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STRATEGIES OF SMALL AND MEDIUM INDUSTRIES IN GROWING THEIR BUSINESS EXISTENCE DURING THE COVID 19 PANDEMIC (SURVEY ON THE APPAREL INDUSTRY IN PEKANBARU CITY)

Abstract: *This study seeks to investigate the influence of strategies executed by small and medium industries during the Covid-19 Pandemic in growing their business existence from a survey conducted to the apparel industries in Pekanbaru City. The population in this study were business actors in the apparel industry with 80 samples calculated using the Slovin formula. Multiple Regression using SPSS was used for data analysis. The results of this study highlight three important points. First, Product Innovation has a positive and significant influence on Business Existence. The respondent's answers show that there is a lack of innovation even though they have tried to modify the product. The innovation could not attract the attention of consumers. Second, the Online Marketing System has a significant influence on Business Existence. Almost all business actors could not properly market their products online. Business actors cannot disseminate information on social media, poorly explain the quality of products produced to consumers, and have problems using online media. Third, Partner Development has a positive and significant influence on Business Existence. Business actors, on the other hand, are still unable to reach deals with their partners. The weakness is that the existing partnership is not based on a legal issue.*

Key words: *Business Existence, Product Innovation, Online Marketing System, Partner Development.*

Language: *English*

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Introduction

Background of the Study

Indonesia is one of the developing countries. In general, developing countries will be oriented to the national development process and integrated into regional coverage. In this regard, the development process can be linked to a geographical approach in the form of a complex regional approach to phenomena and interactions between physical and spatial environmental variables and human variables in it. The activity that is usually in the limelight in the development process is economic activity. Economic activity is not only oriented towards large industries but includes medium and small industries. When

confronted with a pandemic, large, medium, and small industries endure shock and instability. This is especially true for small and medium-sized industries with lack of resilience and flexibility in dealing with a pandemic. Small and medium industries, hereinafter abbreviated as SMIs, are considered to lack resilience and flexibility in dealing with this pandemic due to several things such as the low level of digitalization, difficulties in accessing technology, and a lack of strategies to survive in business.

Based on these issues, it is critical to take actions in the form of policies to ensure the sustainability of SMIs in the midst of the Covid-19 pandemic. The operations of SMIs are strongly influenced by market conditions. Market conditions have become uncertain since the Covid-19 pandemic surging. The pandemic has had a negative impact on various sectors, especially the economic sector. The report from the Organization for Economic Cooperation and Development (OECD) stated that the Covid-19 pandemic could cause an economic crisis marked by the inhibition of economic activity in several countries. In addition, the pandemic has caused a low level of public consumption. SMI is one of the businesses impacted since has a strategic position in the economy of a country. In ASEAN, SMIs create jobs with a percentage between 50% to 95%. SMIs have also contributed 30% to 50% of Gross Domestic Product. Hence, it is very unfortunate if SMIs experience a decline in profit that it does not only affect the worker's economy but also the economy of the community and the country.

One of the SMI with high contribution is the apparel industry. In Indonesia, the apparel industry is a priority and labor-intensive industry with the employment of 1.68 million people. It contributes to the National GDP of 1.21%. However, the current development of the apparel industry is not encouraging with stagnant exports, increased imports, declining employment, and poor utilization. Several government policies to increase the competitiveness of the apparel industry are Bonded Zone or Kawasan Berikat(KB), Ease of Import for Export Destinations or Kemudahan Impor Tujuan Ekspor (KITE), restructuring of machinery/equipment for the apparel industry in 2007 – 2015, and the imposition of Indonesian National Standard (SNI) for baby clothes. Yet, they do not necessarily encourage competitiveness.

Data on SMIs in Pekanbaru City for the last 4 years is presented in Table 1.

Table 1. Number of SMIs in Pekanbaru City

Description	Year			
	2017	2018	2019	2020
Total SMIs	8,084	10,908	10,853	12,167

Source: Department of Cooperatives and MSMEs of Pekanbaru City

From all SMIs, at the end of 2020, the number of apparel entrepreneurs in Pekanbaru City has reached approximately 426 businesses. Currently, there are many apparel entrepreneurs in Pekanbaru City. We can find this business in the central and on the outskirts of Pekanbaru City. This also received special attention from the Pekanbaru City government. The apparel industry is one part of the creative industry sub-sector in the form of a creative craft industry that can be integrated through Small and Medium Industries (SMIs). The creative industry in the form of the clothing industry describes and elevates a region's identity through local items created by its people's ingenuity. This is in line with Presidential Regulation Number 28 of 2008 concerning the National Industrial Policy regulating the creative industry for the development and determination of the guide map.

Policies related to the industry in the region of Pekanbaru City as the capital of Riau Province can be seen in Pekanbaru City Regional Regulation Number 31 of 2001 concerning Industrial Business Regulations in the City of Pekanbaru placing the apparel industry as one of the spinning, weaving, and final processing industries. It relates to the Vision of the Mayor of Pekanbaru in the Regional Medium-Term Development Plan (RPJMD) of Pekanbaru City in 2012-2017 to realize Pekanbaru as a civilized metropolitan city and as one of the best investment destinations in Indonesia in 2030.

It is impossible to escape competition in the business. Not only in large industries with a broad scope, in the apparel industry competition can an indicator of threats as well as opportunities for business actors. When it comes to competitors, they all share the same interests. Every entrepreneur always tries their best to attract consumers or customers, for that we need the right strategy to provide added value to the products they produce. Not only in quantities but also in terms of value to beat the competitors. One strategy that can be applied is product innovation. Innovation is one of the important things in supporting business existence. Innovation is closely related to the process of outlining the value of a new idea. Innovation is defined as a discovery in the form of a new idea that can improve or develop an existing idea and be applied to a business decision. Product innovation can develop and maintain business existence. Assessment of business existence is not only seen in product innovation, but also from the online marketing system and partner development.

In addition to product innovations, another strategy that can be designed to improve business existence in the apparel industry is the development of information technology and telecommunications that will create more dynamic market conditions. To keep and win new clients, business actors will continue to be active and innovative in their improvisation and innovation. The development of information technology and telecommunications will make it easier for business actors to run their businesses. One of the information and telecommunications technologies that support these needs is the internet. The internet is currently developing at a breakneck pace and has the potential to reach every corner of the globe. Every business owner wants the general public to be aware of their products.

Because of the current rapid advancement of technology, the number of internet users in Indonesia is rapidly increasing. In this digital era, the extensive use of the internet in Indonesia causes things to change very quickly. More than 3.8 billion people in Indonesia use the internet, an increase of 38 million people since January 2017. This increase indicates that the internet penetration rate has reached 51% worldwide, or you could say more people use the internet than people who do not use the internet. In 2017, the increase in the number of internet users was much slower than in 2016. Out of 3.8 billion people, 2.9 billion are actively using social media. Looking at internet development in Indonesia, it can be concluded that the online market in Indonesia is growing rapidly from year to year. This is a good opportunity for business actors who want to break into the online market, especially in the small apparel industry in Pekanbaru city.

Furthermore, developing business partners is an important aspect of improving business existence. Industries will experience many challenges in the future. They need to adapt to developments of all aspects. Companies need to make changes to develop the company. One of them is by expanding the business partnership to face challenges in the future. Companies that establish partnerships can jointly minimize the risk of loss.

Based on the descriptions, the authors conducted a study regarding the strategies executed by small and medium industries in growing their business existence during the Covid-19 pandemic in the form of a survey on the apparel industries in Pekanbaru City.

Problem Statement

Based on the research background, the problem statement is formulated as follows:

1. Do Product Innovation, Online Marketing System, and Partner Development simultaneously have a significant influence on Business Existence?
2. Does Product Innovation partially have a significant influence on Business Existence?
3. Does the Online Marketing System partially have a significant influence on Business Existence?
4. Does Partner Development partially have a significant influence on Business Existence?

Research Objectives

From the problem statement, the research objectives of this study are:

1. To find out the influence of Product Innovation, Online Marketing System, and Partner Development simultaneously on Business Existence.
2. To find out the influence of Product Innovation on Business Existence.
3. To find out the influence of the Online Marketing System on Business Existence.
4. To find out the influence of Partner Development on Business Existence.

Research Outcomes/ Benefits

The benefits of this research are:

1. Provide input for the creative industry of apparel in Pekanbaru City concerning the steps to improve business existence.
2. Increase the author's knowledge and insight related to the strategy of growing business existence in the apparel industry in Pekanbaru City.

Literature Review

Business Existence (Y)

There are four meanings of the word ‘existence’. First, it explains what exists. Second, existence is something with actuality. Third, existence is something that is experienced and emphasizes that something exists. Fourth, existence means perfection. According to Sjafirah and Prasanti (2016), it is defined as existence. The existence in this study is an influence on our presence or absence. Other individuals must provide us with existence because, with the response from other people around us, it proves that our existence is recognized. The value of existence is very important as it is proof of work or performance in an environment. Existence has a broad meaning. In this study, the existence of which is seen from the success of business actors in the creative industry of apparel, specifically SMIs in Pekanbaru City.

Furthermore, existence can be defined as an industrial activity that is intended to be in a state of constant development. Existence is an endeavor to do something to survive or maintain and achieve to exceed the current conditions. The increasingly tough market competition with diverse consumer demands requires business actors to maintain their existence. This is a challenge for business actors, for that it is necessary to think of strategies.

Strategic thinking to maintain the existence of SMIs is reflected in several aspects such as

production, accessibility, supply and demand, marketing, and government policy. The existence of a business can be seen through products such as consistency in production, production processes, quality of production, and effectiveness of production. Next, accessibility or attainment is the degree of ease that a person can achieve or obtain the desired. Thus, products produced by SMIs should be easy to get because they are sold at accessible places. The third aspect is demand and supply. Demand is the number of goods purchased or requested at a certain price and time, while supply is several goods sold or offered at a certain price and time. From this understanding, If SMIs want to stay in business, they must devise an effective strategy. Effectiveness can be achieved if business actors pay attention to the demand and supply. SMI is said to have done something right if several products produced at that time were sold out according to the set price. This is due to the demand for several goods at the same time at the agreed price. Another aspect is marketing, this is an important factor for business success. Five important aspects of marketing in running a business are 1) making product specifications, 2) knowing market segmentation, 3) analyzing the market and forecasting demand, 4) analyzing competitors, and 5) conducting promotions. These five aspects must be understood by business actors.

Finally, the existence of business can also be related to government policies. The government considers the micro, small, and medium business sector important for the Indonesian economy. The importance of the Micro, Small & Medium Enterprises (MSMEs) for the Indonesian economy can be seen in five portraits of MSMEs including 1) a large number of, 2) MSMEs absorbing a large number of workers, 3) a large contribution to GDP, 4) greater amount of loans disbursed by banks to MSMEs, and 5) MSMEs surviving in rapid changes of market conditions. The seriousness of the Indonesian government is paying attention to MSMEs can be seen from the policies of the assistance program, legal products related to MSMEs, as well as the establishment of institutions to handle MSMEs. The government's attention to MSMEs and SMIs in Indonesia should encourage them to exist in its business. However, some factors need to be considered in growing business existence such as Product Innovation (X1), Online Marketing System (X2), and Partner Development (X3).

Product Innovation (X1)

According to Myers and Marquis in Kotler (2014: 36), product innovation is a combination of various processes that influence each other. Thus, innovation is not a concept of a new idea, a new invention, or a development of a new market, rather, innovation is a description of all these processes. Kotler and Keller (2016; 476) say that product innovation is “an innovation is any good, service, or idea that someone perceives as new, no matter how long its history, the spread of a new idea from its source of invention or creation to its ultimate users or adopters”. While Charles et al. (2012:30) state that innovation is part of a framework that connects aspects of corporate culture with the ability to innovate and improve company performance through the buyer decision process. Product innovation is expected to drive buying decisions.

Kotabe in Tamamudin (2012: 289) asserts that the more the product innovation made by the company, the higher the company's performance through increasing purchase decisions. In global competition, companies must be able to modify their products to add value to meet the needs and tastes of consumers. The added value of the product can be in the form of a design/model and the service. Thus, SMIs desiring to exist in their business need to pay attention to innovation in the products they produce. Product innovations that can take the product one step further compared to its competitors' s are characterized by 1) new products to the world, 2) new product lines, 3) additions to existing product lines, 4) improvements and revisions to existing products, 5) redefinition, and 6) cost reductions.

Online Marketing System (X2)

According to Myers and Marquis in Kotler (2014: 36), product innovation is a combination of various processes that influence each other. Thus, innovation is not a concept of a new idea, a new invention, or a development of a new market, rather, innovation is a description of all these processes. Kotler and Keller (2016; 476) say that product innovation is “an innovation is any good, service, or idea that someone perceives as new, no matter how long its

In addition to product innovation in realizing business existence, business actors also need to understand the online marketing system. Online marketing is a company performance management system that focuses on selling goods, services, or promotions using the internet as support system (Kotler, 2011). Marketing through social media is a form of direct or indirect marketing to build awareness, and action for a brand, business, person, or other entity and is carried out using tools from the social web, such as blogging, microblogging, social networking, social bookmarking, and content (Gunelius, 2011:10).

Supranto (2006) mentions the indicators used in measuring the application of online marketing as 1) Information, 2) Service availability, 3) Service responsiveness, 4) Purchasing process, and 5) Usability.

Partner Development (X3)

The third factor indicating business existence among SMIs is partner development. The partnership is a cooperation between small and medium-sized businesses or with large businesses with continuous guidance and development by medium or large businesses by taking into account the principles of mutual needs, mutual strengthening, and mutual benefit. A business partnership is mutually beneficial business cooperation between small entrepreneurs and medium or large entrepreneurs (partner companies) with guidance and development by large entrepreneurs by taking into account the principle of mutual benefit (Sutawi in Yuliani, 2004:11).

The following characteristics or indicators of partnership are (1) action that is flexible and needs-based, (2) the nature of the partnership of mutual benefit and synergy in the program; (3) business partnership that is sustainable and professional in terms of rights and obligations, (4) partnership status regarding the legalization with MoU, (5) partnership system of goal-oriented and emphasize on program success, (6) program targets by the characteristics of the program, and (7) success indicators of satisfaction between partner institutions and transparency (Rizka & Suharyani, 2015)

Method

Research Sites

This research was conducted in the apparel industry across Pekanbaru city.

Data Types and Sources

According to Umar (2009:42), there are two types of data used in this study:

a. Primary data is obtained directly from the first-hand source from individuals such as filling out questionnaires and interviews with related parties, as well as other data related to research.
b. Secondary Data has been processed, presented, and documented. It is in the form of other relevant data (Robbins, 2012).

Population and Sample

The population in this study was 426 apparel industry entrepreneurs in Pekanbaru city.

The sample size was determined by the Slovin formula in Umar (2011: 78):

$$n = \frac{N}{1 + Ne^2}$$

Description:

n = Number of Samples

N = Population Size

e = Percentage of Allowance for Inaccuracy due to Sampling Errors that are tolerable or Desirable

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{426}{1 + 426(0,1)^2}$$

$$n = \frac{426}{1 + 4,26}$$

$$n = \frac{426}{5,26}$$

$$n = 80$$

Data Testing

Research instrument testing

1. Validity is evidence that the instrument, technique, or process used to measure a concept actually measures the intended concept. Validity test aims to measure the validity of a statement system.
   a. If r count > r table, the items are valid
   b. If r count < r table, the items are not valid
2. Reliability Test is an index that shows the extent to which an instrument can be trusted or relied on. If a measuring device is used twice or more to measure the same symptom with consistent results, it can be said reliable. The reliability test aims to measure the consistency of a person's answers to the statement items in the questionnaire (Sekaran, 2006: 248). According to Arikunto (2014), an instrument can be said to be reliable if it has a reliability coefficient of 0.6 or more.

Multiple Linear Regression Analysis

Multiple linear regression analysis is a statistical method used to determine the effect between independent variables (Product Innovation, Online Marketing System, Partner Development) and the dependent variable (Business Existence). Sugiyono (2017) states that the relationship between the two can be formulated into an equation.

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + e$$

Where:

Y	= Business Existence
β0	= Constant
X1	= Product Innovation
X2	= Online Marketing System
X3	= Partner Development
β 1β2 β3	= Regression coefficient
e	= Standard error

Classical assumption test

Prior to the analysis on multiple linear regression, the requirements for the analysis in the form of the classical assumption tests were carried out.

Data tested for the classical assumptions in linear regression must be interval or ratio scale data. The data obtained was in the form of a Likert scale. There is still debate on the type of Likert scale measurement. For Hair Bush and Ortinau (2003), the data obtained from the Likert scale has an ordinal-interval scale. It is in line with Zikmund that the Likert scale produces ordinal data. Cooper and Schlinder

also say that the Likert scale produces interval data (Simamora, 2005: 24).

To answer this debate, the author considered the data to be ordinal. Thus, it was necessary to change from the ordinal scale to the interval scale by using the Method of Successive Interval (MSI), which is an additional menu in Microsoft Excel. The transformation steps with MSI are as follows (Riduwan, 2006):

1. Calculating the frequency distribution of each respondent's choices.
2. Calculating the proportion of each answer based on the frequency distribution.
3. Calculating the cumulative proportion by summing the proportion sequentially per column of scores.
4. Calculating the Z-value for each cumulative proportion using the normal distribution table.
5. Determining the density for each Z-value using the density table.
6. Calculating the scale value (average value of interval scores) for each choice through the following equation:

$$\text{Scale Value} = \frac{\text{Density at lower limit} - \text{Density at upper limit}}{\text{Area below upper limit} - \text{Area below lower limit}}$$

7. Calculating the score (the transformation result) for each choice through the following equation:

Score = Scale Value + Scale Value minimum + 1

Before hypothesis testing, a classical assumption test should be carried out. The classical linear model assumes that there is no multicollinearity, autocorrelation, and heteroscedasticity. The testing of classical assumption deviation is as follows:

Multicollinearity Test

Multicollinearity test aims to determine whether the relationship between independent variables has multicollinearity symptoms. Multicollinearity is a very high or very low correlation that occurs in the relationship between independent variables. Multicollinearity test should be done if there are more than one independent variables. According to Wijaya in Sarjono Haryadi et al. (2011: 70), there are several ways to detect the presence or absence of multicollinearity:

a. The R2 value generated by an empirical regression model estimation is very high, but individually many independent variables do not significantly influence the dependent variable.
b. Analyzing correlations among independent variables. If there is a fairly high correlation between independent variables (greater than 0.90), this is an indication of multicollinearity.
c. Multicollinearity can also be seen from the value of VIF (variance – inflating factor). If VIF < 10, the collinearity can be tolerated.
d. The eigenvalues of one or more independent variables that are close to zero give an indication of multicollinearity.

The basis of decision-making are:

a. If the value of VIF < 10, there is no symptom of multicollinearity among the independent variables.
b. If the VIF value is > 10, there is a symptom of multicollinearity among the independent variables.

Normality Test

The normality test aims to determine the normality of data distribution. Normality test aims to compare the data held and data with the normal distribution that has the same mean and standard deviation as the data held (Haryadi et al., 2011: 53). Normality test is important because one of the requirements for parametric testing is that the data must have a normal distribution. The test criteria are as follows:

a. Sig. Value of the Kolmogorov-Smirnov test > 0.05 indicates the data is normally distributed.
b. Sig. Value of the Kolmogorov-Smirnov test < 0,05 indicates the data is not normally distributed.

Hypothesis Testing

1. Coefficient of Determination (R^2)

If R^2 is close to 1, the influence of the independent variable is simultaneously strong and if R^2 is close to 0, the influence of the independent variable on the dependent variable simultaneously is weak.

2. F-Test

To test the significance of the simultaneous influence of Product Innovation, Online Marketing System, and Partner Development on the Business Existence of creative industry players in Pekanbaru City, the F test was used.

The test criteria are:

a. If the calculated F is greater than the F table (Fcount > Ftable), the independent variables simultaneously have a significant influence on the dependent variable.
b. If the calculated F is smaller than the F table (Fcount < Ftable), the independent variables simultaneously have no significant effect on the dependent variable.

3. T-Test

To test the significance the influence of Product Innovation, Online Marketing System, and Partner Development on Business Existence of creative

industry players in Pekanbaru City, the t-test was used.

a. If calculated t is greater than t table (tcount > ttable), the independent variable has a significant influence on the dependent variable.
b. If calculated t is smaller than t table (tcount < ttable), the independent variable has no significant influence on the dependent variable.

In processing the data from the questionnaire, the authors used the Statistical Product and Service Solution (SPSS VERSION 17.00). Because all the answers given by the respondents are qualitative, the qualitative answers are given a scale to make it onto quantitative data. The categories were based on the Likert scale.

Instrument Testing

Validity Test

The validity test carried out on the research variables consisting of Product Innovation, Online Marketing Systems, Partner Development, and Business Existence were declared valid because rcount > rtable. The rcount can be seen in the corrected item-total correlation.

Table 2. The Validity of the Variable of Product Innovation (X1)

Variable	Statement	r count	r table	Description
Product Innovation (X1)	OE 1	0.331	0.2199	Valid
	OE 2	0.449	0.2199	Valid
	OE 3	0.548	0.2199	Valid
	OE 4	0.740	0.2199	Valid
	OE 5	0.481	0.2199	Valid
	OE 6	0.740	0.2199	Valid

Table 3. The Validity of the Variable of Online Marketing System (X2)

Variable	Statement	r count	r table	Description
Online Marketing System (X2)	KPS 1	0.416	0.2199	Valid
	KPS 2	0.799	0.2199	Valid
	KPS 3	0.343	0.2199	Valid
	KPS 4	0.332	0.2199	Valid
	KPS 5	0.784	0.2199	Valid

Table 4. The Validity of the Variable of Partner Development (X3)

Variable	Statement	r count	r table	Description
Partner Development (X3)	BEO 1	0.503	0.2199	Valid
	BEO 2	0.363	0.2199	Valid
	BEO 3	0.596	0.2199	Valid
	BEO 4	0.546	0.2199	Valid
	BEO 5	0.566	0.2199	Valid

Table 5. The Validity of the Variable of Business Existence (Y)

Variable	Statement	r count	r table	Description
Business Existence (Y)	KPD 1	0.482	0.2199	Valid
	KPD 2	0.426	0.2199	Valid
	KPD 3	0.760	0.2199	Valid
	KPD 4	0.585	0.2199	Valid
	KPD 5	0.743	0.2199	Valid

If $r_{count} \geq r_{table}$, the statement items are declared valid. The value of r_{table} for df n-2 = 80-2 = 78 = 0.2199 (see r_{table} with df=78). From the table above, the values of r of all statements were > 0.2199. Thus, the measuring instrument used is said valid.

Reliability Test

The results of the reliability test on Product Innovation, Online Marketing Systems, Partner Development, and Business Existence show that all indicators are reliable with Cronbach's alpha of ≥ 0.6.

Table 6. Reliability Test

Variable	Cronbach's Alpha	Critical Value	Decision
Product Innovation (X1)	0.794	0.6	Reliable
Online Marketing System (X2)	0.748	0.6	Reliable
Partner Development (X3)	0.738	0.6	Reliable
Business Existence (Y)	0.809	0.6	Reliable

If the reliability value is less than 0.6, the measuring instrument used is not reliable. From the table above, the value of Cronbach's Alpha for all variables is > 0.6. This means that the measuring instrument used is reliable.

Classical Assumption Test

Normality Test

Table 7. Normality Test
One-Sample Kolmogorov-Smirnov Test

		Product Innovation	Online Marketing System	Partner Development	Business Existence
N		80	80	80	80
Normal Parameters[a,b]	Mean	20.1202	13.5377	16.0635	15.5101
	Std. Deviation	3.57979	3.16686	3.23215	3.40864
Most Extreme Differences	Absolute	.123	.120	.105	.079
	Positive	.064	.095	.105	.074
	Negative	-.123	-.120	-.061	-.079
Kolmogorov-Smirnov Z		1.104	1.071	.938	.702
Asymp. Sig. (2-tailed)		.175	.201	.343	.707

a. Test distribution is Normal.
b. Calculated from data.

Based on Table 7, it can be concluded that all data have a normal distribution. This is indicated by the results of the Kolmogorov-Smirnov test which shows the Asymp Sig (2-tailed) value of > 0.05 of the product innovation variable (0.175), online marketing system variable (0.201), partner development variable (0.343), and business existence (0.707). Thus, the model has met the assumptions to be used as a multiple linear regression equation.

Heteroscedasticity Test

The heteroscedasticity test is used to determine whether there is a deviation from the classical assumption of Heteroscedasticity in terms of variance and residual inequality for all observations in the regression model. Heteroscedasticity can result in inefficient parameter estimation so that it does not have minimum variance. Because parameter estimation is considered efficient for having a minimum variance, the residual variance is constant or the homoscedasticity assumption is met.

The impact of heteroscedasticity is that it is difficult to measure the actual standard deviation. It can result in a standard deviation that is too wide or too narrow. If the error rate of the variance increases, the confidence level will be narrower. A scatterplot is used to detect whether there is heteroscedasticity. The basis for decision-making are (Ghozali, 2005: 107):

1. If there is a regular pattern on the plot such as dots that form regular patterns (wavy, widen, and narrowed), heteroscedasticity has occurred.
2. If there is no clear pattern and the points are spread above and below 0 on the Y axis, there is no heteroscedasticity.

The following is a scatterplot of the structural model to determine whether heteroscedasticity occurs in this study:

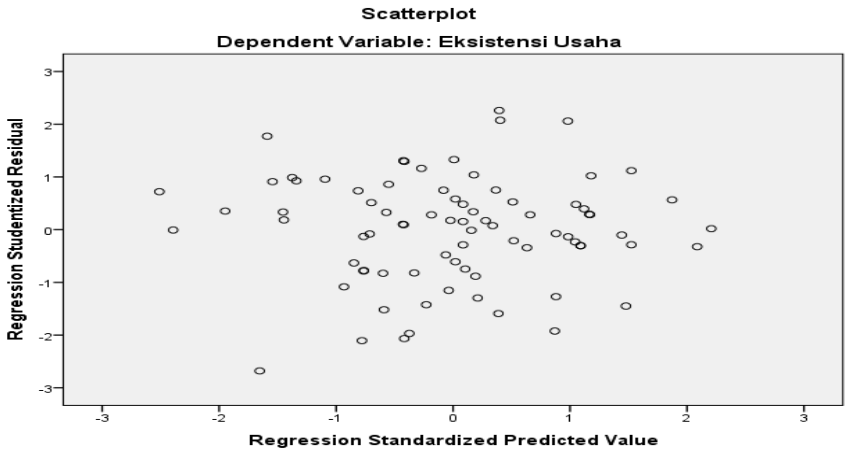

Figure 1 - Scatterplot

From the scatterplot above, it can be seen that the dots do not form a certain pattern and spread randomly above and below 0 on the Y-axis. Thus, it can be interpreted that there is no heteroscedasticity in the regression model of this study.

Multicollinearity Test

Table 8. Multicollinearity Test

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Product Innovation	.476	2.099
	Online Marketing System	.369	2.706
	Partner Development	.298	3.352

a. Dependent Variable: Business Existence

Multicollinearity testing aims to determine whether there is a correlation among the independent variables in the regression model. The results show that there is no correlation among the independent variables. This can be seen from the VIF < 10. This means that the regression model is free from correlation among variables.

Table 9. Multiple Linear Regression Equations

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.524	1.215		-.431	.668
	Product Innovation	.329	.084	.345	3.920	.000
	Online Marketing System	.341	.108	.317	3.172	.002
	Partner Development	.299	.117	.284	2.551	.013

a. Dependent Variable: Business Existence

Based on Table 9, the regression equation can be formulated as follows:

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + e$$

$$Y = -0.524 + 0.329X1 + 0.341X2 + 0.299X3 + e$$

The interpretation of the regression equation is as follows:

a. The constant (a) is -0.524. This means that if the variables of product innovation, online

marketing system, and partner development are assumed to be 0, the business existence decreases by 0.524.

b. The regression coefficient of the variable of product innovation is 0.329. If product innovation is increased by 1 unit, it will increase business existence by 0.329 assuming other variables remain constant.

c. The regression coefficient of the variable of online marketing system is 0.341. This means that if the online marketing system is increased by 1 unit, it will increase business existence by 0.341 assuming other variables remain constant.

d. The regression coefficient value of the variable of partner development is 0.299. This means that if partner development is increased by 1 unit, it will increase business existence by 0.299 assuming other variables remain constant.

Table 10. Coefficient of Determination Test (R^2)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.848[a]	.720	.709	1.84033

a. Predictors: (Constant), Partner Development, Product Innovation, Online Marketing System

b. Dependent Variable: Business Existence

The results of the coefficient of determination test show 0.709 or 70.9% with a value of e1=0,291 (√1-0,709) meaning that product innovation, online marketing systems, and partner development simultaneously influence the business existence variable of 70.9% and the remaining 29.1% influenced by other factors not examined in this study.

Table 11. F-Test

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	660.488	3	220.163	65.006	.000[b]
	Residual	257.399	76	3.387		
	Total	917.887	79			

a. Dependent Variable: Business Existence

b. Predictors: (Constant), Partner Development, Product Innovation, Online Marketing System

The F_{count} is 65.006 with a significance of 0.000. F_{table} at a significant level of 5% can be obtained by the equation n – k – 1 ; k = 80 – 3 – 1 ; 5 = 76 ; 5 = 2.725 where n is the number of samples, k is the number of independent variables and 1 is a constant. Thus, it is known that F_{count} (65.006) > F_{table} (2.725) with Sig. (0.000) < 0.05. Thus, product innovation, online marketing system, and partner development simultaneously have a significant influence on business existence.

Table 12. Partial Regression Coefficient Test (T-Test)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.524	1.215		-.431	.668
	Product Innovation	.329	.084	.345	3.920	.000
	Online Marketing System	.341	.108	.317	3.172	.002
	Partner Development	.299	.117	.284	2.551	.013

a. Dependent Variable: Business Existence

It is known that the ttable value is at a significance level of 5% (2-tailed) with the following equation:

t_{table} = n – k – 1: alpha/ 2
= 80 – 3 – 1: 0.05/ 2
= 76 : 0.025
= 1.992

Where:

n : number of samples
k : number of independent variables
1 : Constant

Results and Discussion

Hypothesis 1: Product Innovation partially has a significant influence on Business Existence. The results of statistical tests show that tcount (3.920) > ttable (1.992) or Sig. (0.000) < 0.05. This means that product innovation has a positive and significant influence on business existence. Business actors who are oriented to business existence should think of something new and unique for their products. Business actors should make innovation because the main goal of innovation is to do and create something different from competitors in the same field. Innovation is a key factor for business success. Research conducted by Curatman et al. (2018) proves that product innovation has a positive effect on competitive advantage by 13.1%, meaning that if the company wants to excel in business competition, it should innovate the products. Thus the existence of the business will be sustained and even improved.

Many factors must be addressed in order to make innovation, such as product concepts, working methods, product marketing, or thoughts that must be colored with creative thinking to emerging inventive products. There are many forms of innovation in business, it can be product innovation, internal systems, work processes, or business models. The goal of innovation is for business players to be able to adapt to changing circumstances, especially in the contemporary period, where understanding information technology is critical. The reason why innovation needs to be considered by business actors is that innovation encourages business growth, keeps business relevant, and gives different colors to the products compared to competitors.

The results of this study are in line with research conducted by Putri and Masyhuri (2013) that innovation, raw material production systems, business system development, and marketing systems have a significant influence on indicators of business existence. In the apparel industry, the statistical test results showed that there was an influence of innovation on business existence by 32.9%. This means that innovation among apparel business actors is very much needed. business actors must learn to innovate by thinking creatively, imitating and modifying existing ideas, taking into account feedback from consumers, following current developments, and daring to change things for the better future. The weakness of the apparel business, which can be seen from the results of this study, is the lack of observance of business actors in seeing opportunities, such as the kind of clothes consumers are interested in during the covid 19 pandemic. Although some have shifted the direction from clothing of formal events, school and work uniform to produce daily clothes, especially for women and children, there are still many who hesitate to make the same decision.

Hypothesis 2: Partial Influence of Online Marketing System on Business Existence.

The results of the statistical test show tcount (3.172) > ttable (1.992) or Sig. (0.002) < 0.05. This means that the online marketing system has a positive and significant influence on business existence. Therefore, business actors should be aware of the importance of understanding digital marketing. Digital branding goals include increasing market share, increasing the number of comments on a blog or website, increasing sales revenue, reducing distribution or promotion costs, achieving brand goals, increasing brand awareness, increasing the size of the database, and achieving customer relationship management, increasing purchase frequency or customer reference rate, and improving supply chain management through better member coordination, adding partners, or optimizing inventories.

If the apparel business actors as the samples in this study have decided to do online marketing, they maintain their business and grow their business existence in the Covid-19 pandemic. There are many benefits of digital marketing, such as connecting with consumers on the internet, generating high sales, making businesses more efficient, activating real-time customer service, connecting businesses with consumers using mobile devices, helping generate high income, maintaining a position against competitors, and helping compete with big companies.

The results of this study are supported by research conducted by Mario et al. that partially, online marketing has a positive and significant effect on purchase decisions. If consumers are easy to make purchases online, it is expected that there will be an increase in sales. Increasing sales will make business actors flooded with orders and profits. Business existence will be realized as expected. The weakness of many apparel business actors in this study is that they do not utilize information technology in marketing their products. Consequently, many clothes that have been produced are not sold.

Hypothesis 3: Partner Development partially has a significant influence on Business Existence.

An analysis of Partner development shows tcount (2,551) > ttable (1,992) or Sig. (0.013) < 0.05. This means that partner development has a positive and significant influence on business existence. Partners are co-workers or work partners, often also called business partners. The results of this test emphasize the importance of building business partners and developing them. Business partners are interwoven in a cooperative effort to achieve a goal based on an agreement and their respective roles. Looking at the responses in this study, most of the apparel business actors in Pekanbaru City have established partnerships with other business actors, be it in the same or different fields. However, business actors still need to develop their partnerships, because this is one of the efforts to advance the business they run. Thus, they can maintain and improve business existence. The results of the research by Halik et al. (2019) strengthen that partnerships have a significant positive effect on operating income. If business income can be increased, business existence will be realized.

Establishing a business partnership can be done with small entrepreneurs or large entrepreneurs who have a wider network and become a part of it. It can increase our role as equal business partners by contributing positively to one another. Benefits are mutually beneficial to the business interests of the two parties who are collaborating on a project. It can be in the form of management, financing, marketing cooperation, or business merger that provides mutual reinforcement from various business sectors.

Conclusion and Suggestion

Conclusion:

1. Innovation has a positive and significant influence on business existence. Respondent's answers show that there is a lack of innovation even though they have tried to modify the product. Yet, it could not to attract the attention of consumers.
2. The online marketing system has a significant influence on business existence. Almost all business actors could not market their products online properly. Business actors could not disseminate information on social media or explain the quality of the products produced. They often experience problems when using online media.
3. Partner development has a positive and significant influence on business existence. However, business actors could not make agreements with their partners. The weakness of the current partnership is not based on something legal.

Suggestions:

1. To innovate and keep up with the competition, the apparel business is advised to think outside the box by seeking new ideas and doing market analysis. Business players must be aware of their surroundings to build something distinctive relating to the business they are doing. They should take into account feedback from consumers and follow fashion trends. Business actors must be courageous to change from obsolete practices and toward those that are more appealing.
2. Business actors are advised to focus more on online product marketing. Many benefits can be obtained if a business can select the most relevant and well-understood internet media.
3. Business actors must understand how to form and develop a partnership. For the partnership to work well, business actors and partners must prioritize business values for the partnership's success and profitability, communicate regularly to avoid misunderstandings, and agree on mutual partnership goals for the partnership to succeed. It is necessary to outline the strengths and weaknesses of each business as well as commitment.

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REFERENCE DATA OF PRESSURE DISTRIBUTION ON THE SURFACES OF AIRFOILS HAVING THE NAMES BEGINNING WITH THE LETTER C

Abstract: *The results of the computer calculation of air flow around the airfoils having the names beginning with the letter C are presented in the article. The contours of pressure distribution on the surfaces of the airfoils at the angles of attack of 0, 15 and -15 degrees in conditions of the subsonic airplane flight speed were obtained.*

Key words: *the airfoil, the angle of attack, pressure, the surface.*

Language: *English*

Citation: Chemezov, D., et al. (2021). Reference data of pressure distribution on the surfaces of airfoils having the names beginning with the letter C. *ISJ Theoretical & Applied Science, 12 (104)*, 814-844.

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Scopus ASCC: *1507.*

Introduction

Creating reference materials that determine the most accurate pressure distribution on the airfoils surfaces is an actual task of the airplane aerodynamics.

Materials and methods

The study of air flow around the airfoils was carried out in a two-dimensional formulation by means of the computer calculation in the *Comsol Multiphysics* program.

The airfoils in the cross section were taken as objects of research [1-14]. In this work, the airfoils having the names beginning with the letter *C* were adopted. Air flow around the airfoils was carried out at the angles of attack (α) of 0, 15 and -15 degrees.

The flight speed of the airplane in each case was subsonic. The airplane flight in the atmosphere was carried out under normal weather conditions. The geometric characteristics of the studied airfoils are presented in the Table 1. The studied geometric shapes of the airfoils in the cross section are presented in the Table 2.

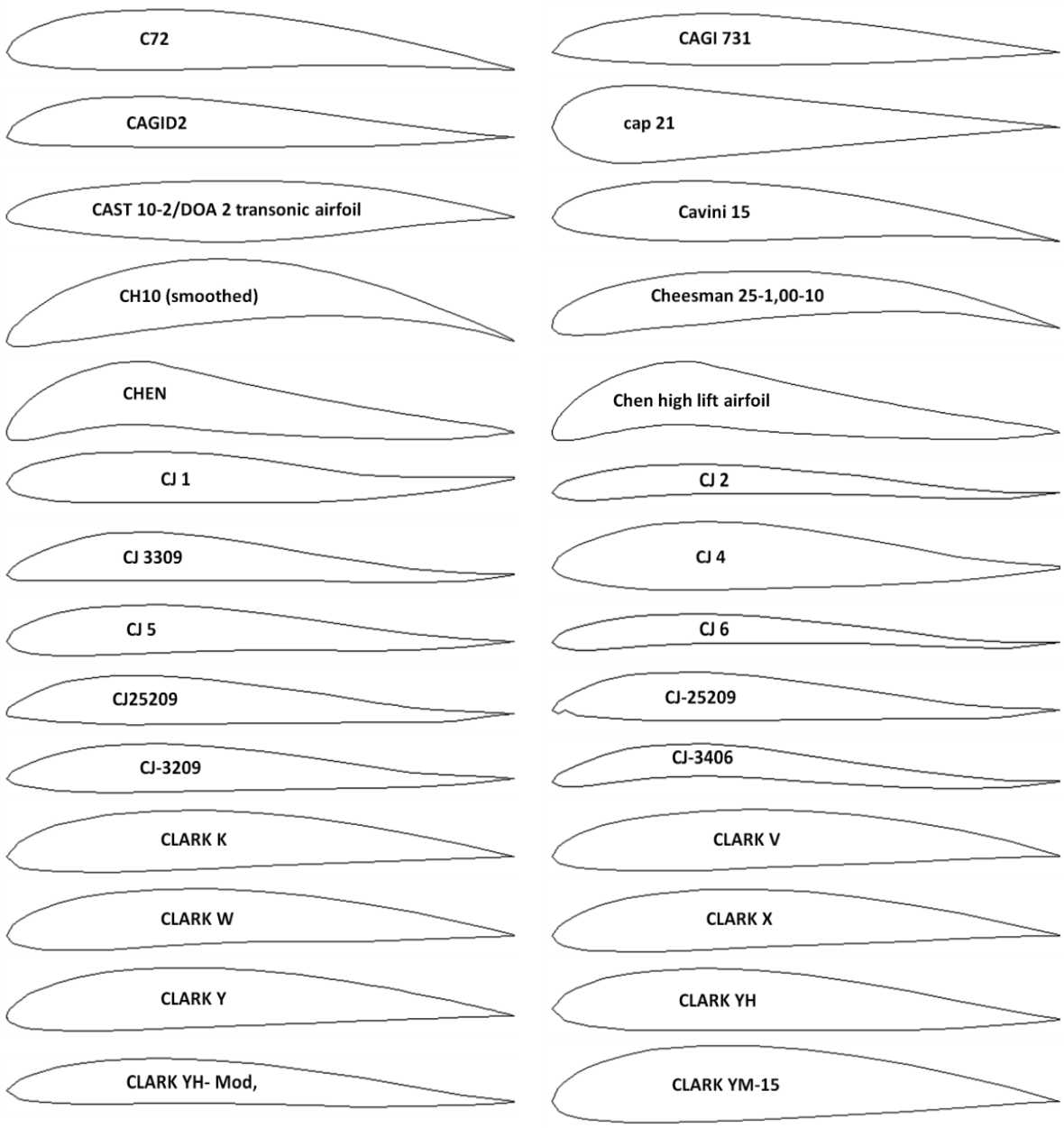
Table 1. The geometric characteristics of the airfoils.

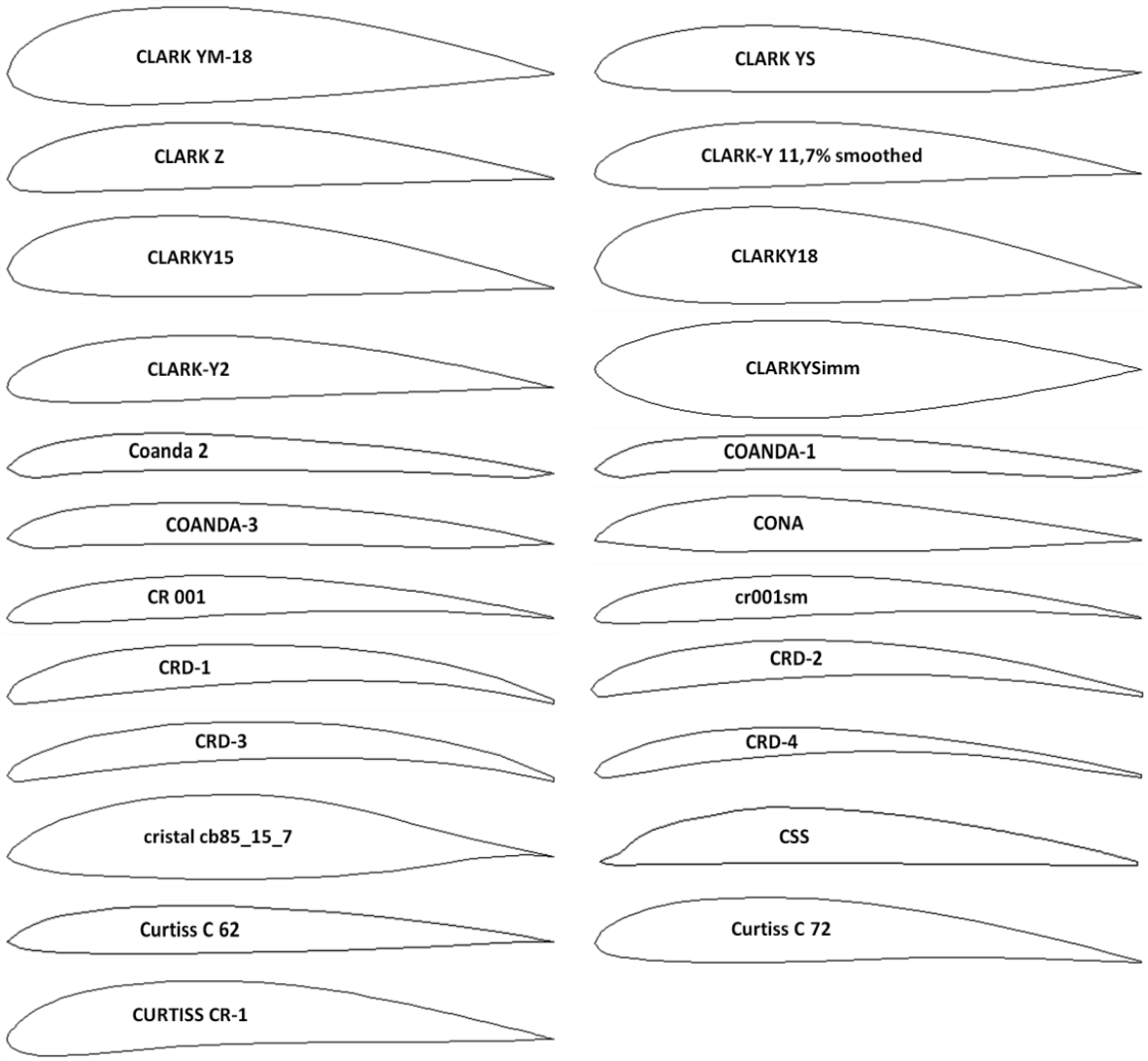
Airfoil name	Max. thickness	Max. camber	Leading edge radius	Trailing edge thickness
C72	11.73% at 30.0% of the chord	5.87% at 30.0% of the chord	1.3308%	0.1%
CAGI 731	10.06% at 30.0% of the chord	2.42% at 30.0% of the chord	1.3983%	0.0%
CAGID2	9.97% at 30.0% of the chord	2.88% at 20.0% of the chord	1.006%	0.0%
cap 21	15.59% at 15.7% of the chord	0.62% at 23.9% of the chord	3.2138%	0.0%
CAST 10-2/DOA 2 transonic airfoil	12.18% at 45.6% of the chord	1.54% at 69.5% of the chord	0.9165%	0.5%
Cavini 15	11.7% at 30.0% of the chord	5.85% at 30.0% of the chord	1.1643%	0.0%
CH10 (smoothed)	12.84% at 30.6% of the chord	10.2% at 49.3% of the chord	1.2557%	0.011%
Cheesman 25-1,00-10	10.1% at 25.0% of the chord	6.7% at 50.0% of the chord	1.5944%	0.0%
CHEN	12.44% at 26.6% of the chord	7.76% at 26.6% of the chord	1.9015%	0.0%
Chen high lift airfoil	12.44% at 26.6% of the chord	7.76% at 26.6% of the chord	1.8978%	0.0%
CJ 1	9.5% at 30.0% of the chord	1.25% at 30.0% of the chord	1.2343%	0.3%
CJ 2	5.6% at 20.0% of the chord	2.3% at 30.0% of the chord	0.7868%	0.25%
CJ 3309	9.2% at 30.0% of the chord	3.4% at 30.0% of the chord	0.7862%	0.2%
CJ 4	13.7% at 30.0% of the chord	2.35% at 30.0% of the chord	1.3037%	0.6%
CJ 5	9.3% at 20.0% of the chord	2.3% at 30.0% of the chord	1.137%	0.0%
CJ 6	5.6% at 20.0% of the chord	2.3% at 30.0% of the chord	0.7868%	0.25%
CJ25209	9.5% at 25.4% of the chord	2.5% at 25.4% of the chord	0.6116%	0.0%
CJ-25209	9.31% at 30.0% of the chord	2.47% at 20.0% of the chord	0.7841%	0.1%
CJ-3209	9.34% at 30.0% of the chord	1.98% at 30.0% of the chord	0.8173%	0.0%
CJ-3406	6.0% at 20.0% of the chord	4.0% at 30.0% of the chord	0.7%	0.2%
CLARK K	11.69% at 30.1% of the chord	3.26% at 40.1% of the chord	1.9382%	0.12%
CLARK V	11.64% at 30.0% of the chord	3.42% at 50.0% of the chord	1.1512%	0.14%
CLARK W	11.22% at 30.0% of the chord	3.76% at 40.0% of the chord	1.4457%	0.1%
CLARK X	11.7% at 30.0% of the chord	3.3% at 40.0% of the chord	1.2523%	0.12%
CLARK Y	11.71% at 28.0% of the chord	3.43% at 42.0% of the chord	1.0714%	0.1199%
CLARK YH	11.9% at 30.0% of the chord	5.95% at 30.0% of the chord	1.8596%	0.1%
CLARK YH- Mod,	8.33% at 30.0% of the chord	5.95% at 30.0% of the chord	1.5909%	0.07%
CLARK YM-15	14.98% at 30.1% of the chord	3.55% at 40.1% of the chord	2.0202%	0.16%
CLARK YM-18	17.98% at 30.2% of the chord	3.55% at 40.2% of the chord	2.884%	0.18%
CLARK YS	11.7% at 30.0% of the chord	2.35% at 30.0% of the chord	1.2661%	0.0%
CLARK Z	11.75% at 30.0% of the chord	4.06% at 40.0% of the chord	1.6416%	0.12%
CLARK-Y 11,7% smoothed	11.72% at 30.9% of the chord	3.55% at 43.5% of the chord	1.2361%	0.0%
CLARKY15	15.0% at 30.0% of the chord	5.85% at 30.0% of the chord	1.9854%	0.16%
CLARKY18	18.0% at 30.0% of the chord	5.85% at 30.0% of the chord	2.831%	0.18%
CLARK-Y2	11.7% at 30.9% of the chord	3.58% at 40.2% of the chord	1.1426%	0.0%
CLARKYSimm	18.33% at 36.0% of the chord	0.0% at 0.0% of the chord	0.7217%	0.12%
Coanda 2	6.0% at 30.0% of the chord	4.3% at 30.0% of the chord	0.6871%	0.0%
COANDA-1	5.65% at 30.0% of the chord	4.17% at 30.0% of the chord	0.6522%	0.0%
COANDA-3	7.0% at 30.0% of the chord	4.2% at 30.0% of the chord	0.6242%	0.0%
CONA	10.0% at 31.3% of the chord	2.96% at 31.3% of the chord	0.3463%	0.258%
CR 001	7.33% at 27.1% of the chord	4.06% at 45.4% of the chord	0.5493%	0.001%
cr001sm	7.33% at 27.1% of the chord	4.06% at 45.4% of the chord	0.5493%	0.001%
CRD-1	7.62% at 30.0% of the chord	7.13% at 50.0% of the chord	1.0378%	0.7%
CRD-2	6.59% at 30.0% of the chord	6.57% at 50.0% of the chord	0.8749%	0.65%
CRD-3	6.85% at 30.0% of the chord	7.3% at 50.0% of the chord	0.8364%	0.75%
CRD-4	5.36% at 20.0% of the chord	6.55% at 40.0% of the chord	0.7901%	0.6%
cristal cb85_15_7	15.69% at 40.0% of the chord	3.5% at 40.0% of the chord	0.8645%	0.0%

CSS	10.0% at 33.5% of the chord	4.85% at 35.5% of the chord	5.4407%	0.779%
Curtiss C 62	8.02% at 30.0% of the chord	1.92% at 40.0% of the chord	1.5114%	0.0%
Curtiss C 72	11.73% at 30.0% of the chord	5.87% at 30.0% of the chord	1.3308%	0.1%
CURTISS CR-1	12.21% at 24.0% of the chord	4.71% at 42.0% of the chord	1.399%	0.0035%

Note:
CAGI 731 (USSR);
Cavini 15 (L. Cavini (Italy));
CH10 (Chuch Hollinger CH 10-48-13 high lift low Reynolds number airfoil, smoothed);
Cheesman 25-1,00-10 (USA);
Chen high lift airfoil (University of Illinois);
CJ 1, CJ 2, CJ 4, CJ 5, CJ 6 (USA);
CJ 3309 (USA);
Coanda 2 (H. Coanda (Romania));
CR 001 (Cody Robertson CR 001 R/C hand-launch low Reynolds number airfoil (smoothed));
Curtiss C 62, Curtiss C 72 (G. Curtiss (USA));
CURTISS CR-1 (General aviation airfoil).

Table 2. The geometric shapes of the airfoils in the cross section.





Results and discussion

The calculated pressure contours on the surfaces of the airfoils at the different angles of attack are presented in the Figs. 1-51.

The calculated magnitudes on the scale can be represented as the basic magnitudes when comparing the pressure drop under conditions of changing the angle of attack of the airfoils.

The optimal airfoil should have good aerodynamic characteristics, i.e. low drag and high lift. The modified version of the CHEN airfoil is subjected to less negative pressure at the different angles of attack. The pressure difference near the upper and lower surfaces of the CJ 2 airfoil is approximately 172 kPa, i.e. it varies by more than 20 times. This indicates a large lift of the airplane wing.

In conditions of the airplane's descent, maximum pressure of -180 kPa acts on the CJ 2 airfoil.

The CSS airfoil is subjected to a minimum pressure of -11.9 kPa at the similar negative angle of attack.

Changing the angle of attack of the Chen high lift airfoil to 15 degrees is accompanied by pressure of -19.2 kPa, which is the minimum pressure magnitude for all considered airfoils.

The minimum negative pressure magnitude was determined in conditions of horizontal flight of the airplane on the upper surface of the CAST 10-2/DOA 2 transonic airfoil. Also, the minimum drag magnitude at the leading edge was calculated for this airfoil. This indicates the most favorable conditions for the airplane flight.

During the airplane maneuvers, the leading edge of the airfoils is subjected to both positive and negative pressures.

The maximum increase in pressure on the leading edge occurs at the angle of attack of -15 degrees for some airfoils:

- CAST 10-2/DOA 2 transonic airfoil;
- Cheesman 25-1,00-10;
- CHEN, Chen high lift airfoil;
- CJ 1, CJ 2, CJ 4, CJ 5;

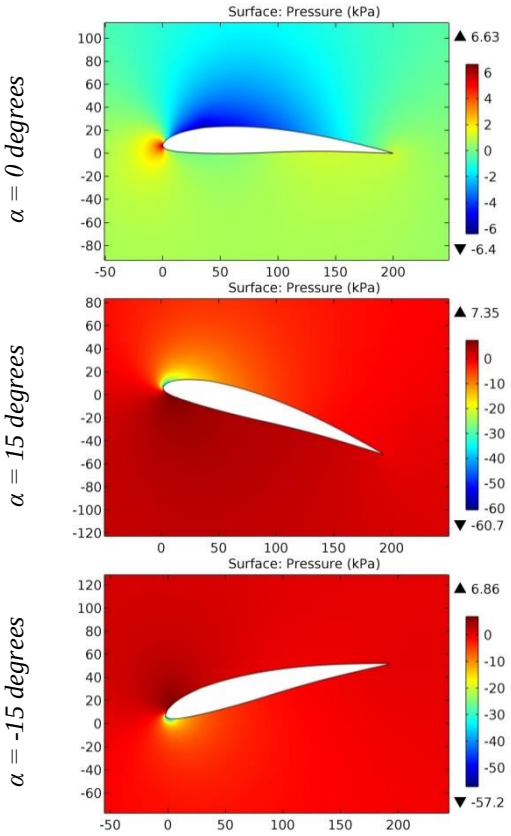


Figure 1. The pressure contours on the surfaces of the C72 airfoil.

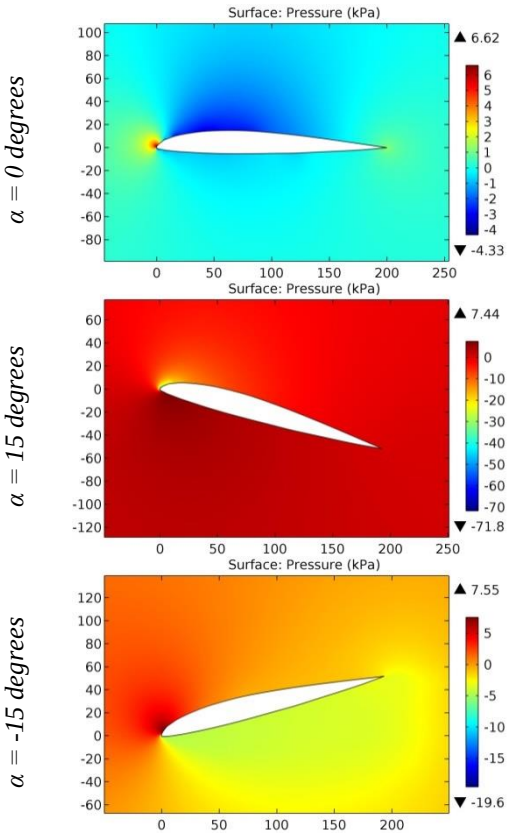


Figure 2. The pressure contours on the surfaces of the CAGI 731 airfoil.

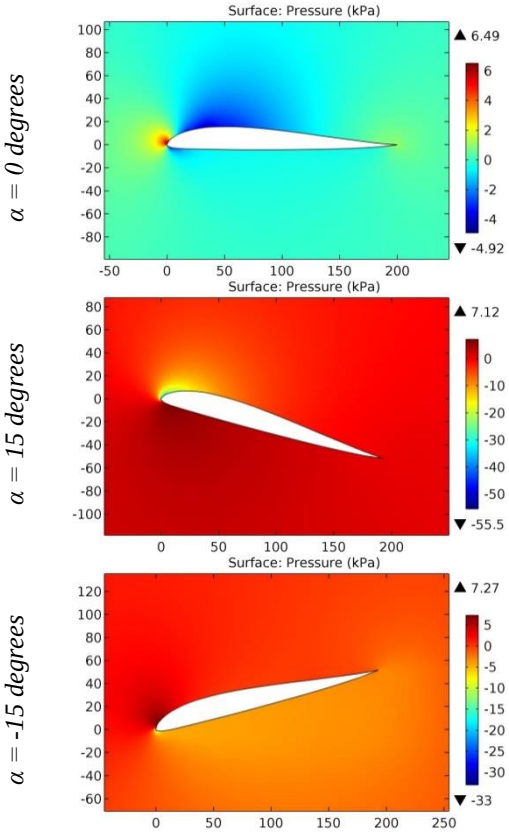


Figure 3. The pressure contours on the surfaces of the CAGID2 airfoil.

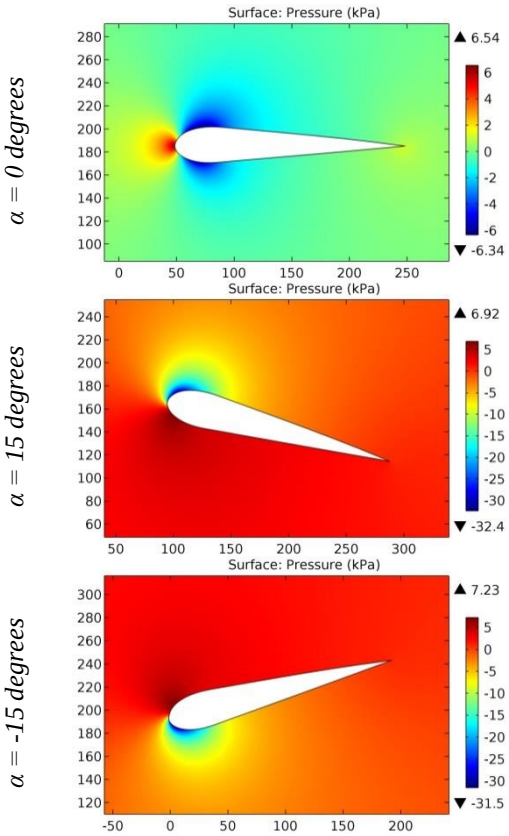


Figure 4. The pressure contours on the surfaces of the cap 21 airfoil.

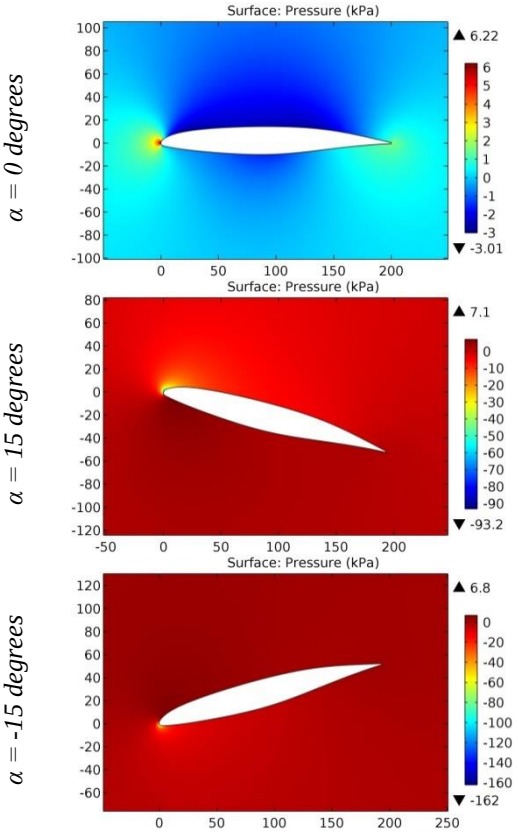


Figure 5. The pressure contours on the surfaces of the CAST 10-2/DOA 2 transonic airfoil.

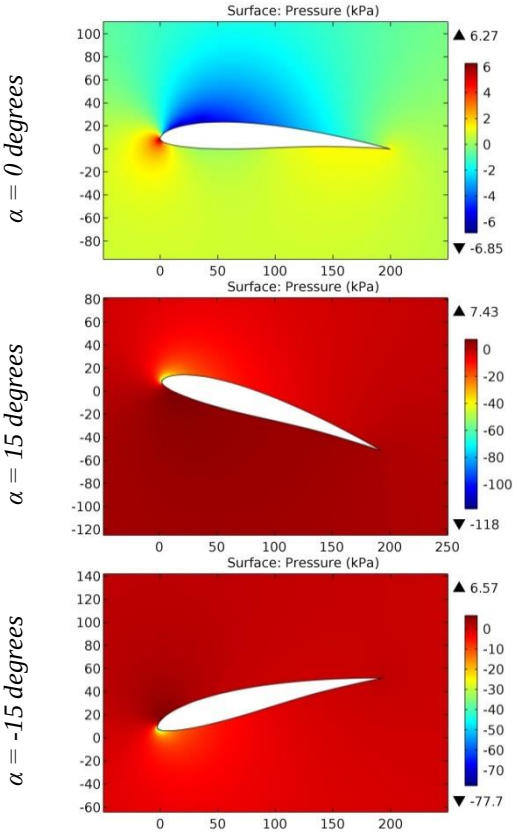


Figure 6. The pressure contours on the surfaces of the Cavini 15 airfoil.

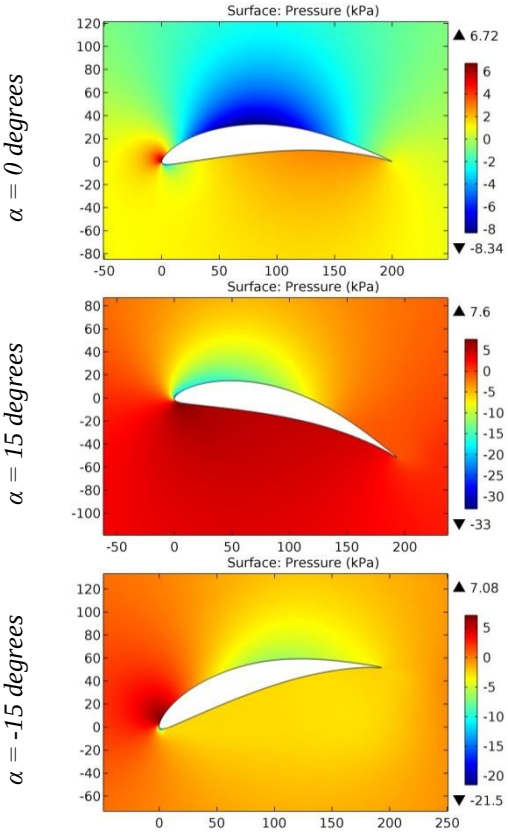


Figure 7. The pressure contours on the surfaces of the CH10 (smoothed) airfoil.

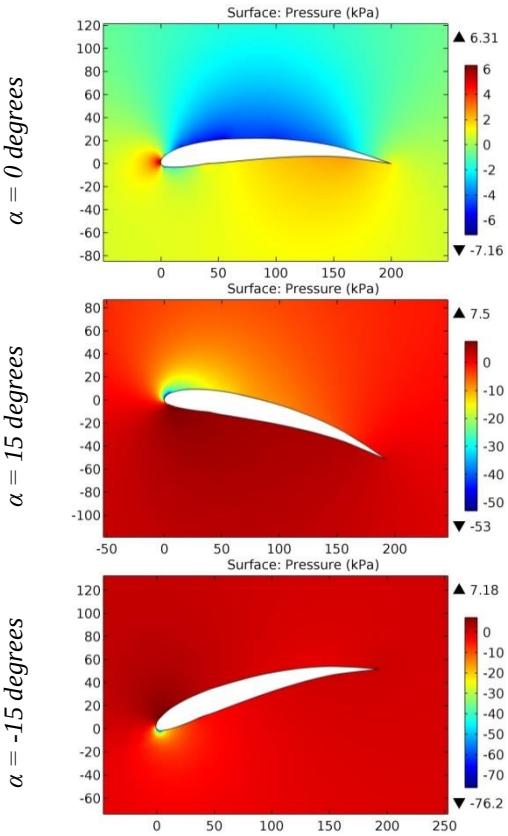


Figure 8. The pressure contours on the surfaces of the Cheesman 25-1,00-10 airfoil.

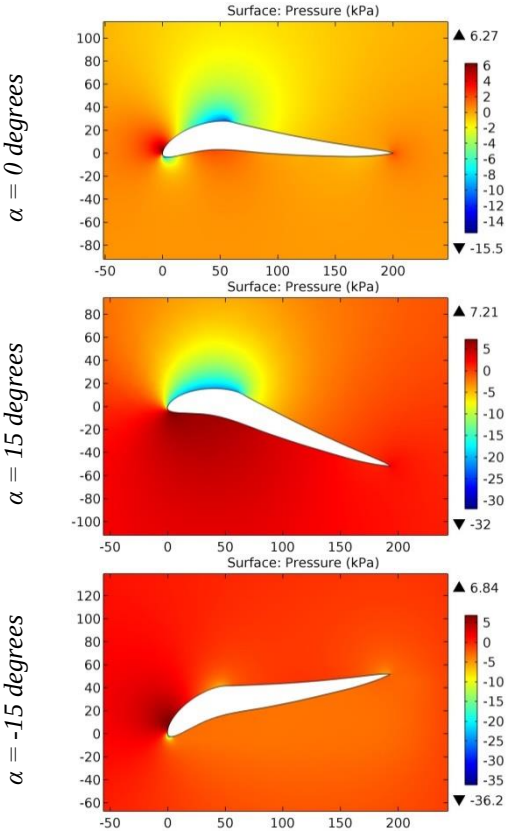


Figure 9. The pressure contours on the surfaces of the CHEN airfoil.

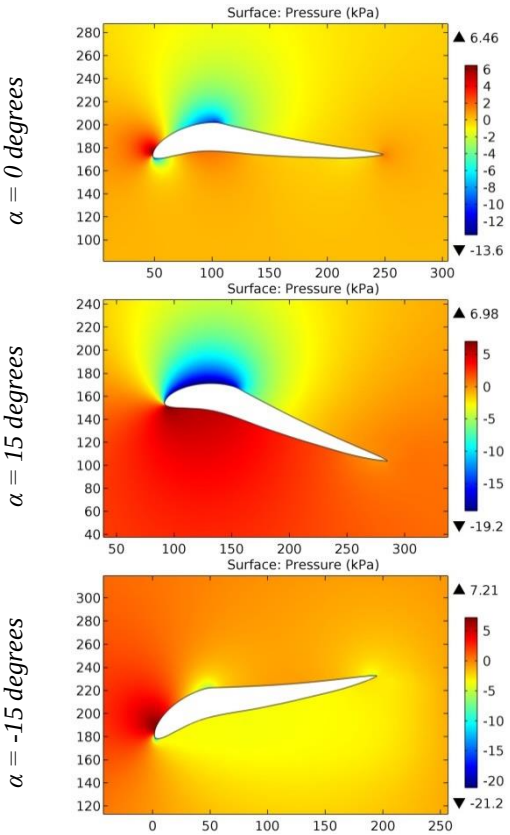


Figure 10. The pressure contours on the surfaces of the Chen high lift airfoil.

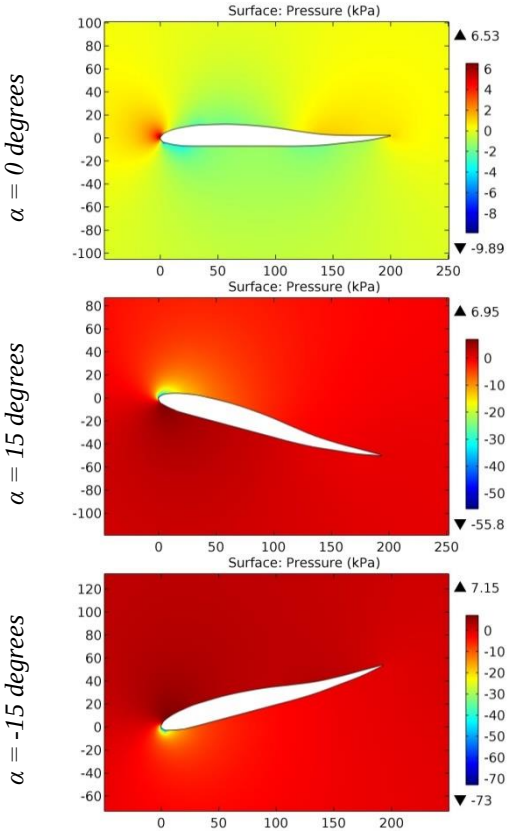


Figure 11. The pressure contours on the surfaces of the CJ 1 airfoil.

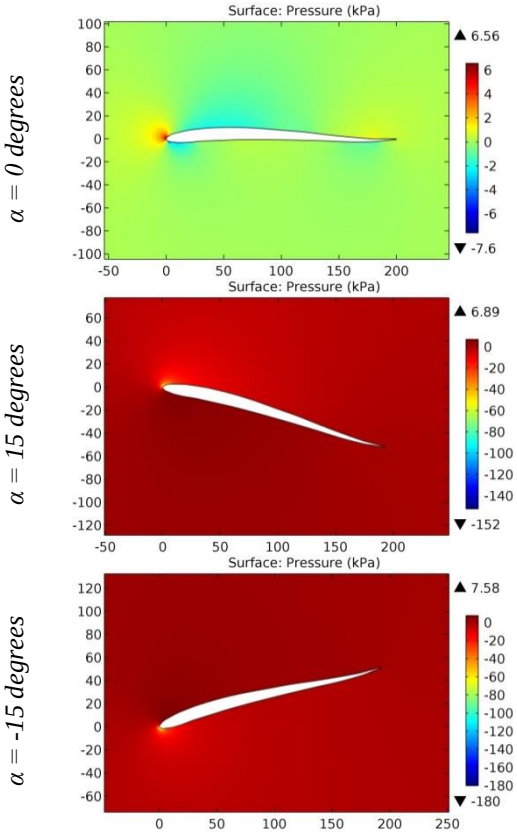


Figure 12. The pressure contours on the surfaces of the CJ 2 airfoil.

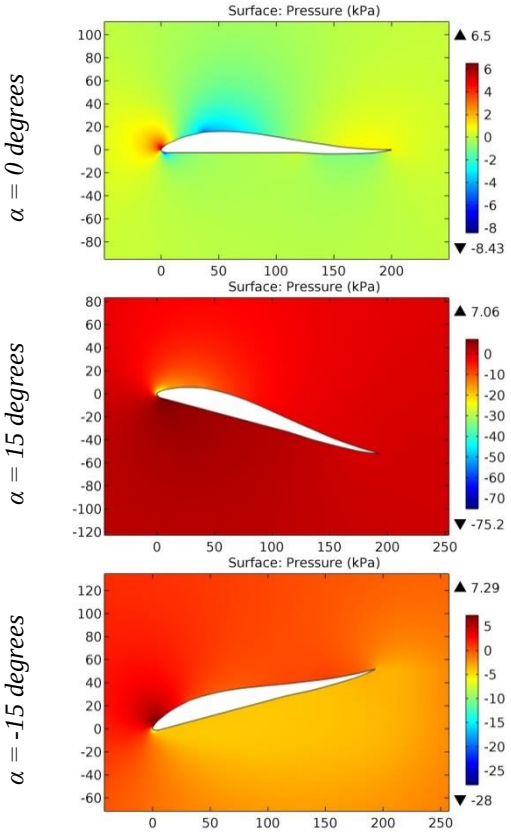


Figure 13. The pressure contours on the surfaces of the CJ 3309 airfoil.

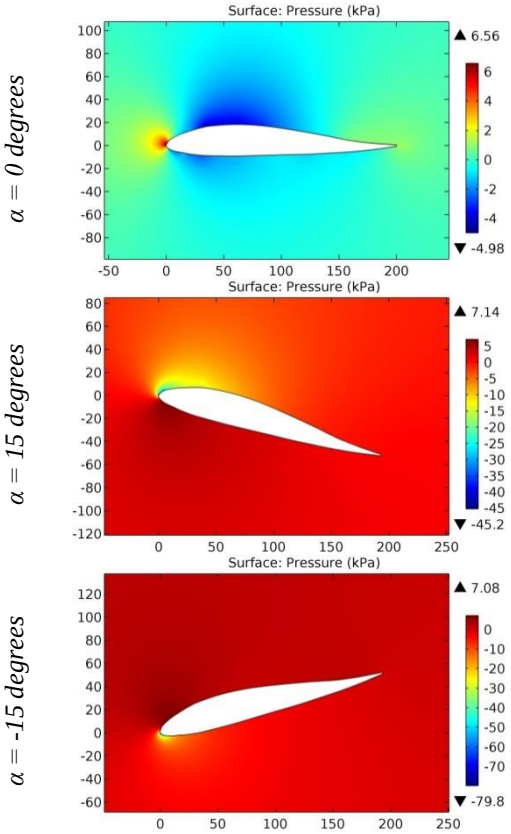


Figure 14. The pressure contours on the surfaces of the CJ 4 airfoil.

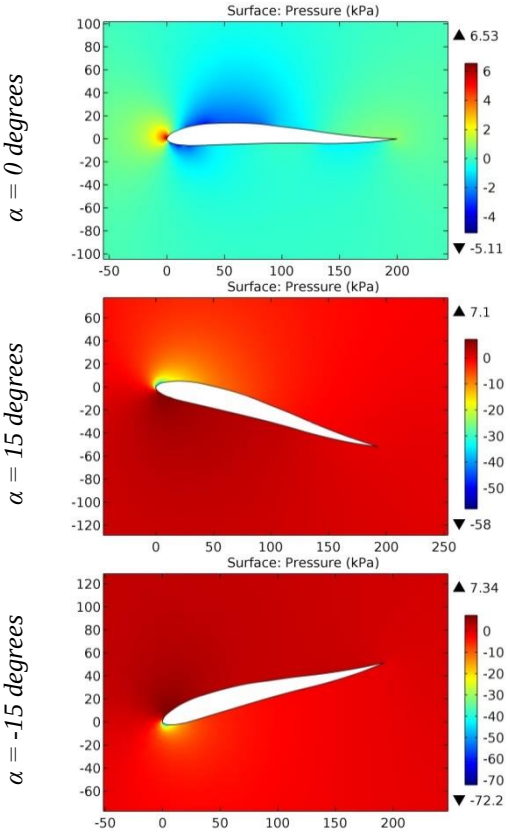


Figure 15. The pressure contours on the surfaces of the CJ 5 airfoil.

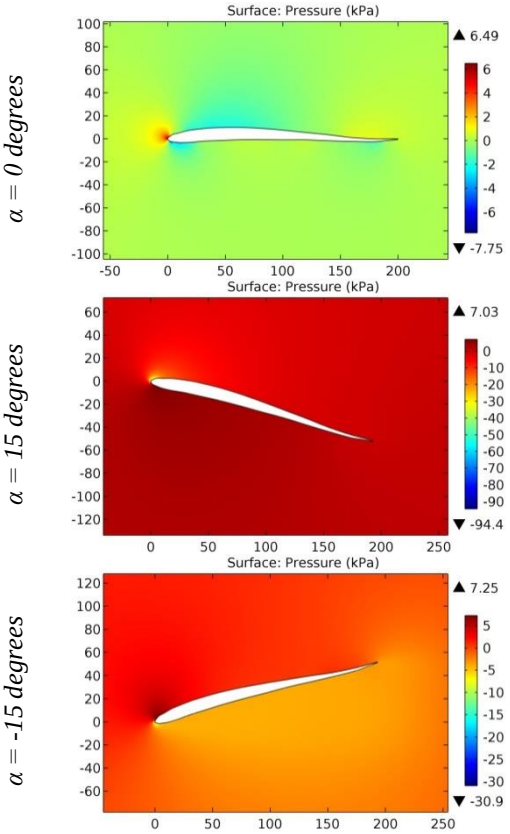


Figure 16. The pressure contours on the surfaces of the CJ 6 airfoil.

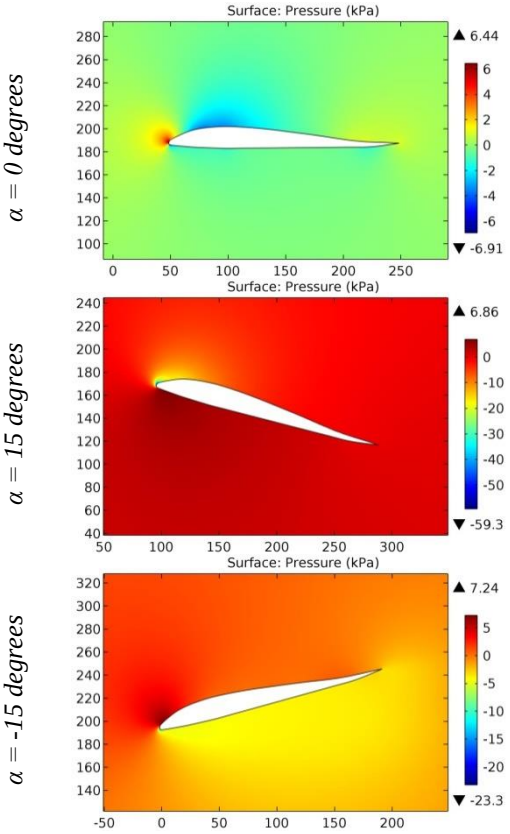


Figure 17. The pressure contours on the surfaces of the CJ25209 airfoil.

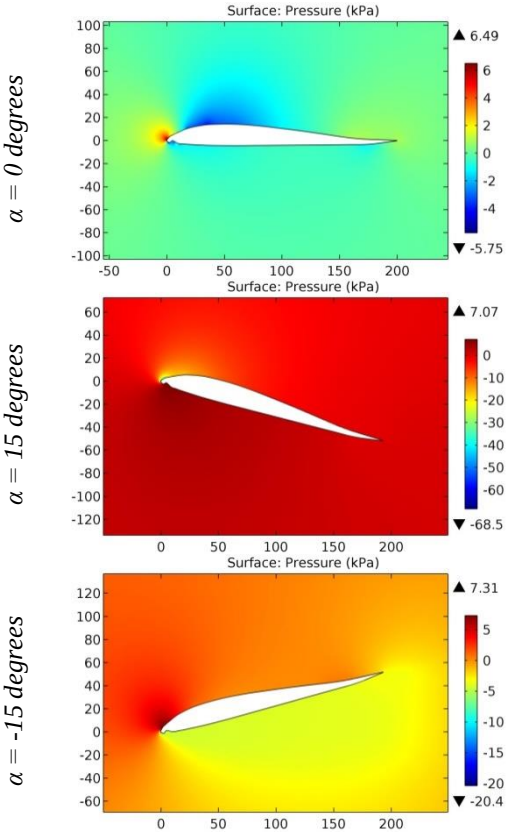


Figure 18. The pressure contours on the surfaces of the CJ-25209 airfoil.

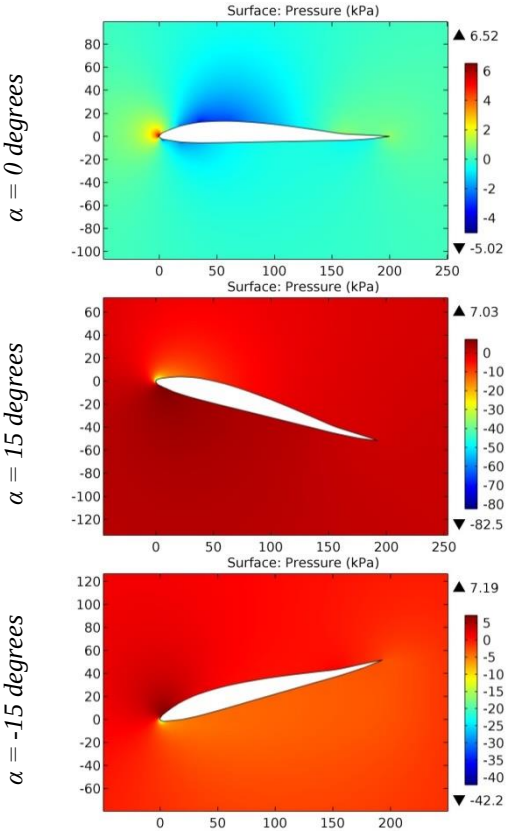


Figure 19. The pressure contours on the surfaces of the CJ-3209 airfoil.

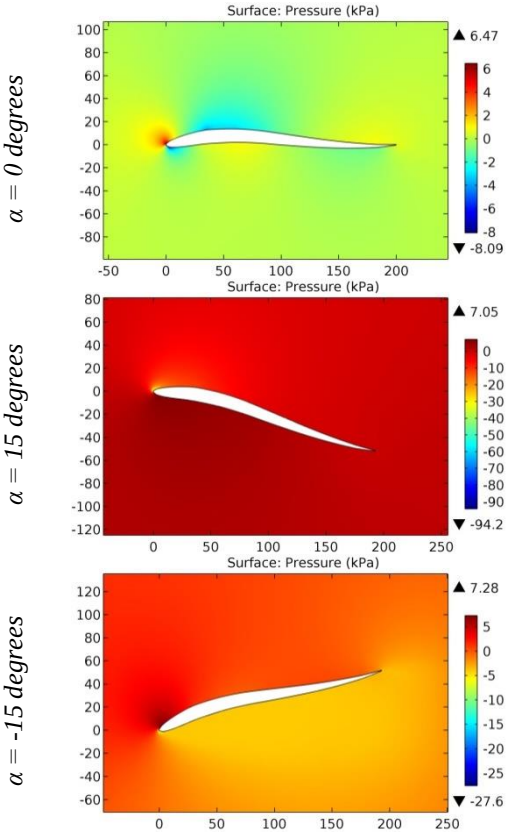


Figure 20. The pressure contours on the surfaces of the CJ-3406 airfoil.

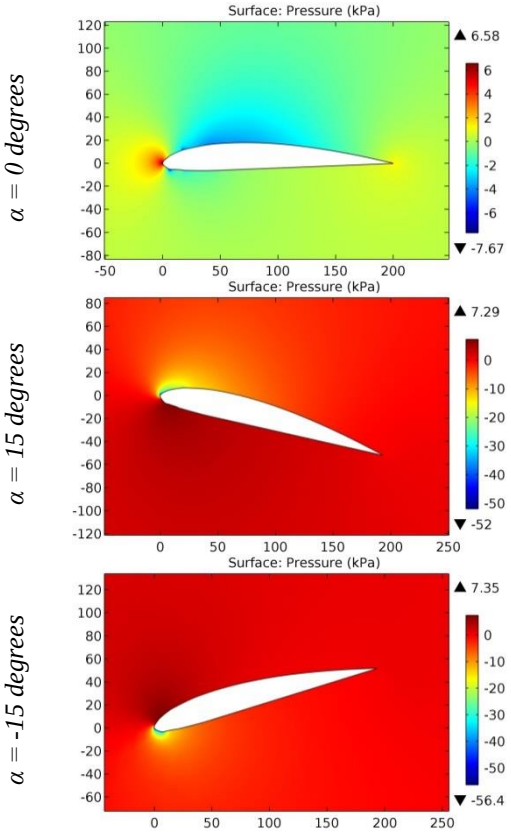


Figure 21. The pressure contours on the surfaces of the CLARK K airfoil.

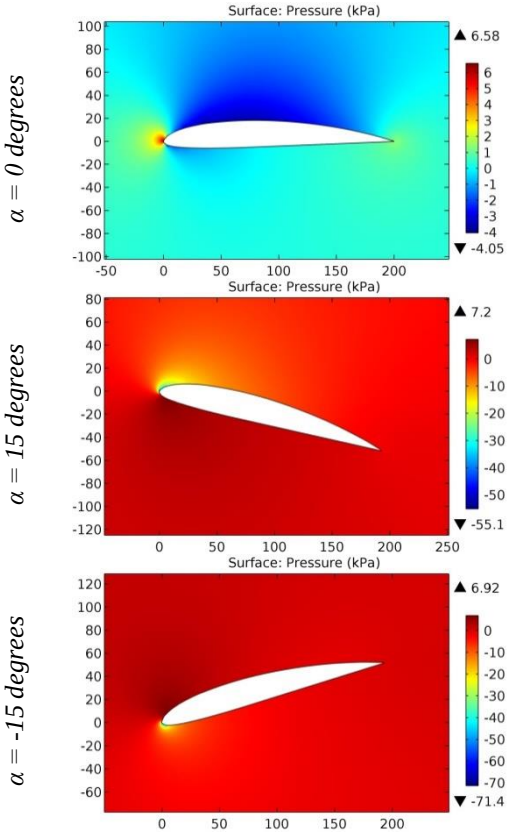


Figure 22. The pressure contours on the surfaces of the CLARK V airfoil.

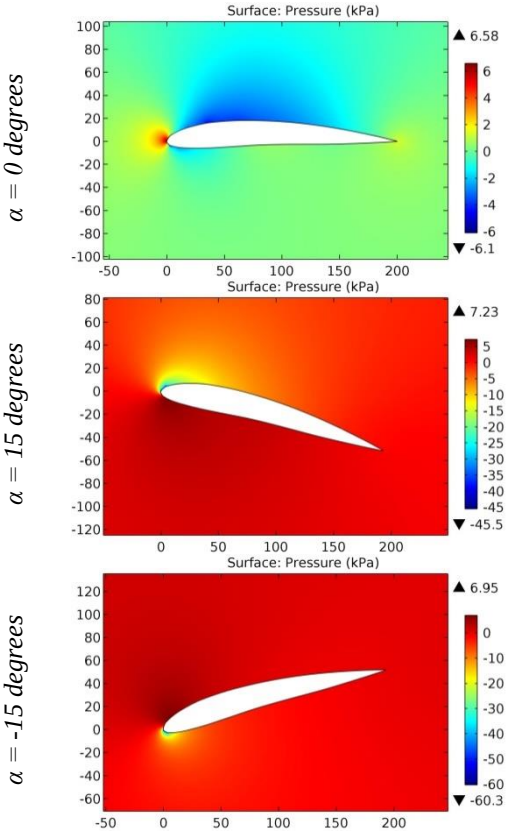


Figure 23. The pressure contours on the surfaces of the CLARK W airfoil.

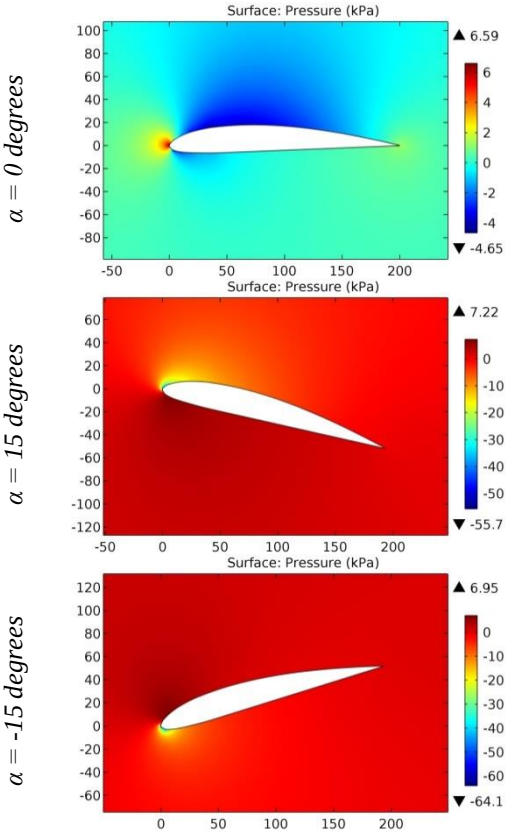


Figure 24. The pressure contours on the surfaces of the CLARK X airfoil.

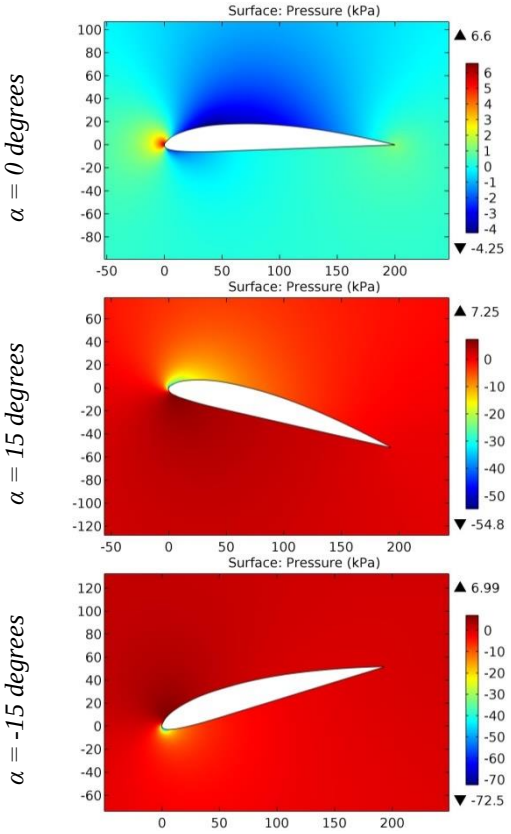


Figure 25. The pressure contours on the surfaces of the CLARK Y airfoil.

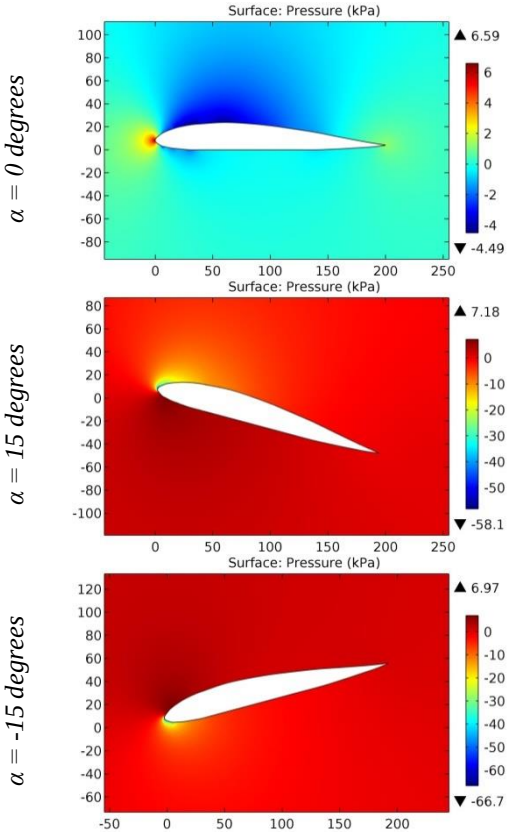


Figure 26. The pressure contours on the surfaces of the CLARK YH airfoil.

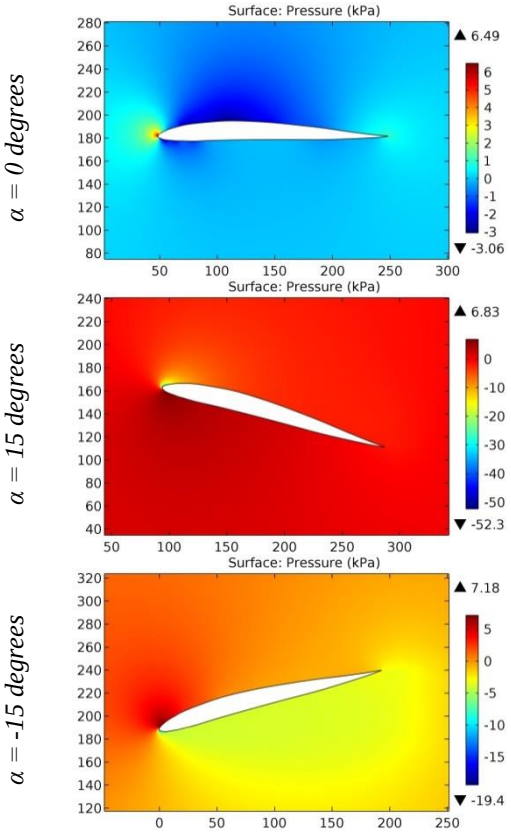


Figure 27. The pressure contours on the surfaces of the CLARK YH- Mod airfoil.

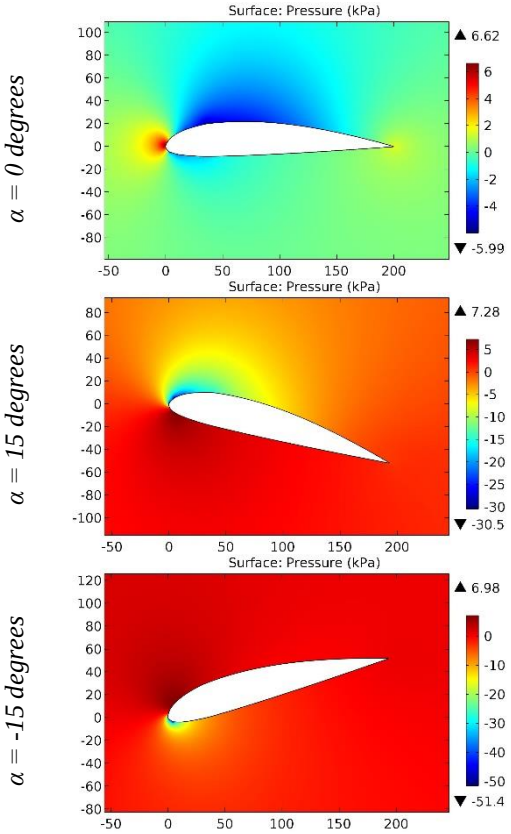


Figure 28. The pressure contours on the surfaces of the CLARK YM-15 airfoil.

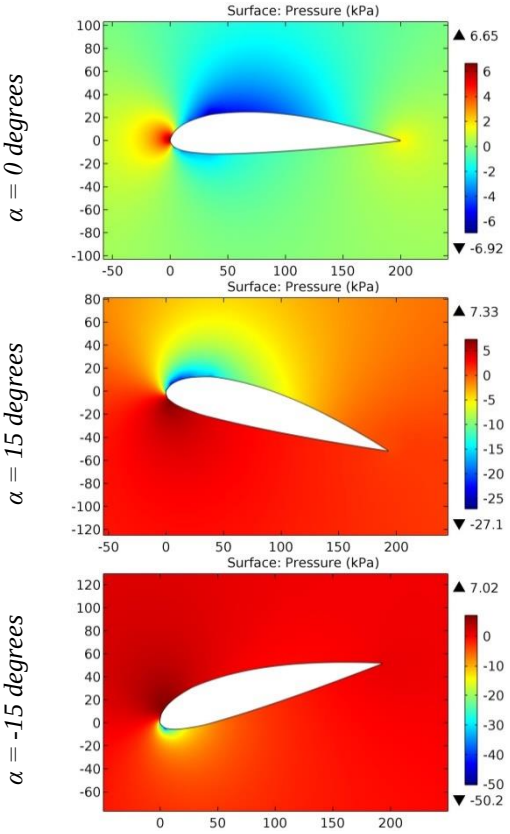


Figure 29. The pressure contours on the surfaces of the CLARK YM-18 airfoil.

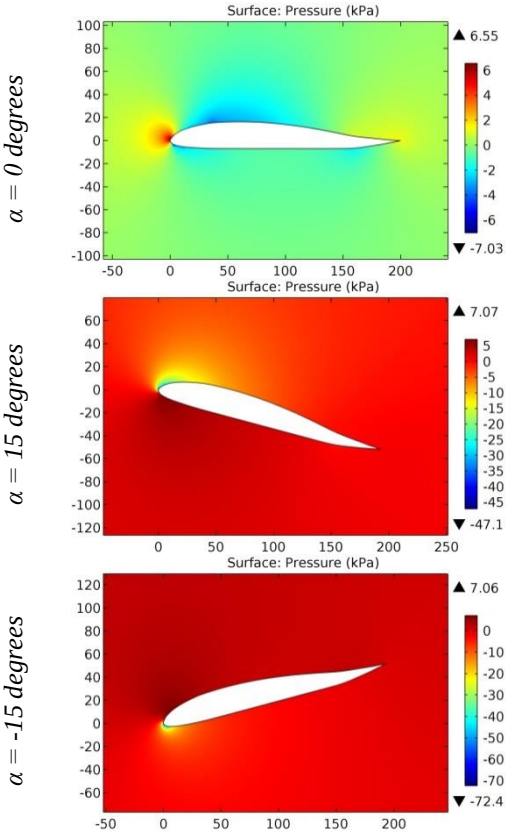


Figure 30. The pressure contours on the surfaces of the CLARK YS airfoil.

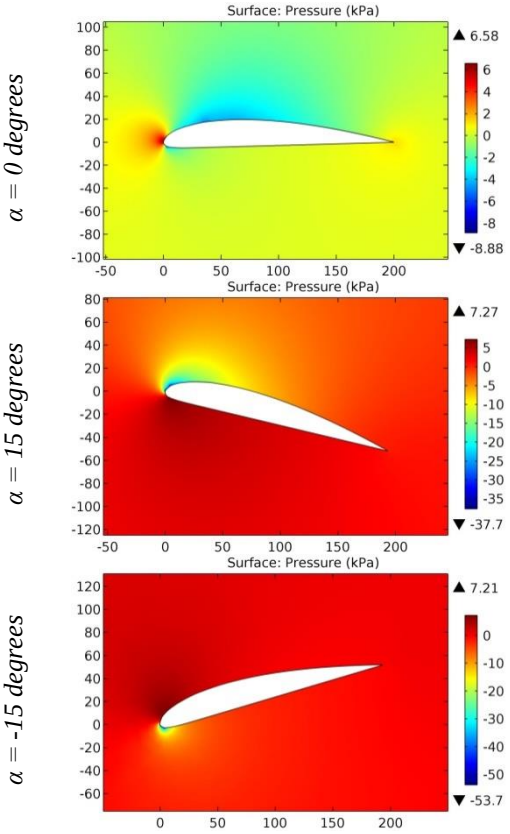


Figure 31. The pressure contours on the surfaces of the CLARK Z airfoil.

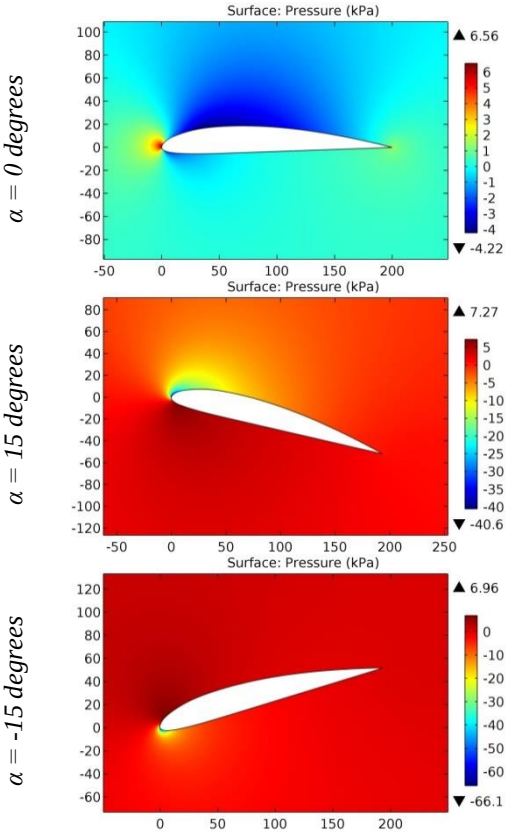


Figure 32. The pressure contours on the surfaces of the CLARK-Y 11,7% smoothed airfoil.

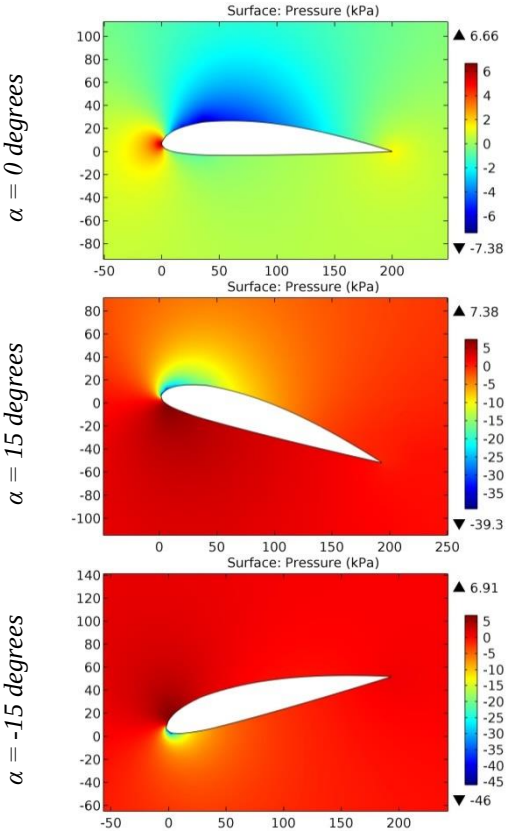


Figure 33. The pressure contours on the surfaces of the CLARKY15 airfoil.

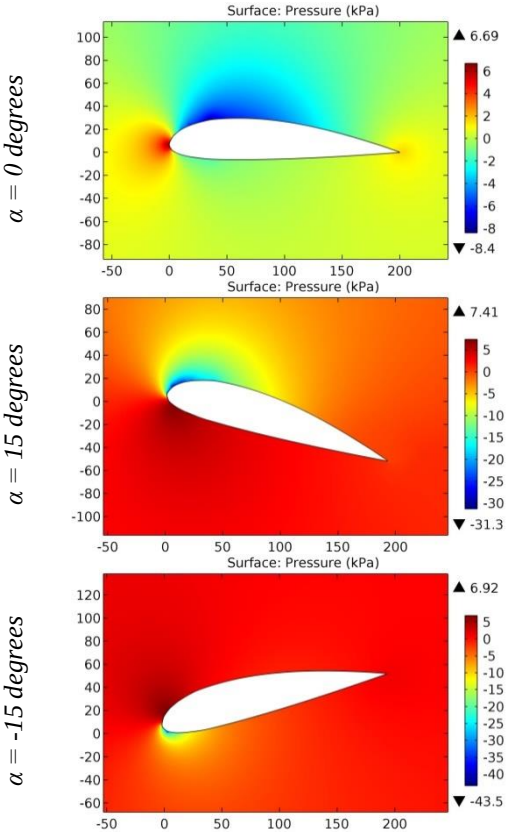


Figure 34. The pressure contours on the surfaces of the CLARKY18 airfoil.

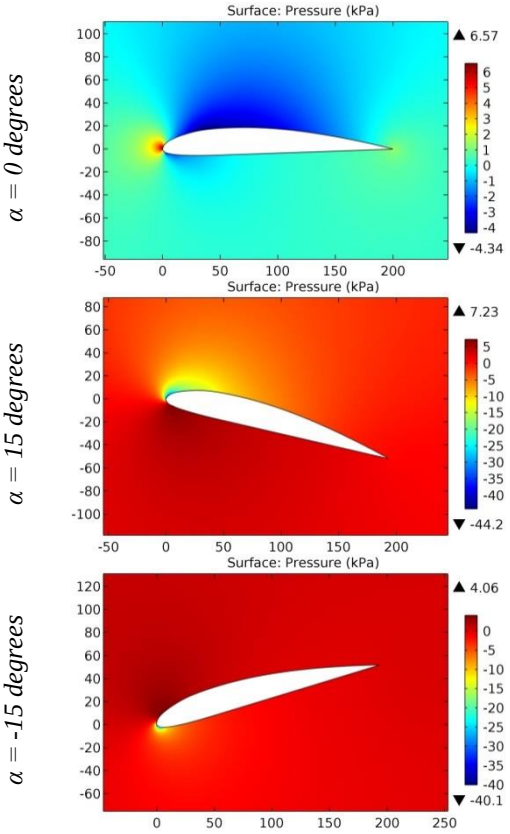


Figure 35. The pressure contours on the surfaces of the CLARK-Y2 airfoil.

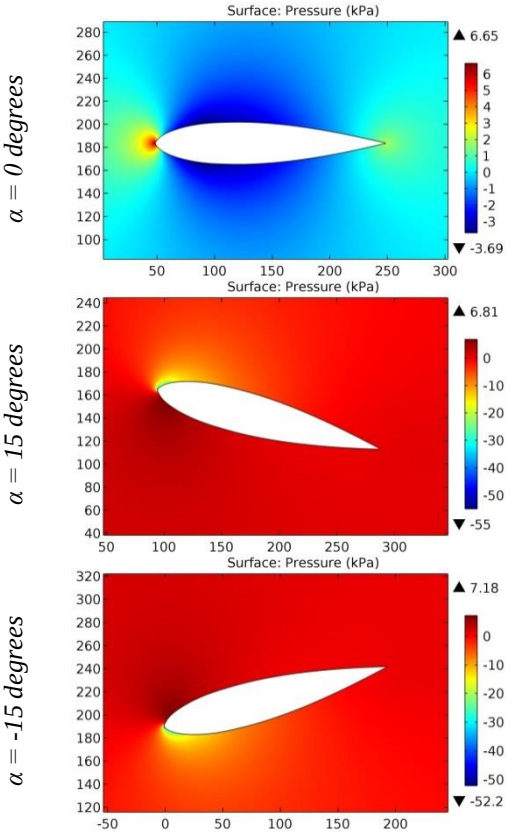


Figure 36. The pressure contours on the surfaces of the CLARKYSimm airfoil.

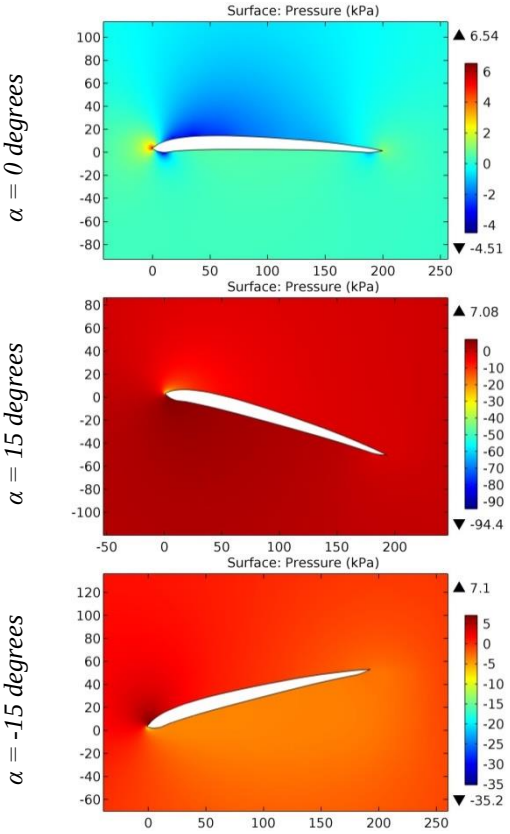


Figure 37. The pressure contours on the surfaces of the Coanda 2 airfoil.

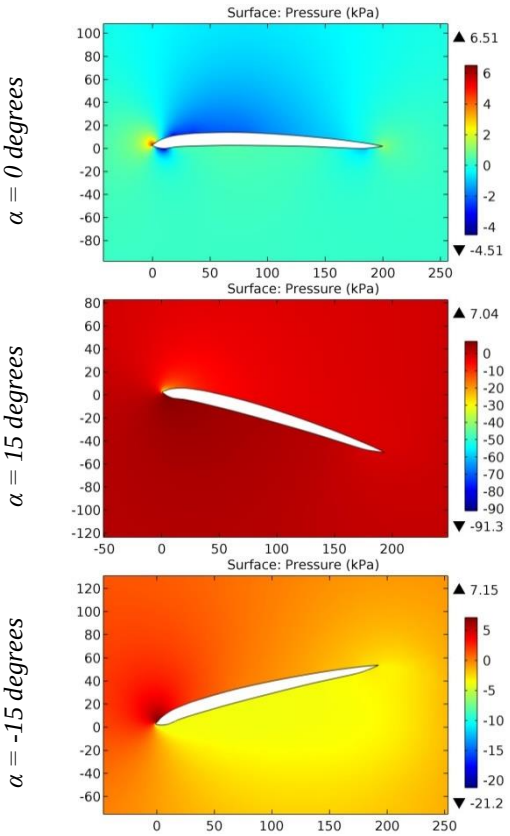


Figure 38. The pressure contours on the surfaces of the COANDA-1 airfoil.

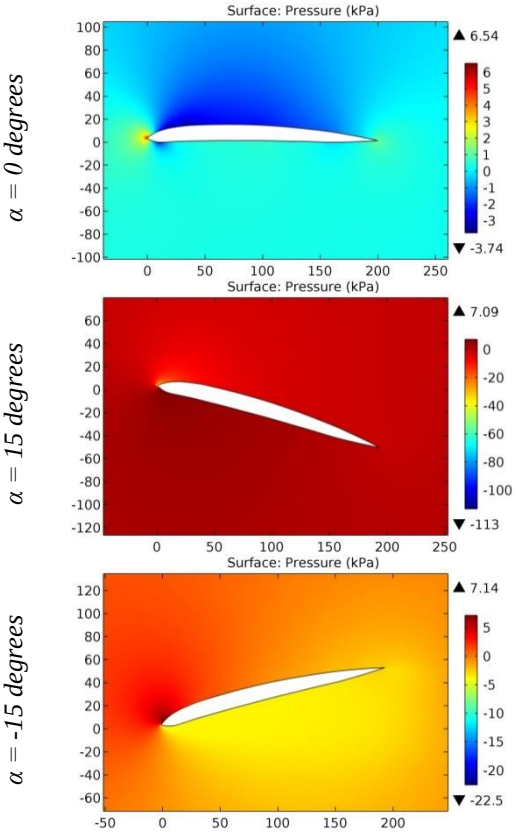


Figure 39. The pressure contours on the surfaces of the COANDA-3 airfoil.

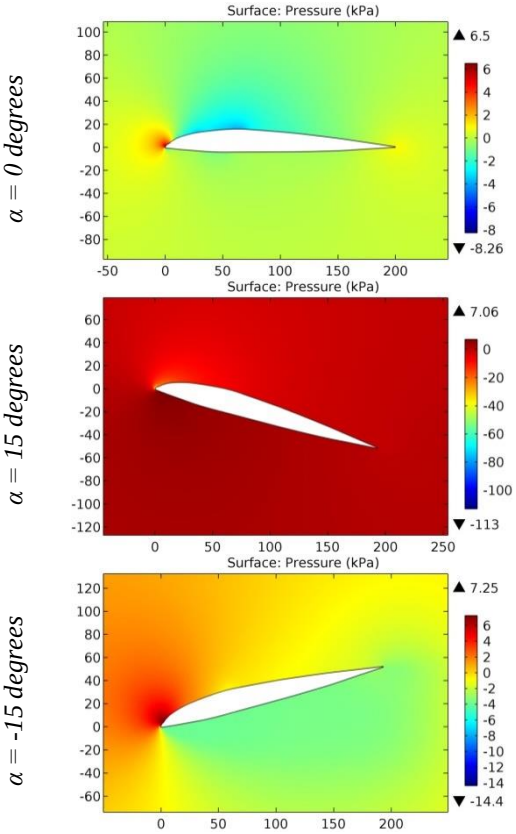


Figure 40. The pressure contours on the surfaces of the CONA airfoil.

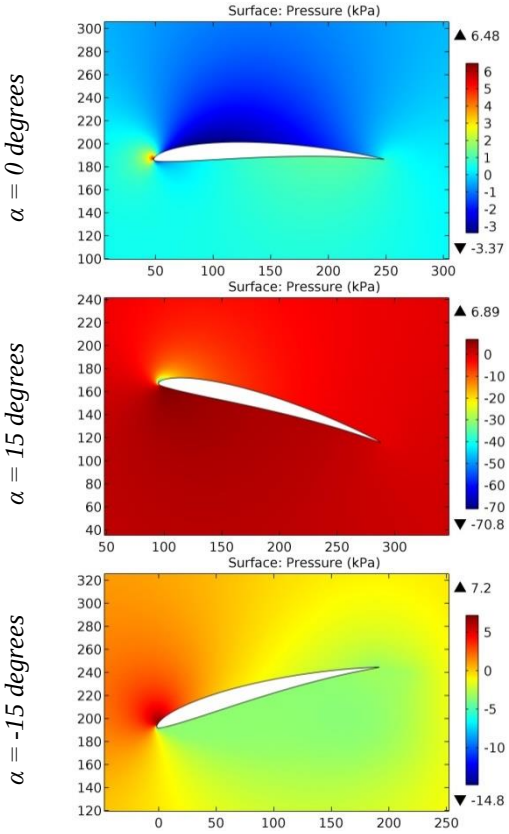


Figure 41. The pressure contours on the surfaces of the CR 001 airfoil.

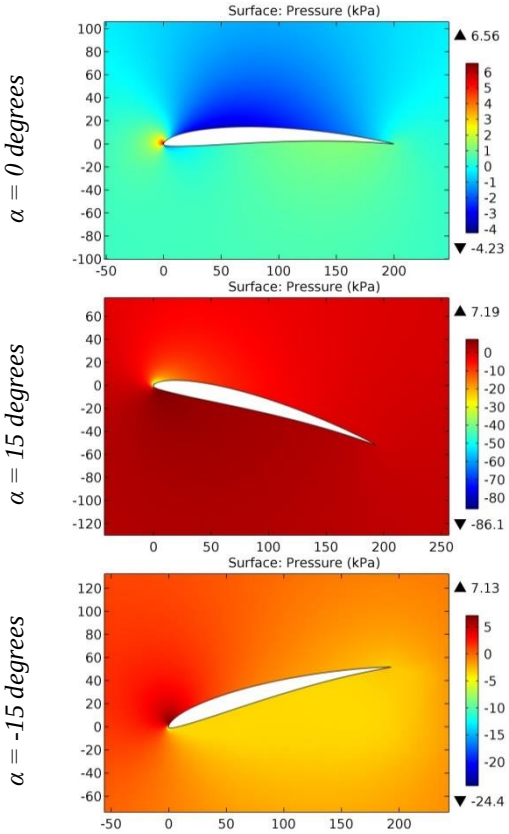


Figure 42. The pressure contours on the surfaces of the cr001sm airfoil.

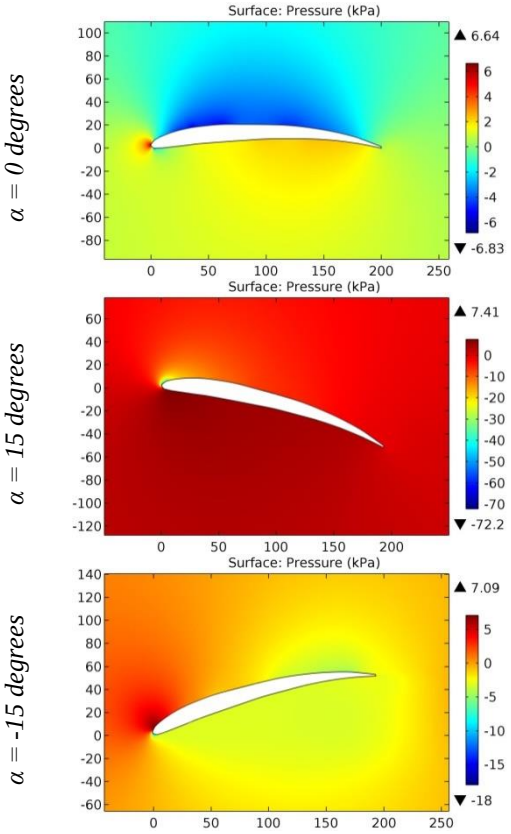


Figure 43. The pressure contours on the surfaces of the CRD-1 airfoil.

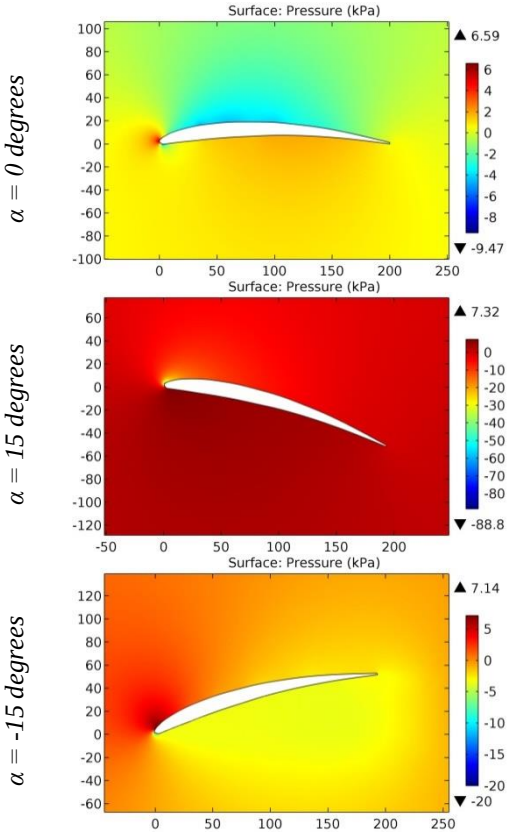


Figure 44. The pressure contours on the surfaces of the CRD-2 airfoil.

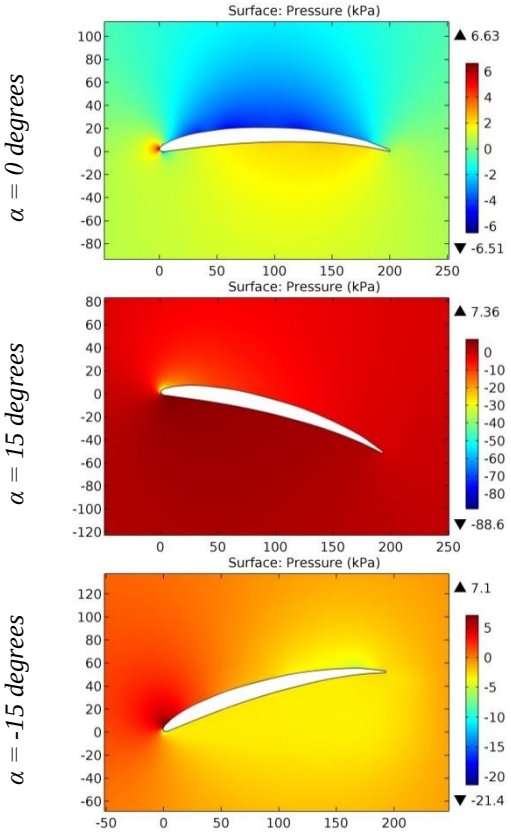


Figure 45. The pressure contours on the surfaces of the CRD-3 airfoil.

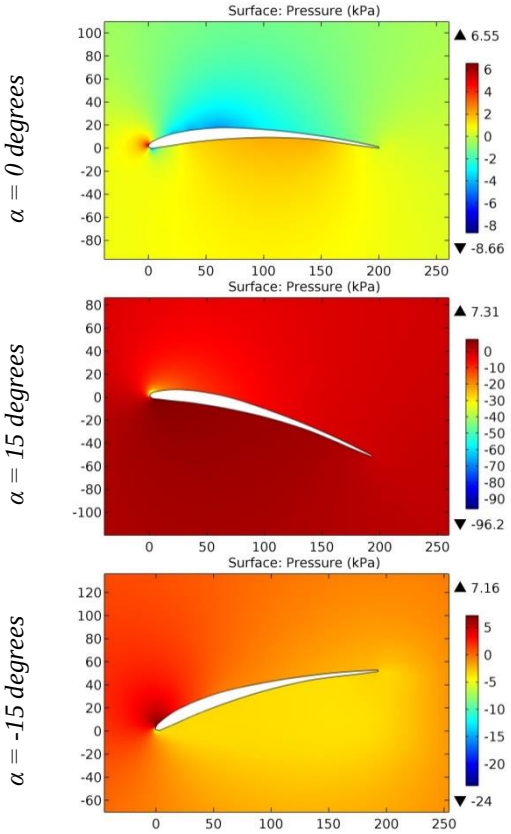


Figure 46. The pressure contours on the surfaces of the CRD-4 airfoil.

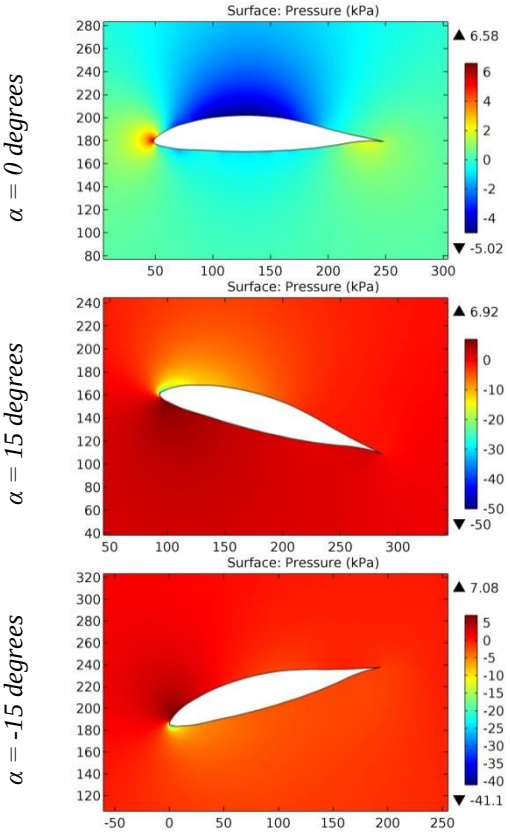


Figure 47. The pressure contours on the surfaces of the cristal cb85_15_7 airfoil.

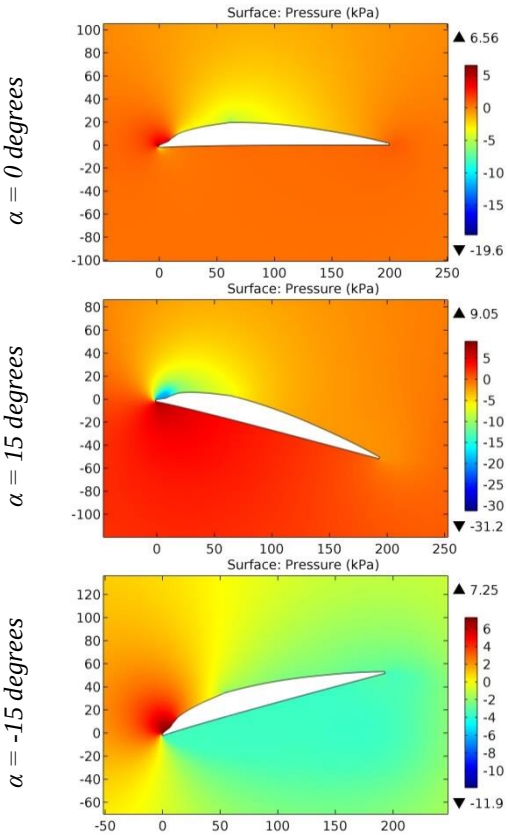


Figure 48. The pressure contours on the surfaces of the CSS airfoil.

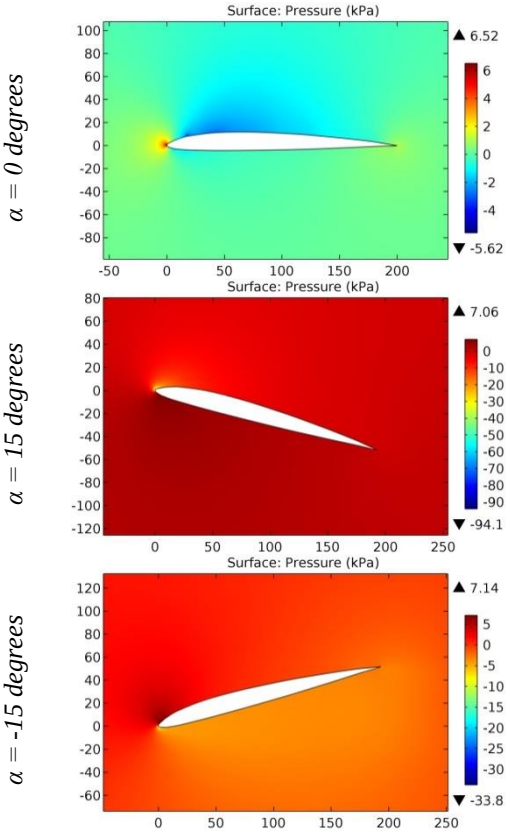


Figure 49. The pressure contours on the surfaces of the Curtiss C 62 airfoil.

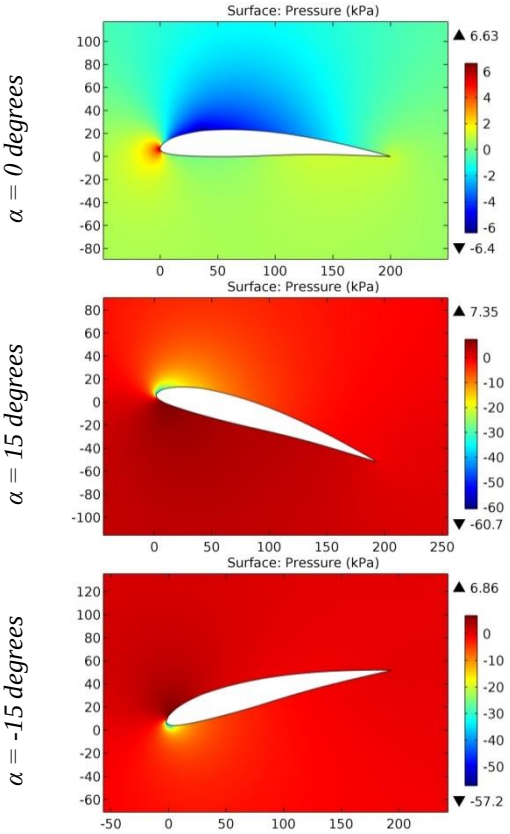


Figure 50. The pressure contours on the surfaces of the Curtiss C 72 airfoil.

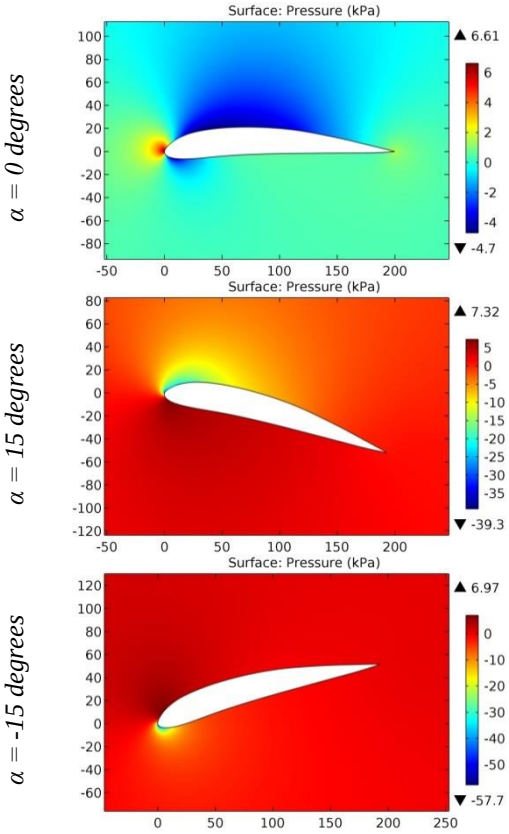


Figure 51. The pressure contours on the surfaces of the CURTISS CR-1 airfoil.

- CLARK K, CLARK V, CLARK W, CLARK X, CLARK Y, CLARK YH, CLARK YM-15, CLARK YM-18, CLARK YS, CLARK Z, CLARK-Y 11,7% smoothed, CLARKY15, CLARKY18;
- CURTISS CR-1.

The shape of the cap 21 symmetrical airfoil ensures the occurrence of the same magnitude of negative pressures on the upper and lower surfaces at the angles of attack of 15 and -15 degrees, respectively.

The maximum increase in pressure on the leading edge occurs at the angle of attack of 15 degrees for the remaining airfoils.

Conclusion

The least drag force during horizontal flight of the airplane occurs in the airfoils having the leading edge radius of 0.91%. The greatest lift force acts at the maximum thickness of the airfoil of 5.6% at 20% of the chord. These requirements are met by the CJ 2 and CAST 10-2/DOA 2 airfoils.

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INVESTIGATION OF THE EXISTING TEMPERATURE AND HUMIDITY CONDITIONS IN THE WEAVING PROCESS

Abstract: *This article consider the influence of the humidity of the silk warp thread and the relative humidity of the air in the workshop, which are the main parameters affecting the weaving process. Studies have shown that in silk weaving, when developing a fabric from natural silk, it is possible to select optimal relative humidity, temperature and moisture content of the base in the weaving shop. This in turn helps to reduce the breakage of the warp and weft thread in the weaving process and increase the release of fabrics.*

Key words: *silk, filament, humidity, strength, elongation, resistance, breakage, main threads, boiled, dyed, partial pressure, water vapor, moisture, sorption, desorption, air temperature.*

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ИССЛЕДОВАНИЕ СУЩЕСТВУЮЩЕГО ТЕМПЕРАТУРНО-ВЛАЖНОСТНОГО РЕЖИМА В ПРОЦЕССЕ ТКАЧЕСТВА

Аннотация: *Данная статья рассматривает вопросы влияние влажности шелковой нити основы и относительная влажность воздуха в цехе, которые являются основными параметрами, влияющими на процесс ткачества. Исследования показали, в шелкоткачестве при выработке ткани из натурального шелка можно подобрать в ткацком цехе оптимальные относительной влажность воздуха, температура и влагосодержания основы. Это свою очередь способствует снижению обрывности нити основ и утка в процессе ткачества и увеличению выпуска тканей.*

Ключевые слова: *шелк, нить, влажность, свойства, прочность, удлинение, выносливость, обрывность, основных нитей, отваренного, крашенного, парциальные давление, водяные пары, влаги, сорбция, десорбция, температура воздуха.*

Введение

В регламентированном технологическом режиме производства национальных авровых тканей для переработки натурального шелка на ткацких станках рекомендуется поддерживать относительную влажность воздуха в цехе в пределах 60-65% при температуре $t = 23℃$. Норма влажности при этом составляет 9% [5, 10-29].

В работах [1-5] изучено влияние микроклимата на свойства пряжи и ее обрывность в ткачестве. Нами исследовано влияние существующих параметров воздуха в цехе на обрывность основных нитей в ткачестве при выработке авровых тканей из натурального шелка.

Для технологического процесса и условий труда в текстильной промышленности большое значение имеют параметры воздуха. В

хлопкоткачестве оптимальными являются относительная влажность воздуха φ=65-70% и температура t=22-24° С. В шелкоткачестве при выработке ткани из натурального шелка φ = 60-65%, температура *t* = 22-24° С, при выработке ткани из искусственного шелка φ =50-55%, температура *t* = 21-23° С. Нередко, однако, на фабриках эти параметры не выдерживаются.

Поскольку влажность основы и относительная влажность воздуха в цехе являются основными параметрами, влияющими на процесс ткачества, необходимо провести анализ влияния влагосодержания основ и относительной влажности воздуха на процесс ткачестве из натурального отваренного шелка. Изменение климатических условий в помещениях в большой мере зависит от колебания параметров наружного воздуха (жары, мороза, дождя, ветра и т.д.). В работе [1,2,3] изучено влияние основных параметров искусственного микроклимата и влажностного состояния волокон на эффективность технологических процессов [4-9].

В регламентированном технологическом режиме производства, национальных авровых тканей для переработки натурального отваренного шелка на ткацких станках рекомендуется поддерживать относительную влажность воздуха в цехе в пределах 60-65 % при температуре ***t***- 23° С. Норма влажности основной нити при этом составляет 9 %.

Наблюдения, проведенные в ткацком цехе, где за системой кондиционирования не ведется должный уход, показали весьма значительные колебания влажности воздуха не только в разные месяцы года, но и в течение одного месяца и дня [10-14]. Так, например, средняя относительная влажность в ткацком цехе в июле месяце колебалась в пределах 50,6-73,4 %, в августе 50,3-70,6 %, в сентябре 48,2-64,2, в октябре 45,4-47,7 %, в ноябре 39,1-52,3 %, в декабре 36,1-51,9 %,в январе 36,6-56,1 % и в феврале 38,6-54,4 %. Подобные колебания характерны и для других цехов.

Из табл.1 приведены результаты наблюдений влияния относительной влажности воздуха, на обрывность основных и уточных нитей, когда в одном ткацком цехе одновременно перерабатывается натуральный и искусственный шелк.

Из табл.1 видно, что в цехе при выработке ткани "Хан-атлас" арт. 011 Уз изменяется обрывность основных и уточных нитей с изменением относительной влажности воздуха. Нами ставилась задача, выяснить динамику изменения влажности основ для ткани "Хан-атлас" арт. 028 Уз с момента выхода их из перегонного цеха до полного схода с навоя на ткацком станке. В ткацком цехе установлены 1504 ткацких станках, которые заправлены тканью "Хан-атлас" арт. 011 Уз, арт. 028 Уз, арт.054 Уз и арт.057 Уз и другими [15-19]. Для исследования были выбраны десять основ, пронумерованы и заправлены На ткацкие станки. Перед заправкой влажность основ составляла 7,4-9,0 %

Таблица 1. Результаты наблюдений влияния относительной влажности воздуха.

Месяцы	Относительная влажность воздуха, %	Артикул	Обрывность на 1 м ткани	
			фактически	норма
Июль	60,6	054-Уз 011-Уз	07/07 1,7/07	09/02 1,5/03
Август	58,7	— —	1,0/02 1,9/0,6	— —
Сентябрь	58,0	— —	08/03 1,9/06	— —
Октябрь	52,2	— —	1,1/03 2,2/04	— —
Ноябрь	44,0	—	07/05 1,9/02	— —
Декабрь	45,0	— —	08/03 2,1/07	— —
Январь	46,0	— —	09/03 2,3/03	— —
Февраль	45,0	— —	1,0/05 2,3/1,2	— —

Взаимодействие основы с окружающей средой определяли по образцам, взятым из зон заправки ткацкого станка, например, навой - скало, скало - пруток и пруток - опушка ткани. Лабораторные анализы показали, что средняя (из десяти испытаний) влажность основы при работе

ткацкого станка по зонам составила: навой-скало 7,7 %, скало-пруток 7,6 % и пруток-опушка ткани 7,5 %, Исследования проведены в июле и августе месяцы когда относительная влажность в цехе колебалась от 53,2 до 70,0 %.

Опыт был повторен в ноябре и декабре месяцы, при относительной влажности воздуха в цехе 38,2-51,4 %. Среднее значение влажности основы при работе ткацкого станка по зонам составило: навой-скало 6,3 %, скало-пруток 6,2 % и пруток-опушка ткани 6,0 %. Из этих наблюдений можно сделать следующий вывод: влажность основы не соответствует норме, нестабильна относительная влажность воздуха в цехе поэтому происходит десорбция влаги из основы в окружающую среду [20-27].

При проведении опыта в феврале и марте ткацкие станки на одном участке цеха были заправлены приготовленной на перегонной машине основой из отваренной шелковой нити 3,23 текс х 2 с влажностью 6,6 и 8,3 %. Относительная влажность воздуха колебалась от 42 до 48 % при температуре 27- 27,7° С.

Оказалось, что влажность нитей на ткацких станках упала в трех основах с 7 до 5,6%, в одной основе с 6,6 до 6,0 % и в четырех основах с 8 до 5,5-6,1%.

Опыт показал, что при одной и той же относительной влажности воздуха различия во влажности основ на ткацких станках сохранились. Следует заметить, что при относительной влажности воздуха 48 % процесс десорбции влаги из основ проходил медленнее, чем при 46%.

На рис.1 представлены кривые изменения относительной влажности воздуха 1,3 и температуры 2,4 в ткацком цехе в течение года.

Обрывность основных нитей наблюдали на десяти станках обслуживаемых одним помощником мастера.

В табл.2 приведены параметры влияния величины относительной влажности воздуха и температуры на обрывность основных нитей и на производительность оборудования.

В табл. 2 приведены результаты изменения относительной влажности воздуха и температуры в течение года и влияние этих величин на обрывность основных и уточных нитей.

На рис. 2 приведены кривые изменения относительной влажности воздуха 1,3 и обрывности 2,4 основных нитей при переработке натурального отваренного шелка. *Из* рис. 2 видно что относительная влажность воздуха изменяется в течение года в значительных пределах.

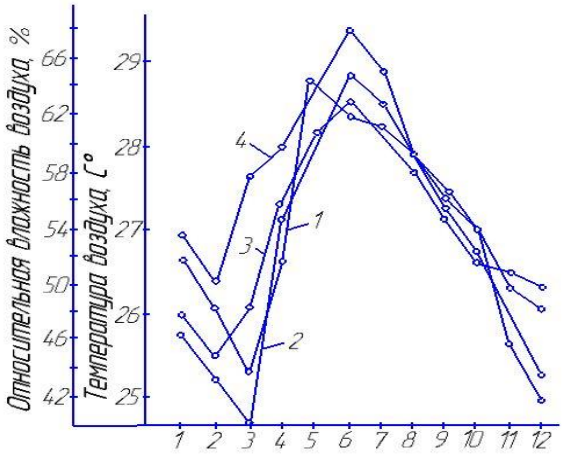

Рис.1. Изменение относительной влажности воздуха 1,3 и температуры 2,4 в ткацком цехе в течение года.

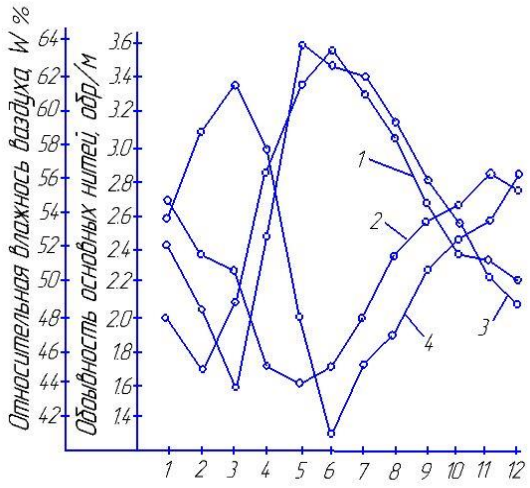

Рис. 2. Кривые изменения относительной влажности воздуха

Таблица 2. Результаты изменения относительной влажности воздуха и температуры.

Относительной влажность воздуха,	Температура, град	Всего обрывов	Количество, М	Обрыв на 1м	Производительность станка, М/Ч
40-45	24,0	181,4	54,30	3,34	1,35
45-48	24,8	199,7	62,40	3,20	1,66
48-52	25,3	193,7	61,50	3,15	1,53
52-55	25,8	180,3	62,60	2,88	1,56
55-58	26,2	171,2	64,60	2,65	1,61
58-60	26,7	157,1	68,00	2,31	1,70
60-63	27,4	145,0	68,10	2,13	1,70
63-65	27,7	134,6	72,00	Г,87	1,80
65-68	28,1	135,2	75,50	1,79	1,88
68-70	28,8	134,0	78,80	1,70	1,97

Обрывность основных нитей при выработке авровых тканей из натурального отваренного шелка на 10000 м одиночных нитей в 8,3 раза больше, чем при выработке сатина из хлопчатобумажной пряжи 16,3 текс. Это объясняется тем, что отваренный шелк имеет структуру рыхлую, ворсистую. При работе ткацкого станка с малой влажностью нити основы соприкасаются с металлическими поверхностями станка и электризуются. Это еще больше увеличивает рыхлость основной нити и поэтому в зоне ремиза - опушка ткани образуются шишки от многократного возвратно-поступательного движения батана; по этой причине 8,8 % обрывов приходится на обрыв нитей шишками. Из-за отсутствия основного наблюдателя шишки обрывают соседние нити, эта обрывность составляет 5,0 %.

Чтобы поднять влажность выпущенной из перегонного цеха основы с 5-8 до 8-9%, необходимо создать условия при которых было бы $P_п > P_0$ то есть поддерживать относительную влажность воздуха в цехе на уровне 75-80 %. Но будет ли практически происходить процесс сорбции? На ткацком станке основа находится в непрерывном разматывание следовательно, сходят все новые слои основы [24-29]. От навоя до опушки ткани основа, в зависимости от артикулов, проходит в течение 45-60 мин. За это время, если и произойдет увеличение влажности основы, то на такую величину, которая не имеет практического значения. Кроме того, если в этом же цехе вырабатываются ткани из искусственного шелка, относительную влажность воздуха 75-80 % поддерживать нельзя. Поэтому целесообразно выпускать основу с начальной влажностью 10-11 %.

Для снижения влажности основы с 10—11% до 8-9 % необходимо создать условия при которых $P_п < P_0$. Для этого в цехе нужно поддерживать относительную влажность воздуха φ = 55-65 %. При этом в основе происходить *десорбция* влага до 8-9 %.

Выводы

1. Наблюдения, проведенные в ткацком цехе, где за системой кондиционирования не ведется должный уход, показали весьма значительные колебания влажности воздуха не только в разные месяцы года, но и в течение одного месяца и дня.

2. Влажность основы не соответствует норме, не стабильна относительная влажность воздуха в цехе, поэтому происходит десорбция влаги из основы в окружающую среду.

3. Поэтому целесообразно выпускать основу с начальной влажностью 10-11 % . Для снижения влажности основы с 10—11% до 8-9 % необходимо создать условия при которых $P_п < P_0$ а относительную влажность воздуха φ = 55-65 % .

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METHODOLOGICAL FOUNDATIONS FOR MANAGING THE QUALITY OF PRODUCTION OF PRODUCTS THAT HAVE PREFERENCES AND PRIORITIES AMONG CONSUMERS IN THE REGIONS OF THE SOUTHERN FEDERAL DISTRICT AND THE NORTH CAUCASUS FEDERAL DISTRICT

Abstract: *for the first time, the article considers the issues of a significant improvement in the quality of domestic products, filling them with the following properties: quality ideology, quality management, fashion and technical regulation, quality system, market quality, advertising, excursion into the past - as a guarantee of quality in the future. All these criteria provide a revolution in quality, guaranteeing the manufacturer stable success in the market, and the consumers of the product - its high quality. We believe that the research results will be in demand not only by manufacturers and consumers, but what is very important - by students, bachelors, masters, graduate students and teachers for the use of the presented materials in the educational process when performing course and diploma projects.*

Key words: *quality, import substitution, demand, competitiveness, market, profit, demand, buyer, manufacturer, financial stability, sustainable TPP, attractiveness, assortment, assortment policy, demand, sales. paradigm, economic policy, economic analysis.*

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Introduction

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Man began to realize his rationality and its advantages much later than homo sapiens became. The understanding of rationality, apparently, occurred under the influence of the development of economic activity, and specifically, in that historical period, when the process of diversification of socially important labor began - producing labor significantly pressed gathering, from the number of hunters for products of purely natural origin, those who tamed domestic animals and controlled them, and farmers, the first to test the design potential of intelligence.

It is still extremely problematic to build productively the desired result in the conditions of the domination of the natural order that had developed long before your appearance, and in the initial period of the history of human activity it was almost a hopeless task. Nevertheless, it was then that what can be defined as protoplanning, or arch planning, was born. The man turned on the reserves of his intelligence.

Reasonableness is the ability of a person, within the framework of systemic relations with the natural environment, to complete the animal (biological) form of submission to nature not only by the art of adaptation, but also by transformation.

Planning arose in the process of man's assimilation of those advantages that rationality provided him with. And here it is necessary to clearly contrast dialectically rationality and consciousness as the specific characteristics of modern man. Reasonableness is predominantly a biological feature, consciousness is its concretely - historical development in the conditions of the social form of human life, a kind of way of realizing the potential of rationality. In this connection, the systemic use of the concepts "consciousness" and "rationality" are different. “Reasonableness” is a part of consciousness as a tool for constructing the latter. Reasonableness singled out a person from the totality of biological species, consciousness allowed him to develop into a modern person and build his own human, social structure of relations, thanks to the ability to foresee and plan, and, planning,

Planning is an attribute of an activity, one of its qualitative features. It is twice qualitative: both as a qualitative indicator of activity, and as a measure of measuring the level of perfection of activity. The art of planning reveals the active side of homo sapiens. To a certain extent, this is a sign of the highest state of activity. Attempts to oppose planning and creativity are nothing more than a desire to limit the universality of planning, to simplify the nature of human rationality. It is also wrong to oppose planning to the freedom of competition. Both creativity and competition are ways of manifesting activity, therefore, all of its attributes must be present in them. Another thing is that the general is realized through the particular, and, therefore, in its reality it is specific, concretized. S.V. Kovalevskaya ventured into an original solution to the problem of describing the rotation of a rigid body with a shifting center of gravity - aerobatics in mathematics, according to the Paris Academy of Sciences, accessible before it only to L. Euler and J. Lagrange, planned her actions both in detail and in time, keeping within term. Even the ancestors of the current apologists of the struggle against the planned economy - the pioneers of the development of the wealth of North American lands - cowboys, who are considered to be free from everything, planned their actions within the limits of available knowledge.

In 2019, the global economy grew by three percent, the EU economy added about 2 percent, keeping up with its western neighbors and the Russian Federation. The indicators can be qualified as satisfactory, based on the conclusion of science that the basic indicator of social development in conditions of the tension of the ecosystem caused by the exploited technologies in industrial and agricultural production is the sustainability of growth, and not the absolute value.

Slowing down the growth in production is perhaps undesirable within the framework of the present, existing being, but it is necessary as a temporary measure. It is more important for modern mankind to gain time, for nature to receive hope that the global nature of the environmental problem can be dealt with without a global cataclysm. Both nature and humanity have reserves. Now it is important not to increase the rate of development of production, but to have time in "reserve time" to develop sparing technologies and rebuild production on them, especially materially and energy-intensive, with open cycles. On how much humanity turns out to be really reasonable, its fate will also depend. It seems that homo sapiens is being tested for survivability again, with the difference that this time he forced nature to test itself for viability. Climate change is already calling into question the much-touted possibilities of technological progress to protect humans. Humanity as a whole does not yet feel this danger, but it already frightens the inhabitants of certain places, regions and continents; recently looking safe.

The analysis of the situation is directly related to the RF. We also have to move in a short time from the idea of the absoluteness of mass production and gigantomania in the centers of the sale of goods to the relativity of the subordination of the economy to the principle: "to satisfy the needs of the buyer here and immediately." The manufacturer must know his buyer "by sight", only then production costs will acquire a rational scale and everyone will be satisfied: nature, producer, consumer. The functions of trade will also change, it will become an industry providing direct communication between the consumer and the

manufacturer. The market will be forced to invest in science in order to have a real picture of the state of the market, to know the trends of the current movement of interests, the purchasing power of the consumer, to be ready to promptly provide the routes of goods from “porch to porch”, solve logistic problems on the ground in real time. The "consumer society" will gradually return to the "society of production", and social consciousness will again closely associate consumption with participation in production. Fake labor - a product of the virtual part of "production", will be reduced, fake workers will be legalized and will start working for their own future.

By means of systems analysis, big science is called upon to determine the optimal rates of economic growth on the scale of national, regional, continental and global progress, and not a phantom "world government" acting in narrowly accumulative interests.

At the beginning of the third millennium, the most urgent question is: how to optimize the organization and management of production development in the priority of consumer interests and environmental safety.

The underestimation of the strategic scale of planning reveals the flaws arising from the understanding of rationality, and ultimately the defects of the intelligent capacity of those who are behind attacks on the universality of planning. In relation to planning, one can easily trace, firstly, the absence of panoramic thinking, and secondly, its ideological orientation towards the narrow format of utilitarianism as a perverse pragmatism.

The ideological pluralism that has replaced communist ideology must be viewed critically. The right to work is not the same as guaranteed employment. With the right to work, you can remain unemployed and there is no legal point in complaining. Something similar is observed with ideological pluralism. The guaranteed right to adhere to the ideological concept that is closer to the values of your consciousness in the information society is blocked by the ownership of the official and most significant sources of information. The Internet with its "toys" is portrayed as a competitive means of ideological monopoly, but in reality it is not. Ideological pluralism is justly likened to a big river, for example, the Don. A big river is not born big, it becomes her in proportion how small rivers and streams flow into it, the traces of which dissolve. Rostov - on the Don, by and large, not on the Don, but on the totality of the water sources united in the Don. That's just, all these sources will remain nameless in Rostov. To the question: what kind of river? The answer will be short: Don, and he will be on the map.

Pluralism, as a rule, is dominated by one thing, reflecting the alignment of forces provided by economic interests and financial resources. Now the mass media, programs of general and professional education, pop cultural practice induce the formation of a worldview in the direction of liberal values. At the same time, rarely does anyone say that modern liberalism is not at all the democratic one under whose banners the Europeans stormed the citadels of absolutism, and the bourgeoisie of the eighteenth and nineteenth centuries won the historical right to build social relations required by the specifics of the capitalist organization of production.

The founders of political economy as a science - A. Smith, D. Ricardo, D. Hume, J. Sismondi relied on the systemic importance of labor in any production system, were the first to realize the growing importance of the qualification component of labor in connection with the scientific and technical equipment of the industrial form of organization of labor activity, in which the rationality of human status is manifested. Capital, in order to reveal its potential, had to grow with the freedom of movement, and the freedom of movement of capital had a perspective only in the conditions of freedom of the subject of labor, his social independence, formalized in legislation and guaranteed by a new type of state. They were socially oriented liberals, the concept of "people" for them had a concrete historical meaning of the aggregate of people whose life was conditioned by the development of production. From science,

The revolutionary bourgeoisie emphasized the value of fairness in distribution - remuneration in any form should be tied to the quantity and quality of labor, place in the management hierarchy of production. It is no coincidence that A. Smith drew attention to the fact that the correlation between the growth of labor productivity and remuneration is violated everywhere. In the spirit of the times, the Scottish scholar explained this by the moral downfall of property owners. J. Sismondi in his well-known work "New principles of political economy" (1819) argued in favor of regulating economic competition and the balance between supply and demand, initiated social reforms as patterns of production development. Later, the classic of the 20th century J.M. Keynes was guided by his ideas.

Among the outstanding achievements of the classics of political economics is precisely what scientists economists who are guarding the interests of the present heirs of revolutionaries - the bourgeoisie of the eighteenth and nineteenth centuries, strive to carefully disguise:

- the fundamental position in the production of that labor that can be specifically measured in the product produced;
- development of a theory of value in relation to such work;
- freedom of the producer as a necessary condition for the development of production;
- the decisive factor in the development of production is labor productivity, and the improvement of labor productivity is due to the division of labor,

which also facilitates the introduction of scientific and technological achievements into production;

- the goals of the economic movement are only partly located within the development of production, the main goal is determined by the systemic position of production itself in the life of a person and society. Production is a tool for solving problems of social and personal development, therefore, planning should be socially and culturally oriented.

It is curious that all the leading economists - theorists of the 18th - early 19th centuries were noted in the history of thought as philosophers. So far, no one has tried to explain this fact, apparently believing it to be insignificant. In vain. The combination of philosophy and economic science in research turned out to be a tradition in subsequent times - Proudhon, Dühring, Marx, Engels, Mill, Spencer, the list goes on. The essence of the explanation of this union lies in the specifics of the epistemological and methodological purpose of philosophy and science. Philosophy is more focused on the discovery and definition of development problems, science - on ways to resolve them. Hence the normative nature of scientific knowledge. A. Smith and his contemporaries saw first of all the problems of the economic movement, that is, they showed their philosophical talents, then took up their scientific comprehension.

The need for planning in the economy was initially discussed exclusively in the context of its optimization, because planning was provided for by the rational nature of the organization of production. Planning was a phenomenal expression of management, and management was an attribute of production. In the titles of numerous studies by D. Ricardo, which served as material for his heirs - worthy and dubious, there is no word "planning", but the content of the work is built as a superstructure over the planning process of the corresponding actions of the economic order. Especially the British economist D. Ricardo was interested in pre-planning - a set of calculation operations of thinking that preceded planning at the stage of defining objective actions - choosing the direction and nature of participation, and when assessing the results.

Neither S. Smith, nor D. Ricardo, nor Sismondi opposed the freedom of economic choice to planning, and planning was not considered as an action incompatible with economic freedom. They interpreted freedom within the framework of the political conditions of life, that is, in the spirit of the ideological positions of a class that is solving the historical task of changing the socio-political, economic and cultural structure of social relations. It should be noted that a certain advance was characteristic of the methodological foundations of scientific research. They contained some limitations, but it is not difficult to see that these defects were actively overcome when it came to scientific calculations.

Unlike most of their descendants - today's scientists economists, the classics of economic science sought to involve in economic analysis not so much mathematical methods and the narrow content of the concept, as the fundamental categories of economic science. Their talent was used to build a theoretical basis for a science-specific analysis. In essence, the progress of scientific economic knowledge in the twentieth century was a superstructure over this basis, and what turned out from above looks more like the Leaning Tower of Pisa.

Intensive discourse on the content of basic political and economic concepts in the 19th century is not difficult to explain, the birth of something new in theory requires methodological shifts. To understand what the mechanism of clock pendulums should be, Huygens had to independently replenish mathematical analysis in six directions. A. Smith, being a pioneer in economic theory, solved methodological problems and could not share the purchased labor with the expended one. Mistake A, Smith was corrected by D. Ricardo, explaining that his predecessor did not notice that the cost of goods should also take into account the costs of production and operation of equipment. At the same time, D. Ricardo himself did not consider the cost of producing raw materials.

Both Sismody, Smith, and Ricordo estimated value in terms of the relationship of mainly things. The historically conditioned relations of people remained for them, as it were, on the sidelines. Hence the inconsistency in understanding the political essence of production relations, their class character. For them, production was the stage on which the production scenario unfolds as a partner relationship. Some had capital, others knew how to do things. Each is a part of a common cause. In such a combination, the political essence of the economy is reduced to the foundations of organization, planning of development and distribution, that is, it is simplified to the level of special knowledge, moral responsibility and decency of the participants.

How does the above have to do with the theory and practice of modern planning? Direct. The foregoing analysis serves as a basis for asserting that the effectiveness of the practical part of planning is directly dependent on the quality of theoretical understanding, reflecting the natural nature of the emergence and development goals of production. The quality of planning theory is due to the methodology of its political and economic equipment. Planning reveals the level of depth of knowledge of the economic process that requires management, and the degree of reasonableness of management actions. The latter needs a special explanation.

Reason, as a phenomenon, has a double interpretation. In the philosophy of the past and in the new century, "rationality" was understood and understood as an independent phenomenon that

realizes the identity of thinking and being, for example, Hegel's expression was the absolute idea; or it is considered as a unique ability of the subject - the highest level of the ideal ability to reflect reality. The characteristic of such a level is determined by the adequacy of the reproduction by thinking of what is happening outside of it.

Reasonableness is a guarantee of the ability to get an ideal copy of objective reality. The task of thinking with intelligence is to transform an opportunity into an appropriate result. The process of cognition - the reflection of reality by thinking is natural, therefore it can and should be planned. Here the main condition for obtaining a product is to conform the actions according to the nature of the object. On the way to the truth there are many obstacles associated with the specifics of the planned action, and with the specifics of thinking itself. Thinking is capable of knowing the truth, but it is also characterized by movement in the wrong direction, which may be delusional, and may be deliberate in order to fit the result of the fulfillment of someone's interests, to be the result of moral dishonesty.

Most of the vices in the search for correct solutions to economic problems have fundamental grounds, they are associated with a one-sided understanding of the functions of economic research, in particular, the sequestration of the political essence of economic science. Planning as a tool is considered on a utilitarian scale that allows you to simplify the process, leaving outside of it everything that is not directly related to production.

The essence of the economic transformations in Russia in the 1990s and their continuation in the “zero years” of the 21st century was to remove responsibility for social development from the economy, which meant opposing the economy to social policy. Politics is the business of the state and its institutions, and the new owners should be engaged only in production. To what was traditionally considered non-economic, added no less than what was traditionally attributed to the economy. The new owners removed the entire addition to the "state", considering all this to be an accompaniment of production, in other words, its infrastructure. Therefore, an oligarchic semblance of capitalism has grown in our country: the seizure of the most economically profitable property with the help of the state, outright robbery through raider seizures,

Corruption is not an excess of official powers in one's own interests and not securing profitable economic projects for bribes, corruption is a fusion of business and government. Such a rich country as the Russian Federation could not become poor in ten years due to irrational economic policy, miscalculations in the organization of planning. Poverty did not come about for economic reasons, it was the result of the usurpation of power by political clans that expressed the economic interests of those who illegally became the master of national wealth. According to clearly underestimated statistics, no less than 71 percent of resources are currently controlled by one million owners, and 140 million cannot even count on the remaining 29 percent, because the economic "reforms" that began in the 1990s are continuing.

Economic violence was carried out under political and ideological cover. The Demreformers carried out a gigantic scam, masking their actions by the need to decisively fight the centralized planning model. Realizing that their own practice and theory were doomed to failure, the initiators of the collapse of the socialist image of the economic system were in a hurry to take advantage of the created people of the great country and scatter around the world, hoping to find shelter from its enemies.

The "scholarship" of the reformers was so high that it did not tell them the most elementary - the idea of socialism has long since gone from a ghost in different parts of the world to a political program, including government parties. Socialism attracts by the fact that it concentratedly expresses the logic of social progress and the meaning of the systemic position of production. The specificity of socialism reflects the specificity of historical time and national history. In the socialist orientation and organization of production, the systemic principle of social life is crystallized - the dialectic of the individual and society.

Society is a form of the reality of human existence, but the very reality of human existence exists and develops only thanks to the three hypostases of personality. Social history begins with the personality, it is its main subject of advancement, and in it is the goal of social progress. Production is intended to be the economic base of social practice aimed at creating socio-cultural conditions for the comprehensiveness and harmony of the human person.

Economic policy, which determines the image and purpose of planning, can be different, but all this political and economic diversity, ultimately, is decomposed into two series of actions. The first row is formed by those programs that express private interests and are focused on the social benefits of representatives of these groups. Typical examples of such economic plans are the political programs of Trump in the United States and Macron in France. These programs are real, but not historical. They concentrately reflect one side of production - the stimulation of its growth, but the other is not defined - the final goal of the systemic status of production. The systemic place of production in social progress is commuting. Let's repeat: production serves as a way of personal development.

Expressed in terms of Hegel's genius, economic planning is divided into “real” and “reasonable”, aimed at creating conditions for personal satisfaction

with their development, and "situational", that is, beneficial to those social groups that create this situation in their private, not historical interests. Such a reality is possible, but it lacks "rationality" that reveals the logic of social progress. Here you can get temporary and private satisfaction, for which all other generations will have to pay handsomely.

Real history will surely pave its own way of movement through this kind of economic "blockages". But the "tax" of historical logic on the illogicality of human economic activity is very high. When they say: "measure seven times, only then cut off", then, in comparison with the "tax" on the unreasonableness of economic policy, such a ratio seems modest. There are calculations showing that for each year of the "bazaar" - the criminal arbitrary practice of planning - the country can pay with eighteen years of recovery.

The "Lomasters" of the 1990s did not defeat the planned economic development on a national scale. They turned out to be more active than the "masters" of the 1980s, confirming the old truth: history requires an active attitude towards itself. Naturally, the difficult history of the Russian Empire and the USSR did not deserve the continuation described above. It was necessary to activate the economic status of Russia in a different way. Russia will have to spend a lot of effort and resources to restore its international prestige. Politicians love to write about how bad Americans and NATO members deceived the first Presidents of the USSR and the Russian Federation. Much less common are analytical materials showing how Gorbachev and his company and Yeltsin and his like-minded people deceived those in the world who looked with hope at the fate of socialism in the USSR and, not without reason, counted on an alliance with the new Russia.

It would be interesting to go step by step mentally along the road map of the reformers of the 1990s, if only in order to enlighten their heirs, who are not appeasing after two decades of the current political liberals. To trace how they were looking for a replacement for the previous practice of economic planning, completely ignoring not only national identity, which could somehow be explained, but also the concreteness of the historical process. In search of a possible model, domestic engineers - economists sorted out states from all continents. And, nevertheless, it is still not clear what should be after the end of the "transition period". What economic order we have to prepare for. The arrow is capable of transferring us to capitalism, however, here we are a century and a half late, and to socialism, which we seem to have renounced.

Despite the differences in particulars, the reformers of the economy remain within the general framework - to clear the planning of economic construction from social aspects. If on the banners of the revolutionary bourgeoisie was written liberte, which gave the name to the liberals and demanded that the state provide civil liberties in full, then the liberals of the new generation want freedom by removing the state from actively participating in the development of production through planning and control. They are trying to decentralize the management of the economy, remove social responsibility from economic activity, forcing only the state to be socially responsible, in every possible way preventing, at the same time, those actions of the state that lead to an increase in the social burden on economic profit.

In essence, liberal reformers economists strive for special freedom and privilege of their status within the state. Any objectively reflective analyst will see a clear historical illogism: the founding liberals, who laid the foundation of liberal ideology, clearly outlined the main value of liberalism - equal freedom for all, as a necessary condition of social responsibility, and their successors in the 21st century are eager to be free so as not to bear responsibility for social progress. By and large, this is nothing more than a 180-degree turn towards the model of social inequality.

Social equality is built not only by the state as political subjects, but also by all other subjects of society. Even more than the state, they are obliged by their social status to be responsible for the exercise of constitutional freedoms. The redundancy in the liberal interpretation of the foundations of social relations is easy to forgive A. Smith, who is convinced of the system-forming status of morality, but after it became clear that morality has a historical form and is formed under the active influence of the economic basis, it is not a unitary formation - several varieties of morality, it is immoral to separate the economy from direct participation in socio-cultural improvement, positioning its progress as self-movement, to plan to cleanse it of the sociocultural burden.

Human intelligence has its own special history, but it is absurd to understand it separately from biological evolution and sociobiological continuation of natural history. Before human rationality appeared as the special ingenuity of liberal economists infected with the idea of reformism, it itself was a derivative product of labor activity, that is, the formation of economic reality.

The actual history of the mind is naturally built into the history of the development of what was eventually called economics by a historical process, therefore, socio-cultural progress, revealing the potential of human intelligence, must immanently belong to the economic movement. The concept of "superstructure" does not characterize some kind of artificial constructive addition to the main structure, it helps to understand the architecture of a monolithic structure. No matter how you depict the first floor and call the second the first, you will not be able to get rid of their structural unity - the second will be considered above the first and the second will be, thanks to the first: there will be no first, there will be no second. But

the first without the second is quite independently real. Labor history has a natural beginning in the life of animals. Exactly, in the animal world, nature “worked out” the model of human reality and “realized” that without achieving a socio-cultural effect in such a practice - psychological progress; transformation of smart thinking into conceptual through the development of abstract ability; the formation of the significance of a holistic perception of the world on the basis of imagination and the strengthening of the social value of responsible behavior - that is, the formation of rationality, labor will not be able to realize its potential. The history of labor, which has grown into the history of production, which has become the object of special scientific analysis, which gave the subject of economic science, is the history of a single interdependent process, consisting of labor activity and its socio-cultural support. The only problem is to what extent the socio-cultural factor is economic? that without achieving a socio-cultural effect in such practice - psychological progress; transformation of smart thinking into conceptual through the development of abstract ability; the formation of the significance of a holistic perception of the world on the basis of imagination and the strengthening of the social value of responsible behavior - that is, the formation of rationality, labor will not be able to realize its potential. The history of labor, which has grown into the history of production, which has become the object of special scientific analysis, which gave the subject of economic science, is the history of a single interdependent process, consisting of labor activity and its socio-cultural support. The only problem is to what extent the socio-cultural factor is economic? that without achieving a socio-cultural effect in such practice - psychological progress; transformation of smart thinking into conceptual through the development of abstract ability; the formation of the significance of a holistic perception of the world on the basis of imagination and the strengthening of the social value of responsible behavior - that is, the formation of rationality, labor will not be able to realize its potential. The history of labor, which has grown into the history of production, which has become the object of special scientific analysis, which gave the subject of economic science, is the history of a single interdependent process, consisting of labor activity and its socio-cultural support. The only problem is to what extent the socio-cultural factor is economic? transformation of smart thinking into conceptual through the development of abstract ability; the formation of the significance of a holistic perception of the world on the basis of imagination and the strengthening of the social value of responsible behavior - that is, the formation of rationality, labor will not be able to realize its potential. The history of labor, which has grown into the history of production, which has become the object of special scientific analysis, which gave the subject of economic science, is the history of a single interdependent process, consisting of labor activity and its socio-cultural support. The only problem is to what extent the socio-cultural factor is economic? transformation of smart thinking into conceptual through the development of abstract ability; the formation of the significance of a holistic perception of the world on the basis of imagination and the strengthening of the social value of responsible behavior - that is, the formation of rationality, labor will not be able to realize its potential. The history of labor, which has grown into the history of production, which has become the object of special scientific analysis, which gave the subject of economic science, is the history of a single interdependent process, consisting of labor activity and its socio-cultural support. The only problem is to what extent the socio-cultural factor is economic? - that is, the formation of rationality, labor will not be able to realize its potential. The history of labor, which has grown into the history of production, which has become the object of special scientific analysis, which gave the subject of economic science, is the history of a single interdependent process, consisting of labor activity and its socio-cultural support. The only problem is to what extent the socio-cultural factor is economic? - that is, the formation of rationality, labor will not be able to realize its potential. The history of labor, which has grown into the history of production, which has become the object of special scientific analysis, which gave the subject of economic science, is the history of a single interdependent process, consisting of labor activity and its socio-cultural support. The only problem is to what extent the socio-cultural factor is economic?

Trying to be smarter than everyone else, liberal economists found themselves above both science and the achievements of a philosophical understanding of the reality of human existence. In the interests of business, they decided to reconstruct the logical structure of the system of social life, which has developed historically. To simplify the basic part of the social structure - to separate economic activity from socio-cultural, regardless of the objectivity of relations, or the pattern of development. To this end, the reformers came up with a new scheme - to close the socio-cultural sphere to the state.

The state does have such a function, but it is not the only responsible social subject. Reasonableness and sociality are immanent signs of everything that constitutes social life. An attempt to free oneself from "super-economic" burdens, referring to the need to rationalize and optimize the structure of relations - to replace the immediacy of relations with mediation; economic policy - we taxes the state, it fulfills socio-cultural responsibility for us - a typically selfish move. The goal here is obvious, and, unfortunately, it is not to make production more perfect, but to pay less for the right to produce, leaving ourselves a higher

margin. One example to illustrate: early libraries, cultural institutions, in many places the schools of Siberia appeared only with the construction of the railway and with the help of the railway. Railway builders and railway managers did not consider such activities to be an infrastructural load, on the contrary, for them it was the messiah of a new mode of transport. Compare what Russia received from the reform of railroad management in the 1990s - 2000s: in the 1990s alone, the length of railways in the Russian Federation decreased from 87,200 km to 86,000. The reformers did not build anything, they closed the traffic along rocky roads, sections connecting settlements formed at the sites of large-scale forest and peat mining, with the main passage; stopped the maintenance of the socio-cultural arrangement of residents, including railroad workers. Railway builders and railway managers did not consider such activities to be an infrastructural load, on the contrary, for them it was the messiah of a new mode of transport. Compare what Russia received from the reform of railroad management in the 1990s - 2000s: in the 1990s alone, the length of railways in the Russian Federation decreased from 87,200 km to 86,000. The reformers did not build anything, they closed the traffic along rocky roads, sections connecting settlements formed at the sites of large-scale forest and peat mining, with the main passage; stopped the maintenance of the socio-cultural arrangement of residents, including railroad workers. Railway builders and railway managers did not consider such activities to be an infrastructural load, on the contrary, for them it was the messiah of a new mode of transport. Compare what Russia received from the reform of railroad management in the 1990s - 2000s: in the 1990s alone, the length of railways in the Russian Federation decreased from 87,200 km to 86,000. The reformers did not build anything, they closed the traffic along rocky roads, sections connecting settlements formed at the sites of large-scale forest and peat mining, with the main passage; stopped the maintenance of the socio-cultural arrangement of residents, including railroad workers. year: only in the 1990s, the length of railways in the Russian Federation decreased from 87,200 km to 86,000. move; stopped the maintenance of the socio-cultural arrangement of residents, including railroad workers. year: only in the 1990s, the length of railways in the Russian Federation decreased from 87,200 km to 86,000. move; stopped the maintenance of the socio-cultural arrangement of residents, including railroad workers.

Thousands of settlements, millions of people have lost a stable way out of their places to regional and regional socio-cultural benefits. Planning unfolded exclusively in the direction of the transition to full cost accounting, which meant one thing - "optimization of the economy" by reducing costs, primarily "non-production", which included the socio-cultural complex. In words - in speeches and publications - the leaders called for mobilizing reserves to create sufficient conditions for the development of "human capital" as the main resource for production progress, in reality it turned out to be quite different.

The bureaucratic apparatus did not deprive itself of the advantages of sociocultural support.

Full cost accounting in the Russian Federation in the period of complete transition to a new economy seemed extremely simple in a planned context: not so much to increase labor productivity by means of scientific and technical equipment of production and the creation of socio-cultural conditions for the growth of human capital, but to “optimize” costs. Before the reforms of the 1990s, there was a long queue "for the driver", the reform reduced it and led to a shortage. There are many places, especially in Siberia, Transbaikalia and the Far East, where the railway service would be depopulated altogether if people had other jobs.

Railways are our main national mode of transport. Russia, the USSR grew with railways, built them, actively developed them socio-culturally, thinking about people. A socially and culturally equipped people is a value in the state number 1, even Catherine the Great complained: I would be glad to build an enlightened society, but we do not have an enlightened people yet. Railroad construction has been planned since the 1840s; Nicholas I personally appeared as a domestic Hamlet - he was solving the problem: "to be or not to be" railways. The court discouraged the emperor, convincing him that revolutionary cleanliness would roll on the railways from Europe, and in general our climate makes railroad construction unprofitable. Scientists and entrepreneurs, cultural figures actively advocated the country's railway future. The destinies of the economy and culture were united back then in economic policy,

The reforms in Russia in the 1990s were economic in motivation and purpose, but in essence they were political reforms. It was possible to redistribute state property among enterprising businessmen within 10 years only by relying on the full support and patronage of the state.

The result of the reforms turned out to be proportional to the new approaches in planning and management: the economy cannot recover in thirty years. The exception is the extractive industries, which have increased production, developing mainly previously discovered deposits. In agriculture, more grain is being produced, grain is an export product. They launched construction, but none of the chronic problems of the population has been resolved. The picture is consistent with the above analysis. Only export-oriented production moves on a regular basis. It is either owned by the oligarchs or under their real control. If we are ready to provide the whole world with gas, then our population will not wait, especially

away from the main pipeline. Gas and gasoline prices hurt those who are classified by advertising as the owners of energy resources. Statement:

Optimization in planning destroyed the system of organizing health care and education; forest fires have become regular disasters, and floods have been added, significantly different from the usual and long-known ones. The authorities are trying to blame them on the "natural disorder" caused by climate change, but very few people already believe in such an explanation. The population migrates from the Far East, Eastern Siberia, Western Siberia is next, and some 50 years ago people were actively traveling to these places to build, raise science and culture. BAM was built by the whole world, finances were limited, but they found money for social and cultural life, albeit of a modest scale.

Those who developed the plans, based on real experience, understood the impossibility of implementing projects without what serves the development of the individual, satisfies his cultural needs, and warms the soul. After all, people went to large construction sites from places where they were inhabited and equipped. To the question: what's the matter? The answer is as easy as shelling pears. At the described time of rise, with all the punctures and costs, the goal was universal - the well-being of the Fatherland. Of course, even at that time the benefits were not shared equally - there were both rich and poor, the main thing was that the goal seemed to be the same and the opportunity to make a career was equally set. They built and produced not for the pleasure of the "golden parachutes", they promoted the country and themselves together with it.

The liberal ideology of planning, clearly dominates in modern economic policy, reflects the objective state of society, which found itself in a difficult situation of development, when the previous understanding of the political and socio-economic perspective, either could not overcome the emerging crisis, or realized its creative potential, required a change ... In both versions, it was not without the participation of opposition forces, claiming the right to resolve social contradictions.

The growth of globalization has also affected the implementation of political and economic changes in domestic reality. Their foreign comrades-in-arms helped our "missionaries" to direct public consciousness on the path of liberal ideology, but the essence of what happened in the 1990s was not determined from the outside. A foreign policy conspiracy undeniably took place. This is evidenced by the collapse of prices for energy carriers of clearly artificial origin, and the numerous promises of assistance that turned out to be false, and the demonstration of sympathy for the changes and the willingness to share the accumulated ideological experience. In the late 1980s and the beginning of the new decade, the world was still two polar ones. In general, we have never considered our competitors enemies. For us, they were opponents. And suddenly the enemy appeared as a friend, ready to help in every way.

The metamorphosis in relation was supposed to make one think: for what such grace? The answer lay on the surface. New relations were offered for changing the political and economic course, the beginning of which was to be a radical methodological break. Gorbachev's "new political thinking" found objectification in "perestroika", which blurred the contours of social development guidelines. We went out of our way, instead of repairing it again, as it was in much more difficult conditions. Suffice it to recall the NEP: socialist industrialization; higher education reforms that have made it one of the best in the world; creation of optimal conditions for the development of science, mobilization of scientific and technical resources, which made it possible to prevent the third world war; the initiative to use nuclear energy for peaceful purposes; space exploration program and much more. It was necessary not to "patch holes" in what had become obsolete, but on the old methodological and socially oriented platform, to develop new options for socialist construction.

Capitalism, we repeat, by the twentieth century completed its "classical" history and was forced to rebuild, forcibly abandoning what had once helped it rapidly increase its advantages: the colonial system collapsed as a result of a long struggle for independence; wars aimed at redistributing property became a dangerous business - they could return like a boomerang; had to agree with the idea of peaceful coexistence; it was necessary to strengthen the social direction in economic policy; the question of the maximum load on the natural habitat arose sharply. There have already been different stages in the history of capitalism: primary accumulation of capital; revolutionary activity; monopolization of capital; concentration and domination of financial capital.

In nature, a biogenetic law operates, according to which representatives of a more perfect species in the process of their uterine formation in an accelerated mode repeat the main stages of biological evolution. Thus, nature binds the course of evolution, ensuring continuity and strengthening the strength of evolution. Something similar can be conditionally distinguished in social history. At the turn of the 20th and 21st centuries, it is quite possible to try to become a capitalist, but it is highly doubtful to become capitalism, to fit into the system of capitalism that has been forming for centuries as a socio-economic entity. The line-up was formed, and the locomotives, designed to be the driving force, were at the limit of their capabilities. New "cars" threatened to slow down,

The capitalist perspective of the Russian Federation enjoyed only domestic liberals, who were blinded and deafened by their hatred of communist

ideals. They, and twenty years later, it seems that capitalism, not communism, is the bright future of mankind. The metaphysical nature of liberal thinking is manifested in the desire to strengthen the position of linearity of thinking in ideology, to stop historical development at the level of the bourgeois organization of social relations, to wrest the capitalist spiral from the spiral of social progress and to declare that at this stage the nature of the development of society has radically changed - the historical spiral straightened out and became forever straight-line movement. One could agree and accept their understanding as an option if liberal reflection had an internal systemic form,

A liberal approach to planning economic activity, which pulls the solution of economic problems out of the systemic nature of social relations, opposing economics to sociocultural improvement, leaves no reason for a compromise with the adherents of the liberal course.

A critical analysis of the liberal planning methodology provides sufficient material for a number of fundamental conclusions.

First of all, it should be noted the desire of the liberals of the XXI century to methodological simplification of knowledge and social construction, including planning, economic development. By actively involving the mathematical apparatus in economic science, universally turning to IT technologies, economists do not activate their own methodological resources of economic science.

In comparison with the fact that A. Smith, D. Ricardo, K. Marx, J. Mil, G. Spencer contributed to the methodology of economic knowledge and transformation, the methodological acquisitions of the twentieth century look more like a deep depression of philosophical and scientific reflection. A small part of modern researchers continues to look for ways to advance in the direction of dialectical and systems approaches, realizing the limited capabilities of the mathematical apparatus. Mathematics for economic research is an auxiliary part of the methodological equipment of the search for solutions to the development problems identified by research experience. It is not even able to formulate a problem, its capabilities help to quantitatively assess the state of movement of economic processes.

It is necessary to heed the warning of K. Yaskers about the fundamental difference between the desire for simplicity of scientific thinking and simplification as a search for a way out of a complex scientific situation, sequestering its content. Simplicity is the path to true understanding, and simplification is movement away from it under the guise of scientific likeness. A direct confirmation of this conclusion is the recognition in economic research and projects of the "admissibility of speculation."

Speculative thinking is a well-known phenomenon that arises in philosophical reflection or in the course of scientific discourse. Its epistemological nature is well studied - outside the systematic assessment of individual aspects of the subject of thinking and, as a consequence, the absolutization of the meaning of these aspects. Mental speculation falsely reflects objective reality, therefore it is permissible to qualify it as a cost in the production of the required knowledge. It is extremely rare that speculation was the product of the artificial induction of the cognitive process in the wrong direction of movement. The "scientific admissibility of speculation" (by liberal economists) has a completely different epistemological mechanism of education, which indicates that there is nothing related to the postulates that distinguish the scientific way of knowing from the unscientific in their thinking.

It is always necessary to clearly differentiate philosophical reflection, scientific thinking and unscientific ways of knowing the world. The problematic nature of philosophical knowledge is logically compatible with the subjective costs of thinking. The falsifiability of philosophically identified problems is limited, since philosophical knowledge is conventionally normalized.

Scientific knowledge, on the other hand, must be subject to either strict verification or equally severe falsification. It does not reproduce in consciousness its attitude to the object (object), it is, in terms of content, a 100% objectified process. Even the choice of the coordinate system, reference point, etc. by the subject of thinking is regulated at all stages of cognition. When scientific knowledge is "enriched" by the "admissibility of speculation", then such an addition testifies to one thing - the desire to modernize the post-non-classical stage of the history of science by the fact that it has nothing to do with the current time or scientific history at all. Admitting speculation not as a cost, but as a scientific phenomenon in the knowledge of the economic movement, innovator economists want to squeeze a subjective action into the chain of objective reflection of the developing reality,

Scientific knowledge is objective, the characterization of the scientific nature of knowledge begins with objectivity, if economic thinking strives to be scientific, it must filter knowledge on the basis of objectivity. "The admissibility of speculation" is tantamount to its legalization in scientific knowledge. This is nonsense for legal sciences, logic, ethics, aesthetics, cultural studies, a negative phenomenon for historical science, political science, sociology. As a fact of objective reality, speculation undoubtedly exists, therefore, scientific - economic, political, psychological, legal interest in it is justified, however, one thing is the attention of science to the fact, and quite another is the desire to substantiate the regularity of the systematic belonging of speculation to economic science as a necessary condition for its development.

"Speculation", by definition (omitting its philosophical interpretation as "contemplation, speculation") is "calculation, intent based on something, the use of something in selfish interests." Therefore, law enforcement agencies should deal with speculation; it would be nice for them to pay attention to speculative manipulations, those who are looking for justification for speculative actions in the economic and political sciences. Political liberals, for example, hardly hide their desire to bring terrorists to the actions of those who are called the political opposition, then terrorism would be easily done away with. So the United States and its partners officially recognized the Taliban as an opposition political movement, that is, they legalized Al Qaeda and ISIS, organizations banned in the Russian Federation, next in line. Economic speculators are no less dangerous in the context of social progress than terrorist advocates. It's just that the effects of their negative impact on economic and socio-cultural development are not so psychologically resonant, moreover, they have grown into the existing corruption scheme and look like their own for many.

The advancement of economics, as follows from the above, is not accidental. It is primitive, manipulative, controlled, it is not held by the "anchors" of the requirements for objectivity and essential reflection of reality by scientific knowledge. Scientific knowledge reveals facts in order to understand the regularity of their existence, and economics scientifically describes the structure of facts.

The second main conclusion is no less obvious: on the platform of methodological simplification of scientific analysis, curtailment of the systemic approach and rejection of the dialectical way of thinking in favor of methodological anarchism and borrowing, liberal economic theory systematically lowers the epistemological and sociological status of the concept of "planning". The task here is this: it is necessary to simplify the concept to such a content that its scope of use opens up the possibility of a purely digital solution of all problems according to the program for optimizing the economic component. Planning should be a technically feasible activity, free from social policy. The main obstacle on the way is the growing demand of social progress for the efficiency of economic construction.

Liberals hide the growing contradiction of economics to everyone else. The day is not far off when mathematics will present its accounts to liberal economists. Economists, mercilessly exploiting mathematics, do not give the expected results either in the development of production management or in mathematics itself, and in fact they devalue the value of mathematical analysis with their extremely low productivity. Political strategists, who spoke in favor of the digital economy, have promised another "life buoy" to economics, replacing the concept of "economy" with the concept of "production". Production will become digital. The economy emerged, formed, and will continue to develop as a basic social instrument of social progress, which, in turn, has been and will remain the main factor in the development of people. The economy must have a human face. All its other characteristics are derived from its humanitarian vector. But only in the liberal-economic dimension, economic planning is consistently moving away from the satisfaction of personal development needs. It would not be so, it would not make sense to "teach speculation." They persistently try to present speculation as a necessary link in scientific thinking, and this is done in the interests of the minority that controls the distribution, and does not produce a real product. Within the framework of artificially constructed relations in the superstructure over production, speculation has been legally flourishing for a long time, but it is unnatural within the framework of the regularity of the formed system of production itself, where everyone, regardless of their position, is a participant and has the right to count on their legal share in the product produced. The order of distribution is determined mainly by property, and only then by the shares of participation in the production of goods. The gap between two realities - labor and property, the direct creator of a real product and its real owner - formed in connection with the regularity of the development of production and the social superstructure, opens up a real opportunity to supplement objectively natural reality, a conditionally existing reality, virtual or speculative. It is she who is considered as the path of movement towards property. the direct creator of a real product and its real owner opens up a real opportunity to supplement objectively natural reality, a conditionally existing reality, virtual or speculative. It is she who is considered as the path of movement towards property. the direct creator of a real product and its real owner opens up a real opportunity to supplement objectively natural reality, a conditionally existing reality, virtual or speculative. It is she who is considered as the path of movement towards property.

Speculation is a roadmap to capital that can be sufficient to start a real business. And in this version, speculation has real meaning, it can be a conditional fact of scientific research. But under the dominance of financial, in essence, speculative capital, speculation has become a stably autonomous variety of activity, divorced from the production of a real product. Market speculation is an excessive form of intermediary activity. It has already become an obstacle to the development of production. And so the costs of the social movement began to concentrate in it. By and large, speculation has matured, blossomed and outgrew the limits of the right protected reality.

It is a typical phenomenon of that form of reality that inhibits progress, having squandered the rationality of its action, is subject to denial. However,

everything will remain the same, because speculation has a reliable "roof" protecting it from political control, financial capital on a transnational scale.

So, historical logic requires that the planning of economic activity be carried out in a systemic form of expression, create optimal conditions for socio-cultural development and be conditionally focused on a humanitarian result. Economic planning is conditioned by the solution of socio-cultural problems, therefore, the models of economic planning should be complicated, not simplified. Economic analysis of the situation, prior to planning, should be based on special scientific research, be conceptual. Deepening the epistemological and methodological equipment of economic reflection presupposes the active use of the requirements of dialectical thinking - the comprehensiveness of the involvement of historical dialectics and a sufficient completeness of the analysis of the relevance of the involvement of historical dialectics, as well as the advantages of a systemic approach. Domestic specialists should bear in mind that foreign researchers also criticize liberal innovations, opposing them with an objective analysis of production development trends. We have something to be interested in. Let us take, for illustration, the reasoning of the authoritative American specialist J. Galbraith. In his famous book "New Industrial Society", he critically traced the history of the modern industrial system of the 20th century, which subordinated the formation of social relations and the human personality itself. As a result, J. Galbraith came to the conclusion about the need for radical changes in it, but not those that liberals advertise. We have something to be interested in. Let us take, for illustration, the reasoning of the authoritative American specialist J. Galbraith. In his famous book "New Industrial Society", he critically traced the history of the modern industrial system of the 20th century, which subordinated the formation of social relations and the human personality itself. As a result, J. Galbraith came to the conclusion about the need for radical changes in it, but not those that liberals advertise. We have something to be interested in. Let us take, for illustration, the reasoning of the authoritative American specialist J. Galbraith. In his famous book "New Industrial Society", he critically traced the history of the modern industrial system of the 20th century, which subordinated the formation of social relations and the human personality itself. As a result, J. Galbraith came to the conclusion about the need for radical changes in it, but not those that liberals advertise.

J. Galbraith compared the development of industrial systems according to two significantly different scenarios - planned, which liberals - economists identify with socialist management, and market, regulated through competition. Liberals always cite the latter as an example, as the ideal embodiment of economic freedom. Based on the experience of the economic history of two-thirds of the twentieth century, which absorbed both the rise and the "great depression", peacetime and wartime, the American scientist showed that economic progress does not contradict the planned activities of the state. Thanks to the analysis of economic processes in the format of social and personal changes. J. Galbraith convincingly demonstrated the limitations of the liberal concept of economic freedom.

Galbraith's conclusions are relevant for a correct understanding of what was happening at the end of the 20th century and in the early decades of the 21st in Russian society, on the one hand, and for an adequate assessment of the futility in the scientific and practical aspects of the ideas of Russian liberals who turned into conservatives. The industrial system is dangerous by the high level of its organization, it is increasingly turning into a gigantic mechanism, acting according to its own order, functionally tightening the personality, subordinating it to the freedom of its organization. The industrial order, so important and beneficial for the development of production, becomes a trap for the progress of the individual, leads to the one-sided development of the individual - the formation of a technical man. The “specialist” displaces the personality from the goals of social development. Economists need a specialist sharpened for the technology and organization of production, the personal development of liberals - economists seems transcendental for the purposes of production. Production requires not a person for its development, but a specialist who knows and knows how to work. They build the functions of culture and education for the training of a specialist. There is no need to go far for arguments, there is no need to plunge into the history of the United States, you just need to turn towards the modernization of domestic special education - secondary and higher, ousting from the programs everything that contributes to personal development in order to emphasize the process of training a specialist in the direction. The personal model of education has given way to the competence model. Production requires not a person for its development, but a specialist who knows and knows how to work. They build the functions of culture and education for the training of a specialist. There is no need to go far for arguments, there is no need to plunge into the history of the United States, you just need to turn towards the modernization of domestic special education - secondary and higher, ousting from the programs everything that contributes to personal development in order to emphasize the process of training a specialist in the direction. The personal model of education has given way to the competence model. Production requires not a person for its development, but a specialist who knows and knows how to work. They build the functions of culture and education for the training of a specialist. There is no need to go far for arguments, there is no need to plunge

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The USA survived this reform back in the 1960s and, according to J. Galbraith, became disillusioned with the idea of coaching education for training in a specialty. Both in the field of foreign and domestic economic policy, wrote G. Galbraith, everything that is considered - and not without reason - as an automatically accepted or taken on faith position of people now called the "establishment" is being questioned. These mindsets need political guidance. This process of reassessment of tasks has arisen because the idea of liberal reform is no longer quoted. In the past, liberals have acted like economic liberals; reform meant economic reform. The task of this reform has invariably been repeated in hundreds of programs, speeches and manifestos. Production must grow; income must grow; income distribution should be improved; unemployment must be reduced. This was what the program of liberal reformism boiled down to for decades. Even the ten biblical commandments are less known and, of course, are much less implemented than these requirements ... The role of a liberal reformer does not require effort, it is not associated with any violent disputes, scandalous strife, no one has to be persuaded and persuaded. All that is required is to stand still and bow when the Gross National Product increases again. At the end of his book, J. Galbraith concludes: “The progress we are talking about today (recall that the book was published in 1967) will be much more difficult to measure than the progress that is associated with the percentage of growth in the gross national product or with unemployment rate. This is due to the fact that the tasks, which the industrial system sets for itself are so narrow that they lend themselves to accurate statistical measurement. But life is hard. The definition of the prosperity of society should be a subject of discussion. " We would like to complete the study of the methodology for planning the development of production by listing the monographs of J. Galbraith: "American Capitalism" (1952), "The Great Crash" (1955), "The Society of Plenty" (1958), "The Time of Liberalism" (1960 .), "New Industrial Society" (1967). It seemed that the author had found a name for modern society, perhaps it was so, but when J. Galbraith revealed the essence of the “new industrial society”, he realized that this society, despite its novelty, was outdated. What the future society should be like, the scientist did not know, so he accurately defined the emerging society as a "society of prosperity",

J. Galbraith corrected the status of economic science with the dynamics of welfare in society. As wealth rises, the role of economic research changes. When people are malnourished, poorly dressed, do not have decent housing and die of illness, the priorities are those that improve their material living conditions, it is necessary to look for economic ways to increase income - "people are most diligently looking for ways to save their souls with a full stomach." With a high level of income, problems other than physiological ones arise, and society is obliged to help its citizens in solving them. The advantages of a comprehensive analysis of changes are significant, J. Galbraith argued. “Also great - and growing over time - are the benefits of an analysis of change that goes beyond economics. This is because

J. Galbraith generally adhered to the "general line" of the modern interpretation of the subject and functions of economic science in the West. He distinguished scientific economic research from political problems, beliefs that their solution goes beyond the competence of economic science, are the prerogative of the authorities themselves. We will not judge how fair his position is. Let us only recall: there was a post-war period of obvious successes in capitalist construction, economic science was not relevant to an expanded interpretation of the subject of its research, to be a political economy, to explain economic inconsistencies by political relations; secondly, we note that J. Galbraith felt very uncomfortable, realizing that limiting, like liberals, economic analysis is a simple study of the dynamics of the economic characteristics of production, it drives itself into a dead end. To understand the system requires a systematic approach.

Economic globalization is a policy that uses the objective trend of integration of national economies. This is clearly illustrated by the example of the WTO. The WTO, on the one hand, stimulates the planned form of managing the economic movement, on the other, it strictly regulates the possibilities of planning the development of the economy on a national scale, subordinating national interests to global goals, the justification of which, from a scientific point of view, looks insufficient and politically biased. Meanwhile,

having entered the WTO, the country is forced to accept the conditions of this largely political game.

National economic development projects are more and more loaded and adjusted not in the national interests, which we have to put up with as the costs of globalization. At the same time, it should be borne in mind that there is no alternative to integration. Homo sapiens exists as a universal species. The earth is his common home, development is a common interest, synthesizing biological evolution and social and cultural arrangement.

When planning, it is necessary to proceed from the dialectical requirement for the comprehensiveness of an objective analysis of reality, once and the need to act together in common interests, two. States have something to share, but history cannot be tested for strength, humanity has no other and will not have another. Dialectics has opened up to us a range of opposition, both practical and theoretical. The struggle is reasonable exclusively within the boundaries of unity, therefore, the contradictions should be filtered through the need to obtain a general result corresponding to the laws of motion of the human reality of being.

Scientific knowledge comes with a cost. Scientists' understanding of what is happening does not always take the form of true knowledge; delusion is a natural movement of any knowledge, here it is important to have a critical attitude. A scientist must not believe, he must doubt. J. Galbright is an honest scientist, aware of the limitations of his scientific potential, he logically addresses the discussion, in scientific disputes he sees a way out of deadlocks and dubious judgments.

K. Marx was careful about the mistakes of those who served science, believing that not politicians, but scientists are called upon to determine the path of economic development. Politicians should create the political conditions for resolving economic problems, following the recommendations of scientists. J. Galbraith is absolutely right when he speaks of the complication of social development and the need, in connection with this, to consider economic knowledge and planning in a new, broad sociocultural format. An American scientist with a similar methodological attitude did not come to the court of domestic reformers - liberals at the end of the last century, when the time of economic reforms was compressed, then there was already a train of vices of their actions. Soros turned out to be the idol of our liberals - a typical financial and political speculator. Speculators without ideas have found a speculator with ideas.

Main part

The work presented to your attention is the fruit of joint reflections on topical problems of improving the activities of an important branch of the social economy of leading Russian and foreign experts. A collectively executed monograph always has an advantage over an individual form of creativity. A separate author, no matter how knowledgeable and authoritative he was, was forced by the nature of the circumstances to explain not only his point of view on the problem under study, but also to talk about how colleagues “see” this problem, to present someone else's view of the order of things, to transform in the process of the declared discussions in their opponents. Such a transformation, despite all its conventionality, is not so harmless for objectivity in understanding. Even such a wonderful thinker like G. Hegel sinned, willingly or unwillingly substituting opponents,

This work presents an original author's approach and opens up the opportunity to learn the most significant first-hand, without intermediaries, who often darken creative relationships. The quality is "written by nature" to be at all times in the epicenter of scientific and amateurish reflections. The problem of ensuring the quality of activities is not just universally relevant, it is strategic. The dilemma in relation to quality is reasonable only within the limits of opposing the ratio of actions "direct" and "mediated". The saying "it's all about him" owes its origin to quality. It is possible to "forget" about the quality problem solely because any fruitful and luminiferous activity is directed towards. reflecting the relevance and profitability of activities aimed at the development of production. To reanimate the role and importance of a quality-oriented strategy, since only in this case enterprise managers will subjectively and objectively be forced to improve their production using nano technologies and innovative processes so that competitive and demanded materials and products fully satisfy the needs of domestic consumers. At the same time, the authors' assertion that the consumption of domestic materials and products is regulated by the market is substantiated. In this case, the requirements of the market should be shaped in production, and the authors confirm this situation, drawing attention to the role of the state and consumers in the formation of sustainable demand for domestic materials and products, namely: maintain a range of goods, regulating it by federal, regional and municipal orders; stimulate price stability; increase consumer ability and gradually improve their quality. The implementation of these tasks will create the basis for the consumer to realize the need to pay for the advantages of high-quality materials and products, and the manufacturer to realize that improving the quality of materials and products cannot be associated only with rising prices, but also due to technical innovations aimed at using new technological and engineering solutions. Today, and even more so tomorrow, it is important to implement one of the defining principles of production efficiency - the manufacturer produces exactly what the consumer needs. It is equally important to understand the role and importance of quality activities, that is, to what extent the leaders got into the essence of things, learned to manage things,

change their properties (assortment), form, forcing them to serve man without significant damage to nature, for the good and in the name of man. The quality of an activity is the final criterion of its individual, collective and national status. It is in the quality that the energy of creation is accumulated. The quality of activity testifies only to how much we have penetrated into the essence of things, learned to manage things, change their properties, form, forcing them to serve a person, without significant damage to nature. Quality allows you to see the person himself from new perspectives, to pay tribute to his talent, will, and professionalism. Research carried out by the UN Development Program has made it possible to measure the share of the "human factor" in national and global wealth:

A quality-oriented strategy undoubtedly contributes to an increase in the very role of the subjective factor in the development of production, and to a more complete all-round satisfaction of human needs themselves. The desire to "live according to reasonable needs", as well as the need to "work according to one's capabilities", together with the communist ideal, no one openly and officially dared to abolish, realizing the absurdity of denying the essential forces of man. In the "hot" state, the problem of quality is steadily supported by the internal forces of active consciousness and external life factors. The highest function of consciousness is cognitive. Learning about nature, we discover its qualities, state of quality, quality levels, embodying new knowledge in production. Classical political economy (A. Smith, D. Riccardo, K. Marx, J. Mill) concentrated quality problems in manufacturing. Post-classical economic thought shifted quality towards consumption, trying to give production a "human face" - a person alienates himself in the production process, but this measure is forced and in the systemic sense - temporary, conditional. Labor is a kind of "terrible cauldron" that Vanya the fool had to overcome in order to turn into Ivan Tsarevich. The main thing in production is the result, not the process. Consumption regulates the market. Consequently, market demands must dominate production. The task of society is to contribute to the development of demand in the market worldwide: to maintain a range of goods, stimulate price stability, increase purchasing power, and improve the quality of goods. E. Deming, calling the "network of deadly diseases" of modern production, in the first place he puts "production planning, not focused on such goods and services for which the market is in demand." Try to argue with him. Production during the transition from industrial to post-industrial mass consumption society is thought of as a function of the market. The dynamics of market development in the last decades of the last century and at the beginning of the third millennium invariably shows an increase in consumer demand for the quality of goods. For all the economic, social and political costs, humanity is getting richer and wealth is unevenly distributed. Finance, as before, is concentrated in certain regions, however, in the same way as the premieres of modern production. Analysts predict the course towards the quality of goods confidently and everywhere. The consumer realized the need to pay for the advantage of quality services and products. It's the turn of the manufacturer, who must close "greed" and "deadly sin" in his mind in order to burn out greed. Prominent economists unequivocally declare that an increase in the quality of goods is not causally related to an increase in prices. Positive changes in the quality of goods imply qualitative changes in technology, technology, organization and production management. Manufacturing must improve, which does not mean becoming more costly. And I would also like to draw your attention to one phenomenon that usually escapes in the troubled bustle of the economy - the historicity of the economy. The economy has not always been the way we perceive it now and will not remain forever. Economic life changes in time, which forces us to tune in not its changing being. The modern economy is built on a market foundation and the laws of the market dictate their own rules to it. In the foreground are profit, competition, efficiency, unity of command. How long will this continue? Symptoms of the new economic order are already mounting, analysts say. The next round of the economic spiral will also revolve around the market core, but the value of the market will not remain total. The priority of market competition, which aggressively squeezes out the social sphere, is incompatible with the prospect of economic development, as evidenced by the steady desire of social democracy in the West to deploy the economy as a front for social security and fair distribution of profits. The new economy is called temporarily "lean". It requires humanization not only in the distribution of national wealth. The production itself is also humanized, including the control system. The current principle: "the strongest, the fittest survives", will replace the "social-production partnership - the manager and the manufacturer will become members of one team. Mass production will give way to an organization corresponding to the implementation of the principle - "the manufacturer produces exactly what the consumer needs. The "lean" economy will focus on resource-saving technologies and environmental friendliness of production.

It will require a new look at core concepts. The philosophy of quality will also change. We must be ready for the coming events. To the best of their competence and interests, the authors tried to share with you, dear reader, their thoughts, entrusted you with their judgments about the past, present and future of the case to which they have devoted their lives, their research, in order to answer the main question: what dominates quality - advertising or manufacturer, and the revolution in quality will unite them, or will it be

impossible to do it? But life will judge both. One of the tasks in the system of increasing the competitiveness of the region is to identify the potential for clustering the region. The traditions of the footwear industry in the regions of the Southern Federal District, the North Caucasus Federal District and the trends of its development give a chance for success in the case of interaction of all participants in the process - suppliers, manufacturers, government officials, trade and service companies. The first step towards such interaction must be taken in the course of an exchange of views and clarification of mutual positions. Do the regional footwear market participants unambiguously perceive the problems they face? What is the vector of structural changes in the Russian leather and footwear market - towards the development or stagnation of the industry? What are the conditions and real opportunities for the development of competitive production in the region? What should be the support for the authorities at the federal and regional levels? Is it possible in modern conditions to rely on interaction and cooperation as a real factor of competitiveness? How to solve the problem of training and retaining personnel in production? Do the regional footwear market participants unambiguously perceive the problems they face? What is the vector of structural changes in the Russian leather and footwear market - towards the development or stagnation of the industry? What are the conditions and real opportunities for the development of competitive production in the region? What should be the support for the authorities at the federal and regional levels? Is it possible in modern conditions to rely on interaction and cooperation as a real factor of competitiveness? How to solve the problem of training and retaining personnel in production? Do the regional footwear market participants unambiguously perceive the problems they face? What is the vector of structural changes in the Russian leather and footwear market - towards the development or stagnation of the industry? What are the conditions and real opportunities for the development of competitive production in the region? What should be the support for the authorities at the federal and regional levels? Is it possible in modern conditions to rely on interaction and cooperation as a real factor of competitiveness? How to solve the problem of training and retaining personnel in production? who stand in front of them? What is the vector of structural changes in the Russian leather and footwear market - towards the development or stagnation of the industry? What are the conditions and real opportunities for the development of competitive production in the region? What should be the support for the authorities at the federal and regional levels? Is it possible in modern conditions to rely on interaction and cooperation as a real factor of competitiveness? How to solve the problem of training and retaining personnel in production? who stand in front of them? What is the vector of structural changes in the Russian leather and footwear market - towards the development or stagnation of the industry? What are the conditions and real opportunities for the development of competitive production in the region? What should be the support for the authorities at the federal and regional levels? Is it possible in modern conditions to rely on interaction and cooperation as a real factor of competitiveness? How to solve the problem of training and retaining personnel in production?

For the shoe business, the topic of forming a regional cluster is very relevant. The creation of clusters is one of the most effective tools for increasing the competitiveness of territories. The need for a cluster approach to managing the competitiveness of enterprises, which consists in the development of a new industrial policy to stimulate the organization and development of clusters based on the formation of relations of network cooperation and public-private partnership (cluster policy) and includes the study of clusters, cluster strategy and methods of its provision are a lifesaver for today. From the point of view of the management process, the cluster approach is considered as a set of stages and activities for organizing clusters and their development, i.e. clustering. This approach will allow small and medium-sized enterprises in the light industry to compete successfully not only in the domestic but also in the international market. The role of regional and local authorities in launching and coordinating cluster projects is very important, in this regard, it was possible to form an effective mechanism for representing the interests of business in relations with the authorities. An element that serves as a "coordinator and communicator" is proposed. For the development of this element, a substantive dialogue is needed, based on mutual trust and interest, first of all, between the subjects of the industry themselves - both the government and business are interested in this. It is necessary to develop joint proposals on directions, forms and methods of state support for the development of an industry cluster, namely: The role of regional and local authorities in launching and coordinating cluster projects is very important, in this regard, it was possible to form an effective mechanism for representing the interests of business in relations with the authorities. An element that serves as a "coordinator and communicator" is proposed. For the development of this element, a substantive dialogue is needed, based on mutual trust and interest, first of all, between the subjects of the industry themselves - both the government and business are interested in this. It is necessary to develop joint proposals on directions, forms and methods of state support for the development of an industry cluster, namely: The role of regional and local authorities in launching and coordinating cluster projects is very important, in this regard, it was possible to form an effective mechanism

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– implementation new construction, expansion and reconstruction of production facilities, housing facilities, social-cultural purposes, communal services and consumer services for the population, administrative department, the Ministry of Emergency Situations, environmental protection and ecological safety at the regional level;

– assistance in increasing the competitiveness of products of industrial enterprises and its promotion in the domestic and foreign markets;

– organization and implementation of software projects;

– update the material and technical base of the production of the cluster, the introduction of new technologies;

– preservationand development of accumulated potential in the field of science and scientific services; improving mechanisms for financing science; implementation of scientific results in the industrial and social sphere of the region;

– achievement the quality of education that meets the state educational standard; implementation of a regional order for the provision of additional education services; achieving a dynamic balance between the labor market and professional training; development of higher and secondary vocational education.

A set of measures for anti-crisis management of light industry has been proposed, including the following priority areas:

– the rise competitiveness of enterprises light industry;

– development industry information services; continued modernization of fixed assets;

– mitigation lack of working capital;

– the rise efficiency of public administration;

– jointing non-payments.

An action plan has been drawn up to implement the anti-crisis program in the light industry, including:

– normative - legal and scientific - methodological support of anti-crisis activities;

– development of anti-crisis support infrastructure light industry enterprises;

– expanding business opportunities light industry enterprises;

– financial mechanisms for support and development of anti-crisis activitieslight industry enterprises;

– development of interregional and international cooperation light industry enterprises in the anti-crisis sphere.

To further improve the legal regulation of anti-crisis activities, it seems appropriate to form an action plan for the implementation of the anti-crisis program in the light industry, namely:

– concretization and detailing of the goals of sustainable development of light industry enterprises should be built within the framework of the development of the industrial sector of the economy, which is based on structural transformations of the economy and the introduction of anti-crisis technologies for the development of production and export of consumer goods. Within the framework of development, three stages can be distinguished, the terms of which are presented rather conditionally and can be adjusted in the process of implementing sustainable development of light industry enterprises:

– 2016-2020 Anti-crisis development, providing for overcoming crisis phenomena and restoration of crisis losses of light industry enterprises and finding resources for the subsequent modernization transformation of light industry

– 2021-2025 Investment renewal of fixed assets of light industry enterprises, including a qualitative increase in competitiveness

– 2026 -2030 Innovative development - the beginning of the mass development of new types of equipment and technologies, the transition to expansion into foreign markets for light industry goods

The use of the developed and proposed methodological provisions for increasing the competitiveness of the region on the basis of the cluster theory will make it possible to make a decision on attracting and rational allocation of investment funds aimed at implementing the necessary measures to improve the efficiency of the subjects of an attractive cluster and increase their competitiveness. To solve this problem, a competitive assortment of men's, women's and children's shoes is proposed,

taking into account the factors affecting consumer demand: compliance with the main fashion trends, taking into account the economic, social and climatic characteristics of the regions of the Southern Federal District and the North Caucasus Federal District. Within the framework of the developed strategy, the production of competitive products will be organized using modern mechanized innovative technological processes. Besides, to implement the developed assortment of men's, women's and children's shoes, innovative technological processes of its production using modern technological equipment based on advanced nanotechnologies have been proposed, which form the basis for reducing the cost of footwear and, thereby, increasing its competitiveness in comparison with a similar range of footwear from leading world companies. , with the possibility of a wide assortment of footwear, not only by type, but also by fastening methods, which will make it relevant and more competitive. The layouts of technological equipment are proposed, which provide an opportunity to form a technological process for the production of both men's and children's shoes in volume,

At the same time, the financial well-being and stability of newly created enterprises in the regions of the Southern Federal District and the North Caucasus Federal District largely depends on the inflow of funds that ensure the coverage of their obligations. Lack of the minimum required supply of funds can provoke financial difficulties for enterprises. In turn, an excess of cash may be a sign that the company is suffering losses. The reason for these losses can be related both to inflation and depreciation of money, and to the missed opportunity to place them profitably and generate additional income. In any case, it is the constant analysis of cash flows that will allow the company to control its real financial condition and prevent bankruptcy.

If the manufactured shoes are not fully sold, the enterprise loses part of the profit, which is necessary for the further development of production. To reduce losses, the manufacturer must have daily information about the sale of products and make effective decisions, namely: either to change the prices for the manufactured range of footwear in a timely manner, or, which is more efficient and justified, to start producing a new range of footwear that is more in demand on the market.

Sales managers or marketers who oversee the sale of a specific range of footwear must calculate the cash flow from their operations on a daily basis. As a result of tracking the inflow of funds, we will have information about their net inflow from our operating activities. A decrease in sales will lead to a decrease in cash flow and will require a decrease in the selling price of the product in order to increase sales. If such an event does not lead to an increase in cash flow, then it is necessary to make a timely decision on the advisability of further releasing this range of shoes.

For this calculation, it is important to differentiate the data involved in the calculation. To calculate the cost of a specific model being produced, the initial data are fixed and variable costs, which depend on production equipment, the composition of basic and auxiliary materials, the number of employees, etc. The main initial data that are used in the monitoring process are the selling price of a unit of production and sales volume. Thus, the calculation can be performed daily or in a selectable time range, while setting only the sales volume and unit price for a certain period, we will receive an increment in the cash flow for this period.

Calculations are carried out on the basis of assessing the degree of implementation and dynamics of production and sales of products, determining the influence of factors on the change in the value of these indicators, identifying on-farm reserves and developing measures to reduce them, which should be aimed at accelerating product turnover and reducing losses, which will make it possible to achieve significant economic effect.

Of great importance in the management of product output is the assessment of the actual output and sale within the production capacity, that is, within the boundaries of the "minimum - maximum" volume of production. Comparison with the minimum, break-even volume allows you to determine the degree, or zone of "safety" of the organization and with a negative value of "safety" to remove certain types of products from production, change production conditions and thereby reduce costs or stop production of these products.

Comparison of the achieved volume of output with the maximum volume determined by the production potential of the organization makes it possible to assess the possibilities of profit growth with an increase in production volumes, if demand or the share of sales of footwear on the market increases. For a footwear company seeking a strong position in the market, setting the price of footwear for sale is key to the success of the chosen strategy. Price is a tool to stimulate demand and at the same time is the main factor in the long-term profitability of its activities. In this regard, it is necessary to conduct a break-even analysis. Various ratios of sales volumes and prices for manufactured products are considered. A decrease in prices occurs when an enterprise uses a system of discounts to increase sales. This action leads to an increase in sales proceeds and additional profit. However, the area of income is not unlimited - when a certain volume of production is reached, its further expansion becomes economically unprofitable.

The effectiveness of all these measures in creating a cluster is possible only with the active interaction of the branches of government and, without fail, with support at the federal level - the

Southern Federal District and the North Caucasus Federal District can completely or partially relieve the footwear industry from infrastructure costs when creating new industries within the cluster. And only the federation can solve the issues of tax preferences; closing the borders for gray and black imports is again the competence of Moscow, and given that the industry is in a severe depression, changes for the better require a very powerful set of tools and authoritative decisions and joint actions of all interested parties.

Perhaps now, when the Don shoemakers see how quickly their ranks are thinning under the pressure of competition, the readiness for joint action will be higher. Otherwise, Rostov will soon cease to be the shoe capital of the south of Russia.Finally, the institutional-organizational scenario presupposes an answer to the question of how a cluster should be organized, how should it be formed and grown? For us, a cluster presupposes the co-organization of at least four large technological groups that form the technological basis of the cluster:

– breakthrough scientific laboratories - pilot production, on which the foundations of new technologies are created;

– development centers, on the basis of which mock-ups and samples of technologies will be created for testing in experimental production;

– industrial and technological groups capable of tooling production for the manufacture of pilot series;

– marketing groups capable of promoting a new type of product to the market and generating sustainable demand.

The managerial superstructure that ensures the interconnection of these four large technology groups with each other can be:

– Investor Council who decides on the priority financing of a particular project;

– expert council considering various projects as they prepare for implementation;

– creative center preparing materials for decision-making by the expert council and the council of investors.

Achieving the goal in the field of cluster development is possible only with a comprehensive technological modernization of the real sector of the regional economy. With regard to the Southern Federal District and the North Caucasus Federal District, it is possible only if the interests of all participating economic entities are taken into account. We are talking about such areas as:

– increase the share of the innovation sector and the introduction of technological innovations in enterprises that form clusters;

– development entrepreneurial activity in the field of large, medium and small businesses and mutual cooperation in order to introduce innovations, which leads to the expansion of existing and the creation of new clusters;

– gain ties and interdependence of industrial enterprises and research and educational centers and schools;

– perfection territorial location of industrial enterprises.

In conclusion, considering the process of formation and implementation of cluster policy in the region, we point out that this is a difficult task, the development and implementation of which should be of a scientific nature. Its success depends on many factors and conditions, and the central place here belongs to the scientific principles of management and the desire for the dynamic development of the region, the interest of all branches of government, both municipal and regional, and federal branches of government.

Nevertheless, the weakest point of enterprises is the low level of information support of precisely the technological preparation of production. This is explained byautomated CCI systems are specialized and depend on the nature of production, type of products, serial production. In addition, the ASTPP application software is heterogeneous in purpose, it is formed from a set of products, each of which ensures the development of a separate type of technological processes. Therefore, there is a need to create information support in the form of a universal database in order to reduce labor intensity and increase the efficiency of work at the stage of technological preparation of production through their use.For the technological process of assembling shoes using the adhesive fastening method, the authors have created information support, the purpose of which is the formation of a model passport and an automated selection of the technological process.

To create information support, the authors completed the following tasks:

– highlighted criteria that determine the structure of the technological process of assembling shoes with the adhesive fastening method based on the methods of a priori ranking and rank correlation;

– developed by classifier and block diagram of shoe model coding for automated design of technological process;

– drawn up a matrix of coincidences of technological operations, depending on the design, materials and methods of processing blanks for the upper, insole and sole units, heels and intermediate parts for an objective substantiation of the procedure for drawing up a process flow diagram and an algorithm for its selection;

– developed a structural-logical model of shoe assembly with an adhesive fastening method based on the principles of a systematic approach, which ensures the development of optimal technological solutions;

– developed information support for computer-aided design of the shoe assembly technological process in the form of a set of databases that contain information about various options for performing the same technological operations, depending on the equipment and capacity of the enterprise;

– built the algorithm of the program, in accordance with which the precise prescriptions defining the computational process leading from varying initial data to the original result;

– developed software enabling to form the technological process of assembling shoes with the adhesive fastening method with the simultaneous determination of the labor intensity and the number of workers for the production of a given number of models.

The developed software meets the main indicators of the quality of information systems, such as:

– flexibility - the ability to adapt and further develop, the ability to adapt the information system to new conditions, new needs of the enterprise;

– reliability - functioning without distorting information, losing data for "technical reasons" by creating backup copies of stored information, performing logging operations, maintaining the quality of communication channels and physical media, using modern software and hardware;

– efficiency - the ability to solve the tasks assigned to it in the shortest possible time, is ensured by the optimization of data and methods of their processing, the use of original developments, ideas, design methods and is confirmed by its ability to depend minimally on equipment resources: processor time, space occupied in internal and external memory, bandwidth the ability used in communication devices;

– security - the property of the system, by virtue of which unauthorized persons do not have access to the information resources of the organization, is provided setting the launch parameters in such a way that the user, having launched the application, sees only the main button form and such a menu and toolbar, in which he cannot use the buttons intended for the application developer.

The software, in accordance with the algorithm, processes the selected conditions and prints out a ready-made version of the technical process for a given shoe model with the calculation of the labor intensity and the number of workers, as well as the model's passport. When using the developed information support, the task of the technologist in the formation of the technological process is reduced to the choice of design features of the model and the main limitations, which include production capacity, availability of equipment, production areas; analysis of results; correction of the selected conditions (if necessary) and the choice of the optimal variant of the technological process.

With regard to the effectiveness of the implementation of information support, any enterprise can be assessed from various sides, namely: economic, financial, organizational, temporary, environmental, social.

The result of calculations for any separately applied method for assessing the effectiveness of the proposed solution is able to reflect only a part of their positive aspects. Meanwhile, the numerical values of various criteria that can be used can differ significantly, and sometimes even be in conflict. In such a situation, it is justified to use a synergistic (complex) assessment of the effectiveness of solutions, which imply the determination of advantages not by one criterion, but by a set of criteria.

The effectiveness of the implementation of the provided information support can be assessed from two sides: social and economic.

The social effect of the introduction of information support for computer-aided design of a technological process is as follows:

1. As a result of the introduction into the educational process - an increase in the level of training of specialists through the use of innovative technologies in education.

2. As a result of implementation in production - a change in the nature and improvement of working conditions, resource equipment of labor activity, increasing professionalism, increasing the average duration of the technologist's time free from "paperwork".

Evaluation of the economic efficiency of the introduction of information technologies often occurs either at the level of intuition, or is not performed at all. On the one hand, this is due to the reluctance of solution providers to spend significant efforts on detailed preliminary analysis, on the other hand, there is probably a significant share of consumer distrust in the results of such studies. However, both of these problems stem from one source, namely, the lack of clear and reliable methods for assessing the economic efficiency of IT projects.

The full economic efficiency of the use of software for the computer-aided design of the Chamber of Commerce and Industry consists of savings in the field of technological preparation of production, which is a consequence of an increase in the labor productivity of technologists due to the automated selection of the list of technological operations with the calculation of labor intensity and the number of workers.

In the field of production, savings are obtained due to the choice of the optimal technological process due to the typification and unification of the adopted technological solutions. In addition, the preparation time for production is significantly reduced, and this factor can hardly be overestimated in our time, when competitiveness can be achieved only with a frequently changing assortment of products, and for

this it is necessary to achieve good technical and economic indicators of the enterprise.

These and other advantages of automated selection of technological processes, although many of them are difficult to determine through direct economic calculations, contribute to a significant improvement in the performance of shoe enterprises.

The results obtained allow us to speak about the achievement of a synergistic effect both from the point of view of technology (due to a significant reduction in the time for technological preparation of production, selection of the optimal technological process, reduction of changeovers of the technological process when changing the assortment, selection of the correct sequence of launching samples), and from the point of view of efficiency production as a whole, due to the simultaneous achievement of social and economic effect.

Today, a light industry enterprise striving not only to survive, but also to develop, requires the ability not only to competently operate the available technologies, but first of all, to actively position itself in the market, supplying in a short time high-quality products that meet the requirements, requests and expectations of consumers. at the lowest price. In other words, at the present time, the one who will be the fastest to release to the market the products that most fully meet the requirements of consumers, while ensuring the minimum cost of its production, will survive.

What should the company undertake to make the listed indicators become its competitive advantages?

1. Understand not only current but also future customer preferences and be able to design products that match those preferences.
2. Provide setting up technological production processes, guaranteeing their minimum cost by identifying and eliminating all types of costs that do not bring value to the product.
3. Withdraw products to market faster than competitors.

The implementation of the listed tasks will depend on how well-functioning and efficiently all departments will work at the enterprise.

How can this smooth and efficient work be ensured?

1. By defining a set of processes or activities that ensure the production of products with quality characteristics that meet the requirements, requests and expectations of consumers.
2. Establish clear and understandable interactions between processes.
3. Definition of quality objectives at the enterprise and divisional levels that provide an understanding of the results to be achieved by the divisions and that ensure the achievement of the overall objectives of the enterprise.
4. Planning the resources needed to achieve the goals.
5. Definition of procedures to ensure that work is carried out in departments in the most efficient way.
6. Measuring the results and comparing them with the set goals.
7. Analyze and decide what needs to be improved within each department.

That is, a set of processes is presented, due to the functioning of which an enterprise management system is formed, orienting it towards the production of products that correspond in their characteristics to the requirements, requests and expectations of consumers and adjusting all types of activities related to ensuring production to an efficiency indicator, namely:

– a system for identifying sources of costs is being built, and the development of adequate measures to reduce them,
– reliable data are formed that demonstrate the effectiveness of the use of invested investments, which can help to attract new investors;
– the cost of production is reduced, which makes it possible to reduce the price, expand the market and increase production volumes;
– cost reduction is usually associated with a reduction in the number of rejects and other types of waste, which has a positive effect on such indicators of the enterprise as the impact on the environment, the state of industrial safety; the image of a socially oriented enterprise is formed;
– a clear statement of goals and objectives for each employee, determining the result that should be obtained when performing work;
– identifying the resources needed to get the job done and providing resources;
– providing the knowledge and skills necessary to understand how work should be done in order to ensure its maximum effectiveness;
– measuring performance at the level of employees, departments and the organization as a whole and comparing results with goals;
– analysis of results and adequate response to them through a system of corrective and preventive actions.

As practice shows, the ability to implement these processes at the level of top management creates the conditions necessary for the formation of a competitive enterprise, that is, all this can be adopted by the head today in order to ensure this very economic stability for his enterprises.

In addition, it is important that there are not too many product names. For the majority of Russian enterprises, the main reserve for assortment optimization still lies in a significant reduction in the assortment range. Too large assortment has a bad effect on economic indicators - there are many positions that cannot even reach the break-even level in terms of sales. As a result, the overall profitability drops dramatically. Only the exclusion of unprofitable

and unprofitable items from the assortment can give the company an increase in overall profitability by 30-50%. In addition, a large assortment diffuses the strength of the enterprise, makes it difficult to offer a competent product to customers (even sales staff are not always able to explain the difference between a particular item or name), and scatters the attention of end consumers.

Here it will be appropriate to recall the psychology of human perception of information. The reality is that the average person is able to perceive no more than 5-7 (rarely up to 9) semantic constructive decisions at a time. Thus, a person, making a choice, first chooses these same 5-7 options based on the same number of criteria. If the seller offers a greater number of selection criteria, the buyer begins to feel discomfort and independently weeds out criteria that are insignificant from his point of view. The same happens when choosing a product itself. Now imagine what happens if a person has a hundred practically indistinguishable (for him) goods in front of a person, and he needs to buy one. People in such a situation behave as follows: either they refuse to buy at all, since they are not able to compare such a number of options, or prefer what they have already taken (or what seems familiar). There is another category of people (about 7%), lovers of new products, who, on the contrary, will choose something that they have also tested.

Thus, from the point of view of the buyer (to ensure a calm choice from the perceivable options), the assortment should consist of no more than 5-7 groups of 5-7 items, i.e. from the point of view of perception, the entire assortment should ideally consist of 25 - 50 items. If there are objectively more names, then the only way out is additional classification. It is generally accepted that the customer wants a wide range of products. This widest assortment is often referred to even as a competitive advantage. But in fact, it turns out that for a manufacturer a wide assortment is hundreds of product names, and for a consumer - 7 items is already more than enough.

And thus, the consumer does not need a wide assortment at all, but the variety he needs.This is possible if the constituent parts of Russia's development strategy until 2025 are implemented, namely: the task of transferring Russia's economic development from an inertial energy scenario to an alternative innovative social- oriented type of development, in the formation of an effective industrial policy, for which it is necessary:

- to develop and legislatively consolidate the foundations of an effective state industrial policy as a system of agreed goals, priorities and actions of government agencies, business and science to improve the efficiency of industry, ensure high competitiveness of products, goods and services and a steady growth in production. When forming it, provide for outrunning growth in all sectors of high-tech products with an increase in its share in the total volume of industrial production by 2025 at least 50%, equality of subjects of industrial policy, guarantees of property rights;

- to provide implementation of special measures to support priority high-tech industries in order to create conditions for the effective development of the entire industry in Russia;

Ensure an increase in the volume of investments, the creation of economic and legal prerequisites for the introduction and use of high technologies and new materials, primarily developed in Russia; to do this, legislatively consolidate the foundations of the national innovation system in the Russian Federation; to establish a multiplying factor for R&D expenses included in the cost price; reduce VAT to 12%; to exempt from taxation the profits of enterprises invested in production; to create institutions of long-term crediting of modernization and technical re-equipment of industry at a low interest rate; to improve the system of VAT administration, to change the procedure and terms for paying taxes to replenish their own working capital by industrial enterprises;

- develop and implement measures to combat price monopoly, to stabilize tariffs for the services of natural monopolies, to prepare and adopt a federal law "On price and tariff policy"; to promote the creation and promotion of domestic national, regional and corporate brands of domestic products for the development of a competitive environment in order to create competitive products, for which to introduce a quality system, to promote the implementation of programs aimed at identifying, independent assessment of the quality and promotion of domestic products, to intensify work on standardization, including the cost of research in this area to develop new and adjust existing national standards;

- at read, that mechanical engineering is a backbone complex, for which to ensure its modernization and restoration of the technological basis of the national engineering complex in a short time -machine tool industry. To this end, use both domestic developments and the purchase of foreign equipment and technologies, using the international division of labor, and use the leasing mechanism more broadly. In addition to general measures to support industry, it is necessary to additionally prepare and adopt a state strategy for the development of the machine tool industry for the period up to 2025, including the implementation of special targeted programs aimed at financing promising scientific developments;

- modify the size and procedure for the collection of customs duties to stimulate the import of the latest technological equipment while promoting the revival of the domestic production of such equipment, in particular, to abolish customs duties and VAT on the

import of new imported technological equipment not produced in the country;

- to develop and to take a set of special measures to provide mechanical engineering and machine-tool building with scientific and engineering personnel, highly qualified workers, especially in the field of scientific research and applied development, to form a system of employment of young specialists; to develop and adopt amendments to the Tax Code (Chapter 25), establishing the regimes of accelerated depreciation and preferences (premiums), allowing the amortization of the active part of fixed assets in an amount exceeding their book value;

- take action to stimulate the system of state and commercial leasing of technological equipment for the purpose of technical re-equipment of engineering industries; consider provisional 100- interest payments from the federal budget for the cost of deliveries to enterprises of unique imported equipment, including on a lease basis, necessary for the purposes of technical re-equipment of machine building and machine tool building;

- to introduce into practice the conduct of a systematic all-Russian census of metalworking equipment, which will make it possible to have objective data on the state of the machine tool park of machine-building enterprises;

- design and implement a set of measures to solve the problem of a shortage of qualified personnel in industry, to improve the quality of training in higher educational institutions, to provide young specialists with housing on preferential terms, to introduce into practice the training of specialists under the state order, to provide modern technology and hostels on the basis of public-private partnerships professionally - technical schools, allow enterprises to allocate funds spent on personnel training to production costs in full, adopt special legislative and regulatory documents aimed at ensuring the industrial development of Siberia and the Far East;

- R develop and legislate consolidate a set of measures to ensure the interest of business entities in actively participating in projects to increase resource - and energy efficiency, including elements of monetary policy, foreign exchange and investment regulation, subsidy mechanisms, special tax and depreciation regimes;

- implement a set of measures aimed at the massive development of small and medium-sized enterprises in the industrial - production, innovation and service sectors, primarily in terms of providing small and medium-sized enterprises with access to production facilities, purchasing equipment, including on a lease basis, developing microfinance and credit cooperation;

- NS take action to create the Russian processing industry of equal competitive conditions with importers, to accelerate the development and adoption of the federal law "On Trade" and accompanying regulations on the organization of the effective functioning of the Russian wholesale and retail trade;

- develop a strategy regional industrial development of the constituent entities of the Russian Federation, including the territorial distribution of productive forces in the long term, to link the development of regional infrastructure with the location of industrial facilities;

- clearly spell out the system implementation of the fundamental goals of the state industrial policy, ensuring the solution of systemic problems of the real sector of the economy, to correlate the need for investment, sources of investment and actually achievable socio-economic results.

The Strategy for the Development of Light Industry for the Period up to 2025 and the Action Plan for its implementation take into account the national interests of Russia (improving the level and quality of life of the population, the health of the nation, the strategic and economic security of the state), proposals of the constituent entities of the Russian Federation, public organizations and associations on the necessary measures supporting the industry in priority areas of its development.

The strategy was based on the transition of light industry to an innovative development model. Particular attention is paid to the issues of protecting the domestic market from shadow trade, technical re-equipment and modernization of production, import substitution and export. Today, the light industry of the Russian Federation is the most important diversified and innovatively attractive sector of the economy.

The contribution of light industry to industrial production in Russia today is about 1% (in 1991 this figure was 11.9% and corresponded to the level of developed countries, such as the United States, Germany and Italy, which have maintained this figure at the level of 8-12% for a long time.), in the export volume - 1.3%.

Currently, there are 14 thousand large, medium and small enterprises located in 72 regions of the country in the light industry. About 70% of enterprises are city-forming. The average number of industrial and production personnel employed in the industry is 462.8 thousand people, 75% of whom are women. Scientific support of the industry is carried out by 15 educational, research and design institutes, many of whose developments correspond and even exceed the world level.

The main territories for the location of enterprises that determine the industrial and economic policy of the industry are the Central (55 enterprises), Privolzhsky (30) and South (17) federal districts, which have the largest share in the total volume of production and are the most socially significant.

The results of the industry's work in 2020 showed that in a crisis, it is able to increase production volumes in sub-sectors directly oriented to the market.

It should be noted that during the crisis, the range of goods supplied to Russia is sharply narrowed. This gives the domestic light industry strategic opportunities to occupy the vacated niches and strengthen its position in the market.

In 2019, the retail trade turnover of light industry products amounted to 2.0 trillion. rubles, its share in the retail turnover of the country is 14.5%, and in the retail turnover of non-food products 26.3%. In terms of consumption, light industry products are second only to food products, far ahead of the markets for consumer electronics, cars and other goods. Taking into account macroeconomic indicators and development trends, the market for light industry goods by 2025 may amount to over 3.3 trillion. rub.

The existing preferences and the problems being solved to one degree or another at the federal and regional levels are still insufficient to eliminate the influence of negative factors on the development of the industry and turn it into a competitive and self-developing sector of the economy, and for domestic producers to strengthen their positions in the domestic market and compete on equal terms on the world market not only with manufacturers from China, Turkey, India and a number of other developing countries, but also with the EU countries and the USA.

The situation in the industry was further aggravated by the global financial crisis. In the conditions of the crisis, even those enterprises that in recent years have achieved positive results in innovative development, paying significant attention to the modernization of production, are already forced and will be forced in the coming years to reduce production volumes and abandon long-term investments. This is due to the difficulties that have arisen associated with attracting bank loans (the share of borrowed funds in working capital in recent years has reached 40%), on the one hand, an increase in the volume of official imports, counterfeit and contraband products, a fall in demand and a slowdown in the sale of many types of consumer and industrial goods. - technical appointment, reduction of workers and specialists - on the other hand.

The lack of fundamental measures to solve the identified problems will significantly affect the economy of the industry, its technological lag in the foreseeable future may become an irreversible process, which will lead to the degradation of high-tech industries, to an increase in commodity dependence on foreign countries, the losses of the state will grow geometrically, which will increase the strategic and national danger of Russia.

The current situation can be changed only by developing and implementing anti-crisis measures and measures aimed at raising the economy of light industry, giving it new impulses in innovative, social and regional development, in increasing the competitiveness and efficiency of production at a new technical and technological level. Today, the industry provides with its products only a quarter of the effective demand of the population, and the mobilization needs of the country- only by 17 - 36%, which contradicts the law on state security, according to which the share of domestic products in the volume of strategic products should be at least 51%. Therefore, today the light industry faces new challenges and tasks, the solution of which requires new approaches not only in the short term, but also in the long term.

This determined the goal of the Strategy - creating conditions for the accelerated innovative development of the light industry in Russia, ensuring the effective correspondence of production volumes, quality and range of products to the aggregate demand of consumers, increasing the national importance of the industry and its image in the world community.

The goals and objectives of the Strategy are consistent with the state policy in the field of innovative and socio-economic development of Russia in the medium and long term. The strategy is intended to become: one of the main tools in solving the problems of the industry and to interconnect the task of its economic growth with meeting the needs of the country's citizens, law enforcement agencies and related industries in high-quality and affordable consumer goods, in technical and strategic products.

The implementation of the Strategy will enable the light industry of Russia to become an industrially developed industry that will provide jobs for many thousands of people, increase the welfare of workers, and strengthen the strategic and economic security of the country.

The main result of the Strategist - this is the transition of light industry to a qualitatively new model of innovative, economic and social development, the basis of which is a new technological and scientific base, new methods of production management, the relationship between science, production and business. This is to ensure the effective correspondence of production volumes, quality and range of products, to the aggregate demand from the Russian and world markets.

In conclusion, I would like to once again draw your attention to the fact that all this will become a reality if one condition is met, namely, light industry products will be produced of high quality and taking into account the interests of this very consumer.

The domestic light industry is going through hard times, and the consumer is offered products of dubious quality that have entered our markets by counterfeit and other illegal means, that is, they have no guarantees for buyers to exercise their rights to protect themselves from unscrupulous manufacturers and suppliers.

It is necessary to reanimate the role and importance of a quality-oriented strategy, since only in this case enterprise managers will subjectively and objectively be forced to improve their production

using nano technologies and innovative processes so that competitive and demanded materials and products fully satisfy the needs of domestic consumers. At the same time, the statement is justified that the consumption of domestic materials and products is regulated by the market. In this case, market requirements should be dictated to producers on the need to increase the role of the state and consumers in the formation of sustainable demand for domestic materials and products, namely: to maintain a range of goods, regulating it by federal, regional and municipal orders; stimulate price stability; increase consumer ability and gradually improve their quality. The implementation of these tasks will create the basis for the consumer to realize the need to pay for the advantages of high-quality materials and products, and the manufacturer to realize that improving the quality of materials and products cannot be associated only with rising prices, but also due to technical innovations aimed at using new technological and engineering solutions, including making a quality revolution either through the quality of advertising, or through real quality.

Today, and even more so tomorrow, it is important to implement one of the defining principles of production efficiency - the manufacturer produces exactly what the consumer needs in an assortment that creates the basis for meeting demand.

It is equally important to understand the role and significance of quality activities, that is, how much managers have penetrated into the essence of things, learned to manage things, change their properties (assortment), form, forcing them to serve a person without significant damage to nature, for the good and in the name of man, that is, in in accordance with the requirements of the Federal Law "On Technical Regulation".

Both political leaders and the government have recently been talking about the need for a competent industrial policy. However, if we carefully consider the normative, methodological documents on the structural restructuring of industry, then the thought arises whether we are not stepping on the same rake here that we have been stepping on for all the years of reforms, namely, we did not care about our manufacturer ..

A world-renowned quality specialist E. Deming, who at one time was a scientific advisor to the Japanese government and led Japan out of the economic crisis, in his book "Overcoming the Crisis" says: "... managing paper money, and not a long-term production strategy is the way into the abyss".

As for whether the state needs to pursue industrial policy, one can quote the statement of the outstanding economist of the past, Adam Smith, who laid the foundations of the scientific analysis of the market economy 200 years ago. About the role of the state, he said: "... only it can, in the interests of the nation, limit the greed of monopolists, the adventurism of bankers and the selfishness of merchants." You can't say more precisely. What are the results of economic activity today, what are the achievements in this area? Growth of gold and foreign exchange reserves, decrease in inflation, budget surplus and other financial and economic achievements. But is this really the end result of public administration, and not the quantity and quality of goods and services sold in the domestic and foreign markets and the population's ability to pay to purchase these goods and services? And, ultimately, not the quality of life of the country's population?

Therefore, it is quite natural that today the task is posed for all levels of the executive and legislative authorities - to improve the quality of life of Russian citizens.

Let's carry out an enlarged factor analysis of the quality of life problem. The quality of life of citizens depends on the quality of consumed goods and services in the full range - from birth to ritual services, as well as on the ability to pay of citizens, which allows them to purchase quality goods and services. These two factors (quality and solvency) depend on the state of the country's economy, which in turn depends on the efficiency of enterprises in various sectors of the economy, including light industry. The efficiency of enterprises' work depends on the state of management, on the level of application of modern management methods, on the implementation of production quality requirements.

The problems of improving the quality and competitiveness of materials and products at the present stage of the development of the Russian economy are becoming increasingly important. As the experience of advanced countries that at one time emerged from similar crises (the United States in the 30s, Japan, Germany in the post-war period, and later South Korea and some other countries) shows, in all cases, the basis of industrial policy and the rise economy, a strategy was put in place to improve the quality and competitiveness of products, which would be able to conquer both domestic and foreign sales markets. All the other components of the reform - economic, financial, credit, administrative - were subordinated to this main goal.

Positive changes in the quality of goods imply qualitative changes in technology, technology, organization and production management. Manufacturing must improve, which does not mean becoming more costly.

It was absolutely right that attention was drawn to one phenomenon that usually escapes in the troubled bustle - the historicity of the economy. The economy has not always been the way it is perceived now and will not remain forever. Economic life changes over time, which forces one to tune in to its changing being. The modern economy is built on a market foundation and the laws of the market dictate their own rules to it. In the foreground are profit,

competition, efficiency, unity of command. How long will this continue? Symptoms of the new economic order are already mounting, analysts say. The next round of the economic spiral will also revolve around the market core, but the value of the market will not remain total. The priority of market competition, aggressively pushing social programs to the sidelines, is incompatible with the prospect of economic development, as evidenced by the steady desire of social democracy in the West to deploy the economy as a front for social security, fair distribution of profits. The new economy is called temporarily "lean". It requires humanization not only in the distribution of national wealth. The production itself is also humanized, including the management system. The current principle: “the strongest, the fittest survives”, will replace the “social-production partnership - the manager and the manufacturer will become members of one team. Mass production will give way to an organization corresponding to the implementation of the principle - "the manufacturer produces exactly what the consumer needs." The "lean" economy will focus on resource-saving technologies and environmental friendliness of production. It demanded a new look at the fundamental concepts. And therefore the philosophy of quality must also change. We must be ready for the coming events.

The quality is "written by nature" to be at all times in the epicenter of scientific and amateurish reflections. The problem of ensuring the quality of activities is not just universally relevant, it is strategic. The dilemma in relation to quality is reasonable only within the limits of opposing the ratio of actions "direct" and "mediated". The saying "it's all about him" owes its origin to quality. It is possible to “forget” about the problem of quality only because any fruitful and luminous activity is ultimately aimed at improving quality. Quality is either "on the mind" or "implied." From the relationship in the dynamics of these projections, quality problems in creative thinking are built into an appropriate schedule, reflecting the relevance and profitability of activities aimed at the development of production.

The most significant and global are international quality management standards. The use of modern methods in them makes it possible to solve not only the problem of improving quality, but also the problem of economy and the problem of productivity. That is, today the concept of "quality management" is being transformed into the concept of "quality management".

Thus, solving the problem of increasing the efficiency and competitiveness of the economy, and ultimately the quality of life, is impossible without the implementation of a well-thought-out and competent industrial policy, in which innovation and quality should become a priority.

The results of studies carried out under the UN Development Program have made it possible to measure the share of the "human factor" in national and global wealth: 65% of the wealth of the world community is the contribution of human potential, and only a third of the world's wealth is accounted for by natural resources and production structure. A quality-oriented strategy undoubtedly contributes to an increase in the very role of the subjective factor in the development of production, and to a more complete all-round satisfaction of human needs themselves. The desire to "live according to reasonable needs", as well as the need to "work according to one's capabilities", together with the communist ideal, no one openly and officially dared to abolish, realizing the absurdity of denying the essential forces of man. In the "hot" state, the problem of quality is steadily supported by the internal forces of active consciousness and external life factors. The highest function of consciousness is cognitive.

It is believed that learning about nature reveals its quality, quality state, quality levels, embodying new knowledge in production. Post-classical economic thought shifted quality towards consumption, trying to give production a "human face" - a person alienates himself in the production process, but this measure is forced and in the systemic sense - temporary, conditional. Labor is a kind of "terrible cauldron" that Vanya the fool had to overcome in order to turn into Ivan Tsarevich.

And here it is absolutely justified that the main thing in production is the result, not the process. Consumption regulates the market. Consequently, market demands must dominate production. The task of society is to contribute to the development of demand in the market worldwide: to maintain a range of goods, stimulate price stability, increase purchasing power, and improve the quality of goods. E. Deming, calling the "network of deadly diseases" of modern production, puts in the first place "production planning, which is not focused on such goods and services for which the market is in demand." Try to argue with him. Production during the transition from industrial to post-industrial mass consumption society is thought of as a function of the market. The authors fill these quality properties with criteria, namely:

- quality ideology - development perspective production;
- quality management is an integrated approach to the solution of the quality problem;
- fashion and technical regulation - components of the quality of the manufactured footwear;
- quality systems "ORDERING / 5 S" and "THREE" NOT "- not only the basis for the stability and safety of production, but also a quality guarantee;
- quality in the market is a paradigm for the formation of production that meets the needs of the market;
- advertising is always at the service of quality;

- excursion into the past as a guarantee of quality in the future;
- the product quality assessment model is the production priorities;
- forecasting the cost of quality in the development of a new range of footwear is a guarantee of its relevance and its competitiveness;
- methodology of business visual assessment of a product - a means of assessing the effectiveness of quality;
- improving the quality and competitiveness of domestic special footwear;
- about indicators for assessing the quality of footwear - as a tool for the formation of popular products;
- quality and market: a marriage of convenience and this is indisputable;
- the stability of the enterprises - the guarantor of the quality of the footwear they produce - all these aspects together and provide a revolution in quality, guaranteeing the manufacturer stable success in the market with unstable demand;

It is necessary to begin research in a classical way with the formulation and general description of the problem. Surprisingly, nevertheless, the fact is that, despite the abundant literature on the proposed topic, and no less clear applications for its comprehensive analysis, the problem of a comprehensive study of quality management remains a "hedgehog" in a dense fog. The reason is simple, except for the work of B.S. Alyoshina with coauthors, the promise of a comprehensive study of the problem remains a wish. The content of research usually does not go beyond one or two aspects of considering quality and the possibility of quality management. The rest of the angles are either declared or applied in such a sequestered state that their presence is perceived as a kind of burden for the pleasure of joining the author's reasoning for, of course,

The theory of quality management is based on the philosophical development of this concept. "Quality" is a philosophical category and the solution of the put forward problem depends on how much the philosophical component is presented in the theory of quality management. In philosophy, however, there has never been a single interpretation of quality, there is no mutual understanding in our time. An important conclusion follows from this: it is necessary, before building a quality management strategy, to decide on which philosophical "shore" you are going to land.

Conclusion

Quality does involve serious costs, but it guarantees a stable market position. Working for quality, the manufacturer creates confidence in his own and national future. Correctly built understanding of quality guarantees the future even in the conditions of the domestic market floor. Let us try, in the order of introduction to the theory of quality, to formulate practically significant fundamental provisions: Quality is not reduced to the sum of properties important for the existence of a product; it is a peculiar combination of them, built on the basis of usually two features - more general and more specific. For example. Shoes - "clothes for the feet", hat - "clothes for the head", mufflers - "clothes for the nose and neck", etc. Therefore, the focus should be on them.

Quality allows for changes that do not lead to a loss of quality, but reduce or increase its consumer value; quality - a set of qualitative states that satisfy, to varying degrees, system-forming characteristics. "Backlash" of quality allows you to maneuver in the process of creating a product with a given quality, depending on the specific capabilities of the manufacturer and the consumer.

Quality does not exist outside of quantity, they are dialectical opposites, their opposition is valid only within unity, from which it follows that, creating quality, it is necessary to put in qualitative characteristics a quantitative expression both in relation to individual properties of the product and the number of commodity products. A.K. Savrasov, finding himself in a difficult life situation, made several copies of his famous painting "The Rooks Have Arrived". As a rule, copyright copies have a high level of craftsmanship and are well paid for. The artist was also paid. When they asked P. Tretyakov: would he buy a copy of Savrasov, what happened to the original? Tretyakov's answer turned out to be categorically predictable - no! Quality requires not only skill but also inspiration. Inspiration with repetitions fizzles out. Quality is always quantitative,

Quality and quantity are linked by the most often forgotten measure. Meanwhile, when defining quality, one must simultaneously think about its dimension, both from the standpoint of the market conjuncture, and from the point of view of the very signs of quality. “Quality” is concretized in the concept of “quality”. “Quality” is a concept that reflects the model image of a product, “quality” - defines the quantitative limits of reality and reasonableness of quality (physical and moral status of the product).

Quality and the concept of quality are stable phenomena, but time changes them too. Originally, quality was equated with value. The quality criteria were the utility and the size of the object, the relationship. With the development of consciousness and practical possibilities, the foundations of comparison and choice were formed. Quality is relatively separate from quantity. Utility differentiation takes place, participation is rethought as quantitative features. The evolution of understanding of quality is directly due to the embodiment of creative potential in activity. The discrepancy in the intensity of advancement of individual skill, the interests of those who are called upon to clear the path of talent and mass consciousness complicates the understanding of

quality and the process of quality management. Of particular importance is the concreteness of the interpretation of quality, in particular, such a basic feature of it as objectivity. The social theory of being is built on a natural-historical basis - its outline was laid by nature, and the historical drawing was created by man. In the natural environment, all signs, including such synthetic ones as quality, are products of a spontaneous movement. In society, every phenomenon passes through activity, and includes in its quality the mental and physical labor of a person. Determining the quality of phenomena created by human activity is impossible without sociocultural concretization. In this connection, two questions are being actualized: as quality - products of spontaneous movement. In society, every phenomenon passes through activity, and includes in its quality the mental and physical labor of a person. Determining the quality of phenomena created by human activity is impossible without sociocultural concretization. In this connection, two questions are being actualized: as quality - products of spontaneous movement. In society, every phenomenon passes through activity, and includes in its quality the mental and physical labor of a person. Determining the quality of phenomena created by human activity is impossible without sociocultural concretization. In this connection, two questions are being actualized:

- in what status and to what extent is consciousness included in what is traditionally called the quality of things (there is more clarity with services)?

The answers to both questions must be sought in the philosophical theory of alienation. The theory of alienation is not directly related to the theory of quality. It contains the keys to the methodology for constructing a theory of quality. From the above considerations, it is clear that the authors are not idealists, but rather balancing on the verge of pessimism and optimism. They are critical of the modern, pragmatized approach of market liberals to scientific and philosophically sound theory. A light version of the theory, when a fragment torn from the general theory is turned into a theory itself and adjusted to the construction of a market perverted to please speculators, theoretical economists and suppliers of a high-quality surrogate for domestic counters suits. How long the Russian economy will maintain such a configuration, we (and not only us) are not given to know,

The trajectory of the process of alienation of human creativity into what exists outside of it must necessarily preserve and activate the ability to create. Unlike the being of nature, the being of a person is not substantial. It is not self-sufficient and can take place exclusively due to interchange, initially with nature, and subsequently with society, through which human relations to each other and interaction with nature are built. The tool that ensures the existence of a person is labor, the highest quality of labor is manifested in activity.

The quality of activity, on the one hand, is an indicator of the quality of a person's life (it should be so!), On the other hand, quality activity is built into the quality of what he transforms. The quality of the "first" (natural) nature is formed by itself as a set of objectively related natural features, spontaneously. The quality of the “second” nature (reconstructed, adapted by man to suit his interests) is synthetic. It appears to be a double helix formed by natural features of natural material (possibly in relations between people, knowledge expressed indirectly) and qualitative characteristics of human activity - knowledge, emotions, will, value orientation, and skill. As a result, the quality of the product, in contrast to the product itself, embodies the quality of the person.

Personality is alienated in quality and therefore, in principle, alienation is natural and does not oppress personality. The negative consequence of alienation is caused by the disproportionate replacement of the lost energy of activity. Having discovered the poor quality of the goods, the hidden production defects, the deceitful actions of the seller, the normal buyer gets upset, first of all, because of his own poor-quality decision. Other transaction losses are most often reimbursed. There remains a feeling of imperfection of one's own taste and knowledge.

The quality of everything that is created by activity includes the properties of activity, both practical and spiritual in objectified (objective or functional) expression. Hence, it follows that it is necessary to form and direct the development of the ability of mass consciousness to qualitatively evaluate goods: a certain experience in Soviet times was and showed its effectiveness: "circles", "schools", "universities", including those initiated by television and radio. The place of systemic enlightenment of the mass consumer, professional assistance in the development of a culture of high-quality selectivity, is now flooded with aggressive advertising on the air, the quality of which is not controlled or the control is not commensurate with the size of deception. Who should be the main educator? The manufacturer and only he, because only he fully, according to the logic of the formation of understanding, should know what is quality. Taking on the production of a product without comprehending the specificity of the quality of this product means a professional failure in the market. The release of a product with a fake quality is prosecuted by law, however, formally and ex post facto. Suppliers of pseudo-quality goods hope for the latter.

For the sake of objectivity, let's say: true creators of high-quality products will be outcasts in our market as long as the guardians of order are confident in their own impunity for corruption. Nevertheless, it is

necessary to go forward. History is ugly, but still moving towards order.

Accession to the WTO did not add quality products to us, and prices for quality products did not decrease. The real perspective is associated with the organization of a single economic space within the Customs Union. Cross-quality control appears, the influence of the national corrupt forces on the market is weakening. As for the possibility of an increase in interethnic criminal opposition, there is a danger, but different conditions for organizing crime and intercriminal competition should delay the degradation of the market - the main reason for high-quality national goods, and the market itself, whatever it may be, will expand, and access procedures will be simplified. to him.

Let's honestly admit that the quality problem remains theoretically worked out one-sidedly, which is not very noticeable, because there is no normal organization of production and marketing of high-quality commercial products. The current practice is satisfied with this degree of certainty in the theory of quality. The theory of quality management has been simplified to the concept of control over the conditions of quality production. While there is no systematic understanding of what is the quality of a product? The production is run by the market. The market is ruled by speculators - intermediaries. The state strives to minimize its economic function before collecting taxes. There is no real activity aimed at giving the market a civilized form of "purchase and sale" on the principles of real freedom of competition. Behind the traits that are essential for quality, supervision is limited to the level of practical uselessness. The market dictates order to local and regional governments. The store manager ran the defense department. The culture of the producer and the consumer is of little interest to anyone, not to them. But the external order begins with the internal order, with the awareness of the "political moment" due to the economic situation.

Logic shows that the task of creating in the country its own raw material base for the development of the light industry should be a priority. Technical and technological equipment, personnel training must be carried out in the context of it. Of course, all the actions presented are interrelated. The base will have to be built and improved by specialists; without modern equipment and technologies, it will not be possible to provide production with raw materials. Clusters will remain good dreams without a balanced system of building that direction in the economy, which someone mockingly called "light" industry. The light industry will face difficult years, but in Russia “hard” and “successful” have always been in the same team. And we harnessed for a long time, as N.V. emphasized. Gogol, which, among other things, did not prevent Europe from being saved from fascism in half a century.

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MORAL HAZARD AND ADVERSE SELECTION ON THE PEOPLE BUSINESS CREDIT PROGRAM IN INDONESIA

Abstract: *This article discusses the behavior of providing bank credit to SMEs during the people business credit (hence shortened as KUR) program in Indonesia.Since its launch in 2007, the average NPL for these loans has increased.It indicates the existence of moral hazard behavior in the distribution of credit by the bank. To prove this, this article implements a threshold regression model. The data includes 38 participating banks, observed from Q1-2008 to Q2-2021.The results of data analysis reveal that moral hazard behavior exists when the NPL is below or equal to 5.87%. On the contrary, it experiences adverse selection.Specifically, moral hazard behavior is dominant in the case of investment credit and banks owned by local governments.In working capital loans and others, this behavior also occurs, but not as much as in the case of investment loans.Moral hazard and adverse selection behavior were not detected anyhow in state-owned banks, while in private banks, these only occurred at a low level.At the end of the analysis, we also consider the shock effects of the global financial crisis (2008), European crisis (2009), and the Covid-19 pandemic (2020-2021) on the threshold regression model. However, the results are negative, thus strengthening our previous findings.In general, the factors that significantly determine the risk of non-performing loans in the people business credit program are; increased loan growth rate, market share, deposit insurance interest rates, and economic growth as well as a decrease in the benchmark interest rate.However, the specifics are different both in each type of credit and the type of participating bank.*

Key words: *moral hazard behavior, adverse selection, non-performing loan, people business credit, threshold regression model, bank.*

Language: *English*

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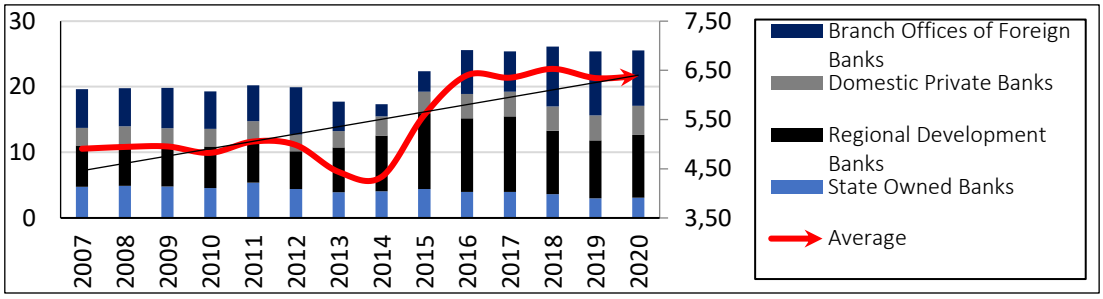
Introduction

The People Business Credit Program (KUR) is one of the government's programs to improve access to financing for small and medium enterprises (SMEs) in Indonesia.Launched on November 5, 2007, this program was effectively implemented by all participating banks in early 2008 and is still ongoing (in 2021).It is intended to strengthen business capital in the context of implementing policies to accelerate real sector development and empower SMEs (Presidential Instruction No. 6 of 2007).However, this program tends to increase the average non-performing loan (NPL) ratio for SME loans.Figure 1 shows that the average NPL for people's business loans reached 5.43%, with an increasing trend from year to year, especially from 2015 to 2020.In general, loans from regional development banks have the highest NPLs, at an average of 8.22% per year.Then it is followed by foreign banks (6.14%), state-owned banks (4.20%), and the lowest was national private banks (3.16%).The increase in NPL for the credit program indicates an adverse selection behavior or moral hazard in lending.



Source:Indonesia Banking Statistics

Figure 1 - Matrix Strategy Combination Formulation

The phenomenon of adverse selection and moral hazard is indeed highly inherent in government programs.It is because direct subsidies from the government are considered as a form of direct government intervention in the business sector, the transfer of funds without repayment.It means that if the project fails or does not meet the specified criteria, then the subsidy recipient (company) is obliged to return the funds. Otherwise, if the project is successful, no repayment is required.Therefore, there is a tendency for banks to be non-selective in channeling credit for the program.On the other hand, customers also tend to borrow beyond their needs.As a result, if one of those tendencies applies, then the risk of bad credit will increase and will increase more when both apply.In addition, credit for SMEs is generally marked with asymmetric information. Thus it further supports the occurrence of adverse selection (Vas, 2017).Repullo and Suarez (2013) call this condition a pro-cyclical market failure, which shows that banks lower the level of credit analysis for SMEs, making them more vulnerable in the event of an economic contraction.

Until now, there has been no empirical research exploring the behavior of banks in disbursing the program.This study is the first to explore this.Specifically, this study will identify the presence or absence of moral hazard or adverse selection behavior in implementing the program.If the behavior is detected, then the significant factors that determine the behavior will be explored.The second section of this article will describe the review of related literature.The third section describes the methodology.The fourth section presents the results of data analysis and discussion.The fifth section is the conclusion, which is also the closing part of this paper.

Review Of Related Literature

People Business Credit Programme

People Business Credit (KUR) is a credit guarantee program by the government to SMEs, launched on November 5th, 2007. It aims at increasing access to financing for Small and Medium Enterprises (SMEs) to accelerate the development of the real sector and empower SMEs.Although this program was launched by the government, the source of the funds came entirely from bank funds.Credit distribution is regulated by the government through Minister of Finance Regulation No. 135/PMK.05/2008 concerning People Business Credit Guarantee Facility. However, in its development, the regulation on KUR continues to be updated every year.Some of the requirements specified in the distribution of KUR are:

1. SMEs that can receive credit guarantee facilities are feasible productive businesses that are not yet bankable.
2. KUR is distributed to SMEs for working capital and investment with the following conditions:
   a. For loans up to Rp. 5 million, the loan interest rate or financing margin imposed is a maximum of 20-21% effective per year;
   b. For loans above Rp. 5 million to Rp 500 million, the loan interest rate or financing margin is between 12-13% effective per year.
3. The implementing bank decides to grant credit based on an assessment of business feasibility following sound credit policy and taking the applicable provisions into account.

Moral Hazard vs. Adverse Selection

In simple terms, moral hazard and adverse selection are the same behavior. They are both risky decision-making behavior.If a risky decision is made consciously or intentionally, it is called a moral hazard. However, if it is done without intention, for example, a wrong decision due to ignorance or negligence, it is called adverse selection.Therefore, these two behaviors are complicated to observe directly. However, these behaviors can be identified through observations of bank behavior.One of the predominant indicators used to indicate moral hazard behavior is excessive risk-taking, reflected in high non-performing loans (NPL) (Zhang et al., 2015).

Several theories can be used for explaining moral hazard behavior, including agency theory, signaling theory, and contract theory.Agency theory explains that there are two motives for moral hazard behavior that occurs in bank lending.First, the managerial rent-seeking motive is when bank managers will seek profit by investing in "pet projects" or providing credit to borrowers to benefit

from borrowers.The benefits in question can be in the form of bribes or fees or others.Second, the motive is due to conflicts of interest between bank owners and depositors. It is when bank owners want to invest in risky projects to obtain higher returns.However, when the bank faces risk, the bank owner will transfer this risk to depositors.The two moral hazard motives lead to higher loan growth rate and higher non-performing loans (NPLs).Meanwhile, in signaling theory, an increase in NPL will give a negative signal to bank owners, that the bank is in a state of stress.With this signal, bank owners must be able to decide whether or not to continue to maintain their ownership with high risk (Janda, 2006; Novellyni and Ulpah, 2017).As in contract theory, moral hazard behavior occurs when bank owners design optimal contracts that give full authority to bank managers to maximize their utility.As a result of full authority, bank managers tend to take policies with excessive risk, as happened in the 2008 global financial crisis (Bebchuk and Spamann, 2010; Bebchuk et al., 2010; Paulowicz, 2015).

Meanwhile, adverse selection occurs due to information asymmetry between banks and borrowers.In the context of SMEs, the level of information asymmetry is very high, because they generally do not have accurate data or information.(Vas, 2017) As a result, banks will find it strenuous to analyze their creditworthiness, therefore they tend to lower the level of analysis (Repullo and Suarez, 2013).

Behavioral Indications of Moral Hazard and Adverse Selection

Several factors can indicate moral hazard and adverse selection behavior.Specifically, these factors can be grouped into three categories.The first is bank-specific factors (Boudriga et al., 2010; Dhar and Bakhsi, 2015), such as performance, liquidity, and loan growth rate.Adverse selection behavior is indicated when performance is positively related to NPL.Performance reflects management quality (Louzis et al., 2012).Therefore, good performance (good management quality) will prompt selective and careful behavior in lending, so that it can suppress NPLs, and vice versa.Meanwhile, moral hazard behavior is indicated when a high NPL is following a high level of liquidity.Islam and Nishiyama (2019) argue that high liquidity will reduce liquidity risk and improve management's ability to service and monitor loans resulting in lower non-performing loans.On the other hand, excess liquidity is a good proxy of moral hazard behavior between bank management and depositors since they cannot monitor and therefore make the bank management committed to the effective use of funds.In addition, the positive relationship between loan growth rate and NPL can also capture moral hazard behavior.The increase in credit volume should be able to offset or reduce the NPL (Islam and Nishiyama, 2019).Therefore:

H1 : Adverse selection behavior is indicated when performance is positively related and significance to NPL.

H2 : moral hazard behavior is indicated when liquidity is positively related and significance to NPL.

H3 : moral hazard behavior is indicated when loan growth rate is positively related and significance to NPL.

The second is industrial factors (Islam and Nishiyama, 2019), such as market share and the deposit guarantee system.A large market share is expected to reduce NPL because banks have a higher market segment. Thus they will be more selective.On the other hand, a large market segment offset by a high NPL will reflect moral hazard behavior.In addition, deposit insurance also often triggers moral hazard behavior.With a deposit guarantee, banks will be encouraged to finance high-risk projects with high returns (Ngalawa et al., 2016).The emergence of moral hazard behavior with deposit insurance has been widely supported in empirical studies,such as studies conducted by Demirguc-Kunt and Detragiache (2002), Leaven (2002), Wheelock and Wilson (1995), Carapella and Di Giorgio (2004), and Cull et al. (2005).Therefore:

H4 : moral hazard behavior is indicated when market share is positively related and significance to NPL.

H5 : moral hazard behavior is indicated when deposit insurance interest rates is positively related and significance to NPL.

The third is macroeconomic factors (Nkusu, 2011; Skarica, 2014; Beck et al., 2015), such as economic growth and interest rate policies.Adverse selection behavior is indicated by the NPL increase when economic growth increases.The increase in economic growth reflects economic stability. Thus, affecting the demand and supply of loans.In this condition, the borrower can pay debt well (Salas and Saurina, 2002).However, if the economy is in good condition and the NPL is high, it indicates that the bank is not selective or less careful in lending.In addition, the benchmark interest rate can also indicate adverse selection behavior.Nkusu (2011) and Castro (2013) argue that an increase in interest rates will substantially weaken the ability to pay borrowers, which will encourage an increase in NPLs.Therefore, adverse selection behavior will be indicated by low-interest rates and high NPLs.Therefore:

H6 : Adverse selection behavior is indicated when economic growth is positively related and significance to NPL.

H7 : Adverse selection behavior is indicated when interest rate is negatively related and significance to NPL..

Research Methods

The data includes all 38 KUR channeling banks.The data used is quarterly, starting from Q1-2008 to Q2-2021.The list of KUR channeling banks can be seen in Appendix 1.

This study employed a threshold regression model.This model is designed by dividing observations into two classes that are conditioned on a predetermined variable value.Therefore, the research sample will be divided automatically into two groups following the set threshold value.On this basis, a threshold variable uses the average NPL. Systematically, the threshold regression model developed for this study is:

Moral hazard behavior and adverse selection are proxied by non-performing loans (NPL).Bank performance is proxied by return on assets (ROA), liquidity by liquidity assets ratio (LAR), loan growth rate (LGR) by changes in total loans between the current quarter and the previous quarter, and market share (MS) by the percentage of bank loans to SMEs to total credit for SMEs.Data related to this was obtained from the quarterly financial statements of each participating bank.Meanwhile, the deposit insurance rate (LPS rate) is obtained from the statistics of the Deposit Insurance Corporation.The LPS rate data used is the most recent data for each quarter.Meanwhile, economic growth (eco_growth) and the benchmark interest rate (BI rate) were obtained from the Central Statistics Agency and Bank Indonesia.The economic growth data used is quarterly, while the BI rate data used is the most recent data for each quarter.

$$\mathrm{NPL_{i.t}} = \alpha + \sum_{j=0}^{m} \beta_1 \mathrm{X_{i.t-j}}\,(\mathrm{NPL_{i.t-1}} \le \gamma) + \sum_{j=0}^{m} \beta_2 \mathrm{X_{i.t-j}}(\mathrm{NPL_{i.t-1}} > \gamma) + \sum_{j=0}^{m} \beta_3 \mathrm{C_{i.t-1}} + \varepsilon \ldots\ldots \textbf{equation (1)}$$

where: NPL_(i.t) is the NPL of bank i in period t (current quarter); α is a constant; β_1 is the slope of the variable X_(i.t-j) (NPL_(i.t-1)≤γ); β_2 is the slope of the variable X_(i.t-j) (NPL_(i.t-1)>γ); X_(i.t-j) is the independent variable of/for bank i in period t-1 (previous quarter); NPL_(i.t-1) is the NPL of bank i in period t-1 (previous quarter); γ is the threshold value; β_3 is the slope of the control variables; C_(i.t-1) are control variables for bank i in period t-1 (previous quarter; and ε is residual error.When the independent variables perform above the threshold value, then the decision-making process is taken from β_2, not from β_1.And vice versa.

Specifically, the model can be described as:

$$\begin{aligned}\mathrm{NPL_{i.t}} = \alpha &+ \beta_{1.1}\mathrm{LAR_{i.t-1}}(\mathrm{NPL_{i.t-1}} \le \gamma) + \beta_{1.2}\mathrm{LGR_{i.t-1}}(\mathrm{NPL_{i.t-1}} \le \gamma) + \beta_{1.3}\mathrm{MS_{i.t-1}}(\mathrm{NPL_{i.t-1}} \le \gamma)\\ &+ \beta_{1.4}\mathrm{LPS\_rate_{i.t-1}}(\mathrm{NPL_{i.t-1}} \le \gamma) + \beta_{1.5}\mathrm{ROA_{i.t-1}}(\mathrm{NPL_{i.t-1}} \le \gamma)\\ &+ \beta_{1.6}\mathrm{Eco\_growth_{i.t-1}}(\mathrm{NPL_{i.t-1}} \le \gamma) + \beta_{1.7}\mathrm{BI\_rate_{i.t-1}}(\mathrm{NPL_{i.t-1}} \le \gamma)\\ &+ \beta_{2.1}\mathrm{LAR_{i.t-1}}(\mathrm{NPL_{i.t-1}} > \gamma) + \beta_{2.2}\mathrm{LGR_{i.t-1}}(\mathrm{NPL_{i.t-1}} > \gamma) + \beta_{2.3}\mathrm{MS_{i.t-1}}(\mathrm{NPL_{i.t-1}} > \gamma)\\ &+ \beta_{2.4}\mathrm{LPS\_rate_{i.t-1}}(\mathrm{NPL_{i.t-1}} > \gamma) + \beta_{2.5}\mathrm{ROA_{i.t-1}}(\mathrm{NPL_{i.t-1}} > \gamma)\\ &+ \beta_{2.6}\mathrm{Eco\_growth_{i.t-1}}(\mathrm{NPL_{i.t-1}} > \gamma) + \beta_{2.7}\mathrm{BI\_rate_{i.t-1}}(\mathrm{NPL_{i.t-1}} > \gamma) + \beta_{3.1}\mathrm{Size_{i.t-1}}\\ &+ \beta_{3.2}\mathrm{DGR_{i.t-1}} + \beta_{3.4}\mathrm{BOPO_{i.t-1}} + \beta_{3.5}\mathrm{NIM_{i.t-1}} + \beta_{3.6}\mathrm{CAR_{i.t-1}}\\ &+ \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \textbf{equation (2)}\end{aligned}$$

where:LAR is the liquidity assets ratio (independent variable 1); LGR is loan growth rate (independent variable 2); MS is market share (independent variable 3); LPS_rate is the deposit guarantee rate (independent variable 4); ROA is the return on assets (independent variable 5); Eco_growth is economic growth (independent variable 6); BI_rate is the bank reference interest rate variable (independent variable 7); size is bank size (control variable 1); DRG is the growth rate of third party funds (control variable 2); BOPO is the efficiency ratio (control variable 3); NIM is the productivity ratio (control variable 4), and CAR is the capital adequacy ratio (control variable 5).

Results

The results show that in general, the ratio of non-performing loans (NPL) of participating banks to the people business credit program (KUR) tends to increase from time to time.The average NPL is 5.87%, showing an increase of around 0.79% per quarter.The average value is relatively high because it is close to the maximum limit set by the banking authorities in Indonesia (NPLMax = 6%).Specifically, based on the type of credit disbursed, investment credit has the highest NPL (avg. 8.06%) or is already above the Indonesian banking standard.The next one is credit for working capital (avg. 5.43%) and other KUR loans (avg. 4.11%), both of which are still at Indonesian banking standards.Meanwhile, based on the types of participating banks, regional government-owned banks (BUMD) have the highest NPLs than state-owned and private banks.The average NPL from BUMD banks reached 8.68%, while the average NPL from state-owned and private banks tended to be equal, 3.99% and 3.83%.In this study, the observation period is divided into two parts.The first is the "normal period." A period where there are no significant economic and financial shocks.This period starts from Q1/2010 to Q1/2020.The second referred to as the "turbulence period," is a period of significant

economic and financial shocks.In this case, the shocks of the global financial crisis (Q1-Q4 2008), the European crisis (Q1-Q4 2009), and the Covid-19 pandemic (Q2/2020 – Q2/2021).The average NPL in the normal period, is 5.49%, while in the turbulence period, the average NPL is 5.55%.So, there is no significant difference between the NPL in the normal period and the turbulence period.The specifics of NPL statistics from KUR participating banks can be seen in Table 1.

Table 1. Statistics Summary

	N	Min	Max.	Mean	STDev.	Skewness	Kurtosis
INP (%)	5.700	1.28	22.33	5.87	3.98	1.71	2.59
By Types							
Worcap.	1.900	2.46	9.38	5.43	1.88	0.35	-1.11
Invest.	1.900	1.91	22.33	8.06	5.41	0.86	-0.70
Others	1.900	1.28	12.42	4.11	2.60	1.68	2.44
By Banks							
State-owned Corporation	600	1.28	8.56	3.99	1.71	0.26	-0.76
Provincial-owned Company	3.300	1.71	22.33	8.68	4.27	1.05	0.27
Private	1.800	1.61	6.41	3.83	1.11	0.05	-0.73
By Period							
Normal	4.218	1.30	22.33	5.49	3.42	1.94	2.55
Turbulence	1.482	1.30	17.89	5.55	4.27	1.97	2.80
LAR (%)	1.900	12.84	38.43	19.94	5.87	1.15	0.52
LGR (%)	1.900	-18.42	16.27	0.71	2.46	-0.21	17.80
ROA (%)	1.900	1.07	5.32	2.71	0.68	0.44	-0.06
MS (%)	1.900	3.24	47.70	24.02	17.25	0.03	-1.93
LPS_rate (%)	50	4.00	7.75	6.42	1.01	-0.57	-0.22
Eco_Growth (%)	50	-5.32	7.07	4.86	1.21	-5.25	37.11
BI_rate (%)	50	3.50	7.75	5.55	1.36	0.29	-1.28
Size (Log10_TA)	1.900	5.26	6.59	6.00	0.40	-0.04	-1.39
DGR (%)	1.900	-23.20	25.23	0.77	3.94	-0.61	8.99
BOPO (%)	1.900	66.16	113.91	80.91	6.78	0.82	1.38
NIM (%)	1.900	1.86	8.16	5.07	1.30	-0.20	-0.47
CAR (%)	1.900	15.33	61.01	24.81	11.76	1.72	1.35

In general (see Table 1, General column, Panel A), the increase in NPLs throughout the observation period was significantly triggered by loan growth rate (LGR), increased market share (MS), increased deposit insurance interest rates (LPS_rate), economic growth (Eco_growth), and a reduction in the banking benchmark interest rate (BI rate).The level of liquidity (LAR) and performance (ROA) do not show a significant relationship.The positive relationship among loan growth (β_(LGR.NPL) 0.96), market share (β_(MS.NPL) = 0.23), and deposit insurance interest rates with non-performing credit risk (β_(LPS.NPL) = 0.69) indicates the existence of moral hazard behavior in the distribution of people business loans (KUR).On the other hand, a positive relationship between economic growth and NPL (β_(ECO.NPL) = 0.19), and a negative relationship between the benchmark interest rate and NPL (β_(BI.NPL) = -0.22) indicate adverse selection behavior.

Table 2. Regression

	General	By Loan			By Bank			By Period	
		WC	Invest.	Other	State-owned Corporation	Provincial-owned Company	Private	Normal	Turb.
Panel A.Panel Regression - Common									
Constant	19.84 ***	14.11 ***	16.95 ***	33.33 ***	.99	82.94 ***	5..35	36.75 ***	28.58
$LAR_{i,t-}$	.07	-.04 *	.11	.37 ***	.02	.41 ***	-.02	.28 ***	-.04
$LGR_{,t-1}$	.96 ***	.70 ***	.91 ***	.44 ***	-.02	.52 ***	-.33	.57 ***	.11
$MS_{,t-1}$	.23 ***	-.83 ***	.65 ***	.03	-.19	.61 ***	.06	.26 ***	.22
$LPS_{,t-1}$	.69 ***	-.34 ***	.42 ***	-.32 ***	-.21	.66 ***	.29	.26 ***	-.28
$ROA_{,t-1}$	.20	-.18 **	-.79 ***	.27 ***	-.24	.81 ***	-.21	.37 ***	-.03
$ECO_{,t-1}$	.19 **	.23 ***	-.02	.56 ***	-.01	.05	-.01	.01	-.07
$BI_{,t-1}$	-.22 ***	.08	-.56 ***	.16	.03	-.22 **	-.33 *	.05	-.30
$SIZE_{t-1}$	-.94 ***	.84 ***	-.96 ***	-.70 ***	.35	-.91 ***	.83 ***	.77 ***	.69
DGR_{t-1}	.94 ***	.79 ***	.38 ***	.81 ***	-.48	.20 **	-.44 ***	.89 ***	.39
$BOPO_{t-1}$	.84 ***	.65 ***	.18 ***	.01	.03	.13	-.01	.31 ***	-.22
NIM_{t-1}	.23 ***	.23 ***	.77 ***	-.31 ***	.28	.97 ***	.38 *	.19 **	.09
CAR_{t-1}	.01	-.20 ***	.12	.10	-.09	.31 **	.05	.02	.04
Memo Item									
R	.68	.90	.92	.76	.33	.43	.35	.70	.63
Adj.R^2	.46	.80	.85	.56	.08	.16	.09	.49	.35
F-stat.	80.48 ***	130.9 ***	176.3 ***	41.63 ***	3.65 ***	6.99 ***	4.15 ***	79.96 ***	7.96 ***
Obs.	5.700	1.900	1.900	1.900	600	600	600	4.218	1.482
Panel B.Panel Regression Threshold									
Constant	53.43 ***	37.20 ***	52.20 ***	38.86 ***	3.23	90.78 ***	6.10 *	61.03 ***	75.82
$LAR_{i,t-1}(NPL_{it-1}\leq\gamma)$	.39 ***	.02	.56 ***	.22 ***	.04	.46 ***	-.03	.38 ***	-.04
$LAR_{,t-1}(NPL_{it-1}>\gamma)$	.06	.97 ***	.12	.02	.02	.26 ***	-.06	.03	-.04
$LGR_{,t-1}(NPL_{it-1}\leq\gamma)$	.62 ***	-.14	.64 ***	.85 ***	.14	.97 ***	-.21	.68 ***	.38
$LGR_{,t-1}(NPL_{it-1}>\gamma)$	-.05	.71 ***	-.05	.89 ***	.05	.94 ***	.54 ***	.13	-.16
$MS_{,t-1}(NPL_{it-1}\leq\gamma)$	.29 ***	-.09	.95 ***	.05	.11	.29 ***	.13	.37 ***	.16
$MS_{,t-1}(NPL_{it-1}>\gamma)$	-.02	.33 ***	-.16 *	.54 ***	-.12	.17 **	.22 ***	.03	.21
$LPS_{,t-1}(NPL_{it-1}\leq\gamma)$	.59 ***	.16 **	.08	.42 ***	-.10	.31 ***	-.02	.41 ***	-.25
$LPS_{,t-1}(NPL_{it-1}>\gamma)$	-.14	.76 ***	.04	-.12	-.05	.60 ***	.34 ***	.01	-.74

$ROA_{t-1}(NPL_{it-1} \leq \gamma)$	-.14		-.17		.06		-.09		.31		.40	***	.29		.07		.13		
$ROA_{t-1}(NPL_{it-1} > \gamma)$	.81	***	-13		.26	***	-.08		-.12		.47	***	-.13		.22	***	-.77		
$ECO_{t-1}(NPL_{it-1} \leq \gamma)$	-.01		.02		.16	**	.16	***	.01		.22	***	-.12		.01		-.04		
$ECO_{t-1}(NPL_{it-1} > \gamma)$	.01		.23		.11		.11		-.12		.12	*	.01		.01		-.28		
$BI_{t-1}(NPL_{it-1} \leq \gamma)$	-.06		-.12		.04		.04		.12		-.20	***	.08		.06		-.12		
$BI_{t-1}(NPL_{it-1} > \gamma)$	.02		.04		-.20	***	-.12		-.23	**	-.51	***	-.13		.01		-.41		
$SIZE_{t-1}$	-.96	***	.92	***	.92	***	.95	***	-.98	***	-74	***	.95	***	.91	***	.97		
DGR_{t-1}	.69	***	-.65	***	.89	***	-83	***	.53	***	.49	***	-.10		.33	***	.02		
$BOPO_{t-1}$	.64	***	.10	*	.26	***	-.30	***	.28	**	.01		.01		.26	***	-.04		
NIM_{t-1}	-.18	*	.29	***	.43	***	-.43	***	.03		.60	***	.17		.25	***	.21		
CAR_{t-1}	.21		-.31	***	-.08	*	-.05		.05		-.12		-.11		.32	***	.12		
Memo Item																			
R	.64		.85		.89		.82		.56		.69		.68		.62		.32		
Adj.R^2	.40		.72		.79		.65		.27		.42		.43		.37		-.29		
F-stat.	27.78	***	55.43	***	73.83	***	54.96	***	7.06	***	8.91	***	13.76	***	18.48	***	.26		
Obs.	5.700		1.900		1.900		1.900		600		600		600		4.218		1.482		
Threshold	5.87		5.43		8.06		4.11		3.99		8.68		3.83		5.49		5.55		

Specifically, the threshold regression results (see Table 2, General Column, Panel B) shows that moral hazard behavior only occurs in banks with NPLs less than or equal to 5.87% (threshold value).Banks with such NPLs are dominated by state-owned and private banks (see Table 1).It means that banks with such NPLs tend to use their excess liquidity to increase the distribution of KUR, especially for SME investment, thereby increasing their market share.However, the banks concerned may intentionally channel these loans to risky SMEs or voluntarily approve inadequate or inappropriate credit proposals.As a result, their risk of non-performing loans (NPL) increases.Meanwhile, banks with NPLs above 5.87%, which were dominated by BUMD banks, experienced adverse selection, which may have been triggered by information asymmetry between bank credit analysts and borrowers (SMEs).As a result, the NPL of these banks also increased.

Based on the type of credit disbursed, investment credit has the highest NPL (avg. 8.06%) or is already above the Indonesian banking standard.The next one is credit for working capital (avg. 5.43%) and other KUR loans (avg. 4.11%), both of which are still at Indonesian banking standards.Significant factors that determine the risk of non-performing loans on investment loans, working capital, and others are past loan growth rates, and increases in deposit insurance interest rates.Previous performance and good economic growth also influenced the risk of bad credit on working capital loans and others.Meanwhile, the decline in the benchmark interest rate is a significant additional factor determining the risk of non-performing loans on investment loans.In investment loans, moral hazard behavior only occurs in banks with NPLs below or equal to the threshold value (8.06%), while banks with NPLs above this value tend to experience adverse selection.Contrary to these findings, moral hazard behavior in working capital loans occurs in banks with NPLs greater than the threshold value (5.43%). Meanwhile, adverse selection behavior is not indicated, either in banks below or above the threshold.As for other loans, moral hazard behavior also occurs in banks below or equal to the threshold value (4.11%), and there is no proven adverse selection behavior.

Based on the type of participating bank, increased liquidity, loan growth rate, increased market share, increased deposit insurance interest rates, improved performance, economic growth, and

decreased benchmark interest rates are significant factors in determining the risk of non-performing loans in BUMD banks.Significant moral hazard behavior occurs in the banks that are below and above the threshold value (8.68%).In addition, significant adverse selection behavior was detected in these two bank groups.In contrast, state-owned banks as a whole did not show a significant increase in NPLs.Therefore, the behavior of moral hazard and adverse selection in state-owned banks do not significantly exist.As for private banks, the increase in NPL occurred at a low significance level (α = 10%), which was only triggered by credit growth, and which declined in the benchmark interest rate.However, moral hazard behavior exists in these banks, especially those with NPLs above the threshold value.There is no indication of significant adverse selection in the distribution of KUR to these banks.

The observation period starts from Q1-2008 until Q2-2021.During this period, at least three major shocks occurred, namely the global financial crisis in 2008 followed by the European crisis in 2009, and shocks due to the Covid-19 pandemic that began in Q2-2020 and are still ongoing until the end of this observation period (Q2-2021).These shocks may have an impact on banking performance, particularly in the distribution of people business loans.Therefore, this study divided the period into two groups.The first is the "normal period" (Q1-2010 to Q1-2020).The second is the "turbulence period" (Q1-Q4 of 2008, Q1-Q4 of 2009, Q2 of 2020 to Q2 of 2021).The general regression results show that the increase in NPL of people business lending banks only occurs in the 'normal period.'This significant increase was triggered by increased liquidity, loan growth rate, increased market share, increased deposit insurance interest rates, and improved performance.Significant moral hazard behavior occurs in banks with NPLs below or equal to the threshold value.Therefore, these findings support our previous findings, especially our general findings.In other words, the shocks of the global financial crisis (2008), the European crisis (2009), and the Covid-19 pandemic (2020-2021) did not adversely affect the results of this analysis.

Conclusion

The results of data analysis reveal that moral hazard behavior generally exists when the NPL is below or equal to 5.87%. On the contrary, it experiences adverse selection.Specifically, moral hazard behavior is dominant in the case of investment credit and banks owned by local governments.In working capital loans and others, this behavior also occurs, but not as much as in the case of investment loans.Moral hazard and adverse selection behavior were not detected anyhow in state-owned banks, while in private banks, these only occurred at a low level.At the end of the analysis, we also consider the shock effects of the global financial crisis (2008), European crisis (2009), and the Covid-19 pandemic (2020-2021) on the threshold regression model. However, the results are negative, thus strengthening our previous findings.In general, the factors that significantly determine the risk of non-performing loans in the people business credit program are; increased loan growth rate, market share, deposit insurance interest rates, and economic growth as well as a decrease in the benchmark interest rate.However, the specifics are different both in each type of credit and the type of participating bank..

Apendix

Appendix 1:Sample Bank List

1. Bank Rakyat Indonesia (Persero), Tbk.
2. Bank Mandiri (Persero), Tbk.
3. Bank Negara Indonesia (Persero), Tbk.
4. Bank Tabungan Negara (Persero), Tbk.
5. Bank Central Asia, Tbk.
6. Bank Bukopin, Tbk.
7. Bank Maybank Indonesia, Tbk.
8. Bank Sinarmas, Tbk.
9. Bank Permata, Tbk.
10. Bank Tabungan Pensiunan Nasional, Tbk.
11. Bank OCBC NISP, Tbk.
12. Bank Artha Graha International, Tbk.
13. Bank BRI Agroniaga
14. Bank Nationalnobu.
15. Bank Mandiri Taspen
16. BPD Bali
17. BPD Kalbar
18. BPD NTT
19. BPD DIY

20. BPD Sulselbar
21. BPD Sumut
22. BPD Sumbar (Bank Nagari)
23. BPD Sumsel Babel
24. BJB
25. BPD Kalsel
26. BPD Riau Kepri
27. Bank NTB Syariah
28. BPD Lampung
29. BPD Papua
30. BPD Bengkulu
31. BPD Kaltimtara
32. BPD Jambi
33. BPD Jateng
34. BPD Sultra
35. BPD Kalteng
36. BPD SulutGo
37. BPD Jatim
38. Bank Syariah Indonesia*)

Notes:

*) is a bank resulting from the merger of Bank Syariah Mandiri, BRI Syariah, BNI Syariah, and BTN Syariah in 2020.Prior to the merger, the four banks were participants in the KUR program.Therefore, the data before the merger uses the combined data from the four banks.

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