



UDC 343.98

Corrective coefficients for bargaining for forensic commodity expertise of leather and haberdashery products

Mykola Bednarchuk*

PhD in Technical Sciences, Professor
Lviv Research Expert Forensic Center
of the Ministry of Internal Affairs of Ukraine
79040, 24 Konyushynna Str., Lviv, Ukraine
<https://orcid.org/0000-0002-4327-8390>

Yaroslav Zaiats

Master in the Specialty
"Entrepreneurship, Trade and Stock Exchange Activity"
81000, 97 Lvivska Str., Yavoriv, Ukraine
<https://orcid.org/00-0003-3763-3701>

Abstract. The relevance of the work is due to the need to improve the level of ensuring the requirements for completeness, validity and objectivity of the conclusion of a forensic commodity expert by introducing corrective coefficients for bargaining. The purpose of the study is to establish the numerical values of corrective coefficients for bargaining, which must be used by forensic commodity experts when establishing the market value of leather wallets. General scientific analytical methods (grouping, tabular, theoretical generalisation, analysis and synthesis of information, abstraction, formalisation); generating random numbers; questionnaire; audio recording of the bargaining process were used in the work. It has been established that the offer of leather wallets on OLX is 1189 units at a price from 30 UAH to 7799 UAH. A sample was formed – 80 offers of leather wallets at a price from 145 UAH to 6800 UAH, of which 76.3% were not in use. It was found that 17.5% of sellers of leather wallets provide the possibility of bargaining to a potential buyer regardless of the commodity condition and the initial price of wallets offered for sale, and only 7.5% of sellers did not reduce the price announced by them due to the insignificant cost (from 150 UAH to 350 UAH) and the commodity condition "new". It turned out that after the bargaining procedure, the discount to potential buyers is ready to provide 92.2% of respondents or 88.8% of the total number of sellers; the absolute size of this discount – from 5 UAH to 350 UAH and most often is up to 50 UAH; discount percentage – from 3.0% to 29.5% and most often (48.8%) is in the range from 7.0% to 15.0%; arithmetic mean – 84.62 UAH. It is proved that it is advisable to apply a correction coefficient for bargaining in the amount of 11.2% in determining the market value of leather wallets. The practical value of the work is to determine the numerical value of the corrective coefficient for bargaining for the needs of forensic experts-commodity experts and the positive effect of the adjustment on bargaining on the degree of objectivity of the conclusions of forensic experts

Keywords: leather wallets; the process of buying and selling goods; commodity research; conclusion of the forensic expert; adjustment

Introduction

At the request of the Law of Ukraine "On Forensic Examination", the forensic expert is obliged to "conduct a full study and give a reasonable and objective written

conclusion" (Law of Ukraine No. 4038-XII, 1994). Therefore, scientific studies, the results of which improve these characteristics of the forensic expert's opinion,

Suggested Citation:

Bednarchuk, M., & Zaiats, Ya. (2024). Corrective coefficients for bargaining for forensic commodity expertise of leather and haberdashery products. *Commodity Bulletin*, 17(1), 125-133. doi: 10.62763/ef/1.2024.125.



Copyright © The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution License 4.0 (<https://creativecommons.org/licenses/by/4.0/>)

*Corresponding author

are relevant and significant in the conditions of European integration of Ukraine. Analysis of the results and experience of forensic experts-commodity experts shows that the level of objectivity of their conclusions is influenced not only by the qualification, administrative, organisational and material support of activities, but also by the correspondence of the scientific and methodological base to the real state of the goods market. Most of the problems that these specialists solve are focused on the objective determination of the market value of property.

A.M. Tymchyshyn (2023) has studied the peculiarities and potential possibilities of applying special knowledge in the pre-trial investigation process. P.M. Baranov *et al.* (2020) substantiated the tasks of the forensic expert concerning the determination of the market value of the research object through the prism of the use of price lists and the author's algorithm. A.V. Yukhymenko & V.O. Volokov (2019) summarised the practice of forensic commodity expertise and determined the definition of the market value of property as a specific activity. O.G. Ruvin & V.V. Matveiv (2020) noted that determining the market value of movable property is an integral part of the forensic commodity examination methodology. V.V. Boiko & D.G. Pavlichenko (2019) summarised the possibilities of applying adjustment coefficients in determining the market value of research objects and stated that the current methods provide only adjustment coefficients for commodity condition and/or completeness.

In higher education institutions of Ukraine, the peculiarities of examination of goods that are tangent to forensic commodity expertise were actively studied by V.V. Indutny *et al.* (2019), M.O. Kraliuk *et al.* (2021), N.V. Lutsiv (2021). The peculiarities of behavior, intentions, opportunities and other characteristics of potential sellers and buyers related to the bargaining process were also studied by specialists in evaluation activities in areas other than forensic expertise (Dombrovska & Kylymnyk, 2017). But in the works of these and other authors there are no studies aimed at studying the process of bargaining for used goods in general, and establishing corrective coefficients for bargaining by forensic commodity experts, in their professional activities in particular.

In the process of buying and selling in any form of trading, there is a bargaining – “an action that corresponds in value to the concept of “bargaining” – agreeing on the price of buying and selling, concluding a trade agreement, seeking mutual concessions” (Busel, 2005). Since in the world practice of valuation activity, adjustment for bargaining is carried out by applying corrective coefficients for bargaining (bargaining coefficients, bargaining discounts), the theoretical scientific interest and practical value is to establish the numerical values of these coefficients for the needs of forensic commodity expertise, because:

- bargaining objectively exists and is an integral attribute in the sale or purchase of goods, regardless of the country of the world or form of trade;
- current methods of research, which are used by Ukrainian forensic commodity experts, so far do not provide for the use of corrective coefficients for bargaining;
- starting the application of corrective coefficients for bargaining does not contradict the requirements of current legal and regulatory documents, since it allows to reflect the size of the amendment to bring the value of similar objects (objects of comparison), which is originally indicated in the announcement, to true market value. And also has at least two positive consequences for modern practice and theory of forensic commodity expertise: increases the degree of objectivity of the conclusion of the forensic expert and reflects the actual (real) state of the commodity market.

The main purpose of the system study, one of the results of which is outlined in this article on the example of leather and haberdashery products, is to find digital values of corrective coefficients for bargaining based on a marketing study of the arrays of goods that are offered for sale in e-commerce. They are most often objects of comparison in determining the market value of goods by forensic commodity experts.

Achievement of this goal is carried out by solving a set of interrelated tasks:

- researching the offer of a separate type of leather and haberdashery goods – leather wallets on the electronic trading platform (online ads) OnLine eXchange (OLX), which is most often used by forensic commodity experts to find comparison objects in determining the market value of goods;
- the formation of a sample and the study of the content of the texts of ads on the sale of leather wallets that fell into the sample, and with the sellers of which a bargaining process will be carried out;
- calculation of the average arithmetic numerical value of the adjustment factor for bargaining, which is recommended for use by forensic commodity experts when establishing the market value of leather wallets.

Materials and methods

Scientific work consists of a number of logically related stages: the search and study of the supply of leather wallets on the OLX electronic trading platform; the formation of a sample and the study of the texts of advertisements for the sale of leather wallets that fell into the sample; conducting and fixing the bargaining process; setting absolute and relative numerical values of the bargaining result; calculation of arithmetic mean numerical value of correction factor for bargaining. Basic theoretical principles and practical recommendations for solving the problem of determining the market value of property, set out in the current regulatory (Order of the Ministry of Internal Affairs of Ukraine No. 591, 2017), regulatory and legal documents

(Resolution of the Cabinet of Ministers of Ukraine No. 1440, 2003) and in the works of individual authors. O.O. Syrota (2021) investigated mining equipment and factors that shape ASIC's market value.

General scientific analytical methods of obtaining objective data are applied in the study: tabular, grouping, analysis and synthesis of information, abstraction, formalisation, theoretical generalisation. A random selection strategy (randomisation) was used to obtain digital values of corrective bargaining factors for use by forensic commodity experts in establishing the market value of leather wallets. As well as a procedure in which the maximum possible number of research objects (all proposals for the sale of leather wallets on all pages on the OLX platform) is assigned an individual number and then the required number (80) of actually investigated products and, accordingly, sellers who took part in the questionnaire are selected. In this way, each offer to sell leather wallets on the OLX platform was given an equal chance to participate in the study.

It was advisable and possible to interview all the authors of ads, that is, sellers of goods with a small offer of researched goods on the OLX platform. The feasibility and possibility of such an action are determined, respectively, by the completeness of the coverage of the array of studied goods and the costs of time required for research. But if the supply of goods that need to be researched on the OLX platform is numerical, for example, is more than a thousand titles, then it is not rational to interview all the authors of ads because of the large costs of time. Therefore, when using numerical arrays to determine the digital values of correction coefficients for bargaining, the approach used in mathematics and marketing research is used. It makes it possible to significantly reduce the duration of the study and has no negative impact on the objectivity of the study result.

To determine the number of proposals of leather wallets (sample set, sample), which need to be investigated when determining the digital values of correction coefficients for bargaining, methods common in commodity research of non-food products of the light industry are used. These methods are included in the corresponding standards (DSTU 26167:2009, 2010) of the sample quantity tables when goods are accepted in trade depending on the size of their batch. This number corresponds to the number of leather wallet sellers to be interviewed for a discount when buying a specific leather wallet offer on an online ad platform.

Therefore, it is necessary to form a sample of 80 units, that is, to investigate 80 proposals (to conduct a questionnaire survey of 80 sellers) of this product to set the numerical values of correction coefficients for determining the market value of leather wallets when they are offered on the OLX online ad platform in the amount of 1189. The selection of units of products into the sample (that is, specific sellers of leather wallets who placed their sales ads on the OLX

e-commerce platform) was carried out in two ways: according to the procedure specified in the standard (DSTU 26167:2009, 2010), when the first proposal (the first seller surveyed) is chosen arbitrarily, and the rest – with a certain step (interval), which is established by dividing the population number by the sample number ($1189:80 \approx 15$); using a random number table or random number generator (Random number generator, 2024) – 578, 865, 324, 943, 299, 285, etc. A sample of 80 offers of leather wallets was formed by the specified algorithm using a random number generator.

To record the bargaining process, a questionnaire method was used – a personal survey of sellers of leather wallets on the OLX platform by author's questionnaire (Zaiats *et al.*, 2023), as well as an audio recording of the digital media bargaining process (Zayats, 2022). An anonymous, absentee survey was conducted between January 18 and January 20, 2024, using the pre-compiled questionnaire telephone interview method; communication with each seller is carried out by phone numbers, which are indicated on the investigated OLX page and are freely available. The survey followed ethical guidelines when working with people who meet the requirements of the ICC/ESOMAR International Code of Procedure for Marketing and Social Research (Ukrainian academy of marketing, 2024), as well as the requirements of the Commission on Academic Integrity and Ethics (Regulations on the Commission on Ethics..., 2023) and the Ethical Code of the Lviv University of Trade and Economics (Code of Ethics..., 2023), which indicate that ethical approval is not mandatory for this type of study.

Results and discussions

The establishment of numerical values of corrective factors for the needs of forensic commodity expertise was carried out on the example of leather wallets – a classic type of goods included in the commodity group of household non-food goods, which in the science of goods in Ukraine (Tikhonova, 2003) is called "Leather and haberdashery goods".

The choice of this type of product is due to a practical need, since the analysis of the nomenclature of objects of forensic commodity examination confirms that it is the wallets of citizens that are one of the most common objects of theft (on the street, in transport, in public places, etc.) and, as a result, the current object of research in forensic commodity examination.

To determine the digital values of corrective coefficients for bargaining, an array of offers of leather wallets was used on one of the most common e-commerce platforms (online ads) OLX, the choice of which was due to three main reasons:

- presence of a numerical audience of sellers, which is calculated in millions (OLX Ukraine, 2021);
- full compliance with all marketing research requirements in terms of latitude and depth of market coverage (Senyshyn & Kryveshko, 2020);

- most often the use by forensic commodity experts of this platform to find comparison objects in determining the market value of goods (Zayats, 2020).

The offer of goods in accordance with the request "Leather wallet buy on OLX" has been investigated and the search limits "All Ukraine" have been selected to form a sample in order to establish numerical values of correction coefficients. A general analysis of the supply of leather wallets on the OLX bulletin board (Leather wallet on OLX) as of 18.01.2024 suggested the following:

- product offer was 25 pages of bulletin board;
- the total number of offers of goods amounted to 1250 units, among which there were 1189 offers of leather wallets;
- 61 offers consisted of other types of leather haberdashery goods – document covers, key cases, sets of

leather haberdashery products (handbags with wallets, waist belts with wallets), etc.;

- leather wallets offered for sale had a price declared by sellers from 30 UAH (wallet used) to 7799 UAH (wallet new trademark "Loewe");

- the offer is significantly dominated by goods that were not in use (new);

- all ads placed (displayed) in 2023-2024.

According to the presented algorithm using a random number generator (Random number generator, 2024), a sample was formed – 80 proposals of leather wallets on the OLX electronic trading platform (Table 1). Numerical values of corrective coefficients for bargaining for the needs of forensic commodity expertise in determining the market value of leather wallets were established based on the results of the questionnaire of these sellers.

Table 1. Data on leather wallets and bargaining results

No.	PS	OAB	CG	RTF	No.	PS	OAB	CG	RTF
1	575		n	50 (8.9)	41	1999		n	99 (10.0)
2	600		n	50 (8.3)	42	1300		n	100 (7.7)
3	450	+	n	100 (22.3)	43	349		n	49 (14.1)
4	345		n	45 (13.1)	44	280		n	30 (10.8)
5	1450		n	150 (10.4)	45	850		n	50 (5.9)
6	2000		b/u	200 (10.0)	46	600		n	50 (8.3)
7	700	+	b/u	150 (21.5)	47	1450		n	150 (10.4)
8	745		n	45 (6.0)	48	565		n	65 (11.5)
9	200		n	0	49	400		b/u	50 (12.5)
10	6800		b/u	250 (3.7)	50	520	+	n	70 (17.5)
11	1800		n	150 (8.4)	51	500		n	50 (10.0)
12	900		n	50 (5.5)	52	927		n	27 (3.0)
13	600		b/u	100 (16.7)	53	1850		n	350 (18.9)
14	225	+	b/u	50 (22.3)	54	350		n	0
15	312	+	b/u	92 (29.5)	55	1000		n	100 (10.0)
16	200		n	0	56	1800		b/u	300 (16.7)
17	400		b/u	50 (12.5)	57	150		b/u	30 (20.0)
18	1450	+	n	350 (24.2)	58	790		n	50 (6.4)
19	200		b/u	25 (12.5)	59	550		n	in
20	700	+	n	200 (28.6)	60	220		b/u	20 (9.1)
21	180		n	0	61	550		n	50 (9.1)
22	550		n	in	62	525		n	25 (4.8)
23	650		n	50 (7.7)	63	500		b/u	50 (10.0)
24	160		n	0	64	3500		n	250 (7.2)
25	590	+	n	140 (23.8)	65	400		n	50 (12.5)
26	795		n	95 (19.5)	66	150		b/u	20 (13.4)
27	145		n	5 (3.4)	67	1850		n	200 (10.9)
28	2700		n	200 (7.4)	68	650		n	50 (7.7)
29	795		n	45 (5.7)	69	790		n	50 (6.4)
30	675		n	75 (11.1)	70	220		b/u	20 (9.1)
31	300	+	b/u	50 (16.7)	71	950		n	50 (5.3)
32	200	+	b/u	50 (25.0)	72	430		n	30 (7.0)
33	150		n	0	73	499		n	49 (9.9)
34	930		n	80 (8.6)	74	400		n	20 (5.0)
35	1250		n	150 (12.0)	75	2300		n	150 (6.6)
36	500	+	b/u	100 (20.0)	76	575		n	25 (4.3)

Table 1. Continued

No.	PS	OAB	CG	RTF	No.	PS	OAB	CG	RTF
37	650		n	50 (7.7)	77	350		n	50 (14.3)
38	550		b/u	50 (9.1)	78	1350		n	150 (11.2)
39	700		n	in	79	500	+	n	100 (20.0)
40	400	+	n	100 (25.0)	80	540	+	n	90 (16.7)
Total							14	61	84.62 (11.2) ¹

Note: the following conventions are adopted in Table 1:

No. – conditional sequence number of the sale announcement (sample of the product offered for sale) on the platform of online ads OLX;

PS – price on the website of ads for the sale of leather wallets, UAH;

OAB – there is an offer in the advertisement for sale, about bargaining or the conditions that the price is “Contractual”;

CG – condition of the goods in relation to its use (n – not in use, new; b/u – the product was in use, operation);

RTF – actual result of bargaining (price reduction) after communication with the owner of the goods, UAH (%);

in – could not establish a telephone connection with the owner of the goods;

1 – mean effective value of RTF

Source: developed by the authors based on a study of the offer of leather wallets on the OLX online ad platform (2024)

Data from Table 1 shows that 80 offers of leather wallets from 145 UAH (No. 27) to 6800 UAH (No. 10) were investigated to establish numerical values of corrective coefficients for bargaining. 76.3% (or 61 offers) were non-used wallets and 23.7% (or 19 offers) were used wallets. This makes it possible to state that:

- the price structure of the sample is representative and sufficiently fully reflects the price structure of all 25 pages of ads for the sale of leather wallets on the OLX platform, since the average price between the most expensive and cheapest offers is, respectively, 3472.5 UAH (in the sample) and 3914.5 UAH (on the site), which should be considered positive to ensure the objectivity of establishing numerical values of correction factors;

- almost triple predominance of proposals for the sale of new goods on the Internet platform OLX, which most often offers used goods, is due to at least three factors: the specifics of the wallet as a type of leather-haberdashery product, its functional and intended purpose and the materials that are most often used for the manufacture of leather wallets (Tikhonova, 2003);

- availability of bargaining when selling relatively inexpensive leather wallets (the share of the offer of wallets declared value up to 1000 UAH is 76.3%) as a result of which the profit expected by the seller from the sale of his goods due to a decrease in its price is an additional factor in favour of the feasibility and objective need to introduce a correction coefficient for bargaining into the practice of forensic commodity experts in determining the market value of leather and haberdashery products.

Numerical values of bargaining results and corresponding correction factors were determined in two stages. At the first stage, which did not provide for personal communication with sellers of leather wallets, an analysis of the content of sales ads in the received sample was carried out – all 80 offers of the investigated goods:

a) with regard to the availability of data that the price declared by the owner of the goods can be considered by the potential buyer as “contractual” (on the announcement page OLX is indicated externally, under the announced price; information can be obtained without opening the ad text), as well as whether the seller’s offer of bargaining is in the ad text (on the OLX ad page it is indicated only in the ad text);

b) regarding the presence in all components of the announcement (heading, title, text, notes) of information on the commodity condition of leather wallets (new or in use).

The obtained results suggest that almost every fifth owner of the product (14 sellers, or 17.5%) even when putting it up for sale on the market, clearly showed an unequivocal desire to negotiate with a potential buyer about a lower price than specified in OLX, that is, it provided an opportunity for a potential buyer to bargain. At the same time, there was a lack of determining or significant dependence between the commodity status of the wallets offered for sale (new or used) and the offer of their sellers for bargaining, since bargaining provided for 8 sellers (or 10% of sellers) of new wallets (No. 3, 18, 20, 25, 40, 50, 79, 80) and 6 sellers (or 7.5% of sellers) of wallets that were in use.

The further stage of work was to conduct a direct conversation by phone (actual bargaining process) on the questionnaire developed by the authors (Zaiats *et al.*, 2023) with all owners of leather wallets for sale (except for those with which it was not possible to establish telephone communication – sellers of goods No. 22, 39, 59) about the possibility of reducing the price announced on the site (OLX page), when buying of the relevant product. The obtained results confirmed that all owners, without exception, who indicated in the text of their announcement on the sale of leather wallets in advance that the value of the goods published by them is not final, but is considered as “Contractual”, actually lay in the process of selling their goods the possibility

of bargaining in general and provide an opportunity for each potential buyer even before the start of the sale and purchase process.

In this aspect, the data of Table 1 indicate that the possibility of bargaining by sellers almost equally applies to expensive (No. 18) and cheap leather wallets (No. 14, 15, etc.), as well as new products (No. 3, 18, 20, 25, 40, 50, 79, 80) and those that were in use (No. 7, 14, 15, 31, 32, 36). Consequently, the obtained data prove that the offer of sellers of leather and haberdashery goods about bargaining does not depend on the initial price of goods announced by them and their commodity status in the conditions of the modern market.

It also found that only 6 (No. 9, 16, 21, 24, 33, 54) out of 80 sellers of leather wallets (or 7.5%), even if they bought the goods for sale, did not reduce the value announced on OLX. Commodity analysis of these proposals (organoleptic assessment of the offers of goods on photographic images on the site and the description in the text of the ad) suggests that the main reason for the refusal of these sellers to reduce the declared price is the low cost of goods (from 150 UAH (No. 33) – up to 350 UAH (No. 54) and commodity condition (all these wallets were not used); but the seller of a similar product (offer No. 27, the declared value of 145 UAH, the commodity condition is new) agreed to provide a symbolic discount of 5 UAH on the condition of buying his goods. In addition, telephone communication and, accordingly, interviewing three (or 3.7%) sellers of leather wallets could not be established during the questionnaire survey.

Consequently, the results of the survey of sellers of leather wallets on the OLX platform suggest that 92.2% of respondents or 88.8% of the total number of specified sellers are ready to provide a discount to potential buyers after the bargaining procedure. This is a sufficiently convincing digital argument to justify the feasibility and possibility of applying adjustment for bargaining in the practice of forensic experts of the expert specialty 12.1 when establishing the market value of leather and haberdashery goods. Overall, service, price, and communication have an impact on consumer purchasing decisions (Novanda & Medyawati, 2023). The results of the analysis of the data of Table 1 prove that the absolute discount that sellers agree to provide as a result of bargaining varies very widely in the array of sales of relatively cheap leather wallets: from 5 UAH (No. 27) to 350 UAH (No. 18, 53); most often it is up to 50 UAH inclusive (this is almost every second offer or 47.5% of the amount of goods studied). The relative discount that owners actually provide after the bargaining process also ranges widely: from 3.0% (No. 52) to 29.5% (No. 15); most often it is from 7.0% to 15.0% and within these limits covers almost half (48.8%) of the number of goods put up for sale. The amount of goods that the buyer wants to purchase significantly affects the absolute and relative size of the discount,

since this section has small-scale offers (for example, No. 8, 45) from manufacturers of leather wallets. The average arithmetic value of the discount that the surveyed sellers of wallets provided as a result of bargaining is 84.62 UAH, or 11.2%.

Therefore, it is advisable to use a correction coefficient for bargaining in the amount of 11.2% when establishing the market value of leather wallets. This is proved by the results of commodity research and marketing research. This obtained result is a specific numerical value of the correction coefficient for bargaining, it cannot be compared with the corresponding data of other scientists. Open and confidential (from the sphere of state institutions of forensic expertise) information on completed research and obtained numerical characteristics of corrective coefficients for bargaining for the needs of forensic experts of expert specialty 12.1 “Determining the cost of machines, equipment, raw materials and consumer goods”, as well as on research aimed at the development (calculation) of such coefficients is absent in Ukraine. Information on the results of similar studies abroad is also not available in the public domain.

At the same time, Yu.S. Olefir (2019) uses a similar concept of the development of forensic commodity expertise, focusing on the fact that the results of the constant development of scientific knowledge in the field of commodity science and tangent fields of knowledge must be used to improve research methods and methodological and technical support of forensic commodity expertise. Among other things, he notes that the tested methods in the expert study should only be used properly. Therefore, the introduction of corrective coefficients should be considered as fulfilling the requirement of this author to improve the scientific and methodological basis of forensic commodity expertise. Publication of the results of research on establishing corrective factors on authoritative forums of forensic specialists (Zaiats & Bednarchuk, 2019; Zaiats *et al.*, 2023) is the fulfillment of the requirement for proper testing of techniques used in forensic commodity examination.

On the other hand, analysing the tasks, object and subject of forensic commodity expertise Yu.S. Olefir (2019) examines only certain principles of its methodology creation, but does not address the problem of improving the methodology for determining the market value of movable property by introducing corrective bargaining factors into the practice of evaluation commodity activity.

O.V. Pakholiuk & O.I. Peredriy (2021) emphasise the need to improve the process of examination of leather products (on the example of shoes) for the practical needs of expert institutions. The main attention in this study they focus on the peculiarities of the use of measuring and organoleptic methods of research of goods: for the search, identification and assessment of shortcomings (weaknesses and defects) of the materials

from which the product is made; to establish compliance of individual parts and components with the requirements set forth in the relevant state standards; to assess the overall appearance and features of the design of the study object. But these authors commodity analysis of the main consumer properties of the study objects is not associated with the problem of adjustment. They do not consider the further fate of the goods in which the shortcomings were identified from the points of adjustment of its market value to commodity condition and to bargaining.

The results presented differ from the research results of R.V. Boiko & D.G. Pavlichenko (2019) in direction and content. The difference in direction lies in the study by the authors of adjustment coefficients for bargaining, and other authors focused on adjustment coefficients for commodity status. The difference in content consists in obtaining a specific numerical value of the adjustment coefficient for bargaining for a particular product (leather wallets). The need to substantiate, systematise and compile tables with generalised numerical values of corrective coefficients was indicated only in the compared study.

This allows us to argue that this study is in line with the current problem of forensic commodity expertise in Ukraine, which is devoted to the development of adjustment coefficients, and solves the specific practical problem of establishing the numerical value of the adjustment coefficient for bargaining.

Conclusions

Bargaining is present on the commodity market as part of the process of selling and buying goods, but the current regulatory and methodological bases for the performance of forensic commodity examinations do not provide for taking into account the results of bargaining. Therefore, the use of corrective coefficients for bargaining in forensic commodity examination has a significant theoretical scientific interest and practical importance. The real state of the commodity market contributes to the objectivity, completeness and validity of the judicial expert's conclusion.

Numerical values of adjustment coefficients for bargaining have been established for the first time in the practice of forensic expert commodity studies and in theoretical commodity studies. A proposal was made for their use in determining the market value of leather wallets by forensic commodity experts. It is advisable to establish numerical values of these coefficients using a marketing study of arrays of goods

in electronic trade, which are most often objects of comparison in determining the market value of goods by forensic commodity experts. The choice of leather wallets as a research object is defined by a practical need, since citizens' wallets are one of the most common objects of theft. The random selection strategy is used to obtain numerical values of correction coefficients for bargaining for leather wallets. Each of the 1189 available offers had an equal chance to participate in a study on the OLX e-commerce platform on the sale of this product.

A sample of 80 offers for sale of leather wallets was formed from 145 UAH to 6800 UAH, 76.3% of which were not in use. As a result of the questionnaire, it was found that 17.5% of sellers provide the possibility of bargaining to a potential buyer regardless of the commodity condition and the initial price of wallets offered for sale; 7.5% of sellers did not reduce the stated price on OLX when buying their goods; respondents or 88.8% of the total number of sellers; the absolute size of the discount ranges from 5 UAH to 350 UAH and is most often up to 50 UAH; the discount percentage is from 3.0% to 29.5% and most often (48.8%) is from 7.0% to 15.0%; average arithmetic value of the provided discount – 84.62 UAH. It is necessary to use a correction coefficient for bargaining in the amount of 11.2% in determining the market value of leather wallets by forensic commodity experts.

Further studies should be aimed at establishing corrective coefficients for bargaining for other types of leather and haberdashery goods. Such objects of forensic commodity expertise are most often handbags women's leather.

Conflict of interest

None.

Acknowledgements

The authors express their sincere gratitude to the director of the Lviv Scientific Research Expert and Forensic Center of the Ministry of Internal Affairs of Ukraine, Doctor of Law, Professor, Honored Lawyer of Ukraine, academician of the Ukrainian Academy of Sciences Roman Zayats for the idea and development of a new direction of expanding the evidence base of forensic commodity expertise by recording the process of bargaining on a digital medium. As well as for comprehensive support of studies aimed at introducing corrective coefficients for bargaining into the practice of forensic commodity expert activity.

References

- [1] Baranov, P.M., Shevchenko, S.V., & Korotaev, V.M. (2020). On the possibility of using the method of gemological evaluation of coloured stones in forensic gemological examination. *Forensic Bulletin*, 34(2), 38-46. [doi: 10.37025/1992-4437/2020-34-2-38](https://doi.org/10.37025/1992-4437/2020-34-2-38).
- [2] Boiko, R.V., & Pavlichenko, D.G. (2019). Correction coefficients when applying a comparative approach in a judicial commodity examination. *Legal Horizons*, 17(30), 86-91. [doi: 10.21272/legalhorizons.2019.i17.p.98](https://doi.org/10.21272/legalhorizons.2019.i17.p.98).

- [3] Busel, V.T. (Ed.). (2005). *A large explanatory dictionary of the modern Ukrainian language*. Kyiv; Irpin: Publishing and Trading Company "Perun".
- [4] Code of Ethics of the Lviv University of Trade and Economics. (2023, June). Retrieved from https://www.lute.lviv.ua/fileadmin/www.lac.lviv.ua/data/Academy/Docs/Polozhennja_New/Etichnij_kodeks_LTEU.PDF.
- [5] Dombrowska, A.V., & Kylymnyk, I.I. (2017). *Appraisal of property: Economic and legal aspect: Monograph*. Kharkiv: Kharkiv National University of Urban Economy named after O.M. Beketov.
- [6] DSTU 26167:2009. (2010). *Casual shoes. General technical conditions*. Retrieved from https://online.budstandart.com.ua/catalog/doc-page?id_doc=73335.
- [7] Indutny, V.V., Merezhko, N.V., & Zolotaryova, O.G. (2019). Valuation of jewelery taking into account the financial capabilities of potential buyers. *Bulletin of the Lviv University of Trade and Economics. Technical Sciences*, 22, 6-104. doi: 10.36477/2522-1221-2019-22-16.
- [8] Kraliuk, M.O., Omelchenko, N.V., & Brailko, A.S. (2021). Commodity expertise of insulating mine self-rescuers on chemically bound oxygen. *Bulletin of the Lviv University of Trade and Economics. Technical Sciences*, 25, 156-167. doi: 10.36477/2522-1221-2021-25-21.
- [9] Law of Ukraine No. 4038-XII "About Forensic Science". (1994, February). Retrieved from <https://zakon.rada.gov.ua/laws/show/4038-12#Text>.
- [10] Lutsiv, N.V. (2021). *Commodity expert research of solyd toilet soap*. In *Modern commodity expertise: Theoretical developments, practical experience, problems and prospects: Materials of the 1st international science practice conference* (pp. 90-94). Lviv: Rastr-7 Publishing House.
- [11] Novanda, N., & Medyawati, H. (2023). Determinant of Shopee Xpress consumer satisfaction in Jakarta Greater Area. *Economics, Entrepreneurship, Management*, 10(2), 25-34. doi: 10.56318/eem2023.02.025.
- [12] Olefir, Yu.S. (2019). The opportunities of merchandising forensic examination within the criminal proceedings. *Forensic Bulletin*, 32(2), 46-52. doi: 10.37025/1992-4437/2019-32-2-46.
- [13] OLX Ukraine. (2021). *Economic truth*. Retrieved from <https://www.epravda.com.ua/publications/2021/06/15/675004/>.
- [14] Order of the Ministry of Internal Affairs of Ukraine No. 591 "On Approval of the Instruction on Organisation of Expert Proceedings and Registration of Expert Proceedings in the Units of the Expert Service of the Ministry of Internal Affairs of Ukraine". (2017, July). Retrieved from <https://zakon.rada.gov.ua/laws/show/z1024-17#Text>.
- [15] Official website of OLX. (2024). Retrieved from <https://www.olx.ua/uk/>.
- [16] Pakholiuk, O.V., & Peredriy, O.I. (2021). *Examination of the quality of women's shoes production LLC "Ikos-style"*. In *Modern commodity expertise: Theoretical developments, practical experience, problems and prospects: Materials of the 1st International science practice conference* (pp. 122-125). Lviv: Rastr-7 Publishing House.
- [17] Random number generator. (2024). Retrieved from <https://uk.piliapp.com/random/number/>.
- [18] Regulations on the Commission on Ethics of the Lviv University of Trade and Economics. (2023). Retrieved from https://www.lute.lviv.ua/fileadmin/www.lac.lviv.ua/data/Academy/Docs/Proekt/Projekt_Polozhennja_pro_komisiju_z_etiki_Lvivskogo_torgovelnno-ekonomichnomu_universitetu.pdf.
- [19] Resolution of the Cabinet of Ministers of Ukraine No. 1440 "On Approval of the National Standard No. 1 "General Principles of Valuation of Property and Property Rights". (2003, September). Retrieved from <https://zakon.rada.gov.ua/laws/show/1440-2003-%D0%BF#Text>.
- [20] Ruvin, O.G., & Matveiv, V.V. (2020). Expert study to determine the market value of watercrafts and its components in forensic practice. *Forensics and Forensic Examination*, 65, 585-593. doi: 10.33994/kndise.2020.65.58.
- [21] Senyshyn, O.S., & Kryveshko, O.V. (2020). *Marketing*. Lviv: Ivan Franko National University of Lviv.
- [22] Syrota, O.O. (2021). *Mining equipment and factors, which influence the cost of ASIC*. In *Modern commodity expertise: Theoretical developments, practical experience, problems and prospects: Materials of the 1st International science practice conference* (pp. 139-141). Lviv: Rastr-7 Publishing House.
- [23] Tikhonova, N.P. (2003). *Commodity science of haberdashery goods*. Kyiv: Kyiv National University of Trade and Economics.
- [24] Tymchyshyn, A.M. (2023). Peculiarities of using special knowledge during pre-trial investigation. *New Ukrainian Law*, 2, 176-184. doi: 10.51989/NUL.2023.2.24.
- [25] Ukrainian academy of marketing. (2024). *ICC/ESOMAR International code of conduct for marketing and social research*. Retrieved from <https://uam.in.ua/>.
- [26] Yukhymenko, A.V., & Volokov, V.O. (2019). Generalization of expert practice in the assessment of certain species military property – armor vests. *Forensics and Forensic Examination*, 64, 772-783. doi: 10.33994/kndise.2019.64.72.
- [27] Zaiats, Ya.I., & Bednarchuk, M.S. (2019). About the expediency of using adjustment for bargaining in forensic commodity examination. In *Current issues of forensic expertise, criminology and criminal process: Materials of the international scientific and practical conference* (pp. 188-193). Kyiv: Kyiv Research Institute of Forensic Expertise of the Ministry of Justice of Ukraine.

- [28] Zaiats, Ya.I., Popovych, N.I., & Bednarchuk, M.S. (2023). Questionnaire for studying the process and result of the trading for the needs of forensic commercial examination and evaluation activity. *Economics and Region*, 1(88), 56-60. doi: [10.26906/EiR.2023.1\(88\).2872](https://doi.org/10.26906/EiR.2023.1(88).2872).
- [29] Zayats, R.Ya. (2020). Legal aspects of the use of internet resources for adjustment of bargaining in the activities of forensic experts. In *Quality and certification of products. Articles from a international scientific and practical conference dedicated to 100 years from establishment of University of Economics* (pp. 82-87). Varna: "Science and Economics" Publishing House.

Коригувальні коефіцієнти на торг для судової товарознавчої експертизи шкіряно-галантерейних товарів

Микола Беднарчук

Кандидат технічних наук, професор
Львівський науково-дослідний експертно-криміналістичний центр
Міністерства внутрішніх справ України
79040, вул. Конюшинна, 24, м. Львів, Україна
<https://orcid.org/0000-0002-4327-8390>

Ярослав Заяць

Магістр зі спеціальності «Підприємництво, торгівля та біржова діяльність»
81000, вул. Львівська, 97, м. Яворів, Україна
<https://orcid.org/0000-0003-3763-3701>

Анотація. Актуальність роботи обумовлена потребою покращення рівня забезпечення вимог до повноти, обґрунтованості та об'єктивності висновку судового експерта-товарознавця за допомогою запровадження коригувальних коефіцієнтів на торг. Метою дослідження є встановлення числових значень коригувальних коефіцієнтів на торг, які необхідно застосовувати судовим експертам-товарознавцям при встановленні ринкової вартості гаманців шкіряних. У роботі використані загальнонаукові аналітичні методи (групування, табличний, теоретичного узагальнення, аналізу і синтезу інформації, абстрагування, формалізації); генерування випадкових чисел; анкетне опитування; аудіозапис процесу торгу. Встановлено, що пропозиція гаманців шкіряних на OLX складає 1189 одиниць ціною від 30 грн до 7799 грн. Сформована вибірка – 80 пропозицій гаманців шкіряних ціною від 145 грн до 6800 грн, з яких 76,3 % не були у вжитку. Виявлено, що 17,5 % продавців гаманців шкіряних надають можливість торгу потенційному покупцеві не залежно від товарного стану і початкової ціни пропонованих до продажу гаманців і лише 7,5 % продавців не зменшили оголошену ними ціну через незначну вартість (від 150 грн до 350 грн) та товарний стан «нові». З'ясовано, що після проведення процедури торгу знижку потенційним покупцям готові надати 92,2 % опитаних або 88,8 % загальної кількості продавців; абсолютний розмір цієї знижки – від 5 грн до 350 грн і найчастіше складає до 50 грн; відсоток знижки – від 3,0 % до 29,5 % і найчастіше (48,8 %) перебуває в межах від 7,0 % до 15,0 %; середнє арифметичне значення – 84,62 грн. Доведено, що при визначенні ринкової вартості гаманців шкіряних доцільно застосувати коригувальний коефіцієнт на торг у розмірі 11,2 %. Практична цінність роботи полягає у встановленні числового значення коригувального коефіцієнта на торг для потреб судових експертів-товарознавців та у позитивному впливі коригування на торг на ступінь об'єктивності висновків судових експертів

Ключові слова: гаманці шкіряні; процес купівлі-продажу товарів; товарознавче дослідження; висновок судового експерта; коригування