ukraine by the dispensing place.

№	Type of BFP	Producer	The cost on BFP						
			Pharmacies		Stores		Specialized kid's store		Average cost
			€	±Δ	€	±Δ	€	±Δ	
1.	Combiotic 1	HIPP	9.76	0.42	10.53	-0.35	10.25	-0.07	10.18
2.	Combiotic 2 HA	HIPP	7.43	0.05	7.91	-0.43	7.10	0.38	7.48
3.	Dairy-free buckwheat porridge	HIPP	2.44	0.07	2.69	-0.18	2.40	0.11	2.51
4.	Milk rice porridge	HIPP	2.57	-0.14	2.37	0.06	2.34	0.09	2.43
5.	Mashed meat from turkey	HIPP	1.28	0.03	1.36	-0.05	1.28	0.03	1.31
6.	Mashed apple	HIPP	0.82	0.07	1.04	-0.15	0.81	0.08	0.89
7.	Mashed potatoes with rabbit	HIPP	1.54	0.14	1.84	-0.16	1.65	0.03	1.68
8.	Apple-grape juice	HIPP	0.97	0.03	1.04	-0.04	0.99	0.01	1.00
9.	Humana 1	Humana	9.13	1.10	10.64	-0.41	10.93	-0.70	10.23
10.	Humana HA	Humana	9.94	0.45	10.16	0.23	11.06	-0.67	10.39
11.	Dairy-free porridge flour	Humana	2.99	0.22	3.18	0.03	3.46	-0.25	3.21
12.	Milupa 2	Milupa	4.61	0.15	4.98	-0.22	4.70	0.06	4.76
13.	Milk rice porridge	Milupa	1.46	0.08	1.63	-0.09	1.53	0.01	1.54
14.	Mashed zucchini	Milupa	0.56	0.07	0.78	-0.15	0.56	0.07	0.63
15.	Mashed apples	Milupa	0.62	0.05	0.81	-0.14	0.59	0.08	0.67
16.	Mashed apple-pear	Milupa	0.69	-0.01	0.81	-0.13	0.53	0.15	0.68
17.	Puree vegetables with cauliflower	Milupa	0.75	0.01	0.78	-0.02	0.75	0.01	0.76
18.	Puree vegetables with cauliflower	Gerber	0.60	0.01	0.63	-0.02	0.59	0.02	0.61
19.	Puree vegetables with broccoli	Gerber	0.81	0.01	0.91	-0.09	0.75	0.07	0.82
20.	Mashed apple	Gerber	0.81	0.01	0.91	-0.09	0.75	0.07	0.82
21.	Mashed chicken meat	Gerber	1.01	0.00	1.05	-0.04	0.97	0.04	1.01
22.	Apple juice	Gerber	0.75	0.11	0.97	-0.11	0.87	-0.01	0.86
The total cost of BFP			61.54	2.93	67.02	-2.55	64.86	-0.39	64.47

* – The prices in the specialized kid's stores are presented separately since they were significantly lower than in other markets and influenced on the average prices.

Target Social Program for the Development of BFP for 2012–2016. Official Bulletin of Ukraine from 22.08.2011, No. 62, p. 55, article 2473, AC 58002/2011) is one of the largest BFPs' manufacturers in Ukraine for babies from birth to 12 months. The products of this company, powdered milk formula "Malyutka 1" and "Malyutka-premium 1" for babies from birth to 6 months, the formula "Malysh", "Malyshka" and other dairy products comply with the international standards ISO 9001:2009 and HACCP (Hazard Analysis and Critical Control Point). The energy value of formulae "Malyutka1" and "Malyutka-premium 1" is 496.5 kcal, the formula "Malutka-premium 1" additionally containing probiotics and nucleotides. The average price of formulae "Malyutka1" and "Malutka-premium 1" in drugstores in Ukraine is 62 UAH (€1.88) and 80 UAH (€2.49), respectively.

The results of the analysis of statistic information (1, 4) concerning the BFPs' market in Ukraine shows a tendency for its progression. If, in 2006, the total volume of BFPs' production was 8.49 thousand tonnes, of which the babies' formulae, based on milk, make up 8.2 thousand tonnes; in 2008 these indices were already as follows: the total volume – 19.1 thousand tonnes, the amount of BFP based on milk – 11 thousand tonnes.

The dynamics of BFPs' manufacturing in Ukraine in 2011–2017 is shown on the Figure 1.

The positive dynamics of the BFPs' domestic market development certify that the market formed by the products of its own manufacturing has significantly improved. There is a gradual import substitution. If, in 2008, the part of self-manufactured BFPs was only 15%, then in 2011 the fraction of its own products was 60%; in 2014 – 70%; in 2017 – 79%, in 2018 – 82%.

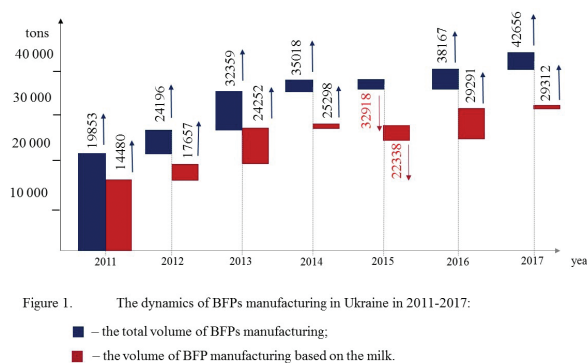


Figure 1. The dynamics of BFPs' manufacturing in Ukraine in 2011–2017:
 ■ – the total volume of BFPs manufacturing;
 ■ – the volume of BFP manufacturing based on the milk.

Figure 1. The dynamics of BFPs' manufacturing in Ukraine in 2011–2017.

However, some BFPs' types have not been produced or produced only in small quantities in Ukraine, for example, mashed meat and fish, biscuits, macaroni, sauces, formulae for prevention and treatment of some pathological conditions.

Discussion

It should be noted that, depending on whether the child receives mother's milk and its amount, there are three types of feeding that have been distinguished: natural, artificial and mixed. Natural feeding (breastfeeding) – is nutrition for infants with breast milk followed by the introduction of complementary foods from 4.5-5 months. As Gertosio et al. (2016) consider, this type of feeding is the most physiological because the quantitative and qualitative composition breast milk optimally covers all needs of the child in

proteins, fats, carbohydrates, vitamins, mineral salts etc. Owens et al. (2012) founded, the AF is infant's feeding using breast milk substitutes i.e. special mixtures mainly from cow's milk. The results of our previous investigation (Krychkovska et al. 2018) showed that goat's milk also can be used as the main component of BFP for AF. For example, in Ukraine currently, available BFP is based on goat's milk – Kabrita GOLD (Baby food market in Ukraine: situation and trends: <https://www.nielsen.com/ua/uk/insights/news/2018/baby-food-market-in-ukraine.html>).

Within AF, the amount of breast milk is less than 20% of the total daily amount of food.

When mixed feeding (MF), the volume of infants' supplementation with female milk substitutes does not exceed 50% of the total volume of nutrition supply.

Due to various subjective and objective reasons, some children receive MF or AF and the task of specialists (paediatricians, nurses, pharmacists, clinical pharmacists) is to maximise balancing the nutrition supply. There are absolute and relative contra-indications to breastfeeding infants. We found that the main reasons for absolute contra-indications to breastfeeding include hereditary metabolic diseases, enzymopathy (galactosaemia, phenylketonuria, "maple syrup" syndrome), breast milk intolerance, deep prematurity, severe birth trauma, congenital teeth etc. Absolute maternal contra-indications include septic conditions, human immunodeficiency virus (HIV) infection, acquired immune deficiency syndrome (AIDS), tuberculosis active form, typhus and malaria, syphilis, malignant neoplasms, leukaemia, kidney disease accompanied by renal failure and azotaemia, postpartum psychosis, neuroses severe forms, mother's use of medicines with a toxic effect for the infant in the lactation period. Heart disease with circulatory failure, expressed forms of hyperthyroidism; chronic malnutrition; purulent mastitis are the relative maternal contra-indications to breastfeeding. The relative contra-indications to breastfeeding in the infant include lactose intolerance.

Owens et al. (2012) testify that recent medical technologies allow neonatologists to save the lives of most premature infants with very low birth weight. Adequate nutrition (the use of special adapted mixtures, parenteral nutrition etc.) is the most important part of measures for care of infants. That is why there is no doubt that breast milk is very useful for the child growing in the first years of life. However, the lack of breast milk, its absence or the detection of medical contra-indications for breastfeeding, make MF or AF necessary for the child.

Tkachenko (2016) noted that, in Ukraine until September 2015, BFPs were classified by age, illnesses (concomitant and acquired), product composition and type of packaging (glass, paper, tin). Since September 2015, the classification BFP in Ukraine conforms to the requirements of the global market and provides 3 main segments: 1) milk products or breast milk substitutes used for infants feeding in the first 6 months; 2) canned baby foods (purees, juices, vegetables and canned meat); 3) dry breakfasts (like flakes, crackers).

In 2017, the Order of the Ministry of Healthcare of Ukraine №1073 on 3 September 2017 "On Approval of the norms of physiological needs of the population of Ukraine in the basic nutrients and energy" was adopted (Order of the Ministry of Health of Ukraine No 1073. On Approval of the Norms of Physiological Needs of the Population of Ukraine in the Basic Nutrients and Energy. Official Bulletin of Ukraine from 07.11.2017, No. 87, p. 72, article 2658, AC 87770/2017). For the first time in the last 18 years, the caloric intake for different population groups has been revised and the WHO recommendations and standards and the European Food Safety Authority are taken into account (Regulation (EU) no 609/2013 of the European parliament and of the council of 12 June 2013 on food intended for infants and young children, food for special medical purposes, and total diet replacement for weight control: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32013R0609>; Commission Directive 2006/141/EC of 22 December 2006 on infant formulae and follow-on formulae: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32006L0141>; Commission Directive 2006/125/EC of 5 December 2006 on processed cereal-based foods and baby foods for infants and young children: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32006L0125>).

In addition, the approval "State Target Social Program for the Development of BFP for 2012-2016" by the Cabinet of Ministers of Ukraine has led to an increase in the rate of production of BFP (Order of the Cabinet of Ministers of Ukraine No 870. On Approval of the State Target Social Program for the Development of BFP for 2012-2016. Official Bulletin of Ukraine from 22.08.2011, No. 62, p. 55, article 2473, AC 58002/2011).

Feeding is one of the important factors that characterise the degree of infant's adaptation to the environment. The nutritional support in paediatric practice also determines the possibility of growth of a child's organism, state of immunologic resistance, psychological and physical development. The first years of childhood are the period of critical sensitivity to the nutrition disorders since there is an intensive formation of different systems of the organism observed at this time. Therefore, the deficit of feeding in the first years of life cannot be compensated in the next period.

Due to the rapid development of the baby food industry to protect the proper feeding of infants and to prevent excessive advertising and aggressive forms of product sales, the International Code of Marketing of Breast-milk Substitutes was approved in 1981 and updated in 2017 (The International Code of Marketing of Breastmilk Substitutes: <https://apps.who.int/iris/bitstream/handle/10665/254911/WHO-NMH-NHD-17.1-eng.pdf?ua=1>). The aim of this Code is to "contribute to the provision of safe and adequate nutrition for infants, by the protection and promotion of breastfeeding and by ensuring the proper use of breast-milk substitutes, when these are necessary, on the basis of adequate information and

through appropriate marketing and distribution". Thus, from the conceptual position, the main principles of the Code provide for the pharmaceutical care in supply during BFPs' realisation, which is based on the monitoring of the rational use of BFPs with the direct participation of the pharmacist in the pharmacy.

Conclusions

BFPs are a specific and unique product range of the pharmaceutical market of Ukraine, unlike the markets of the EU countries under consideration.

BFPs are sold in specialised stores, supermarkets and mini-markets in the EU countries, while, at the same time,

the future of BFP dispensing in Ukraine is through sale in pharmacies.

The dynamics of BFP manufacturing in Ukraine is positive, but some types of BFPs, which are the popular in Ukraine, are not produced by local industry. The products of well-known European firms (HIPPI, Milupa, Gerber, Nestle) are the most popular in Ukraine.

The costs of BFPs in the EU countries under consideration and in Ukraine have not been priced graded and are on the same level.

Purchase of BFP in the pharmacy is the most economically advantageous for the consumer. In addition, this type of BFP dispensing allows professional pharmaceutical care to be conducted for a certain category of patients, these being children.

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