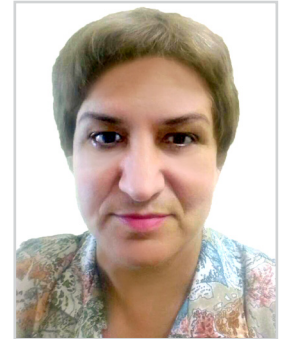UDC 339.332

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Analytical assessment of the jewellery market in Ukraine

Abstract. The article proposes scientific and practical recommendations aimed at deepening the analysis of the jewellery market in Ukraine and establishing its actual characteristics and tasks for perspective development. It is determined that improvement of life quality in Ukraine, based on satisfying cultural and spiritual needs, demands ways to saturate the Ukrainian consumer market with valuable and highly artistic products. However, the development of effective managerial decisions by all the jewellery market subjects is slowed down due to the lack of knowledge on the cause-effect relationships among its parameters, which results from the existing gaps in the scientific system. It has been established that there are no common approaches to the analysis of the jewellery market in modern scientific literature. Moreover, there is a number of contradictions, such as inconsistency and instability of its implementation timing, limited range of parameters, lack of effectiveness and completeness, which significantly reduce the effectiveness of the analysis. The methods for analysing the jewellery market with the detailed definition of tasks for each stage are upgraded on the basis of the systematic approach to economic analysis. The current stage of the development of the jewellery market is generally characterised by a significant reduction in the number of participants involved in the production and distribution of goods, the existence of negative trends in declining volumes of production by domestic producers and volumes of retail trade turnover, the growth of prices for finished products and raw materials (primarily gold), low volumes of imports and exports, and, hence, the formation of a negative trade surplus. The factor analysis of the main market elements by key parameters enabled us to set the levers for further positive changes. Finally, the key tasks for the development of the Ukrainian jewellery market, which correlate with the systemic problems of its functioning, are approved.

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Аналітична оцінка ринку ювелірних виробів України

Анотація. Статтю присвячено розробці науково-практичних рекомендацій по поглибленню аналізу ринку ювелірних виробів України зі встановленням його актуальних характеристик і завдань перспективного розвитку. Визначено, що підвищення якості життя населення України на основі задоволення культурних і духовних потреб потребує активного пошуку шляхів насичення споживчого ринку України коштовними і високохудожніми виробами. Однак розробка ефективних управлінських рішень усіма суб'єктами ринку ювелірних виробів гальмується внаслідок незнання причинно-наслідкових зв'язків між його параметрами, що є наслідком існування системних наукових прогалин. Доведено, що в сучасній науковій літературі відсутні єдині підходи до проведення аналізу ринку ювелірних виробів, має місце низка суперечностей (непослідовність і нестабільність періоду його здійснення, обмежене коло параметрів, відсутність результативності і закінченості аналізу), що знижує дієвість такого аналізу. На основі системного підходу до економічного аналізу загалом удосконалено методику аналізу ринку ювелірних виробів з визначенням детальних завдань кожного етапу. Аналітичне оцінювання сучасного розвитку ринку ювелірних виробів України, яке ґрунтувалося на удосконаленій методиці, показало на сформованість довготривалих негативних тенденцій. Основними з них є скорочення місткості національного ринку, зменшення внутрішньої пропозиції, обсягів роздрібного товарообороту та кількості підприємств-виробників, стрімке зростання цін на золото й вироби з нього, скорочення розмірів зовнішніх операцій, формування від'ємного торговельного сальдо. Наслідки ситуації на ювелірному ринку попри активні інноваційні процеси у виробничій і торгівельній діяльності можна вважати поступовою втратою внутрішнього ринку та зниженням рівня національної економічної безпеки. Факторний аналіз основних елементів ринку за ключовими параметрами дав змогу встановити важелі для подальших змін. Запропоновано ключові завдання розвитку ринку ювелірних виробів України, які корелюють із системними проблемами його функціонування.
Ключові слова: ринок ювелірних виробів; потреби; методика аналізу; тренди; ключові завдання.

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Аналитическая оценка рынка ювелирных изделий Украины

Аннотация. Статья посвящена разработке научно-практических рекомендаций по углублению анализа рынка ювелирных изделий Украины с установлением его актуальных характеристик и задач перспективного развития. Определено, что повышение качества жизни населения Украины на основе удовлетворения культурных и духовных потребностей требует активного поиска путей насыщения потребительского рынка Украины ценными и высокохудожественными изделиями. Однако разработка эффективных управленческих решений всеми субъектами рынка ювелирных изделий тормозится вследствие незнания причинно-следственных связей между его параметрами, что является результатом существования системных научных пробелов. Доказано, что в современной научной литературе отсутствуют единые подходы к проведению анализа рынка ювелирных изделий, а также имеет место ряд противоречий (непоследовательность и нестабильность периода его проведения, ограниченный круг параметров, отсутствие результативности и законченности анализа), что снижает действенность такого анализа. На основе системного подхода к экономическому анализу в целом усовершенствована методика анализа рынка ювелирных изделий с определением детальных задач каждого этапа. Аналитическое оценивание современного развития рынка ювелирных изделий Украины, которое основывалось на усовершенствованной методике, указало на существование длительных негативных тенденций. Основными из них выступают сокращение емкости национального рынка, уменьшение внутреннего предложения, объемов розничного товарооборота и количества предприятий-производителей, стремительный рост цен на золото и изделия из него, сокращение размеров внешних операций, формирования отрицательного торгового сальдо. Последствия ситуации на ювелирном рынке, несмотря на активные инновационные процессы в производственной и торговой деятельности, можно считать постепенной потерей внутреннего рынка и снижением уровня национальной экономической безопасности. Факторный анализ основных элементов рынка по ключевым параметрам позволил установить рычаги для дальнейших изменений. Предложены ключевые задачи развития рынка ювелирных изделий Украины, которые коррелируют с системными проблемами его функционирования.

Ключевые слова: рынок ювелирных изделий; потребности; методика анализа; тренды; ключевые задачи.

1. Introduction

The European vector of Ukraine's development, based on high standards of life quality, requires intensification of the consumer market development, with the jewellery market being its important sector. This market development is aimed at ensuring spiritual and cultural needs of the population, as well as making alternative investments in preserving and increasing the monetary funds in the long run (Achabou & Dekhili, 2013; Nath, 2015) [1; 20].

The jewellery market in Ukraine is characterised by a fairly large capacity with a high level of saturation and tough competition. Thus, it is one of the most promising among other non-food markets. However, modern socio-economic processes in the country impede its development and meeting a number of consumers' needs. The relevance of this particular research is determined by urgent necessity of proper analytical study targeted at spotting the range of current problems, their causes and methods of resolution.

2. Literature Review

Scientists, such as C. Gomathy and N. Y. Devi (2015) [12], B. Kumar and K. Thiviya (2014) [17], L. Kumara and N. Kumar (2016) [18], T. Artiukh and I. Hryhorenko (2017) [3], G. Ivanyshyna (2017) [15], N. Lutsiv (2012) [19], Yu. Popivnyak (2013) [22], I. Volodko (2014) [29] and others, studied the problems of the functioning of the jewellery market and searched for ways to overcoming them. At the same time, the current state of scientific achievements in this field reflects the existence of unfilled gaps, with regard to the theory and methods of complex analysis of the main market processes for the current and future periods, in particular its information support, implementation tools, etc. Estimation of scientific approaches to market analysis, determination of appropriate conditions for the development of the jewellery market, spotting the problems in its functionin, and the

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opportunities of their solution require an in-depth economic analysis. Besides, the study of scientific publications in this field has shown a lack of common approaches to its implementation.

The results of the systematisation of scientific approaches to the analysis of the jewellery market, carried out by Ukrainian scientists in the current decade, give opportunity to make the following conclusions.

1. There are neither common approaches to the definition of key parameters of the jewellery market analysis no algorithm of its implementation and choice of the analysed period in modern scientific literature.
2. Qualitative approaches to market analysis based on consumers' behaviour rating are prevalent (Gomathy & Devi, 2015; Kumar & Thiviya, 2014; Kumara & Kumar, 2016) [12; 17-18].
3. We cannot agree with the authors who, conducting the analysis in the mid-term period, constantly changed its duration (Artiukh & Hryhorenko, 2017; Lutsiv, 2012; Popivnyak, 2013; Volodko, 2014) [3; 19; 22; 29].
4. The toolkit for analysing this market is mainly limited by logical methods of information processing (Savytska, 2005) [23].
5. The parameters for analysing the market coincide in terms of production scales, sales, imports and exports. Prices and market structure are analysed much more rarely.
6. The analysis algorithm has different amounts and completeness of stages, as well as different starting and ending points. It is especially important to emphasize the absence of factor analysis at the last [3] definition of market development reserves [19] and the development of adequate managerial strategies [22; 29].

3. Purpose

The purpose of the article is to develop scientific and practical recommendations, to deepen the analysis of the national jewellery market and establish its actual characteristics and tasks for further development.

4. Methods of market analysis

Taking into account the revealed problems of analytical assessment of the development of the jewellery market, we improved the traditional method of economic analysis according to Savytska (2005) [23], Bryman and Bell (2011) [5] and Cresswell (2007) [8]. The results are presented in Figure 1.

In accordance with the revealed problematic issues, the aim is defined and the analysis objectives are determined at the first stage. The objective of the jewellery market analysis is to obtain the most informative key parameters providing an objective and accurate assessment of consumers' needs satisfaction and insurance of business entities effectiveness. The analysis tasks are as follows: assessment of the market main elements, factor analysis of the latter, generalisation of shortcomings and obstacles and development of steps for their elimination.

At the second stage of the research, a general system of indicators is developed, which will be used to assess the jewellery market development, in particular indicators of market significance for
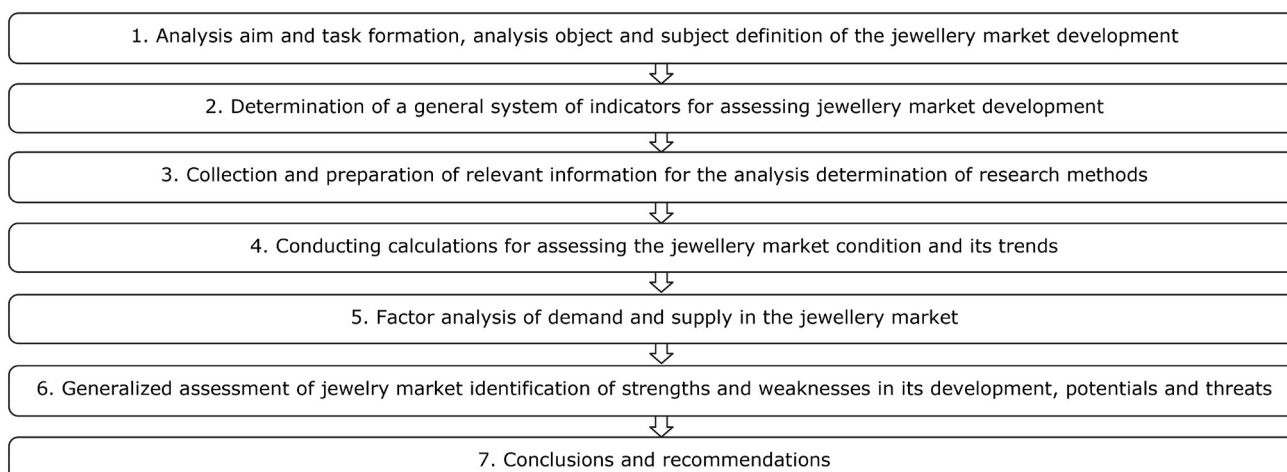

Figure 1:
Improved methods for analysing the national jewellery market
Source: Developed by the authors

the national socio-economic development, estimation of indicators of supply (the number of producers, the number of sellers, the scale of production, exports, imports, wholesale trade, supply influencing factors, etc.), indicators of demand assessment (the market capacity, the retail turnover, demand influence factors, etc.), product prices, etc.

At the third stage the collection of the necessary information is ensured; its authenticity and completeness are checked in accordance with the analysis aim.

Modern open sources of information for the analysis of the jewellery market after the liquidation of the State Probation Service of Ukraine are too limited. Therefore, it is worth using available sources, in particular the official sites of the State Statistics Service of Ukraine, the National Bank of Ukraine, the State Fiscal Service of Ukraine, the Union of Jewellers of Ukraine and the largest domestic jewellery producers.

The main methods of market analysis should be considered as a complex of parameters of different groups. Besides, conducting of factor analysis, which is mainly provided on the basis of correlation analysis, is of paramount importance.

At the fourth stage, the calculation of analytical indicators, marked in the second stage, is carried out for several periods of the same duration, studying their dynamics and the reasons for the change.

At the fifth stage, factor analysis of supply and demand in the market is carried out and the influence of each factor is determined.

The sixth stage defines general characteristics of the market, summarises the analysis results at stages 4-5 and conducts a SWOT-analysis.

At the seventh stage, the development of recommendations for eliminating identified obstacles for future development of the market is carried out.

4.1. Main trends of the development of the Ukrainian jewellery market

Under the current conditions, the transformation of the Ukrainian society according to the world and European life standards where human resources are considered to be the main ones, it is impossible to keep aside the processes taking place in the jewellery market.

The jewellery market is part of the aggregate consumer market where objects of sale are «jewellery and household items made of noble metals in combination with precious and semiprecious gems, as well as artistic products made of non-precious materials, crafted with great skill» (O. Mykytyuk, V. Fediv, & O. Olar, 2016) [10].

The development of this market is directly affected by the quality of life of the population, which is defined by the World Health Organisation as «the perception of people of their position in life, depending on cultural features and value system...» (World Health Organisation, 2017) [31] and is estimated, among other things, by psychological parameters of life (positive emotions, appearance, self-esteem, etc.). The degree of satisfaction of consumers' cultural and spiritual needs, including jewellery possession and use, determines the mental and social well-being, which is included as a condition of human health and affects the mental state.

Consequently, the jewellery market appeals to those types of commodity markets which meet the cultural and spiritual needs of a person, as well as contribute to the preservation of monetary incomes for all market players.

The assessment of the current development of the jewellery market in Ukraine is carried out on the basis of the advanced methods of analysis. Stages 1-3 were carried out in the section «Methodology and research methods».

The significance of the jewellery market for socio-economic development of Ukraine within the past year is summarised in Figure 2.

The volume of jewellery distribution by wholesale and retail entities in the domestic consumer market is not large, in spite of the importance of this goods group and the conditions of socio-economic development of the country. However, it provides relatively stable revenues to budgets of different levels and creates high levels of added value with a high profitability of the jewellery business and an objectively high level of labour productivity that results in high levels of average wages.

The main elements of any type of market, including the jewellery market, are supply, demand and price.

The analysis of the jewellery market supply (State Fiscal Service of Ukraine, 2018) [24] shows that large producers and powerful trading companies with significant potential for competition dominate and, as a rule, combine production and trading activities. It causes a decrease in the total number of market participants (Figure 3), which is confirmed by the number of registered brands - special jewellery trademarks that are subject to mandatory annual registration.

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It provides wholesale trade turnover in the amount of USD 5,22 million, incl. 83% - products realization of domestic production

The average profitability of 40-50%, when entering the product group in the excisable goods shows an active role in the formation of all levels budgets

Jewellery market in Ukraine

It provides retail turnover of USD 30,38 million

High levels of added value and productivity lead to high levels of average wages

It provides employment for more than 15 thousand workers in the industry and 22 thousand workers in trade
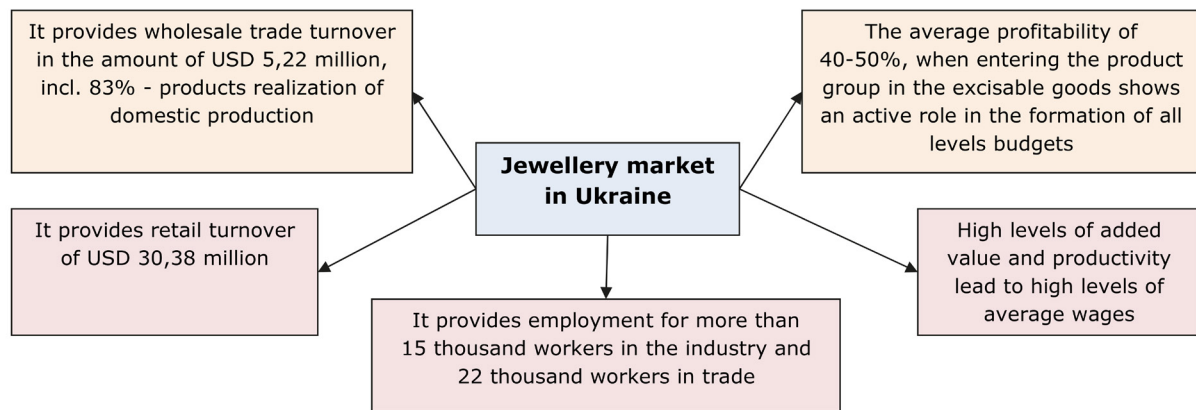
Figure 2:
**Role of the jewellery market (including watches)
in the socio-economic development of Ukraine in 2018**
Source: [16; 25]

It is apparent that the number of jewellery manufacturers in Ukraine in 2007-2018 decreased by 47.7%. Moreover, rapid reduction of the indicator falls at the end of the analysed period (2015-2018) due to the annexation of the Crimea and the occupation of the country's eastern territories with a number of jewellery factories there, as well as problems with the restoration of the relocated companies.

At the same time, the analysis of Figure 3 indicates that the number of jewellery producers increased (11.2% and 2.5%, respectively) in the crisis years of 2008 and 2009, and it was relatively stable in the following years. However, the trend line shows a steady trend towards a reduction in the number of jewellery manufacturers in Ukraine.

Market analysts believe that the key issues that restrict the development of jewellery production and selling in Ukraine are as follows: decrease of solvent demand, shortage of own raw materials and prices growth for purchased goods, unfair competition from the part of large companies and excessive state interference in jewellery business [16; 25].

Meanwhile, during the crisis, manufacturers learned to counteract the negative effects of the abovementioned factors through changes in the product range (increasing the proportion of silver products, reducing the weight of products) and increasing the diversity of activities (an increased share of operations with toll processed raw materials and the exchange of precious metals scrap for finished products, working for direct orders, etc.).

Trading companies found a much smaller arsenal of instruments for counteracting crisis phenomena and, therefore, the number of companies in this area decreased significantly with the reduction of the volume of trade.
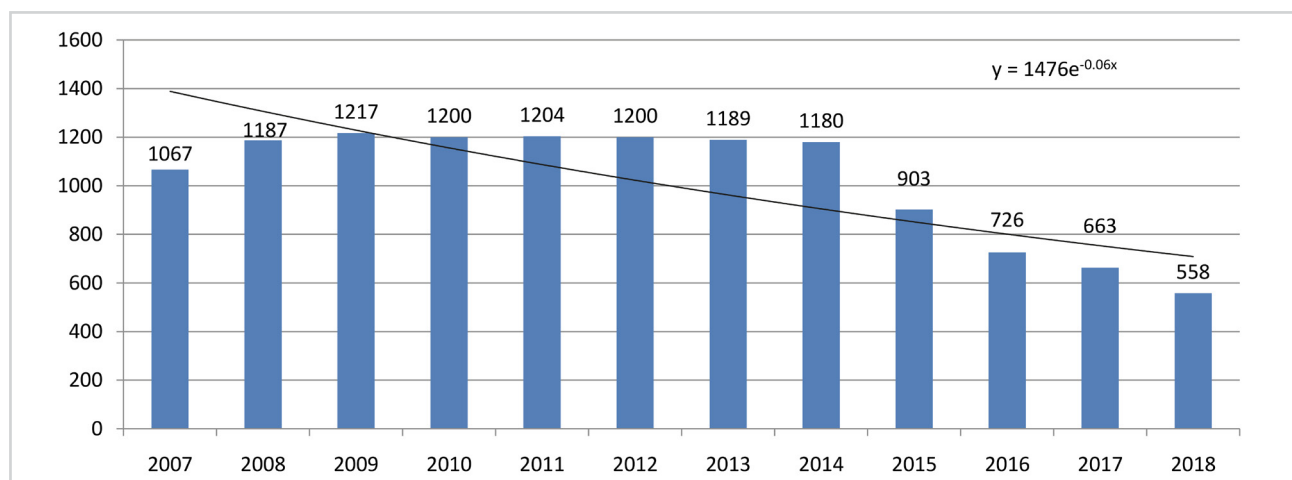

$$y = 1476e^{-0.06x}$$

Figure 3:
**Dynamics of the number of Ukrainian jewellery producing companies with trend lines
according to the method of exponential smoothing**
Source: State Fiscal Service of Ukraine (2018) [24]

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The analysis of the production of Ukrainian jewellery manufacturers in 2007-2018 is carried out according to the information in Figure 4.

Apparently, Figure 4 shows the existence of a negative trend in the reduction of the volume of domestic jewellery production, which has been forming since 2013 (the crisis year for the world gold market). Further reduction of production is a consequence of the dollar value growth, since Ukraine is provided with its own gold output for only 0.2-0.5%, while the share of imported raw materials is about 55%; the toll processed raw materials amount to almost 42%, the rest is scrap [3; 29]. Thus, the rise in raw materials prices (primarily gold) caused a dramatic reduction in the domestic jewellery production.

The increase in the jewellery production by 3.1 times in 2018 is a consequence of the slowdown in the growth of gold prices at a relatively low dollar value. At the same time, market operators spot the formation of a tendency to increase the demand for gold and golden goods. It indicates the desire of the citizens to protect their savings due to the volatile and difficult situation in the country. The military conflict in Ukraine and the stagnation of the real estate market caused an increase in the role of gold and jewellery as a means of saving. That is why the individual investments in such goods take the third position among other types of investment (Jewellery market of Ukraine review, 2018) [16].
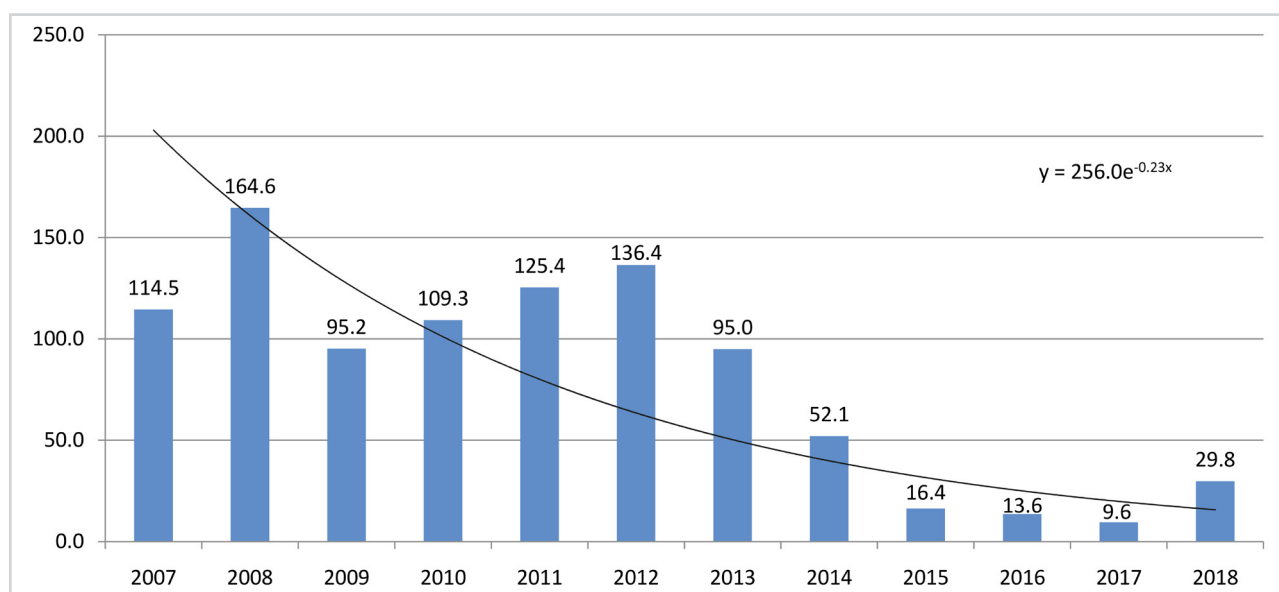
The dynamics of the gold prices growth rate, in comparison with the dynamics of the dollar value growth, is shown in Figure 5, which demonstrates common trends, confirmed by virtually similar trend lines.

An estimation of changes in the effect of gold prices on the dynamics of the production volume of jewellery products was made according to the corresponding coefficients of elasticity (Figure 6).

Figure 6 proves that the production in 2009-2011 and 2016 was hardly responsive to the change in gold prices, as the pace of dollar value growth was increasing slower than gold prices. The high elasticity of production in 2012-2015 and 2017-2018 is a reflection of the high dependence of jewellers on gold prices, which is the main reason for reducing the number of subjects of this business and the extent of their activity.

The high elasticity of the production in 2012-2015 and 2017-2018 is a reflection of the high dependence of jewellers on gold prices, which is the main reason for reducing of both the number of this business subjects and the extent of their activity.

The situation regarding national foreign operations on jewellery is presented in Figures 7-9, as they are the result of the work of domestic jewellers, on the one hand and, on the other hand, part of the national market capacity meeting the demands of Ukrainian consumers.

Note: Compiled by the authors' calculations of the market equilibrium on the market capacity (capacity = production - export + import) based upon the average dollar exchange rate.

Figure 4:
Dynamics of Ukrainian jewellery production with trend lines
according to the method of exponential smoothing, USD million
Source: [21; 24-25]

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Figure 5:
**Comparison of the dynamics of gold prices growth rate and dollar value growth rate
with trend lines according to the method of exponential smoothing, %**
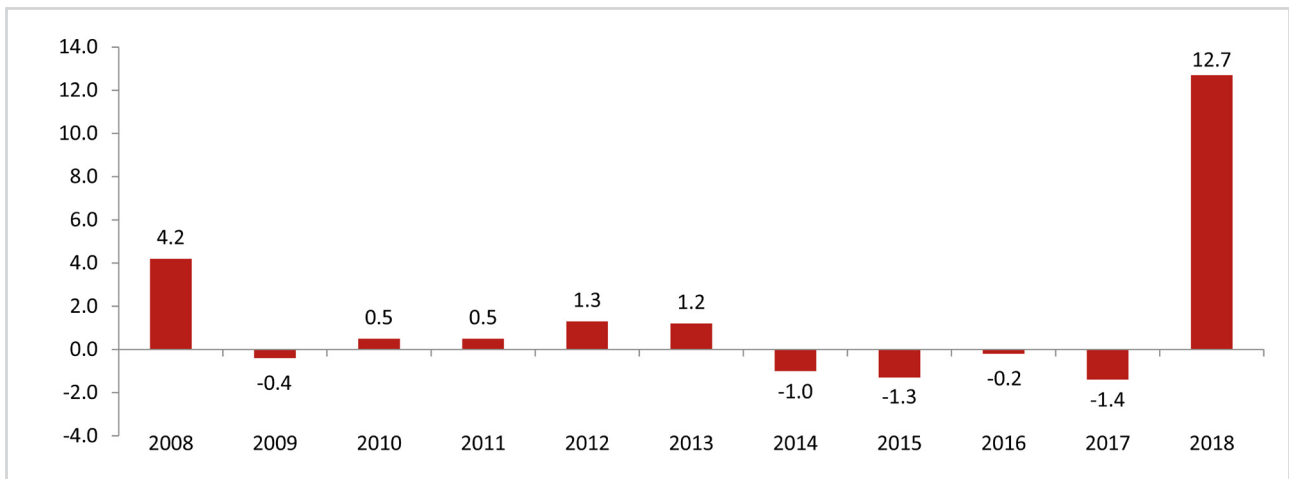Source: [21; 25]

Figure 6:
Coefficients of production elasticity according to the price of gold
Source: Developed by the authors

Figure 7 brings to light that the volumes of gold imports to Ukraine in 2008 were the largest in the period of 2007-2018 and amounted to USD 8,731 thousand, which is 12.9 times as high as in 2018. The trend line shows the general trend in the annual accelerated decline in imports due to the fall of the UAH exchange rate. The volume of jewellery imports in 2018 amounted to only 13.2% of the volume of 2007, along with a steady decline in the indicator.

At the same time, Ukraine's jewellery exports (Figure 8) grew in 2009-2011 with a further sharp decline. In total, the exports volume of these goods decreased by 95% in the period between 2007 and 2018.

A comparison of the volumes of jewellery imports and exports based on Figure 9 showed a negative trade surplus. However, it is worth paying attention to a significant decrease in the level of this indicator at the end of the period, as confirmed by the trend line, which is the result of reducing the volumes of all external operations.

The assessment of jewellery demand is based on the analysis of the dynamics of retail trade turnover (Figure 10), the size of which determines the capacity of this market in monetary terms.

Thus, in the period from 2007 to 2012 the size of the jewellery market predominantly increased and reached the maximum value in 2012 (USD 137.55 million). However, during the period 2013-2017 there was a sharp decline in demand for jewellery and watches, the turnover of which in 2017 reached the minimum value for the analysed period and amounted to USD 10.02 million. The year 2018 was characterised by a rapid expansion of the market capacity (+203.2%), yet its level amounted to only 25.7% of the initial value.
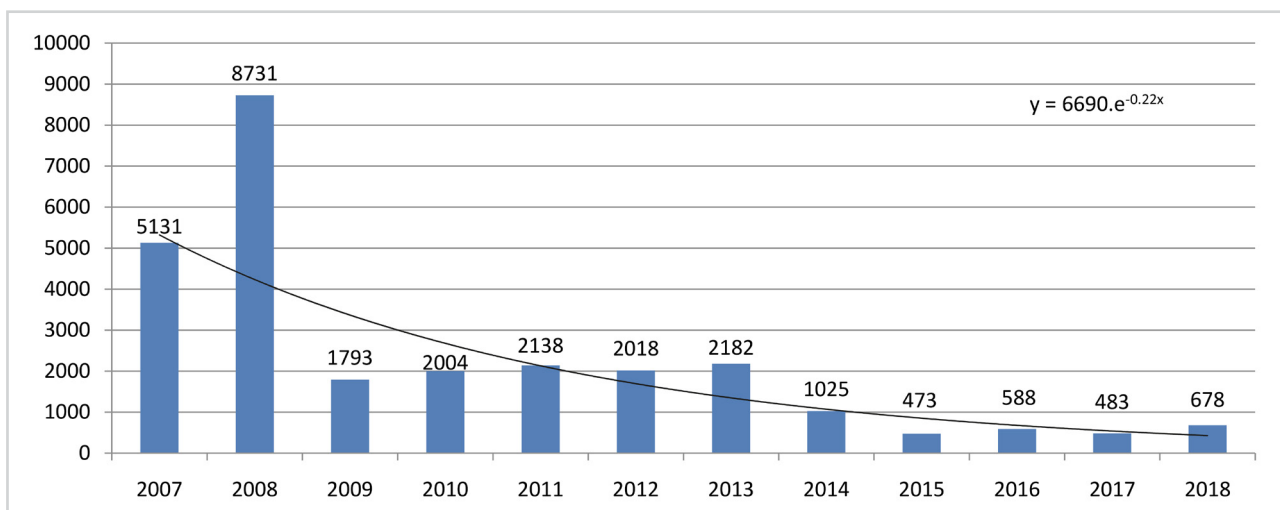
Figure 7:
Dynamics of jewellery imports with trend lines
according to the method of exponential smoothing, USD thousand
Source: [25]

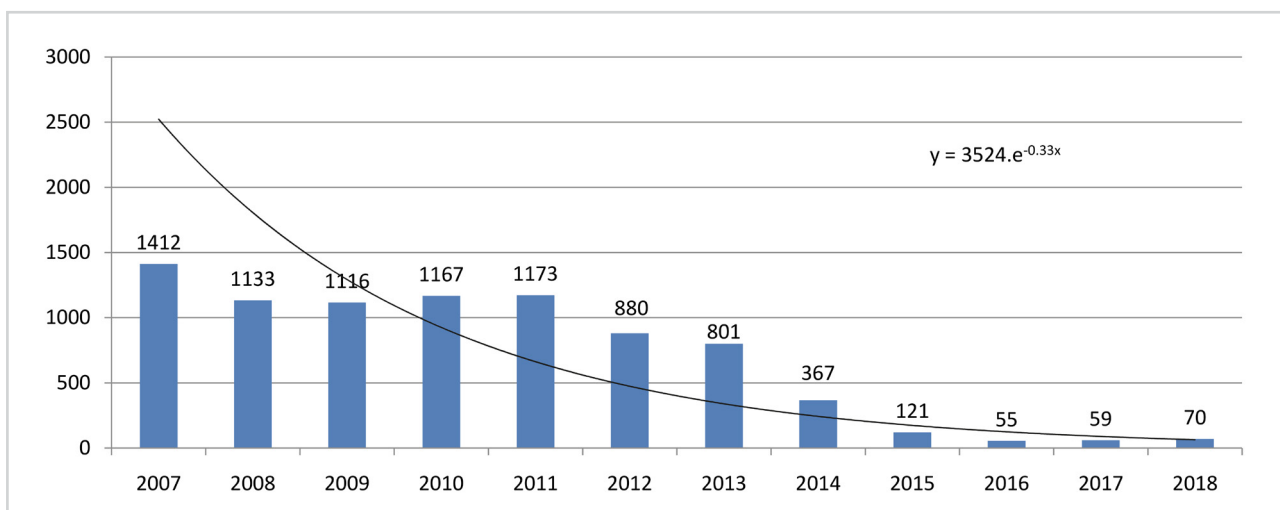

Figure 8:
Dynamics of jewellery exports, with trend lines according to the method of exponential smoothing, USD thousand
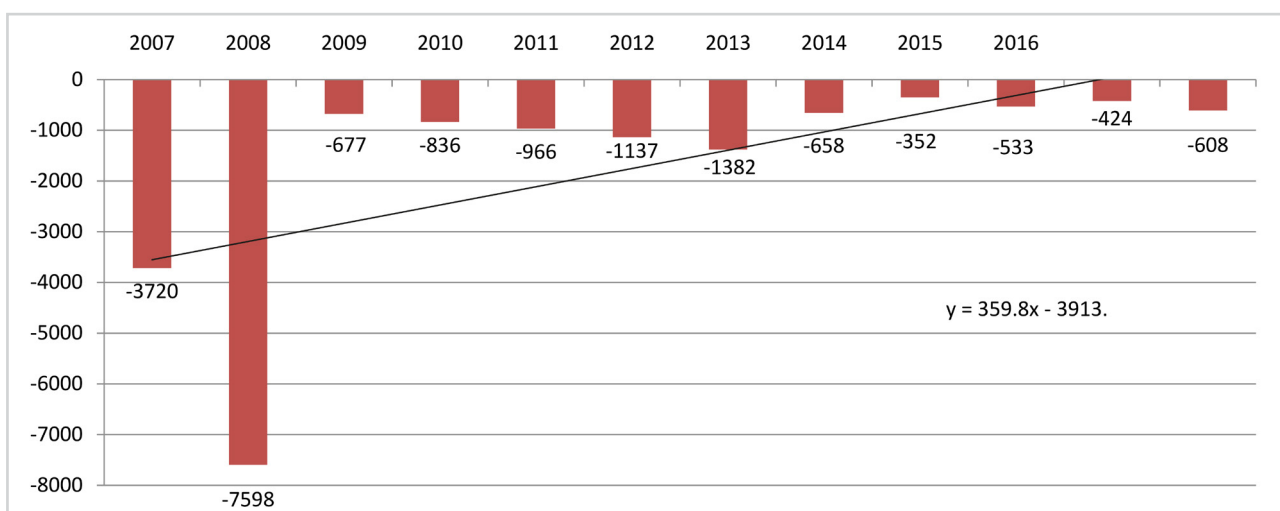Source: [25]

Figure 9:
Trading balance for jewellery with trend line by exponential smoothing method, USD thousand
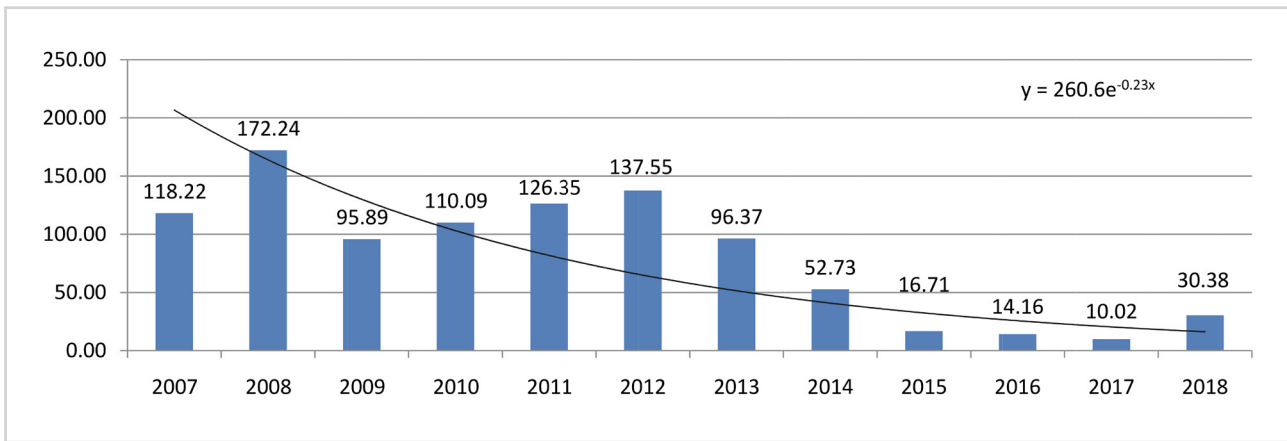Source: [24]

Figure 10:
Dynamics of retail trade turnover in jewellery (including watches), with trend lines according to the method of exponential smoothing, USD million
Source: [25]

Figure 11 provides information on the main way for selling jewellery. It is obvious that the distribution of domestic jewellery in 2007-2013 was carried out mainly through a trading chain with a constant decrease in the level of this indicator. After 2013, which was a crisis year and the beginning of notorious military and political events followed by long stagnation for the jewellery industry in Ukraine, the retail trade stopped playing the role of the main channel for the jewellery distribution. By the end of the analysed period the share of the shadow sector had become threatening (over 95%). It was also contributed to the increase in tax pressure, resulting in almost 90% of small jewellery market players using the opportunity to be flat tax payers (Information portal of the Jewellers Union of Ukraine, 2018) [14].

The analysis of retail commodity turnover by the main factors (changes in physical volumes and prices for products) will be made according to Figure 12.

The presented information testifies to the unstable demand for jewellery on the part of Ukrainian consumers. The result of adding chain indexes of the physical volume of retail trade turnover makes it possible to conclude that the volume of the jewellery goods market for the analyzed period of 12 years decreased by 74.3%, and therefore jewellery became a commodity that is in low demand. The trend line by the method of exponential smoothing confirms the existence of a negative tendency to reduce the volumes of jewellery retail commodity circulation. Expansion of market capacity in 2018 is not only the evidence of active sales of jewellery products due to their savings function. It gives hopes for restoring the traditional Ukrainian consumption culture, which is directly affected by the quality of life for the population.
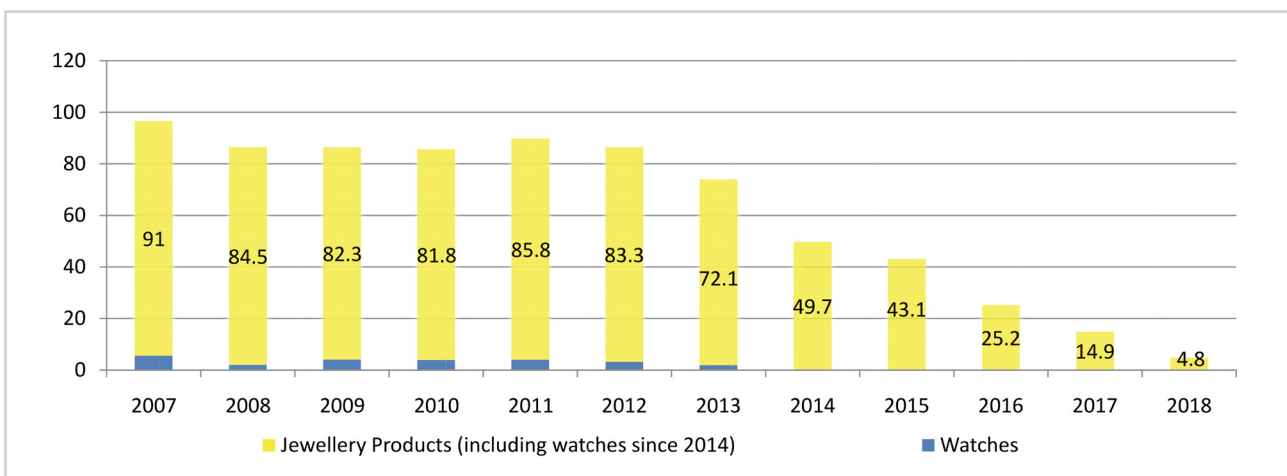

Figure 11:
Share of jewellery (including watches), produced on the territory of Ukraine, sales by the trading companies chain, %
Source: [25]

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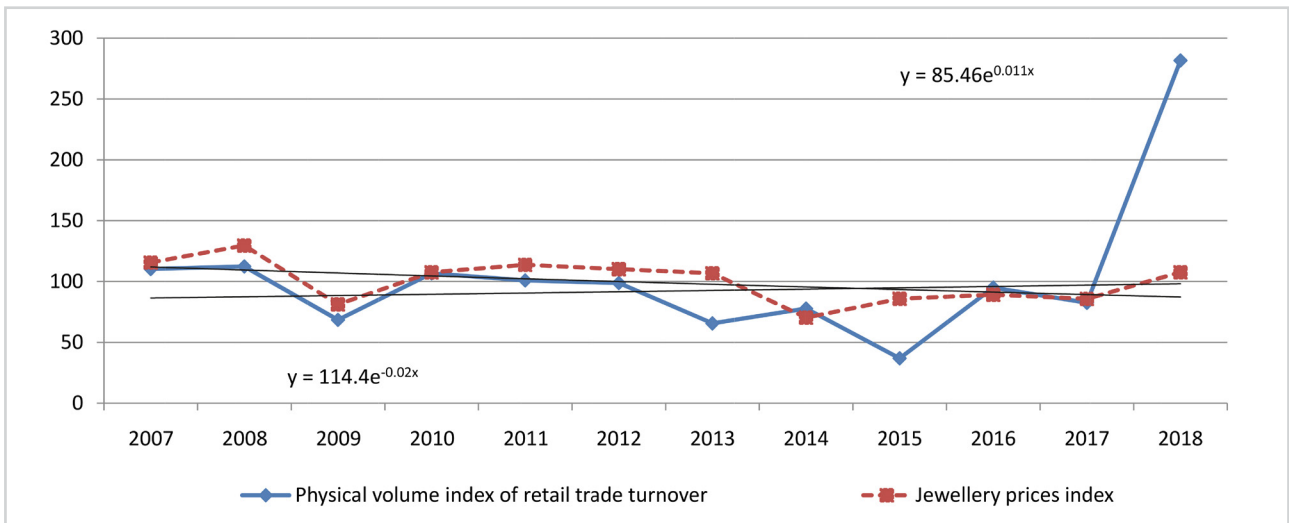
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Figure 12:
**Comparison of the index of physical volumes of jewellery retail sales to their price index,
with trend lines according to the method of exponential smoothing, %**
Source: [25]

Under the conditions of significant influence of changes in gold prices on the formation of jewellery products production cost, which, in turn, depend on the dollar rate, it is expedient to expand the analysis to assess the dependence of prices of finished products on the change in prices for raw materials (Figure 13), which makes up approximately 80% from self-cost (Information portal of the Jewellers Union of Ukraine, 2018) [14].

Figure 13 indicates that the trend line for gold prices and jewellery prices is the same, as it can be observed from the identity of the equations. This testifies to the full dependence of the change in the product price on the price change on the main precious metal (gold).

The elasticity coefficients were calculated and analysed for the estimation of the effect of price changes for jewellery on the demand change (Figure 14).

It is apparent from Figure 14 that the demand for jewellery is mostly elastic (the coefficient is more than 1). Therefore, the increasing demand for the jewellery market depends primarily on the price level which producers and traders should manage flexibly.

The factor analysis of the main elements of the jewellery market is carried out by the method of correlation analysis based on the assessment of demand (retail turnover) and internal supply (own production volume).

Figure 13:
**Comparison of the dynamics of gold prices growth rate and jewellery prices growth rates, along with
trend lines by method of exponential smoothing, %**
Source: Compiled by authors based on information in Fig. 5 and [25]

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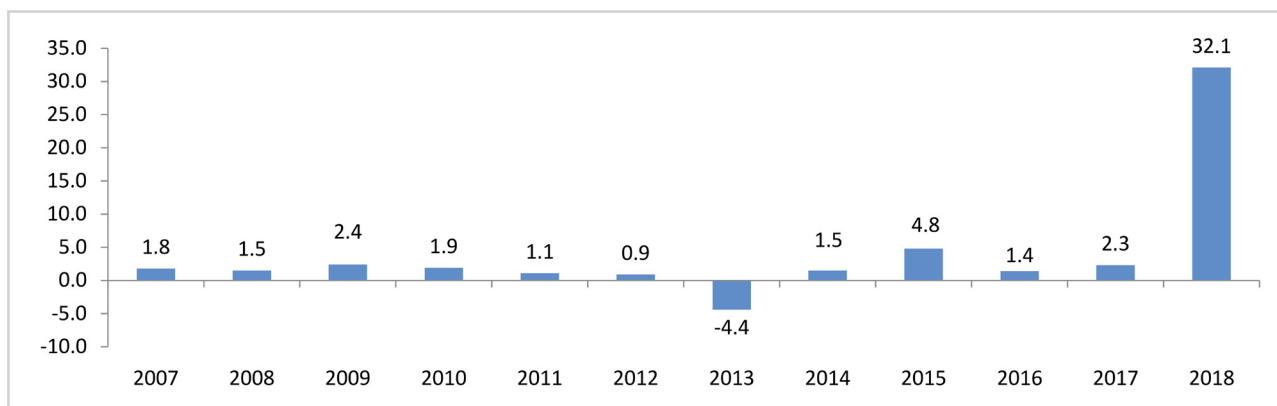
75

Figure 14:
Estimation of the influence of jewellery prices change on demand change
Source: Compiled by the authors

The influence factors and the results of the factor analysis conducted by the rules of correlation analysis (N. Draper & H. Smith, 2014) [11] are presented in Table 1.

The obtained regression equations are adequate, since the coefficients of the multiple correlation make 0.720 and 0.757, and the coefficients of multiple determination are 0.52 and 0.573, respectively.

In accordance with the obtained equations, we conclude that:

1) the volume of demand for jewellery increases with a decrease in their prices and with the consumer income growth (due to significant shadow employment, real incomes are taken at the level of average consumer costs);

2) when the price of jewellery is reduced by 1%, the retail turnover increases by USD 1.652 million, while with an increase in the real average consumer income by 1%, this turnover increases by USD 244 thousand; therefore, the influence of the price factor is overwhelming;

3) the volume of jewellery supply to the national market (thevolume of own production) increases with a decrease in gold prices and imports reduction;

4) when the price of gold is reduced by 1%, the production of jewellery in the country increases by USD 86 thousand, while, with a 1% decrease in its own production, the production actually grows by USD 16.639 million. Consequently, the influence of imported jewellery supplies to Ukraine is essential for domestic producers.

Table 1:
Factor analysis of the main elements of the jewellery market results

Estimated result (y)	Influence factors	Regression equation	Multiplier correlation coefficient / coefficient of multiple determination
Retail turnover at current prices, USD million	Price for jewellery,% change (X_1) Average income of the population in the country (taken at the level of average household expenses), USD (X_2)	$y_1 = -3.768 -1.652X_1 + 0.244X_2$	0.720 / 0.52
Jewellery production in Ukraine, USD million	Gold price,% change (X_1) Import, USD million (X_2)	$y_2 = 44.846 - 0,086X_1 - 16.639X_2$	0.757 / 0.573

Source: Compiled by the authors based on [25]

4.2. Generalised assessment of the domestic jewellery market

To summarise the assessment of the domestic jewellery market, we describe the state of competition in it. The Antimonopoly Committee of Ukraine acknowledges that the jewellery market is highly competitive (Information portal of the Jewellers Union of Ukraine, 2018) [14]. However, our analysis of the main market players did not allow agreeing with this conclusion and stated the monopolistic nature of the market because of the high pressure from the mentioned companies.

An additional analysis of consumers' preferences for jewellery products shows that relatively well-promoted brands that guarantee high quality and augment the person a sense of luxury and prestige are most trustworthy. For the same reason, the products of famous jewellery brands bring almost 55% more profits than similar non-branded products (Jewellery market review of Ukraine, 2018) [16].

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In recent years, there has been a tendency for jewellery to be traded on the Internet, and the above-mentioned manufacturers have their own online stores. An effective marketing policy is able to retain key customers, even in times of economic crisis. Therefore, one should not underestimate the importance of e-marketing tools, such as direct marketing (for example, customer information, mainly through newsletters for new products, promotions, etc.), and event marketing (holding special cultural events, parties, exhibitions related to brand promotion).

Taking into account the results of the above analytical studies, we summarise the characteristics of the jewellery market in Ukraine in Table 2.

The continuation of the tasks of the penultimate stage of the advanced algorithm for analysing the jewellery market is to conduct a SWOT analysis (Table 3).

Therefore, participants in the jewellery market should pay their attention to the weaknesses and threats, while maximising the strengths and opportunities for further development.

Table 2:
General characteristics of the domestic jewellery market

Market characteristics	The result of identification of the jewellery market in the country
Economic purpose	Consumer market (consumer goods market)
Type (groups) of goods	Non-food market (jewellery)
Nature of the sale	Wholesale market, retail market
Level of economic freedom	Partially adjustable (especially in the sphere of products branding)
Saturation level	Equilibrium
Compliance with current legislation	Legal (but with a significant proportion of shadow operations)
Level of competition	Monopolised (both in the sphere of production and in trade)
Territorial feature	Nationwide (insignificant presence on the world market)
Level of development	Developed

Source: Compiled by the authors

Table 3:
SWOT matrix - the jewellery market analysis in Ukraine

Strengths	Weak sides
1. High market capacity. 2. High profitability of jewellery business. 3. High levels of value added, labour productivity and average wages. 4. Great experience of industrial and trading enterprises in the market.	1. Unfair competition from large enterprises (industrial and commercial). 2. Lack of current assets in small and medium-sized enterprises, including advertising activities. 3. Lack of domestic raw materials. 4. Lack of investment in research work. 5. Trends in reducing the number of domestic market participants and the volume of their activities.
Opportunities	**Threats**
1. Increasing of gold mining in Ukraine. 2. Reducing prices for jewellery by reducing the cost of production and sales. 3. Possibility of attracting foreign investments to enhance production and trading activity. 4. Active development of the jewellery world market.	1. Instability of the political and economic situation in the country. 2. Reduction of the effective demand of the population. 3. Bureaucracy in the registration of nouns. 4. Inefficient tax policy (introduction of the practice of advance payment of taxes and fees). 5. Lack of support programs for the domestic manufacturer. 6. Illegal imports. 7. Exhaustion of world reserves of precious metal ores and precious gems.

Source: [9; 16; 27-28]

4.3. Key tasks of prospective market development

According to analytics who represent Euromonitor International, globally, consumers spend around USD 348.5 billion per year on jewellery, which accounts for about 17% of all retail apparel spending. This can be roughly divided into approximately USD 306.8 billion for lower-valued fashion jewellery and USD 41.6 billion for luxury jewellery featuring precious metals and gemstones. According to jewellery experts, the value of the fashion jewellery market will grow by 2.6% per year, but only by 2.2% for the luxury jewellery market in 2021 (Common Objective, 2019) [6].

Existing reserves in the functioning of the jewellery market must be overcome by combining the efforts of the state, producers and trade. The main tasks of the long-term development of this market are summarised in Table 4.

Existing shortcomings in the jewellery market functioning must be overcome by combining the efforts of the state, producers and trade.

4. Conclusion

The jewellery market refers to those types of commodity markets that meet the status consumers' needs, which tend to grow with the development of Ukrainian population worldviews, and serve the evidence for a steady desire to provide higher life quality standards.

The comparison of scientific views on the market analysis has indicated the absence of unified approaches to its implementation, the presence of contradictory points (inconsistency and instability of its implementation period, limited range of parameters, lack of effectiveness and

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Table 4:
Priority tasks for the development of the Ukrainian jewellery market

Reserves in the functioning of the market	Priority tasks for market development
1.1. Dependence on imports on the supply of precious metals and precious stones, primarily gold 1.2. The growth of world gold prices due to the exhaustion of its reserves, the volatility of energy prices, and the inflation of major world currencies	Creation of the country's own raw material base on the basis of state support and incentives for the development of deposits of gold, amber, etc. (creation of a package of geological information about a deposit for a potential investor, a simplified and fast procedure for obtaining a permit for the use of subsoil, reducing the tax burden on enterprises engaged in the extraction of useful fossils, etc.).
2.1. Removal competition from large enterprises 2.2. Reduction of the number of domestic market participants and the volume of their activities	Activation of the Antimonopoly Committee of Ukraine. Creation of an accessible information base for self-assessment of business activity in this field by the business itself.
3. Reduction of the effective demand of the population	Formation of the middle class on the basis of entrepreneurship development. Regulation of the level of incomes of the population on the basis of reduction of their differentiation.
4.1. Imperfect system of state regulation of economy and customs control 4.2. Saturation of the market with low-quality counterfeit products	Reduction of tax pressure on businesses. Suspension of the practice of paying taxes and fees in advance. Signing up the Convention on the Testing and Marking of Precious Metals by Ukraine. Entering a hard import check system. Strengthening the state's control over violations of the rules of jewellery trade.
5.1. Low level of innovation activity 5.2. Lack of investment in research work	Joining the World Gold Council for support in implementing industry innovations. Search of investors in the country and abroad on the basis of presentation of business plans of development of jewellery enterprises.
6. Low jewellery exports	Creation of affine production. Activation of advertising activity. Participation in world jewellery exhibitions. Improving the quality and safety of jewellery products.
7. Reduction in the volume of domestic production of jewellery	Extension of the range of products targeting all price segments and age groups. Creation of a new assortment based on 3D modelling. Reduction of products cost based on cost optimisation. Development of brands and trademarks. Active development of Internet commerce.

Source: Compiled by the authors based on [2; 4; 13-16; 26]

completeness in the analysis). To overcome the identified issues, a method for analysing the jewellery market with the definition of the each stage tasks has been developed.

The practical examination of the suggested method showed that the Ukrainian jewellery market is one of the potentially large markets (due to the size of the country by area and population, high educational level of the latter, the existence of economically active layer of population with high income).

The current stage of its development is generally characterised by a significant reduction in the number of participants engaged in the production and sales, the existence of negative trends in the declining volumes of production by domestic producers, the volumes of retail trade turnover, the growth of prices for finished products and raw materials (primarily gold), the volumes of imports and exports and, hence, the formation of a negative trade surplus. Failing to address the situation at the jewellery market can bring to grave consequences such as a gradual loss of the domestic market and a decrease in the level of economic security.

It has been determined that the peculiarity of the development of the domestic jewellery market lies in the fact that under unstable socio-economic conditions, when the demand structure changes in the direction of cheaper goods, its dynamics slows down and in case of a crisis, the market capacity is significantly reduced.

The factor analysis of the main elements of the market (demand and supply) has proved that the price factor exerts the most essential influence. In addition, significant conditions for further activation of this market favour an increase in the population purchasing power, reducing the share of imports based on the supply of competitive domestic products, etc.

The final stage of the implementation of the advanced methods in analytical research of the jewellery market is the development of recommendations for the elimination of the identified gaps. We consider that the jewellery market will provide sustainable growth only by means of combining the efforts of all market participants through the fulfilment of a series of priority tasks.

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