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1-бөлім
**ҚАРЖЫ ЖӘНЕ
АҚША-НЕСИЕ САЯСАТЫ**

Section 1
**FINANCING AND
MONETARY POLICY ISSUES**

Раздел 1
**ВОПРОСЫ ФИНАНСИРОВАНИЯ И
ДЕНЕЖНО-КРЕДИТНОЙ ПОЛИТИКИ**

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MONETARY POLICY OPTIMIZATION BASED ON THE DSGE MODEL OF KAZAKHSTAN'S ECONOMY

Abstract. The model describes the economy in the short term (excluding investments), in the case of inflation targeting policy and represents a system of 15 linearized equations for key macroeconomic indicators of the main economy sectors: households, enterprises, the National Bank, and the external sector. The parameters were estimated by Bayesian methods for the period 2010-2018 and in the sub-period 2015-2018. The advantage of the approach is the possibility of estimating parameters in short time series due to the use of prior information. From the estimates obtained, it follows that the National Bank pays attention not only to inflation, but also to business activity and changes in the exchange rate. As is known from theory, the optimal policy for the monetary regulator may differ from the optimal one for society. To determine the parameters of the optimal monetary policy, the function of social losses was derived and it was shown that, in addition to the traditional variables of the output gap and inflation, the fluctuations in the interest rate and exchange rate should be its components. The work takes into account some sources of welfare losses. These average annual losses of society are estimated at 3.2% of the equilibrium level of consumption. The optimization carried out according to the current version of the DSGE-model allows us to draw the following conclusions. A "double mandate" policy and the inclusion of an exchange rate in Taylor's equation can increase public welfare. The sensitivity coefficients of the current interest rate policy can be revised upward, due to which society losses can be reduced. When pursuing a monetary policy, one should focus not on the CPI, but on indicators of internal inflation, perhaps an indicator of core inflation and/or PPI.

Key words: dynamic stochastic general equilibrium models, Bayesian estimation, inflation targeting.

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Қазақстандағы динамикалық стохастикалық жалпы тепе-тендік моделі

Аннотация. Модель экономикиканы қысқа мерзімді перспективада (инвестицияларды қоспағанда), инфляциялық таргеттеу режимінде сипаттайтың және экономикиканың негізгі секторларының: үй шаруашылықтары, нақты сектор кәсіпорындары, Ұлттық банк және сыртқы сектордың негізгі макроэкономикалық көрсеткіштері үшін 15 сызықтық тендеулер жүйесін ұсынады. Параметрлер Байес әдісімен 2010-2018 жж. бағаланды және 2015-2018 ж.ж. Тәсілдің артышылығы априори ақпаратын қолдану арқасында қысқа уақыт қатарында параметрлерді бағалау мүмкіндігінде. Алынған бағалаулардан ҚҰБ ақша-кредит саясатын өзірлеу кезінде инфляцияға ғана емес, сонымен қатар іскерлік белсенділік пен айырбастау бағамының өзгеруіне де назар аударады. Теориядан белгілі болғандай, ақша-несиелік реттеуешінің онтайлы саясаты қоғам үшін онтайлы саясаттан өзгеше болуы мүмкін. Онтайлы ақша-кредит саясатының параметрлерін анықтау үшін әлеуметтік шығындар функциясы алынды және шығарылған және инфляциялық алшақтықтың дәстүрлі ауыспалыларынан басқа, пайыздық мөлшерлеме мен валюта бағамының ауытқуы оның құрамдас бөлігі болуы керек екендігі көрсетілді. Жұмыста әл-ауқаттың жоғалуышың кейбір көздері ескеріледі. Бұл қоғамның орташа жылдық шығындары тұтынудың тепе-тендік деңгейінің 3,2% деңгейінде бағаланады. DSGE моделінің қолданыстағы нұсқасына сәйкес жүргізілген онтайландыру келесі қорытынды жасауға мүмкіндік береді. «Қос мандат» саясаты және айырбас бағамын Тейлор тендеуіне қосу халықтың әл-ауқатын арттыруы мүмкін.

Ағымдағы пайыздық мөлшерлеме саясатының сезімталдық коэффициенттерін жоғары қарай қайта қарауға болады, соның салдарынан қоғам шығындарын азайтуға болады. Ақша-кредит саясатын жүргізу кезінде ТБИ-ге емес, ішкі инфляцияның көрсеткіштеріне, мүмкін, базалық инфляцияның және / немесе ППИ көрсеткіштеріне назар аудару керек.

Түйін сөздер: жалпы тепе-тендіктің динамикалық стохастикалық ұлгілері, Байес бағалаулары, инфляцияның таралуы.

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Оптимизация денежно-кредитной политики на основе DSGE-модели экономики Казахстана

Аннотация. Модель описывает экономику в краткосрочном периоде (без учета инвестиций), в режиме инфляционного таргетирования и представляет собой систему 15 линеаризованных уравнений для ключевых макроэкономических показателей основных секторов экономики: домашних хозяйств, предприятий реального сектора, Национального банка, внешнего сектора. Параметры были оценены байесовскими методами на периоде 2010-2018 гг. и на подпериоде 2015-2018 гг. Преимущество подхода заключается в возможности оценивания параметров на коротких временных рядах за счет использования априорной информации. Из полученных оценок следует, что НБК при выработке денежно-кредитной политики обращает внимание не только на инфляцию, но и на деловую активность и изменения обменного курса. Как известно из теории, оптимальная политика денежного регулятора может отличаться от оптимальной для общества. Для определения параметров оптимальной денежно-кредитной политики выведена функция общественных потерь и показано, что её составляющими, помимо традиционного разрыва выпуска и инфляции, должны быть колебания ставки процента и обменного курса. В работе учтены некоторые источники потерь благосостояния. Эти среднегодовые потери общества оценены в 3.2% от равновесного уровня потребления. Проведённая оптимизация по текущей версии DSGE-модели позволяет сделать следующие выводы. Политика «двойного мандата» и включение в уравнение Тейлора обменного курса могут повысить общественное благосостояние. Коэффициенты чувствительности текущей процентной политики могут быть пересмотрены в сторону повышения, за счет чего можно сократить потери общества. При проведении денежно-кредитной политики следует ориентироваться не на ИПЦ, а на индикаторы внутренней инфляции, может быть, на показатель базовой инфляции и/или ИЦП.

Ключевые слова: динамические стохастические модели общего равновесия, байесовское оценивание, инфляционное таргетирование.

Introduction

The article aims to optimize the parameters of the monetary policy of the National Bank of Kazakhstan on the basis of the Bayesian DSGE-model of the economy of Kazakhstan.

The DSGE model we use has been described in detail in the paper (Shults, 2019). The model consists of aggregated sectors: households and real sector, world and monetary regulator. Households carry out labor activities, save part of their income in interest-bearing assets, and in cash. Real sector enterprises consume household labor and produce for domestic consumption and export. For short-term forecasting purposes, we take fixed assets as exogenous shock. The external sector generates demand for exported goods and creates supply in

the form of imported products. Plus, we assume there are no restrictions on the mobility of capital. The National Bank pursues a policy of inflation targeting, managing the base interest rate.

Thus, the model takes into account the labor market, the goods and services market described by employment and wages, prices and GDP. Financial markets are represented by the foreign exchange market, which equilibrium is described by the tenge exchange rate, and the money market, which key feature is the base interest rate.

Literature review

An important advantage of dynamic stochastic general equilibrium models (DSGE models) over econometric modeling is the availability of neo-

Keynesian microfoundations, i.e. behavioral models that describe decision-making by firms and households within rational expectations and market failures. The latter usually include imperfect competition, price inflexibility and asymmetric information. Reliance on microfoundations makes DSGE models free of the Lucas critique (Lucas, 1976: 19-46).

As a rule, the neo-Keynesian DSGE models describe the situation of monopolistic competition, using the Dixit-Stiglitz (Dixit & Stiglitz, 1977) aggregate and modifications of the general equilibrium model by Blanchard-Kiyotaki (Blanchard & Kiyotaki, 1987). These models describe both household consumption and resource consumption in the manufacturing sector in an imperfectly competitive environment. Pricing under inflexible pricing conditions is often modeled in the DSGE literature using the Calvo scheme (Calvo, 1983), suggesting that not all firms are able to set prices according to optimal ones. Following Rotemberg (1982), losses from non-optimal pricing are described by quadratic functions.

Another important feature is the ability to assess social welfare (or social loss). This feature of DSGE-models is emphasized herein – we will try to derive the approximated social loss function (SLF) in the conditions of market failures from the utility function of households. And then, on the basis of SLF, we will optimize the parameters of interest rate policy under conditions of inflation targeting.

There are two approaches to optimizing monetary policy based on maximizing the utility function of society (minimizing social loss). One is the calculation of the recursive utility function $U_t = u_t + \beta U_{t+1}$, where U is the discounted total utility function on the infinite planning horizon, u_t is the moment utility function of the household sector, β is the discounting factor. The problem of using this approach is that u_t is a nonlinear function that depends on level variables (see for example (1)). Most DSGE models are linear with respect to gaps variables. Accordingly, we will rely on an alternative approach by M. Woodford (2003), which is based on a quadratic approximation of the utility function.

Drobyshevsky et al. (2012) noted that the insufficient capacity of financial markets forces developing countries to borrow from abroad. Accordingly, the high dependence on foreign currency loans, especially in the conditions of export-oriented nature of the economy, leads to the

need to smooth out fluctuations in the foreign exchange market. The empirical studies by F. Kartaev (2017) confirm this hypothesis – countries pursuing a policy of "hybrid" inflation targeting (i.e. combine inflation targeting with smoothing the volatility of the foreign exchange market), are more efficient in terms of stimulating output.

For DSGE modeling, the statement above means the need to include the SLF components with an exchange rate and an exchange rate variable in the Taylor equation.

Methodology

Modeling the household sector

The utility function with constant relative risk aversion (CRRA) is used to model household behavior. Households maximize expected total discounted utility:

$$U = E \left[\sum_{t=0}^{\infty} \beta^t \left(\frac{C_t^{1-\sigma}}{1-\sigma} - \Phi \frac{L_t^{1+\varphi}}{1+\varphi} + \Psi \frac{m_t^{1-\psi}}{1-\psi} \right) \right] \rightarrow \max \quad (1)$$

with budget constraints in deflated terms:

$$\begin{aligned} (C_t + m_t + d_t + d_t^W - w_t L_t)(1 + \pi_t) = \\ = m_{t-1} + (1 + R_{t-1})d_{t-1} + \\ + d_{t-1}^W \frac{(1 + R_{t-1}^W)E_{t-1}[S_t]}{S_{t-1}} \end{aligned}$$

where $\beta \in (0; 1)$ is discount rate; L_t is labor supply; w_t is real wages; d_t and d_t^W are real assets generating interest income in national and foreign currencies; R_t and R_t^W are return on assets in national and foreign currencies; $\pi_t = \frac{P_t}{P_{t-1}} - 1$ is inflation rate, and P_t is the consumer prices level; m_t is real cash balances; S_t is nominal exchange rate (in national currency per unit of foreign currency).

First-order conditions are presented in the following form. Demand function for real cash balances is:

$$\Psi m_t^{-\psi} = C_t^{-\sigma} \left(\frac{R_t}{1 + R_t} \right) \quad (2)$$

Labor supply function (3) is:

$$\Phi L_t^\varphi = C_t^{-\sigma} w_t \quad (3)$$

Euler equation for consumption is:

$$\beta \left(\frac{E[C_{t+1}]}{C_t} \right)^{-\sigma} = \frac{1 + E[\pi_{t+1}]}{1 + R_t} \quad (4)$$

The optimal structure of consuming domestic $C_{H,t}$ and imported $C_{F,t}$ goods is determined by solving the following problem (Heijdra Ben et al., 2002). Maximize¹ the composite consumption:

$$C_t = \left((1 - \delta)^{\frac{1}{\theta}} C_{H,t}^{\frac{\theta-1}{\theta}} + \delta^{\frac{1}{\theta}} C_{F,t}^{\frac{\theta-1}{\theta}} \right)^{\frac{\theta}{\theta-1}} \rightarrow \max \quad (5)$$

under budget constraint:

$$P_{H,t} C_{H,t} + P_{F,t} C_{F,t} = P_t C_t \quad (6)$$

Here P_t is the consumer basket cost, consisting of domestic and imported goods. $C_{H,t}$ and $C_{F,t}$ are consumption of domestic and imported goods at prices $P_{H,t}$ and $P_{F,t}$ respectively. $\delta \in (0; 1)$ is the share of imported goods in consumption, and $\theta > 1$ is a parameter that shows the population tendency to diversify. Moreover, as it will be shown below, the θ parameter can be interpreted as the elasticity of demand at a relative price.

Let us denote the composite consumer price index as:

$$P = \left((1 - \delta) P_H^{1-\theta} + \delta P_F^{1-\theta} \right)^{\frac{1}{1-\theta}} \quad (7)$$

Then the optimal consumption of domestic and imported goods is given by the expressions:

$$\frac{C_{H,t}}{C_t} = (1 - \delta) \left(\frac{P_{H,t}}{P_t} \right)^{-\theta} \quad (8)$$

$$\frac{C_{F,t}}{C_t} = \delta \left(\frac{P_{F,t}}{P_t} \right)^{-\theta} \quad (9)$$

In turn, the consumption of domestic goods by similar way is decomposed further. Households are expected to consume a continuum of goods produced under monopolistic competition:

$$C_{H,t} = \left(\int_0^1 C_{H,t}(i) di \right)^{\frac{\varepsilon}{\varepsilon-1}} \quad (10)$$

Then the optimal consumer basket is formed similarly (8), i.e. the demand for the i -th product is like: $C_{H,t}(i) = \left(\frac{P_{H,t}(i)}{P_{H,t}} \right)^{-\varepsilon} C_{H,t}$.

Modeling the real sector

Derivation of the New-Keynesian Phillips Curve (NKPC) equation for domestic products is based on the article Schulz & Oshakbayev (2018).

Under conditions of monopolistic competition, the optimal price is set with a markup μ relative to marginal costs: $p_{H,t}^* = \mu + mc_t$, where $p_{H,t}^* \equiv \ln(P_{H,t})$, mc_t is the logarithm of marginal costs.

But in each time period t a certain proportion of firms $\omega \in (0; 1)$ are forced to maintain the unchangeable price. Then each firm that is able to set the price, does not choose the price $p_{H,t}^*$ that is optimal at a given time, but some long-term price $\bar{p}_{H,t}$ that will minimize the discounted expected loss (taking into account the probability of invariable prices ω)

$$S(\bar{p}_{H,t}) = \sum_{s=0}^{\infty} (\beta \omega)^s E \left[(\bar{p}_{H,t} - p_{H,t+s}^*)^2 \right] \rightarrow \min \quad (11)$$

As a result, the dynamics of prices for domestic goods is described by the equation:

$$\begin{aligned} \pi_{H,t} &\equiv p_{H,t} - p_{H,t-1} = \\ &= \kappa \cdot mcr_t + \beta E[\pi_{H,t+1}], \end{aligned} \quad (12)$$

where $mcr_t = \mu + mc_t - p_{H,t}$ is real marginal costs with a premium μ , and $\kappa = \frac{(1-\omega)(1-\beta\omega)}{\omega}$ is Calvo parameter, reflecting the price inflexibility.

To model production in the short term, we will use the Cobb-Douglas function:

$$Y = AL^\alpha \quad (13)$$

where Y is the volume of deflated GDP, L is the number of employed, A is the total factor productivity, and $\alpha \in (0; 1)$ is the GDP elasticity by labor.

The production function (13) sets the supply-side GDP. On the demand side, GDP is defined as

¹ The solution of the dual problem (minimization of budget expenditures $P_{H,t} C_{H,t} + P_{F,t} C_{F,t}$ for a given composite consumption C_t) provides the same result.

the aggregate demand of different economic sectors:

$$Y_t \equiv AC_t + C_{H,t} + E_t \quad (14)$$

where AC_t is autonomous consumption, consisting of government spending and investment; E_t is the volume of exports.

The DSGE models of small open economy we know assume the so-called international distribution of risks (Gali et al., 2005). It is based on the proposition of full markets, the existence of Arrow's financial assets, and free access to them. In the export model below, we will use the demand model under monopolistic competition, namely the expression (9). Then the demand for domestic exports is described by the equation:

$$E_t = \gamma \left(\frac{P_{H,t}}{S_t P_{W,t}} \right)^{-\vartheta} Y_{W,t} \quad (15)$$

where $Y_{W,t}$ is the world GDP; $P_{W,t}$ is the world prices expressed in foreign currency; ϑ is preferences to diversify the external consumer basket; γ is a scaling factor.

Financial markets

The model of household behavior is used to derive the uncovered interest rate parity (UIP) equation, which balances the return on assets in national and foreign currencies:

$$\frac{1 + R_t}{1 + R_t^W} = \frac{E[S_{t+1}]}{S_t} \quad (16)$$

The equation (16) can be written in logarithms as $s_t = E[s_{t+1}] + (R_t^W - R_t)$, where $s_t = \ln S_t$. Thus, devaluation expectations and interest rate arbitrage can act as exchange rate drivers.

The law of one price assumes that domestic prices for imported goods $P_{F,t}$ are set on the basis of world prices $P_{W,t}$ as:

$$P_{F,t} = S_t P_{W,t} \quad (17)$$

Central banks conduct interest rate policy in accordance with the so-called Taylor rule (Taylor, 1993):

$$R_t - \pi_t = r^n + q_\pi(\pi_t - \pi^T) + q_y \tilde{Y}_t, \quad (18)$$

where \tilde{Y}_t is the output gap, the percentage deviation of GDP from its equilibrium state; π^T is the target inflation rate.

Taylor's rule (18) indicates that the real base rate should rise when inflation exceeds its target or/and when the output gap is positive. Taylor's principle states that in order to stabilize the economy, the interest rate response to inflation deviating from the target must be greater than 1 ($q_\pi > 1$).

Since the interest rate cannot change too often and sharply in response to changes in the economic environment, central banks smooth changes in the interest rate (Chernyavsky et al., 2017). In addition, the monetary regulator can intervene in the exchange rate in the foreign exchange market:

$$R_t = (1 - \rho_R)(r^n + \pi_t + q_\pi(\pi_t - \pi^T) + q_y \tilde{Y}_t + q_{rer} \Delta rer_t) + \rho_R R_{t-1}. \quad (19)$$

This stabilization interest rate policy aims to achieve equilibrium $\tilde{Y}_t = 0, \pi_t = \pi^T, \bar{R} = r^n + \pi^T$.

Log linear approximation

The derivation of log-linear approximations is presented in (Shults, 2019). Next, we will denote the percentage deviation of the variables from their equilibrium values by "wave". For example, $\tilde{C}_t = \ln \frac{C_t}{\bar{C}}$ is the percentage deviation of household consumption from equilibrium \bar{C} .

We use the equation (4) to obtain a dynamic version of the IS equation:

$$\ln \beta - \sigma(E[\tilde{C}_{t+1}] - \tilde{C}_t) = E[\pi_{t+1}] - R_t \quad (20)$$

So, in the steady state ($\pi_t = \pi^T$ and $\tilde{C}_t = 0$), the natural interest rate r^n must satisfy the condition $r^n = \bar{R} - \pi^T = -\ln \beta$.

The expression for employment (3) is approximated in terms of gaps:

$$\varphi \tilde{L}_t = -\sigma \tilde{C}_t + \tilde{w}_t \quad (21)$$

The demand for money (2) can be reduced to the form:

$$\tilde{m}_t = \frac{1}{\psi} + \frac{\sigma}{\psi} \tilde{C}_t - \eta R_t \quad (22)$$

where $\eta = \frac{1}{\psi \bar{R}}$.

The production function (13) is approximated as:

$$\tilde{Y}_t = \tilde{A}_t + \alpha \tilde{L}_t \quad (23)$$

The linearization of the basic macroeconomic identity (14) gives:

$$\begin{aligned} \tilde{Y}_t = & (1 - w_{CH} - w_E) \tilde{A} \tilde{C}_t + \quad (24) \\ & + w_{CH} \tilde{C}_{H,t} + w_E \tilde{E}_t \end{aligned}$$

where w_{CH} , w_E are the share of household consumption of domestic goods and exports in GDP.

The real exchange rate $RER = \frac{P_F}{P_H}$ and terms of trade $Q = \frac{P_F}{P_H}$, recorded in logarithms, take the form $\text{rer}_t = p_{W,t} + s_t - p_t$ and $q_t = p_{W,t} + s_t - p_{H,t}$.

The dynamics of inflation for imported goods is given by the equation:

$$\pi_{F,t} = \Delta \text{rer}_t + \pi_t \quad (25)$$

The log-linear approximation for the consumer price index (6) is:

$$p_t \approx (1 - \delta)p_{H,t} + \delta p_{F,t} \quad (26)$$

The consumer inflation can be provided as:

$$\pi_t = (1 - \delta)\pi_{H,t} + \delta \cdot \pi_{F,t} \quad (27)$$

The relationship between the real exchange rate and the terms of trade can be approximated by the expression:

$$\text{rer}_t = (1 - \delta)q_t \quad (28)$$

Approximation for export (15):

$$\tilde{E}_t = \vartheta q_t + \tilde{Y}_{W,t} \quad (29)$$

The percentage deviations for consumption of domestic (8) and imported (9) goods:

$$\tilde{C}_{H,t} = \tilde{C}_t + \theta \delta q_t \quad (30)$$

$$\tilde{C}_{F,t} = \tilde{C}_t - \theta \text{rer}_t \quad (31)$$

The UIP equation (16) in terms of the real exchange rate:

$$\begin{aligned} \text{rer}_t = & E[\text{rer}_{t+1}] + (R_t^W - E[\pi_{t+1}^W]) - \\ & - (R_t - E[\pi_{t+1}]) \end{aligned} \quad (32)$$

The gap of real marginal cost:

$$\tilde{mCr}_t = \tilde{w}_t - \tilde{Y}_t + \tilde{L}_t \quad (33)$$

The model also includes the Phillips equation (12) and the Taylor equation (19).

Social loss function

M. Woodford (2003) justified and derived a quadratic approximation of the utility function for a closed economy. In his model, the non-separable utility function is used. Moreover, (Woodford, 2003) contains extensions for cash stocks, consumption inertia, and prices. This unit was included in the popular neo-Keynesian model by Gali (2008).

The basic new Keynesian DSGE model (Gali, 2008) uses the moment utility function $u_t = \frac{c_t^{1-\sigma}}{1-\sigma} - \frac{L_t^{1+\varphi}}{1+\varphi}$ and the Cobb-Douglas production function, similar to (13). Consumption is a consumer basket of a continuum of goods (10). Pricing in case of monopolistic competition is organized according to the Calvo scheme. Then a quadratic approximation of the expected discounted utility function yields the following function:

$$W = -\frac{1}{2} E \left[\sum_{t=0}^{\infty} \beta^t \left\{ \left(\sigma + \frac{\varphi + 1 - \alpha}{2 - \alpha} \right) \tilde{Y}_t^2 + \frac{\varepsilon}{\lambda} \pi_t^2 \right\} \right]$$

where $\lambda = \frac{(1-\omega)(1-\beta\omega)}{\omega} \frac{\alpha}{\alpha+(1-\alpha)\varepsilon}$. That is, monetary policy in a closed economy is aimed at minimizing the average social losses (SLF):

$$L = \frac{1}{2} \left[\left(\sigma + \frac{\varphi + 1 - \alpha}{2 - \alpha} \right) D[\tilde{Y}_t] + \frac{\varepsilon}{\lambda} D[\pi_t] \right]$$

where operator $D[\cdot]$ is a variance.

So, the welfare loss is associated with monopolization of the economy and price inertia. The first leads to underproduction and higher prices. Price rigidity leads to non-optimal price structure and reduced resource allocation efficiency.

Gali and Monacelli (2005) point out that in an open economy, the monetary regulator has an incentive to influence the terms of trade, which also

affects public welfare. In the special case ($\sigma = \theta = \alpha = 1$) and some other constraints, the quadratically approximated social loss function is:

$$\mathbb{L}_{open} = \frac{1 - \delta}{2} \left[(1 + \varphi) D[\tilde{y}_t] + \frac{\varepsilon}{\lambda} D[\pi_{H,t}] \right]$$

The osr function in the Dynare package is designed to minimize quadratic social loss functions by optimizing Taylor rule parameters. To use it, we specify coefficients before variances and covariances of key variables.

The derivation of a linear-quadratic approximation of the utility function for our model is presented in the Appendix. The social loss function for our model has the form:

$$\begin{aligned} \mathbb{L} = & \frac{\varepsilon}{\lambda w_C} \pi_{H,t}^2 - a_Y x_t^2 - a_{RER} e_t^2 - a_R r_t^2 + \\ & + \frac{\chi_2 \chi_4}{w_{CH}^2} \hat{Y}_t r_{er,t} + \chi_3 \tilde{Y}_t \frac{R_t}{\bar{R}} - \chi_3 \chi_4 r_{er,t} \frac{R_t}{\bar{R}} \end{aligned} \quad (34)$$

where x_t, e_t, r_t are linear transformations over the output gap, the real exchange rate, and the interest rate, respectively.

It follows from the expression (34) that monetary policy should be aimed not only at stabilizing inflation, but also at stabilizing economic activity and the foreign currency market. At the same time, the social loss function includes not all consumer inflation, but only the price index of domestic producers.

In addition, as the Appendix suggests, welfare is affected by stochastic shocks of aggregate factor productivity, autonomous domestic demand and consumption, external demand, inflation, and interest rates. And the optimal monetary policy (Taylor equation parameters) should depend on the intensity of these shocks.

To optimize the coefficients of the Taylor rule, we need to estimate the coefficients of the model. That's where we're proceeding to.

Bayesian estimation

Bayesian methods (DeJong et al., 2011; Mikusheva, 2014) are becoming an increasingly popular way of estimating the DSGE model parameters. This can be partly explained by the fact that not only statistical data is used for estimation, but also prior judgments: the economic theory provisions, expert judgments, the results of previous studies, including foreign ones. As a

result, meaningful results can be obtained even on short time series, as prior information fulfills the lack of statistical observations.

Prior knowledge is given as functions of density distribution $f(\theta)$ of unknown parameters θ . Then, based on the available observations, the posterior distribution function is calculated using the Bayes formula:

$$f(\theta|y) = \frac{f(y|\theta)f(\theta)}{f(y)} \propto L(y|\theta)f(\theta),$$

where $f(y)$ is the observation distribution density function; $f(\theta)$ is the a priori parameter distribution function; $f(y|\theta) = L(y|\theta)$ is the likelihood function. To obtain point estimates, the mathematical expectation, median, or a posteriori distribution mode are calculated $f(\theta|y)$.

To estimate the model parameters, for greater adequacy to the real economy, we will introduce several modifications into the model (12), (19)-(32).

In the equation (20), we take into account the desire of households to smooth consumption and add a lag variable:

$$\begin{aligned} \tilde{c}_t = & \rho_c \tilde{c}_{t-1} + (1 - \rho_c) E[\tilde{c}_{t+1}] + \\ & + \frac{1}{\sigma} (E[\pi_{t+1}] - R_t + r^n) + e_{c,t} \end{aligned} \quad (35)$$

Similarly, instead of (12) we will use a hybrid NKPC (Gali et al., 1999), taking into account the inertia of inflation:

$$\begin{aligned} \pi_{H,t} = & \kappa \cdot \tilde{mcr}_t + \beta E[\pi_{H,t+1}] + \\ & + (1 - \beta) \pi_{H,t-1} \end{aligned} \quad (36)$$

We also add inertia to the equation of imported inflation (25):

$$\begin{aligned} \pi_{F,t} = & \rho_{\pi F} \pi_{F,t-1} + \\ & + (1 - \rho_{\pi F}) (r_{er,t} - r_{er,t-1} + \pi_t) \end{aligned} \quad (37)$$

In order to take into account the possibility of deviation from the floating exchange rate, the foreign exchange market regulation, we add inertia to the UIP equation (32):

$$\begin{aligned} r_{er,t} = & (1 - \rho_{RER}) E[r_{er,t+1}] + \\ & + \rho_{RER} (r_{er,t-1} + (R_t^W - E[\pi_{t+1}^W]) \\ & - (R_t - E[\pi_{t+1}])) \end{aligned} \quad (38)$$

The following statistics from the Committee on Statistics and the National Bank and from the International Monetary Fund (International Financial Statistics Database) was

used: GDP, household consumption, exports, consumer price index, producer price index, monetary aggregate M0, US consumer price index.

Table 1– Parameters of a priori distributions and a posteriori estimation of model coefficients

Parameter	Economic sense	Distribution	A priori		A posteriori mean	
			Mean	STD	2010-2018	2015-2018
r^n	Natural interest rate	Gamma	0.005	0.002	0.0049	0.0049
w_{CH}	Share of household consumption of domestic goods in GDP	Beta	0.4059	0.03	0.4423	0.4253
w_E	Share of exports in GDP	Beta	0.3648	0.08	0.0800	0.1445
α	GDP elasticity by labor	Beta	0.1014	0.08	0.0067	0.0049
σ	Inverse of intertemporal substitution of consumption	Gamma	1	0.9	0.5545	0.1016
β	Discount rate	Beta	0.99	0.008	0.9909	0.9890
ϑ	External demand elasticity at prices	Gamma	1.2293	0.9	0.0772	0.0240
θ	Domestic demand elasticity at prices	Gamma	1.0845	0.9	0.0465	0.0150
ψ	Utility elasticity of cash	Gamma	0.2991	0.25	0.7766	0.5014
η	Money demand elasticity at interest rate	Gamma	0.0394	0.03	0.0953	0.1965
φ	Inverse of labor supply elasticity by wage	Gamma	3	2.9	4.5347	4.2610
κ	Calvo parameter for domestic goods	Gamma	0.132	0.13	0.2209	0.2293
$\rho_{\pi F}$	Measure of inflation inertia on imported goods	Beta	0.0203	0.015	0.0006	0.0202
q_π	Measure of the National Bank's commitment to fighting inflation	Gamma	4.0241	1	5.1424	3.5379
q_y	Measure of the National Bank's commitment to stabilizing output	Gamma	0.4683	0.2	0.4972	0.4623
q_{rer}	Measure of the National Bank's commitment to real exchange rate stabilization	Normal	0.1	1	-2.4759	-2.3921
ρ_R	Measure of inertia of the NBK base rate	Beta	0.75	0.15	0.4441	0.5360
ρ_C	Consumption inertia	Beta	0.9368	0.05	0.9325	0.9395
ρ_{RER}	Real exchange rate inertia	Beta	0.1	0.05	0.1003	0.1003
δ	Imported goods share in the consumer basket	Beta	0.2967	0.2	0.1662	0.1878

Seasonality was eliminated by the Census X-12 method in the EViews 8 package. The trend-cyclic component was excluded by the Hodrick-Prescott filter with the standard parameter for quarterly data $\lambda = 1600$.

The parameters of prior distributions were taken from the previous estimations (Shults, 2019) (Table 2). We have deviated in the following cases: $\sigma = 1$; $\varphi = 3$; $\kappa = 0.132$ $\rho_R = 0.75$.

In the expressions above, we have introduced the following sources of shocks:

- Autonomous demand shock $e_{Y,t}$
- Consumer demand shock $e_{C,t}$
- Total factor productivity shock \tilde{A}_t
- World price shock $\pi_{W,t}$
- External demand shock $\tilde{Y}_{W,t}$
- The NBK base rate shock $e_{R,t}$
- World interest rate shock R_t^W
- Price shock $e_{\pi,t}$

Table 2 – Parameters of a priori distributions and a posteriori estimation of shock effects features

Parameter	Economic sense	Distribution	A priori		A posteriori mean	
			Mean	STD	2010-2018	2015-2018
ρ_{eY}	Inertia of the autonomous demand shock $e_{Y,t}$	Beta	0.5969	0.2	0.7691	0.8354
ρ_{eC}	Inertia of the consumer demand shock $e_{C,t}$	Beta	0.0777	0.05	0.4653	0.0795
ρ_A	Inertia of the total factor productivity shock \tilde{A}_t	Beta	0.8248	0.07	0.7931	0.8194
$\rho_{\pi W}$	Inertia of the world price shock $\pi_{W,t}$	Beta	0.6494	0.14	0.7557	0.7272
ρ_{YW}	Inertia of the external demand shock $\tilde{Y}_{W,t}$	Beta	0.1068	0.05	0.1195	0.1128
ρ_{eR}	Inertia of the NBK base rate shock $e_{R,t}$	Beta	0.9565	0.02	0.9587	0.9574
ρ_{RW}	Inertia of the world interest rate shock R_t^W	Beta	0.8983	0.05	0.8867	0.9335
$\rho_{e\pi}$	Inertia of the price shock $e_{\pi,t}$	Beta	0.9	0.04	0.8847	0.8980
σ_{eY}	Standard deviation of the autonomous demand shock $e_{Y,t}$	Inverse Gamma	0.0437	Inf	0.0289	0.0332
σ_{eC}	Standard deviation of the consumer demand shock $e_{C,t}$	Inverse Gamma	0.0141	Inf	2.0271	0.0099
σ_A	Standard deviation of the total factor productivity shock \tilde{A}_t	Inverse Gamma	0.0126	Inf	0.0093	0.0074
$\sigma_{\pi W}$	Standard deviation of the world price shock $\pi_{W,t}$	Inverse Gamma	0.3348	Inf	0.3136	0.3392
σ_{YW}	Standard deviation of the external demand shock $\tilde{Y}_{W,t}$	Inverse Gamma	0.1932	Inf	0.0757	0.0684
σ_{eR}	Standard deviation of the NBK base rate shock $e_{R,t}$	Inverse Gamma	0.6579	Inf	0.3683	0.3024
σ_{RW}	Standard deviation of the world interest rate shock R_t^W	Inverse Gamma	0.3657	Inf	0.5958	0.6889
$\sigma_{e\pi}$	Standard deviation of the price shock $e_{\pi,t}$	Inverse Gamma	1.0896	Inf	1.2363	1.2927

The estimation was carried out in the Dynare package for Matlab on quarterly data for two periods: from 2010 to 2018 and from 2015 to 2018. The default numerical method, the Sims algorithm, was used. The number of iterations is 100,000. The settings of the numerical methods were selected in such a way that the acceptance ratio was in the range from 0.2 to 0.3 (0.234 is considered optimal). Estimations are given in Tables 1 and 2 in the posterior mean column.

Results and Discussion

Attention is drawn to the low value of the parameter α (elasticity of output by labor) of the production function. This suggests that in the short term, the dynamics of GDP and employment are linked loosely, and indirectly indicates the inertia of the labor market in post-transition economies. This is also indicated by the low value of the labor supply elasticity by wage (high value of φ).

Estimates of the parameters of the Taylor equation differ slightly from the reference parameters given in (Chernyavsky et al., 2017). Estimates for the interest rate elasticity on inflation are above 2.5, and they decreased after 2015. But the interest rate elasticity on the output gap is at the

reference level of 0.5. The base rate inertia is lower than 0.75 of (Chernyavsky et al., 2017).

In general, the estimates obtained for the modified model seem to be more adequate in comparison with the previous results (Shults, 2019) and relatively stable in both periods estimated.

These shocks are modeled by first-order autoregressive equations. The parameters of the model shocks are summarized in Table 2.

The parameter ε influences the social welfare losses significantly, but it is difficult to estimate it (Zaretsky, 2012) and it is not included in the dynamics equations. In (Mukhamediyev, 2013), 6 is chosen as its value. The cash to consumption ratio $\frac{\bar{m}}{c}$ will be calibrated based on the data of 2017-2018 at the level of 70%. The consumption share w_C is calibrated at 80%.

With these parameters, the social loss function has the following weights: 19,943 for inflation, 669 for the output gap, about 0 for the real exchange rate and interest rate. Thus, the resulting social loss function is virtually not distinguished from the form used in the DSGE literature only with inflation and output gap. We carried out optimization under different constraints, leaving the interest rate inertia ρ_R unchanged. The results are summarized in Table 3.

Table 3 – Results of optimization of Taylor equation parameters

	(A)	(B)	(C)	(D)	(E)	(F)
q_π	38.8641	5	3.5	39.2839	5	3.5
q_y	28.3621	2	0.5	28.0918	2	2
q_{rer}	-28.0295	-2.9	-2.3			
Social loss \mathbb{L}	260,875	264,933	269,187	260,877	264,933	269,095
Loss relative to (A)		1.6%	3.2%	0.0%	1.6%	3.2%

Column (A). The Taylor equation parameters optimization yields too large coefficient values, which means that the interest rate policy will be very volatile. But the following is noteworthy – the coefficient at inflation is only 1.37 times greater than the coefficient at the output gap, and not 5 times, as in the current interest rate policy (Chernyavsky et al., 2017), or 7 times, as in the estimated Taylor equation.

Column (B). We set limits on the range of possible parameters: q_π from 1 to 5, q_y from 0 to 2, q_{rer} from -3 to 0. It is obvious that the conditional optimum is established at the boundaries of the ranges. The social loss, the percentage deviation from the global optimum in case (A) amounted to 1.6% of the implemented set of parameters. The percentages obtained can be interpreted as losses in real household consumption relative to the equilibrium level.

Column (C). With the estimated parameters of the Taylor equation, the social loss increases to 3.2% relative to the global optimum and to 1.6% compared to the implemented option (B).

The argument against including the exchange rate in the Taylor rule is that monetary authorities find it difficult to predict the currency market. Therefore, we further conducted a series of experiments with the classical Taylor rule (without the exchange rate).

Column (D). Since the weight for the real exchange rate in the social loss function is negligible, the results have not changed much from the result (A). Only the coefficient of inflation rose slightly, and decreased in case of the output gap. It seems reasonable, because consumer prices contain exchange rate component due to the exchangerate pass-through effect.

Column (E) shows the optimization results of the implemented Taylor rule (case (B)) without the exchange rate. If the NBK applied the Taylor equation with coefficients 5 and 2, instead of 2.5

and 0.5 (Chernyavsky et al., 2017), the welfare of the society would increase by 4.4% (relative to the SLF level at 2.5 and 0.5). Since the weight of the exchange rate in SLF is negligible, the SLF value has not changed much relative to the case (B).

Column (F) answers the following question: if the NBK does not explicitly take into account the currency factor in the Taylor equation, then should perhaps a dual mandate policy be implemented? In other words, should the monetary regulator aim not only to stabilize inflation, but also to smooth out output gaps? The answer to this question is already in column (D) – the coefficient of the Taylor equation for inflation should be only 1.4 times greater than the coefficient for the output gap, and not 5-7 times greater as it is now.

In addition, we conducted the following experiments. If the Taylor rule does not use the CPI (consumer price index), but the PPI (producer price index) instead, the social loss is reduced many times. And if the Taylor rule does not use the current values of variables, but their advance, the loss on the contrary will grow by almost 3%.

To visualize the results of Taylor rule optimization, we consider several scenario calculations. The impulse response functions presented below show the reaction of the model variables in response to certain disturbances (shocks) in the economy. We will monitor the effects on key welfare variables: real (net of inflation) wages, employment, inflation.

Let us compare the effects of the growing aggregate demand, for example, due to the increase in budget expenditures, under the current (estimates of 2015-2018 in Table 1) and optimized (column (B) in Table 3) interest rate policy (Figure 1). If aggregate demand increases, so does employment, wages, and inflation. In response, the National Bank raises the base interest rate, which stabilizes the economy near equilibrium. But in the case of an optimized Taylor equation, the interest rate rises

stronger. As a result, the fluctuations of variables, especially inflation, around the equilibrium are smaller. In other words, a more active monetary

policy leads to a more rapid stabilization of the economy, to a smaller dispersion of variables that form social loss.

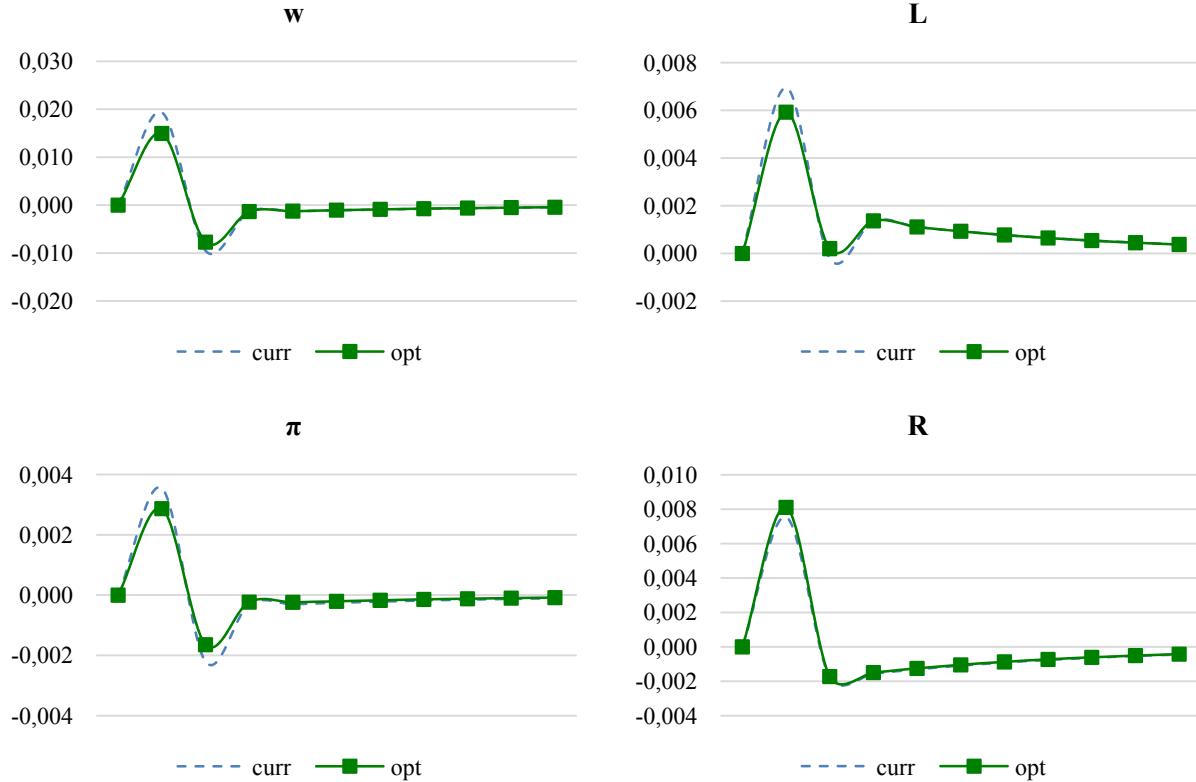


Figure 1 – Response functions under current (curr) and optimized (opt) interest rate policy in case of positive aggregate demand shock

A similar mechanism works in the case of a positive external demand shock (Figure 1). The growth of exports leads to employment growth above the natural level and to a subsequent increase in unemployment. Real wages and inflation behave similarly. Accordingly, the monetary regulator is forced to

first raise the interest rate, and then reduce it. At the current parameters of the Taylor equation, the amplitude of fluctuations is higher, and the social loss is respectively higher. As mentioned above, the effects of shocks on the economy are smaller at higher values of the Taylor equation coefficients.

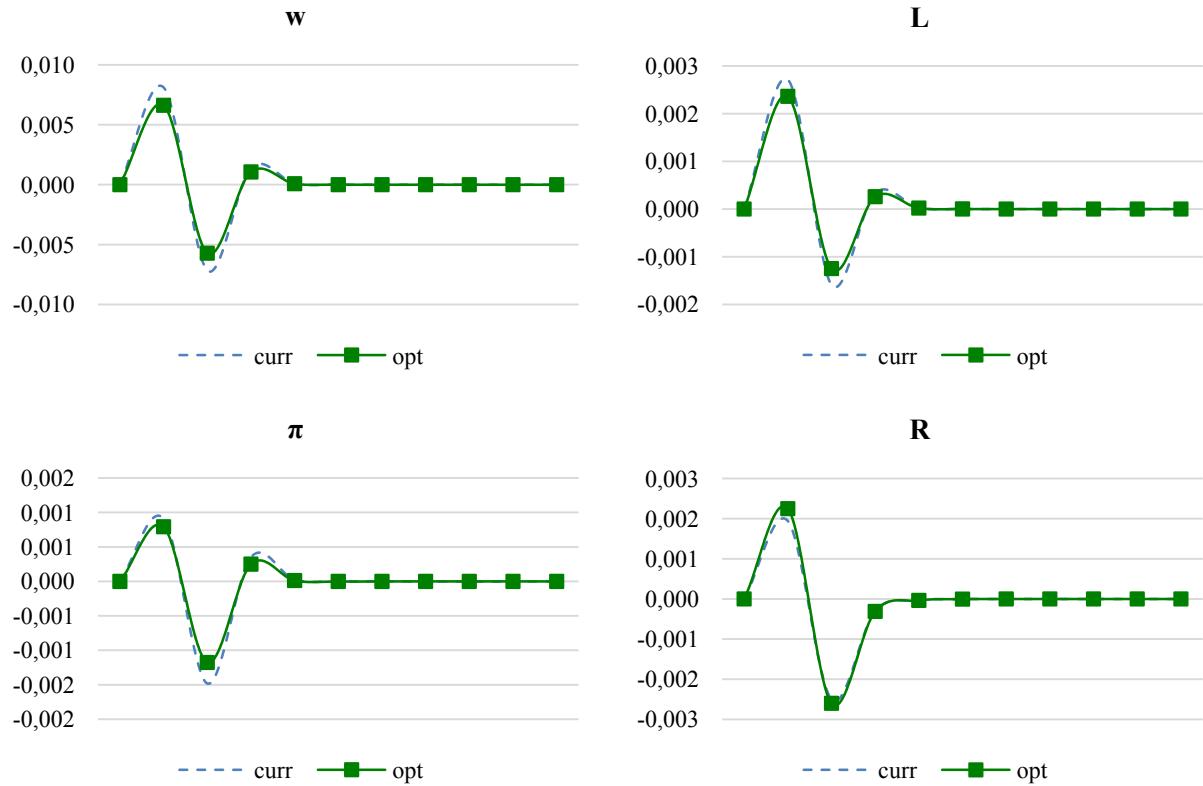


Figure 2 – Response functions under current (curr) and optimized (opt) interest rate policy in case of positive external demand shock

Conclusion

The paper presents the DSGE-model of Kazakhstan. The model parameters are estimated using the Bayesian approach for the period of 2010-2018 and for the subperiod of 2015-2018. The estimates obtained clarify the parameters of the NBK's monetary policy published in (Chernyavsky et al., 2017). In particular, it follows that the NBK, even after the formal transition to the inflation targeting policy, smoothed the fluctuations of the foreign exchange market.

The NBK also seems to pay attention not only to inflation, but also to business activity (dual mandate policy). At the same time, the desire to stabilize inflation decreased after 2015 (3.5 to 0.5), although it is higher than the values indicated in the article (Chernyavsky et al., 2017) (2.5 to 0.5).

It is known that welfare loss can occur primarily due to monopolization of the economy and price rigidity. In addition, as shown in the model, there is a depreciation of income and cash reserves as a result of inflation. And cash reserves lose its value due to the interest rate growth, which

acts as an alternative cost of storing money in cash. Also, the decline in employment and consumption leads to welfare loss. These losses are largely due to the volatility of the foreign exchange market.

As a result, the social welfare loss, expressed in units of equilibrium consumption, is 3.2% of the situation of optimal monetary policy.

At the same time, the obtained estimates for welfare loss from currency market fluctuations are "bottom-up" estimates, since our simple model does not take into account many functions performed by foreign currency in the modern economy, foreign trade and the financial system. For example, uncertainty in the foreign exchange market generates financial risks, forcing exporters and importers, as well as the population and banks, to keep a certain reserve of currency to smooth out the effects of exchange rate fluctuations. These buffer stocks of currencies represent a frozen capital and increase dollarization of economy. Conversely, the capital assets held in the national currency may depreciate in case of an unexpected devaluation. Finally, the conversion of funds into and out of currencies is subject to losses in case of

a sharp change in the exchange rate. Thus, it can be concluded that fluctuations in the foreign exchange market increase transaction costs, which reduces the competitiveness of the economy, limits economic growth and employment, and, consequently, reduces social welfare.

Thus, based on the constructed model and carried out optimization, it is possible to draw the following conclusions and recommendations:

– A dual mandate policy and the inclusion of an exchange rate in the Taylor equation can improve social welfare;

– The sensitivity coefficients of the current interest rate policy can be revised upwards, thereby reducing the social loss by half;

– Monetary policy should be guided not by the CPI, but by domestic inflation indicators, perhaps by core inflation.

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Appendix: Quadratic approximation of the utility function

Let us write out the utility function of households (1):

$$U = E \left[\sum_{t=0}^{\infty} \beta^t \left(\frac{C_t^{1-\sigma}}{1-\sigma} - \Phi \frac{L_t^{1+\varphi}}{1+\varphi} + \Psi \frac{m_t^{1-\psi}}{1-\psi} \right) \right]$$

We calculate a quadratic approximation of the utility function $U = \sum_{t=0}^{\infty} \beta^t u_t$ related to equilibrium at flexible prices:

$$\begin{aligned} u_t - \bar{u} &\approx \bar{u}_c \bar{C} \left(\frac{C_t - \bar{C}}{\bar{C}} \right) + \bar{u}_L \bar{L} \left(\frac{L_t - \bar{L}}{\bar{L}} \right) + \bar{u}_m \bar{m} \left(\frac{m_t - \bar{m}}{\bar{m}} \right) + \frac{1}{2} \bar{u}_{CC} \bar{C}^2 \left(\frac{C_t - \bar{C}}{\bar{C}} \right)^2 + \\ &+ \frac{1}{2} \bar{u}_{LL} \bar{L}^2 \left(\frac{L_t - \bar{L}}{\bar{L}} \right)^2 + \frac{1}{2} \bar{u}_{mm} \bar{m}^2 \left(\frac{m_t - \bar{m}}{\bar{m}} \right)^2 \end{aligned}$$

In the approximation, we took into account the separability of the utility function $\bar{u}_{CL} = 0, \bar{u}_{cm} = 0, \bar{u}_{mL} = 0$.

Next, we will use the property $Z_t - \bar{Z} \approx \bar{Z} \left(\hat{z}_t + \frac{1}{2} \hat{z}_t^2 \right)$. Then:

$$\begin{aligned} u_t - \bar{u} &\approx \bar{u}_c \bar{C} \left(\hat{C}_t + \frac{1}{2} \hat{C}_t^2 \right) + \bar{u}_L \bar{L} \left(\hat{L}_t + \frac{1}{2} \hat{L}_t^2 \right) + \bar{u}_m \bar{m} \left(\hat{m}_t + \frac{1}{2} \hat{m}_t^2 \right) + \frac{1}{2} \bar{u}_{CC} \bar{C}^2 \left(\hat{C}_t + \frac{1}{2} \hat{C}_t^2 \right)^2 + \\ &+ \frac{1}{2} \bar{u}_{LL} \bar{L}^2 \left(\hat{L}_t + \frac{1}{2} \hat{L}_t^2 \right)^2 + \frac{1}{2} \bar{u}_{mm} \bar{m}^2 \left(\hat{m}_t + \frac{1}{2} \hat{m}_t^2 \right)^2 \end{aligned}$$

These properties are executed for the CRRA utility: $\sigma = -\frac{\bar{u}_{CC}}{\bar{u}_c} \bar{C}$, $\varphi = \frac{\bar{u}_{LL}}{\bar{u}_L} \bar{L}$, $\psi = -\frac{\bar{u}_{mm}}{\bar{u}_m} \bar{m}$. Discarding terms older than the 2nd order, we obtain:

$$u_t - \bar{u} \approx \bar{u}_c \bar{C} \left(\hat{C}_t + \frac{1-\sigma}{2} \hat{C}_t^2 \right) + \bar{u}_L \bar{L} \left(\hat{L}_t + \frac{1+\varphi}{2} \hat{L}_t^2 \right) + \bar{u}_m \bar{m} \left(\hat{m}_t + \frac{1-\psi}{2} \hat{m}_t^2 \right)$$

Under the conditions of monopolistic competition, the percentage deviation of employment from equilibrium at flexible prices is given by the expression $\alpha \hat{L}_t = \hat{Y}_t - a_t + d_t$. Here, the new variable is d_t , the relative price variance (cross-sectional). Under flexible prices $\bar{d}_t = 0$. As proven by Gali (2008), $d_t \approx \frac{\varepsilon}{2\Theta} D[p_{H,t}]$, where $\Theta = \frac{\alpha}{\alpha+(1-\alpha)\varepsilon}$. The parameter $\varepsilon > 0$ reflects the substitution rate between goods in the consumer basket (10).

Considering the above, neglecting terms older than the 2nd order and independent of monetary policy, we obtain:

$$\begin{aligned} u_t - \bar{u} &\approx \bar{u}_c \bar{C} \left(\hat{C}_t + \frac{1-\sigma}{2} \hat{C}_t^2 \right) + \frac{\bar{u}_L \bar{L}}{\alpha} \left(\hat{Y}_t + d_t + \frac{1+\varphi}{2\alpha} (\hat{Y}_t - a_t)^2 \right) + \\ &+ \bar{u}_m \bar{m} \left(\hat{m}_t + \frac{1-\psi}{2} \hat{m}_t^2 \right) \end{aligned}$$

In the next step, we note that under equilibrium, the optimum conditions of the consumer (3) $\bar{w} = -\frac{\bar{u}_L}{\bar{u}_c}$ and firms $\bar{w} = \alpha \frac{\bar{Y}}{\bar{L}}$ are met. Accordingly, $-\frac{\bar{u}_L}{\bar{u}_c} = \alpha \frac{\bar{Y}}{\bar{L}}$ and $\frac{\bar{u}_L \bar{L}}{\alpha} = -\bar{u}_c \bar{Y} = -\frac{\bar{u}_c \bar{C}}{w_c}$, where w_c is the share of consumption in GDP under equilibrium.

Besides, from the condition (2): $\bar{u}_m = \bar{u}_c \left(\frac{\bar{R}}{1+\bar{R}} \right)$. Then welfare loss, expressed as a percentage of equilibrium consumption, is equal to:

$$\frac{u_t - \bar{u}}{u_c \bar{C}} \approx \hat{C}_t + \frac{1-\sigma}{2} \hat{C}_t^2 - \frac{1}{w_c} \left(\hat{Y}_t + d_t + \frac{1+\varphi}{2\alpha} (\hat{Y}_t - a_t)^2 \right) + \left(\frac{\bar{R}}{1+\bar{R}} \right) \frac{\bar{m}}{\bar{C}} \left(\hat{m}_t + \frac{1-\psi}{2} \hat{m}_t^2 \right)$$

Deviation for money demand (22): $\hat{m}_t = \frac{1}{\psi} + \frac{\sigma}{\psi} \hat{C}_t - \frac{R_t}{\psi \bar{R}}$. Then we get, omitting the fixed terms:

$$\hat{m}_t + \frac{1-\psi}{2} \hat{m}_t^2 \approx \frac{\sigma}{\psi^2} \hat{C}_t + \frac{1-\psi}{2} \frac{\sigma^2}{\psi^2} \hat{C}_t^2 - \frac{R_t}{\psi^2 \bar{R}} + \frac{1-\psi}{2} \frac{R_t^2}{\psi^2 \bar{R}^2} - \frac{1-\psi}{\psi^2} \sigma \hat{C}_t \frac{R_t}{\bar{R}}$$

Substituting it in the expression for welfare loss, we obtain:

$$\frac{u_t - \bar{u}}{u_c \bar{C}} \approx \chi_1 \hat{C}_t + \frac{1}{2} \chi_2 \hat{C}_t^2 - \frac{1}{w_c} \left(\hat{Y}_t + d_t + \frac{1+\varphi}{2\alpha} (\hat{Y}_t - a_t)^2 \right) - \chi_m \frac{R_t}{\bar{R}} + \chi_m \frac{1-\psi}{2} \frac{R_t^2}{\bar{R}^2} - \chi_3 \frac{\hat{C}_t R_t}{\bar{R}}$$

where $\chi_m = \frac{1}{\psi^2} \left(\frac{\bar{R}}{1+\bar{R}} \right) \frac{\bar{m}}{\bar{C}}$, $\chi_1 = 1 + \chi_m \sigma$, $\chi_2 = 1 - \sigma + \chi_m \sigma^2 (1 - \psi)$, $\chi_3 = \chi_m (1 - \psi) \sigma$

Now we have both the output gap and the consumption gap. In the next step, we move from consumption to output. Given (24) and (28)-(30), they are related by the following relation:

$$\hat{Y}_t = w_{CH} \hat{C}_t + rer_t \frac{w_{CH} \theta \delta + w_E \vartheta}{1 - \delta} + e'_{Y,t}$$

Then, getting rid of the consumption variable, we have:

$$\begin{aligned} \frac{u_t - \bar{u}}{u_c \bar{C}} &\approx \hat{Y}_t \left(\frac{\chi_1}{w_{CH}} - \frac{1}{w_c} \right) + \hat{Y}_t^2 \left(\frac{\chi_2}{2w_{CH}^2} - \frac{1+\varphi}{2\alpha w_c} \right) - \frac{d_t}{w_c} - \frac{\chi_1 \chi_4}{w_{CH}} rer_t + \frac{\chi_2 \chi_4^2}{2w_{CH}^2} rer_t^2 - \chi_m \frac{R_t}{\bar{R}} + \chi_m \frac{1-\psi}{2} \frac{R_t^2}{\bar{R}^2} - \frac{\chi_2 \chi_4}{w_{CH}^2} \hat{Y}_t rer_t \\ &- \chi_3 \hat{Y}_t \frac{R_t}{\bar{R}} + \chi_3 \chi_4 rer_t \frac{R_t}{\bar{R}} + \frac{1+\varphi}{w_c \alpha} \hat{Y}_t a_t - \frac{\chi_2}{w_{CH}^2} \hat{Y}_t e'_{Y,t} + \frac{\chi_2 \chi_4}{w_{CH}^2} rer_t e'_{Y,t} + \chi_3 e'_{Y,t} \frac{R_t}{\bar{R}} \end{aligned}$$

where $\chi_4 = \frac{w_{CH} \theta \delta + w_E \vartheta}{w_{CH}(1-\delta)}$

Next, we move on to the variables deviating from the steady state. To do this, we need to relate the deviations from the steady state \tilde{z}_t to the deviations from equilibrium at flexible prices \tilde{z}_t . As shown in (Gali, 2008), under the performance shock $\tilde{Y}_t = \hat{Y}_t - \frac{1+\varphi}{\sigma\alpha+\varphi+1-\alpha} a_t$. Then, after the transformation, we get (again, discard the components that do not depend on monetary policy):

$$\begin{aligned}\frac{u_t - \bar{u}}{u_C \bar{C}} &\approx \tilde{Y}_t \left(\frac{\chi_1}{w_{CH}} - \frac{1}{w_C} \right) + \tilde{Y}_t^2 \left(\frac{\chi_2}{2w_{CH}^2} - \frac{1+\varphi}{2\alpha w_C} \right) - \frac{d_t}{w_C} - \frac{\chi_1 \chi_4}{w_{CH}} rer_t + \frac{\chi_2 \chi_4^2}{2w_{CH}^2} rer_t^2 - \chi_m \frac{R_t}{\bar{R}} + \chi_m \frac{1-\psi}{2} \frac{R_t^2}{\bar{R}^2} - \frac{\chi_2 \chi_4}{w_{CH}^2} \tilde{Y}_t rer_t \\ &\quad - \chi_3 \tilde{Y}_t \frac{R_t}{\bar{R}} + \chi_3 \chi_4 rer_t \frac{R_t}{\bar{R}} + \left(\frac{1+\varphi}{w_C \alpha} + \chi_5 \left(\frac{\chi_2}{w_{CH}^2} - \frac{1+\varphi}{\alpha w_C} \right) \right) \tilde{Y}_t a_t - \frac{\chi_2}{w_{CH}^2} \tilde{Y}_t e'_{Y,t} + \frac{\chi_2 \chi_4}{w_{CH}^2} rer_t e'_{Y,t} + \chi_3 e'_{Y,t} \frac{R_t}{\bar{R}} \\ &\quad - \chi_3 \chi_5 a_t \frac{R_t}{\bar{R}} - \frac{\chi_2 \chi_4 \chi_5}{w_{CH}^2} a_t rer_t\end{aligned}$$

Here $\chi_5 = \frac{1+\varphi}{\sigma\alpha+\varphi+1-\alpha}$

Next, we need to collapse the resulting cluttered appearance into a form suitable for using in Dynare. To do this, we use the expression of the form $az_t^2 - 2z_t e_t - 2z_t z^* = a(x_t - \varepsilon_t)^2 + tip$, where $\varepsilon_t = \frac{e_t}{a}$; $x_t = z_t - \frac{z^*}{a}$; tip are terms independent from policy.

$$\frac{u_t - \bar{u}}{u_C \bar{C}} \approx a_Y x_t^2 + a_{RER} e_t^2 + a_R r_t^2 - \frac{d_t}{w_C} - \frac{\chi_2 \chi_4}{w_{CH}^2} \tilde{Y}_t rer_t - \chi_3 \tilde{Y}_t \frac{R_t}{\bar{R}} + \chi_3 \chi_4 rer_t \frac{R_t}{\bar{R}}$$

where:

$$\begin{aligned}a_Y &= \left(\frac{\chi_2}{2w_{CH}^2} - \frac{1+\varphi}{2\alpha w_C} \right), y^* = \frac{1}{2} \left(\frac{\chi_1}{w_{CH}} - \frac{1}{w_C} \right), \varepsilon_{Y,t} = \frac{\left(\frac{1+\varphi}{w_C \alpha} + 2\chi_5 a_Y \right) a_t - \frac{\chi_2}{w_{CH}^2} e'_{Y,t}}{a_Y}, x_t = \tilde{Y}_t - \frac{y^*}{a_Y} - \varepsilon_{Y,t} \\ a_{RER} &= \frac{\chi_2 \chi_4^2}{2w_{CH}^2}, rer^* = \frac{\chi_1 \chi_4}{2w_{CH}}, \varepsilon_{RER,t} = \frac{2}{\chi_4} e'_{Y,t} - \frac{\chi_2 \chi_4 \chi_5}{w_{CH}^2} a_t, e_t = rer_t - \frac{w_{CH}}{\chi_4} - \varepsilon_{RER,t} \\ a_R &= \chi_m \frac{1-\psi}{2}, r^* = \frac{\chi_m}{2}, \varepsilon_{R,t} = \chi_3 e'_{Y,t} - \chi_3 \chi_5 a_t, r_t = \frac{R_t}{\bar{R}} - \frac{1}{1-\psi} - \varepsilon_{R,t}\end{aligned}$$

Finally, as shown in (Woodford, 2003), $\sum_{t=0}^{\infty} \beta^t D[p_{H,t}] = \frac{\omega}{(1-\omega)(1-\beta\omega)} \sum_{t=0}^{\infty} \beta^t \pi_{H,t}^2$. Then

$$\mathbb{W} = E \left[\sum_{t=0}^{\infty} \beta^t \left(\frac{u_t - \bar{u}}{u_C \bar{C}} \right) \right] = E \left[\sum_{t=0}^{\infty} \beta^t \left\{ -\frac{\varepsilon}{\lambda w_C} \pi_{H,t}^2 + a_Y x_t^2 + a_{RER} e_t^2 + a_R r_t^2 - \frac{\chi_2 \chi_4}{w_{CH}^2} \tilde{Y}_t rer_t - \chi_3 \tilde{Y}_t \frac{R_t}{\bar{R}} + \chi_3 \chi_4 rer_t \frac{R_t}{\bar{R}} \right\} \right]$$

where $\lambda = 2 \frac{\alpha}{\alpha+(1-\alpha)\varepsilon} \frac{(1-\omega)(1-\beta\omega)}{\omega}$.

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АҚША-НЕСИЕ САЯСАТЫ ЭКОНОМИКАНЫ ТИІМДІ БАСҚАРУ ҚҰРАЛЫ РЕТИНДЕ

Аңдатпа. Ақша-несие саясаты – мемлекеттің иелігінде болатын экономикалық саясаттың ең қуатты құралдарының бірі. Ол айналыстағы ақша массасын, несие көлемін, сыйақы (мұдделендіру) мөлшерлемесін өзгертуге және жалпы банк жүйесінің қызметін реттеуге бағытталған шаралар жиынтығы. Сол себепті мақалада ақша-несие саясатының негізгі мәселелері мен даму бағыттары талқыланады. Яғни, Қазақстан Республикасының Ұлттық банкі қазіргі уақытта қандай әдістер мен құралдарды пайдаланады, олардың негізгі артықшылықтары мен кемшиліктері, ақша-несие саясатының макроэкономикалық нәтижелері қарастырылады. Соған байланысты бұл мақаланың мақсаты – Қазақстан Республикасының экономикасын мемлекеттік реттеудің қаржылық-несиелік әдістерін, ақша-несие саясатын жан-жақты зерттеу болып табылады. Такырыпты зерттеу барысында экономикалық жағдайларды зерттеуде қолданылатын экономикалық әдістер пайдаланылды. Мақаланың негізінде соңғы 2017, 2018 жылдардағы ақша-несие саясатының жағдайы мен көрсеткіштері салыстырылып, 2019 жылы ақша-несие саясатында болатын өзгерістер мен бағыттар ашылған. 2018 жылы Ұлттық Банк ақшаны және валюталиқ нарықтарды, сондай-ақ, мемлекеттік бағалы қағаздар нарығын одан әрі дамытуға бағытталған болды, соған сәйкес ақша-несие саясатының тиімділігін арттыруға бағытталған бірқатар бастамалардың маңыздылығы көрсетілді. Зерттеу нәтижелері студенттерге оқу барысында қолдануға мүмкіндік береді.

Түйін сөздер: Қазақстан, ақша-несие саясаты, пайыздық мөлшерлеме, ақша базасы, инфляциялық таргеттегу.

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Monetary policy as a tool of efficient management of the economy

Abstract. Monetary policy is one of the most powerful instruments of economic policy owned by the state. This is a set of measures aimed at changing the money supply, loan amount, interest rate and regulation of the banking system as a whole. That is why the article discusses the main issues of monetary policy and its development trends. In other words, what methods and tools are currently used by the National Bank of the Republic of Kazakhstan, their main advantages and disadvantages, macroeconomic results of monetary policy. In this regard, the purpose of this article is to study the financial and credit methods of state regulation of the economy of the Republic of Kazakhstan and the concept of monetary policy. The study used economic methods used in the study of economic conditions. The article analyzes the situation and indicators of monetary policy for the last two years of 2017 and 2018, as well as changes and trends in monetary policy in 2019. In 2018, the National Bank focused on the further development of the money and foreign exchange market, as well as the government securities market, and demonstrated the importance of a number of initiatives aimed at improving the effectiveness of monetary policy. The results of the study allow students to apply them during their studies.

Key words: Kazakhstan, financial and credit policy, interest rate, monetary base, inflation targeting.

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Денежно-кредитная политика как инструмент эффективного управления экономикой

Абстракт. Денежно-кредитная политика является одним из самых мощных инструментов экономической политики, которым владеет государство. Это комплекс мер, направленных на изменение денежной массы, объема кредита, процентной ставки и регулирования банковской системы в целом. Именно поэтому в статье рассматриваются основные вопросы денежно-кредитной политики и его тенденции развития. Другими словами, какие методы и инструменты используются в настоящее время Национальным Банком Республики Казахстан, их основные достоинства и недостатки, макроэкономические результаты денежно-кредитной политики. В связи с этим целью данной статьи является изучение финансово-кредитных методов государственного регулирования экономики Республики Казахстан и понятие денежно-кредитной политики. В ходе исследования использовались экономические методы, используемые при изучении экономических условий. В статье анализируются ситуация и показатели денежно-кредитной политики за последние два года – 2017 и 2018 годы, а также выявлены изменения и тенденции в денежно-кредитной политике в 2019 году. В 2018 году Национальный банк сосредоточился на дальнейшем развитии денежного и валютного рынка, а также рынка государственных ценных бумаг и продемонстрировал важность ряда инициатив, направленных на повышение эффективности денежно-кредитной политики. Результаты исследования позволяют студентам применять их во время учебы.

Ключевые слова: Казахстан, денежно-кредитная политика, процентная ставка, денежная база, инфляционное таргетирование.

Kіріспе

Заманауи нарықтық экономикада нарықтың бақылауына келмейтін және мемлекеттік арасында талап ететін көптеген әлеуметтік-экономикалық мәселелер бар. Тұтастай алғанда, «нарықтық экономика» немесе «нарықтық жүйе» ұғымдары абстрактілі болып табылады, олар көптеген негізгі аспектілердің жоқтығын сипаттайды. Ешқашан бұрын-сондық экономикасы тек нарықтық тетік арқылы жұмыс істейтін бірдей бір ел болмаған (Cochrane, 1998). Нарықтық тетікпен қатар үнемі экономиканы мемлекеттік реттеу механизмі қатар жүреді және одан әрі де солай болмақ.

Нарық тұтастай алғанда экономикалық жүйе емес, тек шаруашылық субъектілерін басқарудың механизмдерінің бірі ғана. Бұл механизм ешқашан біреу ғана болмаған, тіпті А. Смит кезінде де. Ол әрқашан мемлекеттік реттеу механизмімен бірге қолданылған. Тек олардың қолдану үлесі өзгеріске ұшырайды. Бұл жағдайда екі механизм де осы қоғамның салт-дәстүріне негізделеді (Smith, 2007).

Экономиканы мемлекеттік реттеудің қаржы-несиелік әдістері мемлекеттің ақша-несие саясатын біріктіреді. Бұл инфляция деңгейіне және динамикасына, инвестициялық қызметке

және басқа да негізгі макроэкономикалық салдарларға әсер ету арқылы экономикалық өсімнің тұрақтылығын қамтамасыз етуге бағытталған ақша айналымы мен несиені экономикалық реттеу шараларының жынтығы. Жоғарыда айтылғаннан байқасақ, ақша-несие саясаты өздігінен емес, мемлекеттің басқа реттеуші функцияларымен (инвестициялық реттеу, фискалдық саясат, шағын бизнесті қолдау жүйесі және т.б.) тығыз байланысты. Ақша-несие саясаты – бұл елдің экономикасына әсер етудің өте тиімді құралы және ол көптеген бизнес субъектілердің тәуелсіздігіне нұқсан келтірмейді. Алайда, бұл экономикалық еркіндіктің ауқымын шектейді (онсыз экономикалық қызметтің кез келген саласын реттеу мүмкін емес), үкімет соның нәтижесінде жанама шешімдерге ғана әсер етеді.

Жалпы ақша-несие саясаты баға тұрақтылығын, толық жұмыспен қамтылуын және экономикалық өсіуді қамтамасыз етуге бағытталған – бұл онаның жоғары және соңғы мақсаттары болып табылады. Дегенмен, іс жүзінде, оның көмегі арқылы ел экономикасының шұғыл қажеттіліктеріне жауап беретін аса ауқымды міндеттерді шешу қажет.

Біз ақша-несие саясаты өте күшті, әрі өте қауіпті құрал екенін ұмытпауымыз керек. Оның

көмегімен дағдарыс жағдайынан да шығуға болады, оған балама болатын экономиканың жағымсыз үрдістерін де ушықтырып жіберуі мүмкін. Жағдайды түбекейлі талдап, ақша-несие саясатының мемлекет экономикасына әсер етуінің баламалы жолдарын қарастырудан кейін ең жоғары деңгейде шешім қабылданады (Калғанбаев, 2009). Мемлекеттің орталық банкі ақша-несие саясатының дирижері болып табылады. Орталық банк жүргізген тиімді ақша-несие саясаты болмаса, экономика тиісті деңгейде жұмыс істей алмайды.

Ақша-несие саясатының әкесі – қазіргі заманғы экономист, Нобель сыйлығының лауреаты Милтон Фридман деп саналады. Оның Рэйганомика теориясына негізделген теорияларын көптеген үкіметтер, соның ішінде Англия үкіметі пайдаланады. Көптеген адамдар оны Адам Смит, Маршалл, Кейнс, Леонтьевпен бір катарға қосады (Berument, 2008).

Бұғаңға таңда ақша-несие саясаты Қазақстан Республикасындағы инфляцияны барынша азайтуға, тұрақты экономикалық өсуді ынталандыруға, валюталық бағамдарды экономикалық тұрғыдан тұрақты деңгейде ұстап тұруға, экспортқа бағытталған және импортты алмасыратын салаларды дамытуға ынталандыратын және елдің валюталық резервтерін елеулі түрде толықтыратын тиімді саясат болып табылады.

Методология

Тақырыпты зерттеудің әдістемелік негізі ретінде монографиялық, салыстырмалы экономикалық талдау әдістері қолданылды. Бұл зерттеу әдістері мемлекеттегі ақша-несие саясатын зерттеп, оның тиімді жақтарын еліміздің мемлекеттік басқару жүйесіне енгізу жолдарын қарастыруды талап етеді. Қазақстан Республикасының ақша-несие саясатының өзіндік ерекшеліктерін зерттеуде талдау мен синтез әдістері қолданылды, оның негізінде мемлекеттегі жүргізіліп отырған ақша-несие саясатының даму заңдылықтары қарастырылып, оларды жүзеге асыру бағыттары көрсетілді. Жалпылама экономикалық зерттеу әдістерін қолдану арқылы тұрақты және тиімді ақша-несие саясатын қолдануға ықпал ететін және кедерігі келтіретін факторлар анықталып, талданды. Салыстырмалы талдау әдісін қолдана отырып Қазақстанда ақша-несие саясатының тиімділігін жоғарылату бағыттары қарастырылды.

Сондай-ак, зерттеу әдістемесі ретінде отандық және шетелдік ғалымдардың банк ісі,

қаржы-экономикалық талдау мен бақылау саласындағы еңбектері, Қазақстан Республикасы заңдары, ҚР Президенті Жарлықтары, ҚР Үкімет Қаулылары, Қазақстан Республикасы Ұлттық банкінің ақша-несие саясатын жүргізуін бағалау мәселелеріне қатысты нормативтік құжаттар табылады. Мақаланы жазуда негізгі ғылыми әдістер және тәсілдер: диалектика заңдары, индуктивті және дедуктивті көзқарас, топтастыру тәсілдері, баланстық әдіс, экономикалық талдау әдістері, деректерге статистикалық өндеу әдістерін қолдану, синтез және жинақтап қорыту, графикалық әдістер және математикалық-статистикалық әдістер пайдаланылды.

Нәтижесінде экономикалық мерзімді басылымдар соңғы статистикалық деректермен жұмыс істеуге, сондай-ақ жетекші отандық экономистердің сыйни пікірін пайдалануға мүмкіндік береді.

Әдебиеттерге шолу

Қазақстан Республикасы Ұлттық Банкінің жүргізіп отырған ақша-несие саясаты мәселесінің өзектілігі мен көпқырлылығы қөптеген батыстық, ресейлік және отандық ғалымдардың еңбектерінде зерттеледі. Білім беру басылымдары тұрғысынан мемлекеттік реттеудің қаржылық әдістері мәселесі қарастырылып жатса да, бірқатар авторлар әлі де маңыздылығын атап өткен. Осы тұрғыдан В.Д. Камаевтың еңбектері ерекшеленеді. Қаржы-несиелік реттеудің егжей-тегжейлі теориялық шешімі онда отандық тәжірибелі терең талдау арқылы біріктіріледі (Камаев, 2003).

Дегенмен, ең толық шешілетін мәселелер мамандандырылған басылымдарда көрсетілген «Нарықтық экономиканы мемлекеттік реттеу» және «Ақша-несие саясаты» ұжымдық авторлық жұмыстары ерекше атап өтіледі. Оқулықтарда нарықтық және өтпелі экономикасы бар елдерді макроэкономикалық реттеудің маңызды аспектілері мен құралдарына, атап айтқанда, мемлекеттің ақша-несие саясатындағы эволюциясына және жаңа үрдістеріне назар аударылған.

Ақша сұранысы және ұсынысы теориясы, ақша нарығындағы тепе-тендік мемлекеттің экономикалық дамуын тұрақтандыруға бағытталған және негізделген, сонымен қатар таразыға салынған несие саясатын жүргізуге негіз болады. Ақша айналымы саласындағы мемлекеттік іс-шаралардың жиынтығы ақша-несие саясаты деп аталады.

Ақша-несие саясаты ақша айналымы және несие саласындағы, экономикалық өсімді реттеуге, инфляция қарқының бәсендетуге, жұмыспен қамтамасыз етуге және төлем балансын теңестіруге бағытталған іс-шаралар кешенінен тұрады. Ақша-несие саясаты мемлекеттің ұдайы өндіріс процесіне араласуының маңызды әдістерінің бірі (Cosimano, 2011).

Казіргі таңдағы экономикалық сөздіктер мен глоссарийлерде, окулықтар мен ғылыми зерттеу жұмыстарына сәйкес ақша-несие саясатына келесідей түсініктемелер беруге болады:

Ақша-несие саясаты – бұл мемлекет жүргізетін багам және ақша айналымы мен несие саласында, экономиканың тұрақты да, тиімді қызмет атқаруын қамтамасыз етуге, ақша жүйесін тиісті деңгейде ұстап тұруға бағытталып жүзеге асырылатын іс-шаралар. Бұндай саясаттың негізгі құраушысы ашық нарықтағы операциялар, есеп саясаты, міндетті минималды резервтердің бар болуы. Ақша-несие саясатының кең қолданылатын әдістеріне: есептеу пайызының мөлшерлемесін өзгерту, ашық нарықтағы операциялар, міндетті резервтер нормаларын өзгерту, сонымен қатар несиенің жеке бір түрлерін реттеудің тандаулы әдістері жатады (Иришев, 2009).

Ақша-несие саясаты – бұл үкіметтің орталық банкінің, инфляция деңгейін төмендету, ақша массасының тұрақты өсімі және тұрақты экономикалық өсімнің негізін салу мақсатымен, айналыстағы ақша массасының көлемін, несиелер көлемін, пайыздық мөлшерлемелерді және ақша айналымының басқа да көрсеткіштерін өзгертуге бағытталған іс-шаралар жиынтығы.

Сондай-ақ, ақша-несие саясаты мемлекеттің экономикалық саясатының маңызды бөлімдерінің бірі. Бұл ақша айналымы және несие саласындағы, экономикалық өсімді реттеуге, инфляция қарқының бәсендетуге, жұмыспен қамтамасыз етуге және төлем балансын теңестіруге бағытталған іс-шаралар жиынтығы. Ақша-несие саясаты Ұлттық банк пен Қаржы министрлігінің тығыз байланысымен және басқа да мемлекеттік органдармен бірлесе жүзеге асырылады (Бачиева, 2016).

Ақша-несие саясаты – бұл айналыстағы ақша массасын, несие көлемін, сыйақы (мұдделендіру) мөлшерлемесін өзгертуге жалпы банк жүйесінің қызметін реттеуге бағытталған шаралар жиынтығы. Ақша-несие саясаты айналыстағы ақшаның саны мен құнына әсер ету үшін орталық банк жүргізетін мемлекеттік экономикалық саясаттың бір бөлігін білдіреді. Ұлттық Банк

ақша-несие саясатын баға тұрақтылығын қамтамасыз ету мақсатында жүзеге асырады (Искаков, 2013).

Ақша-несие саясаты, немесе басқаша айтқанда, монетарлық саясаты – макроэкономикалық тепе-тендікке жетуге және ұлттық өндірістің онтайлы өсуін қамтамасыз етуге бағытталған ақша массасы мен ақша бағасын басқару бойынша мемлекеттік экономикалық саясатының бір бөлігі (Arestis, 2005).

Ақша-несие саясаты – бұл инфляцияның белгілі бір деңгейіне және өндірісті тұрақтандыруға қол жеткізу үшін экономикадағы ақша массасын басқару болып табылады (Ganev, 2002).

Осы түсініктерді қорытындылай келе, ақша-несие саясатына мынадай анықтама берсек болады:

Ақша-несие саясаты – ол экономиканың тұрақтылығы мен айналымдағы ақшаның тенгерімін қамтамасыз ету мақсатында орталық банк сияқты өкілетті үйим тарапынан жүргізілетін кез келген мемлекеттік экономикалық саясатының негізгі бағыттарының бірі болып табылады.

Ал, осы ақша-несие саясатын бәсекелі экономиканы қамтамасыз ету жағдайында қалай жүргізу керектігін анықтау үшін «бәсекелі экономика» терминінің мәніне тоқталайық.

Бәсекелі экономика – нарықтық күштер толық еркіндікке ие және мемлекеттің араласуы барынша аз деңгейдегі экономика. Француздық сатуши Ж. Гурлайға (1712-1759) тиесілі бұл терминді былай аударған жөн: «адамдар өздері қалай дұрыс деп санаса, соны жасасын». Еркін бәсекелестік саясаты батыс елдерінің үкіметтері арасында Кейнстиң уақытына дейін жаппай жұмыссыздыққа ұшыраған кезде танымал болды. Ол қайтадан 1960-1970 жылдардың аяғында стагфляция кезеңінде атакты болды.

Елдер арасындағы бәсекелестік күрестің өршүі әлемдік экономикаға көптеген өзгерістер әкелді. Жыл өткен сайын әлемдік шаруашылық қатынастар бірыңғай геоэкономикалық жүйе ретінде көптеп қарастырылуда. Бұл жағдайларда кез келген елдің күші мен қуаты оның өндірушілерінің бәсекеге қабілеттілігімен анықталады. Ұлттық нарықта неғұрлым бәсекелестік күшті және оның формалары алуан болса, соғұрлым әлемдік нарықта елдің бәсекеге қабілеттілік деңгейі жоғары болмақ.

Бәсекеге қабілеттілік мәселесі экономикалық ғылымдар арасында аз зерттелген салалардың бірі болып табылады. Адам Смит «Табиғат және халықтар байлығының себептері туралы зерттеу» атты еңбегінде көрінбейтін қол әлемді

басқарады, сондықтан нарықтық экономика құламайды, ал бәсекелестік бәрін өз орнына қояды, өзінің жеке мұдделерін қанағаттандыруға үмтүлған адамдар ақыр соңында қогам үшін жұмыс істейді деп айтқан болатын. Дегенмен, 1970 ж. басында, бәсекелестік тақырыбына көп назар аударылғанымен, оны дайындауда инновациялық идеялар аз енгізілді (Смит, 1993). Бәсекеге қабілеттілік түсінігінің заманауи көрінісін негізінен американлық ғалым М. Портердің әзірлемелері айқындалды. Ол елдің бәсекеге қабілеттілігі түсінігін өндіріспен байланыстырыды. Осыған ұқсас ойды әйгілі американлық ғалымдар Д. Доллар және Э. Вульф ұстанады, олардың тұжырымы бойынша, жоғары технологиялар негізінде халықаралық саудада табыстылықты, еңбекақыны және табыс жоғары өндірісті үйлестірген ел бәсекеге қабілетті болып саналады.

Нәтижелер мен талқылау

Қазақстанның ақша-несие саясаты, табиғи американлық, ағылшын немесе қандай болмасын басқа да монетарлық саясатты жүргізуіші нарықтық экономикасы дамыған елдердегідей болуы мүмкін емес, демек бұл тақырып әлі де ұзақ зерттеуді талап етеді. Ақша-несие саясатының теориясы жеткілікті толық өндөлген, бірақ ол қазақстандық экономикаға бейімделуге мүқтаж екені анық.

Ақша-несие саясатын негіздеу, оның стратегиясы мен тактикасын анықтау ең алдымен теориялық принциптердің айқындалуын және оның ішкі механизмдерінің ашылғанын талап етеді.

Әлемдік қаржы нарықтарындағы тұрақсыздық шарттарында мемлекеттің бәсекелі экономиканы қамтамасыз ету жағдайындағы ақша-несие саясатын зерттеу мәні бірнеше есе оседі. Қазақстан Республикасының экономикасы құрделі қаржылық құйзелістерге ұшыраған емес, сондықтан бұндай құбылыстарға қарсы қажетті тәжірибе жоқ, аталған мәселе бойынша терең ғылыми зерттеулер де жоқ. Қазақстанның экономикасы бүкіл әлемдік экономика сияқты кезендік дамудың обьективті фазасына көшуде. Әдетте, экономиканың қарқынды өсуінен кейін оның өсімінің тежелу фазасы орын алады. Бұндай жағдайда елімізге, макро және микро деңгейде, әсіресе экономикалық жүйенің, экономикалық сфералар мен салаларын айналым құралдарымен қамтамасыз ететін негізгі құрылым болып табылатын қаржылық салада орын алып жатқан қын-

экономикалық құбылыстарды басқаруға жаңа көзқарас қажет.

Сонымен бірге, Қазақстан экономикасында бірқатар дағдарыстық жағдайлар соңына дейін әлі де жойылмай келеді. Экономиканың кейбір салаларында өндірістің құлдырауы тоқтатылмады, салық салу және бюджеттік кірісті арттыру проблемалары орын алуда, мемлекеттік ішкі және сыртқы қарыздар мөлшерінің өсуі жалғасуда және мемлекеттің экономикалық қауіпсіздік табалдырығының мағынасына жақындалды, өндірістік салаға берілетін несиелер бойынша пайыздық мөлшерлемелер жоғары болып қалуда, шаруашылық жүргізуі субъектілердің инвестиациялық белсенділігі тиісті деңгейде емес және т.б. Мұның барлығы ақша-несиелік реттеу бойынша шаралар бюджеттік шығындар мен салық салуды басқару жөніндегі мемлекеттік шаралармен тығыз байланысты болу керектігін дәлелдейді.

Озінің даму сатысында Қазақстан Республикасының Ұлттық Банкі ақша-несиелік реттеудің барлық құралдарын қолданады. Сонымен қатар мұнда ең тиімдісі Ұлттық Банктің қолданатын негізгі әдістері экономикалық болып табылуы.

Ұлттық Банк Ұлттық валютаны енгізген уақыттан бері, әсіресе соңғы 3-4 жылда, тұрақты, экономикалық жағдайға сай ақша-несие саясатын жүргізуде. Сонымен қатар Ұлттық Банк өзіне жүктелетін ақша-несие саясатының классикалық функцияларын орындаудың жүзінде қолданатын ақша-несие саясатының құралдарын да жүзеге асырады.

Ақша-несие саясаты мемлекеттің экономикалық шаруашылығының дамуында беделді сипатқа ие. Жаңа жағдайлардағы ақша-несие саясаты елдегі қаржы саласының ядросы болып табылатын банктік жүйені тұрақтандыруды мақсат етеді және экономиканың негізі көздерін дамытуға қажетті шараларды жүргізеді.

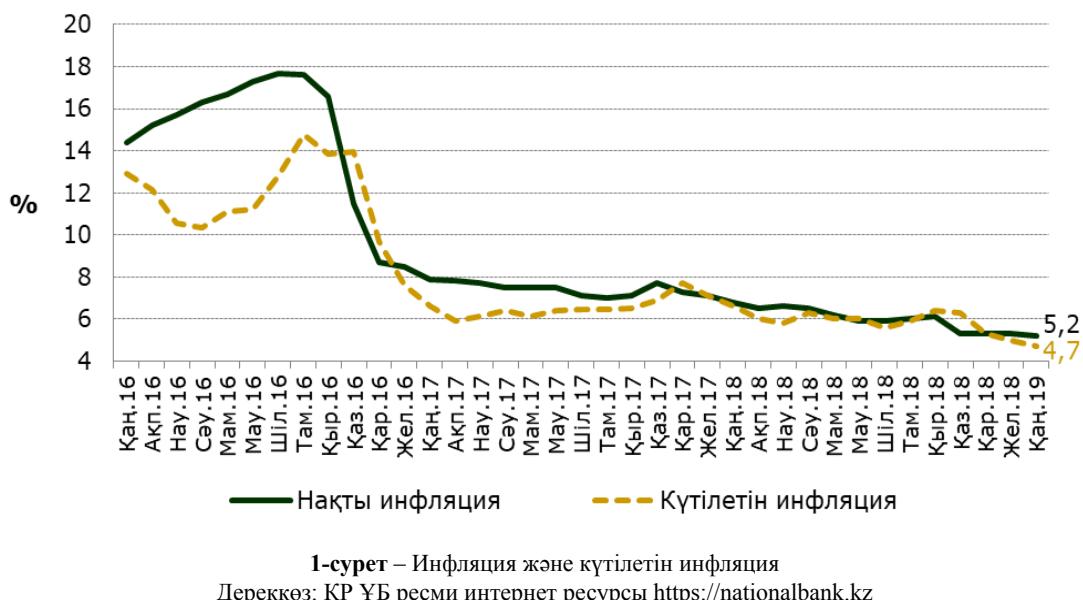
Ақшалай жүйе – ұлттық зандармен реттелетін елдегі ақша айналымын ұйымдастыруши. Қазақстан Республикасындағы ақша-несие жүйесі Қазақстан Республикасы Президентінің 1995 жылғы 30 наурыздағы «Қазақстан Республикасының Ұлттық Банкі туралы» заңының № 2155 Жарлығына сәйкес ұйымдастырылды.

Бүгінгі күні Қазақстан Республикасының Ұлттық Банкі занға сәйкес Қазақстан Республикасының мемлекеттік ақша-несие саясатын айқындастырын және жүзеге асыратын жалғыз орган болып табылады. Ақша-несие саясаты

Қазақстан Республикасының Ұлттық Банкімен төмен инфляцияны және ұлттық валютаның тұрақтылығын қамтамасыз ету үшін жүзеге асырылады.

2017 жылы ақша-несие саясаты инфляциялық таргеттеу қағидаларына сәйкес жүргізілді

(Күшекбаев, 2018). Ұлттық Банктің шаралары, пайыздық мөлшерлемелер саясатын қоса алғанда, 2017 жылға белгіленген мақсатты дәліздің 6-8% шегінде анықталған инфляциялық көрсеткіштерге қол жеткізуге бағытталған болды. Оны 1-суреттен көрсек болады.



2016 және 2017 жылғы бірінші жартыжылдықтағы орташа деңгейдегі ақша-несие саясатының нәтижесінде, сондай-ақ қолайлардың сыртқы және ішкі жағдайлардың әсерінен инфляция процесі баяулады. Жылдық инфляция 2016 жылы желтоқсанда 8,5%-дан 2017 жылы қазан айында 7,7%-ға дейін төмендеді, бұл жыл бойында мақсатты шекте қалып отырды. Сонымен бірге, ақша-несие саясаты саласында шешімдер қабылдау кезінде нақты инфляция деңгейімен қатар ҚР ҰБ-ның болжамдық көрсеткіштері: инфляциялық күтүлдер мен нарықтағы жаңа үрдістер ескерілді (Рябова, 2017).

Бақылаушы қабылданған шешімдердің ақша-несие жағдайын кезең-кезеңмен жеңілдетуге бағытталғанын атап өтті. 2017 жылы базалық мөлшерлеме деңгейі біртебірте 12%-дан 10,25%-ға дейін төмендеді. Ақша-несие саясатының біртіндеп жеңілдеуі қаржы нарығының тұрақтылығын қамтамасыз етті. Сондай-ақ, Ұлттық Банк банк секторын қаржылық нығайтуға бағытталған бағдарламаны өзірледі, ол негізгі банкке қолдау көрсетуді және ірі және әлеуметтік маңызды банктердің қаржылық тұрақтылығын арттыруды. Осы

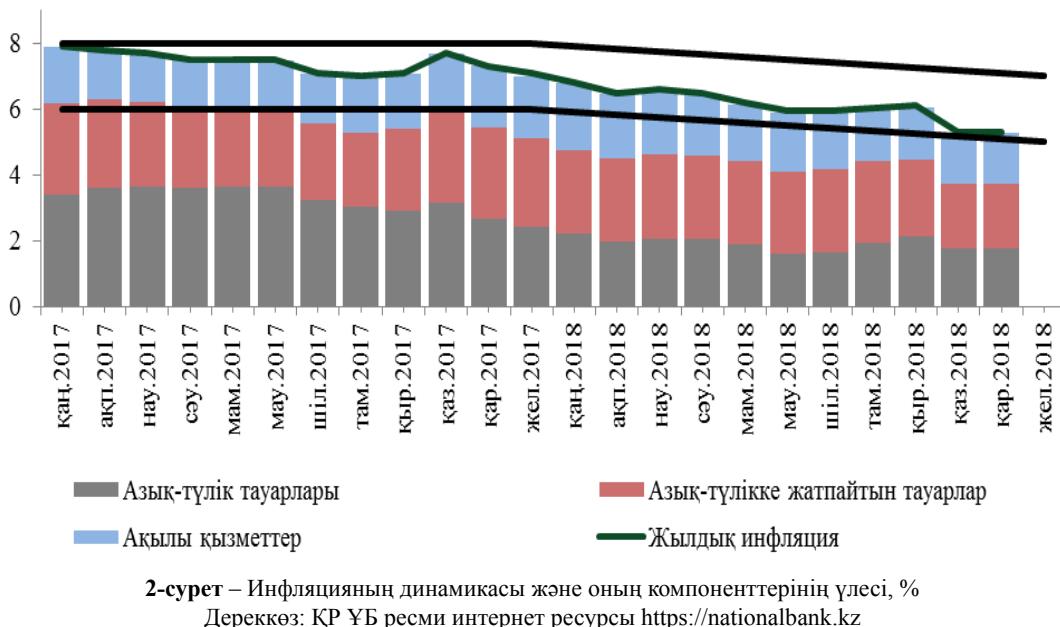
бағдарламаға сәйкес, орталық банктің бөлінген қаржысы жалпы 1,2 трлн теңгеден асты.

Ақша-несие саясатының операциялық шаралары ақша нарығындағы мөлшерлемелердің тұрақтылығын, сондай-ақ TONIA мақсатты мөлшерлемесін пайыздық база дәлізінде ұстап тұруды қамтамасыз етті (Kahn, 2002). Сонымен бірге, өтімділік профициті мөлшерлемені негізінен пайыздық мөлшерлеме дәлізінің төменгі шекарасында екенін көрсетті. Сонымен бірге, 2016 жылы инверсионды формада болған тәуекелсіз кірістілік қисығы ҚР Қаржы министрлігімен бірге кірістіліктің қисық сзығын қалыптастыру үшін қабылданған шаралар аясында қалыпқа келтіруге ұмтылды.

2018 жылы ақша-несие саясаты «Қазақстан Республикасының ақша-несие саясатының негізгі бағыттарының» бұрынғы Ұлттық Банк белгілеген қағидалар мен тәсілдерге негізделген және орташа мерзімді инфляцияға қол жеткізуге бағытталған болды. Инфляциялық таргеттеу режимі инфляциялық көрсеткіштерге қол жеткізуге әкелетін шешімдерді анықтады. Мақсатты дәліз 2018 жылдың аяғында 5-7% шегінде болды.

2018 жылы жылдық инфляция төмендеу үрдісін көрсетті, ол қараша айында 5,3%-ды (2017 жылы желтоқсанда – 7,1%) құрады, яғни

мақсатты дәліздің төменгі шекарасына жақын болды (2-сурет). Жыл сонына дейін дәліздегі инфляция жалғасады деп қүтілді.



2-сурет – Инфляцияның динамикасы және оның компоненттерінің үлесі, %

Дереккөз: ҚР ҰБ ресми интернет ресурсы <https://nationalbank.kz>

Инфляциялық қысымның біртіндеп төмендеуі сауда әріптерінің елдеріндегі инфляцияның төмен болуы себебінен бейтараптық деңгейге дейін, сондай-ак инфляцияның шектеулі импортына жақын деңгейде ақша-несие саясатының тұрақтылығын сақтау арқылы қолдан тапты. Бұдан басқа, азық-түлік нарықтарында жеткілікті ұсыныс жағдайы және көрсетілетін қызметтер бағасының баяулауы байқалды. Инфляцияның жылдам төмендеуіне тежеуші фактор нақты кірісінің өсуін және тұтынушылық несиенің өсуін қалыпқа келтіру нәтижесінде жиынтық сұраныстың кеңеюі болды.

2018 жылы теңгенің айырбас бағамының және ішкі бағалардың өзгерісі арасындағы байланыстың әлсіреуі байқалды. Тенге бағамының әлсіреуінен инфляция баяулады, оның айырбастау бағамы 2018 жылдың 11 айында 11,8%-ға (2017 жылға -0,3%-ға) төмендеді.

Инфляцияны қабылдау және халықтың инфляциялық күтулері ұзак мерзімді төмендеу үрдісін жалғастырды. Алайда, қысқа мерзімді перспективада инфляциялық күтулер тұрақсыз болып қалды және жағымсыз факторлардың әсеріне үшінады, әсіресе белгілі тауар нарықындағы сұраныс пен валюта бағамы сұранысында.

Мәселен, 2018 жылғы қарашада халықтан сауалнама негізінде есептелген инфляциясы (респонденттердің соңғы 12 айдағы инфляция деңгейін жеке-жеке көрсетуі) 16,8% болды, бұл нақты инфляцияға қарағанда 3 еседен жоғары. Соған қарамастан, инфляциялық күтулердің динамикасы инфляциялық тәуекелдер деңгейін айтарлықтай жақсы айқындаиды. Осыған байланысты ол базалық мөлшерлеме деңгейін анықтаудағы негізгі көрсеткіштердің бірі болып табылады.

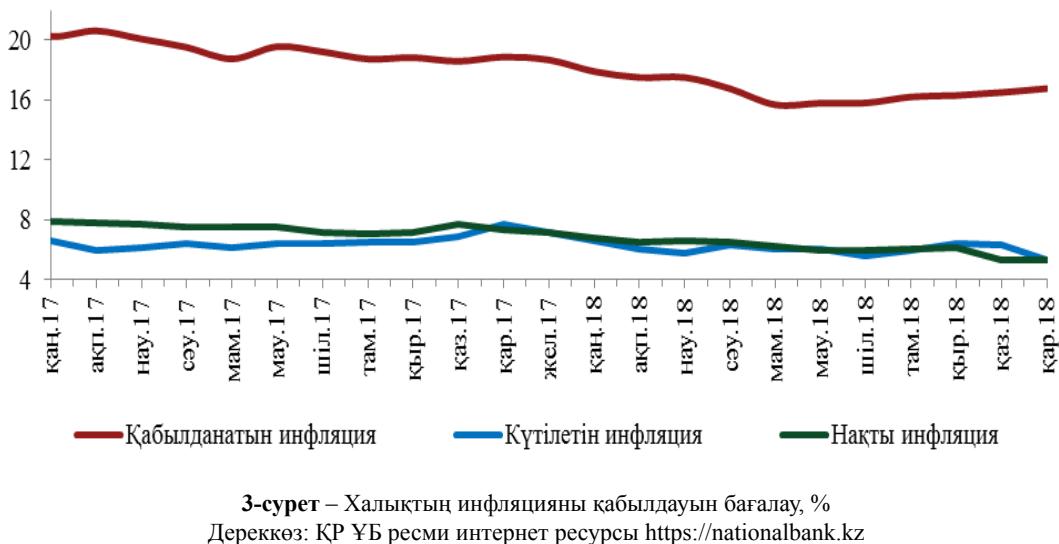
12 айда күтілетін инфляцияны сандық бағалау жыл басындағы 7,1%-дан 2018 жылғы қарашада 5,3%-ға дейін төмендеді (3-сурет).

Инфляцияның күтіліп отырған төмендеу қарқынының жоғары болуымен Ұлттық Банк 2018 жылдың бірінші жартысында базалық мөлшерлемені біртіндеп төмендету туралы шешім қабылдады, маусым айында 10,25%-дан 9,00%-ға дейін төмендетілді.

Алайда, тамыздың басынан бастап сыртқы нарықтардағы жағдай АҚШ пен бірқатар елдер арасындағы халықаралық саудалық қақтығыстардың нашарлауымен, сондай-ак АҚШ-тың санкцияларымен сипатталады, олар әлемдік экономикалық өсуге кедергі келтірген анық. Бұдан басқа, ФРЖ пайыздық

мөлшерлемесін көтеру саясатын жалғастыру және соның нәтижесінде АҚШ валютасындағы активтердің жоғары тартымдылығы дамушы

елдерден капиталдың ағыны мен олардың ұлттық валюталарының әлсіреуіне себепші болады.



3-сурет – Халықтың инфляцияны қабылдаудын бағалау, %
Дереккөз: КР ҰБ ресми интернет ресурсы <https://nationalbank.kz>

Нәтижесінде инфляциялық факторлардың одан әрі динамикасына қатысты белгісіздік байқалды. Ұлттық Банктің мамыр-маусым және тамыз-қыркүйек айларында өткізген болжамдарының нәтижелері бойынша бағалауды инфляциялық тәуекелдердің 1-2 жылдағы ұлғаюын көрсетеді. Осыған байланысты, қазан айында Ұлттық Банк базалық мөлшерлемені 9,25%-ға көтерді.

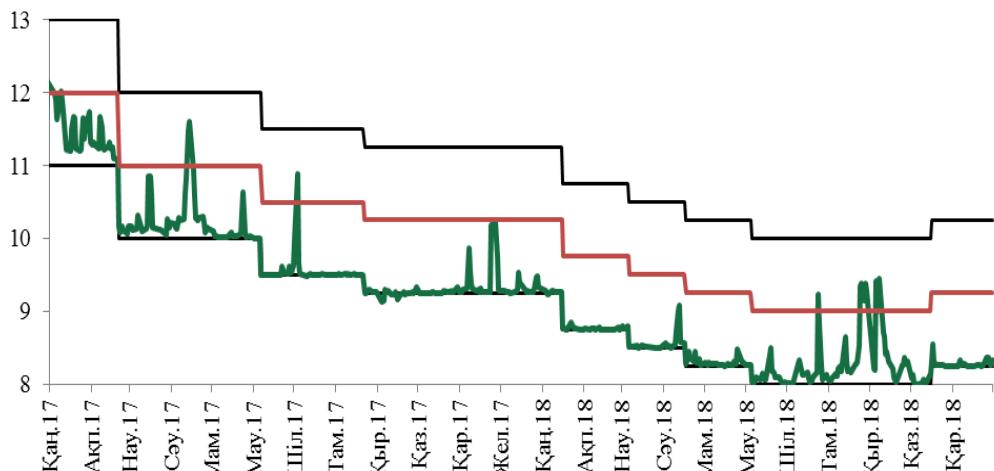
Тамызда және қыркүйекте Ресейге қатысты қатаң санкциялар туралы акпарат аясында ресей рублінің айтарлықтай әлсіреуі жүрді, нәтижесінде ішкі валюта нарығындағы құбылмалылық байқалып, теңгенің айырбастау бағамына қысым жасалды. Сонымен шетел валютасына деген сұраныс пен ұсыныс арасындағы тенгерімді қалпына келтіру мақсатында Ұлттық Банк 2017 жылдың қазан айынан бері бірінші рет 2018 жылдың қыркүйегінде ішкі валюта нарығына 520,6 млн. АҚШ доллары көлемінде араласты. Бұл интервенциялар теңге бағамының өзгеруіне әсер етпеді, бірақ теріс жағдайды төмендедті, бұл іргелі факторлардың динамикасына байланысты болмаған тенгениң әлсіреуіне әкелді.

2018 жылы теңгелік өтімділіктің құрылымдық профициті банк жүйесінде қалды. Өтімділіктің негізгі бөлігін Ұлттық Банк 7 және 28

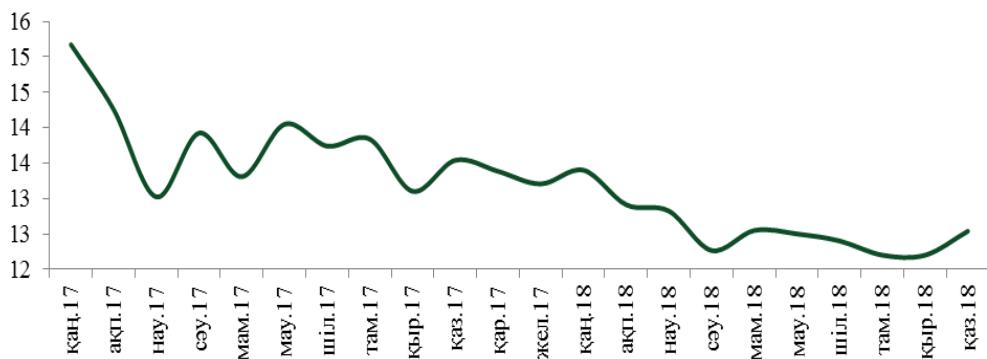
күндік қысқа мерзімді ноттарды пайдалана отырып қайтарып алды. 3, 6 және 12 ай өтөу мерзімі бар қысқа мерзімді ноталардың шығарылымы қаржы нарығындағы кірістілік қисығын қалыптастыруға бағытталған еді.

Ақша-несие саясатының операциялық шаралары TONIA мақсатты мөлшерлемесін базалық пайыздық дәліз шенберінде сактауды қамтамасыз етті. Сонымен бірге, құрылымдық өтімділік профициті негізінен пайыздық дәліздің төменгі шекарасында болған мөлшерлемені анықтады. Дәліздің ортасына пайыздық мөлшерлеменің бөлек шығыны АҚШ долларына қатысты теңгенің әлсіреуі аясында теңгениң өтімділігіне деген сұраныстың артуына байланысты болды (4-сурет).

Экономикалық белсенділіктің бірте-бірте қалпына келуі және инфляциялық қысымының төмендеуі несиелік белсенділіктің өсуіне ықпал етті. Депозиттерді қаржыландырудың шығындарын және тәуекелдерін азайту, банктер арасындағы бәсекелестікті арттыру және өтімділік коэффициентін жақсарту, сондай-ақ базалық мөлшерлемені біртіндеп төмендету, қарыз алушыларға несие беру шарттары және несиeler бойынша сыйақы мөлшерлемелерін жұмсарту басталды (5-сурет).



4-сурет – Базалық мөлшерлеме дәлізі және TONIA индикаторы, %
Дереккөз: КР ҰБ ресми интернет ресурсы <https://nationalbank.kz>



5-сурет – Занды тұлғаларға тенгемен берілетін несиeler бойынша мөлшерлеме, %
Дереккөз: КР ҰБ ресми интернет ресурсы <https://nationalbank.kz>

«7-20-25» бағдарламасының жұмыс істейі аясында ипотекалық несиелендіру іске қосылды. Соңғы 12 ай ішінде банктер, лицензиялары жойылған немесе қайта құрылымдалғандардан басқа, несие портфелін 2018 жылдың аяғындағы жағдай бойынша 8,3% немесе 966,5 млрд. теңгеге ұлғайты.

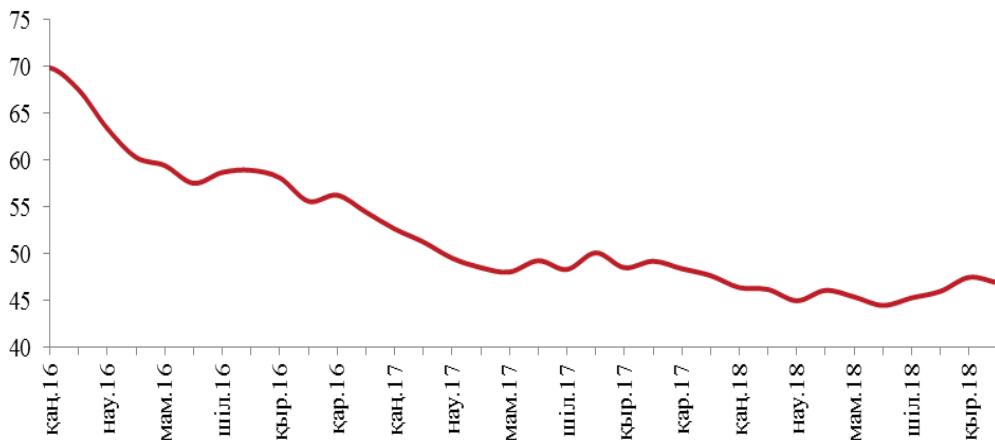
Банктердің қаржыландыру базасы негізінен клиенттердің депозиттері болып табылады, дедолизация үрдісінің жалғасуы – 2018 жылдың қазан айының соңында 46,9% дейін көрінді (6-сурет). Дедоларизация тенге мен валюталық депозиттер арасындағы арбитраж арқылы жүзеге асады.

2018 жылы Ұлттық Банк ақшаны және валюталық нарықтарды, сондай-ақ мемлекеттік бағалы қағаздар нарығын одан әрі дамытуға бағытталған, демек, ақша-несие саясатының тиімділігін арттыруға бағытталған бірқатар

бастамаларды жүзеге асырды (Шамсивалиев, 2018).

Ақша-несие саясаты қаржы нарығының тұрақтылығын сақтауға, сактандыру нарығын одан әрі дамытуға, бағалы қағаздар нарығын дамытуға және банк жүйесін нығайтуға, экономиканың нақты секторына банктік несиелеудің одан әрі өсуіне жағдай жасауға, сондай-ақ жинақталған зейнетеки жүйесін жақсартуға мүмкіндік береді.

2019 жылы Ұлттық Банк шаруашылық жүргізуши субъектілердің инфляциялық күтүін тұрақтандыру және нығайту жөніндегі шараларды жалғастырады. Инфляциялық күтүлерді белгілеу, олардың бірте-бірте төмендеуін қамтамасыз ету экономиканың ішкі және сыртқы күйзелістерге тұрақтылығын арттырады, бұл өз кезегінде ақша-несие саясатының мақсаттарына жетудің тиімділігіне оң әсер етеді.



6-сурет – Шетел валютасындағы депозиттердің үлесі, %
Дереккөз: КР ҰБ ресми интернет ресурсы <https://nationalbank.kz>

2019 жылы Ұлттық Банк жаңа қадағалау практикасын – Еуропалық Одак елдерінің, АҚШ пен ЕЭО (Ресей, Белоруссия) елдерінің тәжірибесі негізінде жүзеге асырылатын тәуекелге неғізделген тәсілдерді енгізеді. Банк секторын жетілдіру және реттеу мен қадағалаудың жаңа тәсілдері банк салымшылары үшін тәуекелдерді айтарлықтай азайтады.

Тәуелсіздіктің жылдар ішінде Қазақстан қаржы секторының барлық сегменттерін дамытуда айтарлықтай нәтижелерге қол жеткізді. Қазіргі уақытта Қазақстанның қаржы жүйесі ТМД-ның басқа елдерімен салыстырғанда мемлекеттің араласуынан қорғалған, дамыған, ашық әрі таза болып табылады.

Корытынды

Ақша-несие саясаты – мемлекеттің иелігінде болатын экономикалық саясаттың ең қуатты құралдарының бірі. Резервтік норманың қайта қаралуы, дисконттау мөлшерлемесінің өзгеруі және ашық нарықта операциялар сияқты Орталық банк ақша массасына және оның көмегімен нақты ұлттық өнімге, жұмыспен қамтуға және баға индексіне шешуші әсер етеді (Kondybayeva, 2013).

Мемлекеттік реттеу – біртекті элементтерді қамтитын жүйе болып табылады: максаттар, әдістер, құралдар, мультиплікаторлар және т.б. Жүйедегі гетерогенді элементтердің комбинациясы неғұрлым табысты болса және оның құрылымы ағымдағы экономикалық жағдайға сәйкес болса, соғұрлым нарықтан тыс тиімді

әлеуметтік-экономикалық мәселелер шешіледі (Ganev, 2002).

Экономиканы мемлекеттік реттеудің негізгі элементтерінің бірі ақша саясаты болып табылады (Starr, 2005). Ақша-несие саясаты – елдегі орталық банк не тікелей мемлекеттік ықпал ету арқылы ақша массасы мен ақша айналымын реттеу. Ақша-несие саясаты ақша-несие жүйесінің дұрыс жұмыс істеуін және ақша айналымының тұрақтылығын қамтамасыз етеді, оның әсері ақшаға да, бағаға да тікелей маңызды болып келеді.

Ақша-несие саясаты фискалдық саясат сияқты тұрақтандырудың мақсаттарын белгілейді, олар: экономикалық жүйенің тұрақтылығы мен тиімділігін арттыру, дағдарыстан шығу, жұмыспен қамту және экономикалық өсуді қамтамасыз ету. Сонымен бірге, фискалдық саясаттың қарсы циклдік сипаты бар, ол бюджет пен салықтарға байланысты, ал ақша-несие саясаты ақша айналымын тұрақтандырумен шектеледі және ақша массасына неғізделген.

Қайта қаржыландыру саясаты, ашық нарық операциялары, резервтік саясат, өтімділік саясаты мемлекеттік ақша-несие саясаттың құрамдас бөлігі болып табылады. Осы құралдардың барлығы айналыстағы ақша массасын және жеке ақшалай агрегаттарды реттеуге мүмкіндік береді және сол арқылы нарықтық бағалардың динамикасына, инфляция деңгейіне, өндірушілер мен тұтынушылар арасындағы тауар-акшалай қатынастарға, нарықтық айырбасқа, нарық субъектілерінің кірістеріне және шығыстарына жанама әсер етеді.

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СОВРЕМЕННЫЕ АСПЕКТЫ ФИНАНСОВОЙ БЕЗОПАСНОСТИ РОССИИ В УСЛОВИЯХ КРИЗИСА

Аннотация. Сильно уязвимых стран небольшое количество, но их экономика ослабевает от замедления роста международной торговли, повышения процентов, падения глобальной деловой активности. Следует отметить, что основной задачей государственной политики, направленной на обеспечение экономической безопасности государства, является внедрение мер, направленных на обеспечение социально-экономических интересов общества и достижение стабильности национальной экономики, и особенно устойчивости ее финансовой составляющей, что обусловлено прежде всего усилением в XXI веке интеграции и консолидации финансовых рынков и формированием глобальной финансовой системы. Авторами определены и классифицированы различные теоретические концепции финансовой безопасности, как динамически развивающее состояние финансовых процессов и экономических отношений. Был проведен анализ финансовой безопасности страны как важнейшего условия формирования адекватной стратегии экономического развития территории государства.

Разработка эффективного механизма обеспечения финансовой безопасности государства невозможна без научного осмысливания ее экономической сущности, исследования и разработки методов оценки и пересмотра теоретических подходов к обеспечению стабильности и устойчивости финансовой системы.

Научная новизна исследования заключается в обосновании авторской концепции совершенствования механизма обеспечения финансовой безопасности России в условиях экономической ситуации в стране.

Ключевые слова: финансовая безопасность, экономическая безопасность, кризис, стратегия, стабильность, Россия.

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Modern aspects of Russia's financial security in crisis

Abstract. There are a small number of highly vulnerable countries, but their economies are weakened by the slowdown in international trade, rising interest rates, and falling global business activity. It should be noted that the main task of state policy aimed at ensuring the economic security of the state is the introduction of measures aimed at ensuring the socio-economic interests of society and achieving the stability of the national economy, and especially the stability of its financial component, which is primarily due to the strengthening in the XXI century of the integration and consolidation of financial markets and the formation of the global financial system. The authors define and classify various theoretical concepts of financial security as a dynamically developing state of financial processes and economic relations. The analysis of financial security of the country was carried out – as the most important condition of formation of adequate strategy of economic development of the territory of the state.

The development of an effective mechanism to ensure the financial security of the state is impossible without scientific understanding of its economic essence, research and development of methods of evaluation and revision of theoretical approaches to ensuring the stability and stability of the financial system.

The scientific novelty of the study lies in the substantiation of the author's concept of improving the mechanism of ensuring the financial security of Russia in the economic situation in the country.

Key words: financial security, economic security, crisis, strategy, stability, Russia.

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Дағдарыс жағдайындағы Ресейдің қаржылық қауіпсіздігінің қазіргі заманғы аспектілері

Андратпа. Өте өлсіз елдер саны аз, бірақ олардың экономикасы халықаралық сауданың өсуінің баулауынан, пайыздардың артуынан, жаһандық іскерлік белсенділіктің төмендеуінен әлсірейді. Мемлекеттің экономикалық қауіпсіздігін қамтамасыз етуге бағытталған мемлекеттік саясаттың негізгі міндеті қоғамның әлеуметтік-экономикалық мұddeлерін қамтамасыз етуге және үлттық экономиканың тұрақтылығына, әсіресе оның қаржылық құрамдас бөлігінің тұрақтылығына қол жеткізуге бағытталған шараларды енгізу болып табылатынын атап өткен жөн, бұл ен алдымен XXI ғасырда қаржы нарықтарын біріктіру мен шоғырландырудың қүшөюіне және жаһандық қаржы жүйесін қалыптастыруға негізделген. Авторлар қаржы процестері мен экономикалық қатынастардың динамикалық дамып келе жатқан жағдайы ретінде қаржылық қауіпсіздіктің түрлі теориялық концепцияларын анықтап, жіктеді. Елдің қаржылық қауіпсіздігіне талдау жүргізілді – мемлекет аумағының экономикалық дамуының барабар стратегиясын қалыптастырудың маңызды шарты ретінде.

Мемлекеттің қаржылық қауіпсіздігін қамтамасыз етудің тиімді тетігін әзірлеу оның экономикалық мәнін ғылыми үғынусызы, қаржы жүйесінің тұрақтылығы мен тұрақтылығын қамтамасыз етудің теориялық тәсілдерін бағалау және қайта қарастыру әдістерін зерттеп мүмкін емес.

Зерттеудің ғылыми жаңалығы елдегі экономикалық жағдайында Ресейдің қаржылық қауіпсіздігін қамтамасыз ету механизмін жетілдірудің авторлық тұжырымдамасын негіздеу болып табылады.

Түйін сөздер: қаржылық қауіпсіздік, экономикалық қауіпсіздік, дағдарыс, стратегия, тұрақтылық, Ресей.

Введение

Занимаясь изучением проблем обеспечения экономической безопасности государства, в частности финансовой, как ее составляющей, ученые акцентируют внимание на внутренних вызовах и угрозах, которые выступают одними из ключевых факторов, обусловливающих де-стабилизацию финансовой системы страны.

13 мая 2017 года Президентом Российской Федерации определены основные направления и задачи государственной политики в сфере обеспечения экономической безопасности: была утверждена Стратегия, которая направлена на обеспечение противодействия вызовам и угрозам экономической безопасности, предотвращение кризисных явлений в ресурсно-сырьевой, производственной, научно-технологической и финансовой сферах, а также на недопущение снижения качества жизни населения.

Для финансовой безопасности страны необходимы законы, ограничивающие размер перевода (в %) предпринимателями прибыли и своих банковских денег за границу. А для РФ и вступивших с ней в экономический союз других стран особенно важно установить такую таможенную политику (что ранее осуществлял и великий Сталин), чтобы сохранить свое производ-

ство (промышленное и сельское), защитить его от свободного наплыва зарубежных дешёвых товаров и демпинговой торговли. Недопустимо, чтобы «зоны свободной торговли» вредили развитию экономики РФ. Необходимо поддерживать протесты трудящихся (и антиглобалистов) против антинародной политики продажных «либералов», лукаво и безответственно восторгающихся высоким уровнем жизни в США и на-взывающих ложные идеи о невмешательстве государства в его экономику, что национальные государства в экономике исчерпали себя и должны поэтому уступить эту сферу транснациональным корпорациям и мировому правительству, т.е. по сути открыть для США и американских банкир (т.е. мафии) свои границы.

В настоящее время всех беспокоит дальнейшая эскалация санкционной политики США и их союзников. Политика российского правительства основана на четком разделении санкций США и санкций ЕС. В отношении США планируются максимально жесткие ответные меры. В отношении ЕС ставка делается на использование всех возможностей для сотрудничества при минимуме агрессивной риторики (Россия склонна рассматривать Европу как заложницу США).

Проблема, однако, заключается в том, что воздействовать на Штаты очень сложно: тор-

говый оборот тут в десятки раз меньше, чем с ЕС. Мировая финансовая система контролируется США и основана на долларе, от которого зависит, в том числе, и Россия. Применить прямые контрасанкции в таких условиях едва ли возможно.

С Европой дело обстоит противоположным образом. Вполне эффективные контрасанкции против европейцев введены еще 6 августа 2014 г., когда был запрещен ввоз в Россию широкого ассортимента пищевой и сельскохозяйственной продукции, в том числе большинства видов мяса и мясных продуктов, молочных изделий, овощей и корнеплодов и т.п. Хотя впоследствии список корректировался (некоторые продукты из него исключены еще в 2015 г.), в целом эмбарго существует и причиняет европейским сельхозпроизводителям многомилиардные убытки, вероятно, сопоставимые с потерями от санкций самой России.

Единственным действительно значимым ответом России на санкции Штатов мог быть вы-

вод государственных резервов РФ из банков и казначейских бумаг США. Правительство РФ действительно прибегло к таким мерам зимой 2017-2018 гг. На сегодняшний день (в отличие от ситуации десятилетней давности) главными резервными валютами России стали евро (при мерно треть от общего объема ЗВР) и золото, с которым доллар делит второе-третье место.

Как известно, в целом, Западу не удалось в 2014-2018 годы полностью дестабилизировать финансовую и бюджетную систему России, что был вынужден даже признать и Всемирный банк. Основные финансово-экономические показатели остались на прежнем уровне либо даже несколько улучшились. Но крайне важны отдельные детали. В частности, объем и структура внешнего долга России за последние годы не изменились. Как видно, государственный долг России вырос незначительно и не сопоставим с уровнем государственного долга России в 90-е годы, когда он составлял сотни миллиардов долларов.

Таблица 1 – Внешний долг России, млрд. долл. США

**Внешний долг России (2016–2018 гг.)
(млрд. долл. США)**

	I-Jan-16	I-Apr-16	I-Jul-16	I-Oct-16	I-Jan-17	I-Apr-17	I-Jul-17	I-Oct-17	I-Jan-18
Total	518.5	520.1	523.0	518.3	511.7	521.5	527.0	529.6	518.9
Government (w/t CBR)	30.5	32.1	35.9	40.4	39.1	45.8	46.5	54.3	55.8
Corporate	476.3	477.3	476.4	467.2	460.5	461.7	463.6	454.1	448.6
Banks	131.7	129.8	127.7	123.6	119.4	120.2	113.3	108.0	103.4
Short-term	25.3	25.6	28.7	28.4	26.7	32.5	32.0	27.6	30.6
Non-banking sector	344.5	347.5	348.7	343.6	341.1	341.5	350.3	346.1	345.2
Short-term	13.2	12.5	14.3	12.5	13.5	12.8	16.4	14.3	14.2

Source: CBR.

Политика дедоллоризация является ответом РФ на санкционное давление со стороны США. Дедоллоризация – это защита в рамках обеспечения экономической безопасности страны в целом, которая придает устойчивость и значимость российской валюте, уменьшая зависимость от валют иностранных государств. Некоторые эксперты называют переход на национальную валюту дополнительным, хотя и незначительным фактором в ускорении экономического развития.

Например, те европейские страны, которые не перешли в зону евро, сегодня сохраняют высокую долю финансовых операций, в том числе благодаря широкому использованию националь-

ных валют. Они обеспечивали им активизацию экономической деятельности за счет большой значимости финансового сектора.

Стоит также учитывать, что зависимость от доллара иногда бывает и на потребительском уровне. Достаточно вспомнить крахи, связанные с высоким скачком курса рубля, которые были в конце 2014 года. В итоге многие россияне, имеющие потребительские или ипотечные кредиты в долларах, оказались в сложном положении, что негативно повлияло на экономическое состояние в стране.

По данным Всемирного банка ожидается, что рост мирового ВВП замедлился до 3,0% с 3,1%

в 2018 году. В основном из-за ускорения роста в странах Африки к югу от Сахары и в Южной Америке. Однако нас больше всего интересуют перспективы России и наших крупнейших торговых партнеров.

По данным ВБ, США начнут замедляться с 2,7% в 2018 году до 2,5% в 2019 году и 2% в 2020 году. Зона евро после роста на 2,1% в 2018 году замедлится до 1,7% в 2019 и 1,5% в 2020 году.

В конце концов наблюдается всё-таки увеличение, пусть и довольно небольшое. Тем не менее, когда рост теряет силу, снижается поток новых инвестиций, рабочих мест и заработной платы. Компании начнут сокращать расходы, даже если лично вы не видите кризис. В результате рынок труда проседает. Поэтому лучше быть готовым к худшему сценарию.

Поскольку российская экономика в значительной степени зависит от экспорта и экономических условий покупателей, замедление за рубежом также повлияет на нее. Из-за практически хронического экономического кризиса во многих странах мира на протяжении последних лет 10 люди перестали верить, что государство как таковое может справиться с подобным явлением, которое практически не поддается контролю. В связи с этим каждый человек адаптируется к новым условиям и старается самостоятельно исправить и улучшить свое финансовое положение. Чаще всего выходами из подобной ситуации являются такие действия:

значительно сокращение расходов по многим статьям;

поиск новой или дополнительной работы;

в некоторых случаях мошеннические и противозаконные операции с целью наживы.

Последнее является вполне логичным, хотя и не лучшим вариантом с точки зрения безопасности населения в государстве. Некоторые попадают на подобных действиях, но большая часть остается безнаказанной.

Гипотезой данного исследования является предложение о том, что обеспечение финансовой безопасности РФ – это деятельность как всего государства, так и общества, направленная на стабилизацию функционирования финансовой сферы, на защиту национальных ценностей и интересов в этой области.

Целью данного исследования является систематизация и обоснование понятий, определяющих финансовую безопасность страны.

В соответствии с обозначенной целью были поставлены и решены следующие задачи:

1. Рассмотрены и классифицированы научные подходы и взгляды, различных авторов к интерпретации финансовой безопасности как экономической категории.

2. Аргументированы методологические подходы к пониманию влияния мирового финансового кризиса на финансовую экономическую систему государства.

3. Рассмотрена система новых вызовов, предпринятых к внешнеполитической и внешнеэкономической нестабильности в стране.

4. Предложены и научно обоснованы ряд мероприятий, которые направлены на совершенствование и повышение уровня обеспечения финансовой безопасности России в условиях мирового экономического кризиса.

Научная новизна исследования заключается в создании и обосновании авторской концепции совершенствования механизма обеспечения финансовой безопасности России в условиях экономической ситуации в стране.

Обзор литературы

Многие ученые экономисты обращаются к теме финансовой безопасности в своих исследованиях, трактуют с разных сторон. Делая акцент на финансовую безопасность, которая испытывает влияние различных аспектов экономической безопасности, что и объясняется наличием сложных системных связей. Именно поэтому многими авторами финансовая безопасность представляется как многоуровневая категория.

Представителями данного подхода являются такие экономисты, как В. Бурцев, А. Вахрамеев, К. Жана, П. Савона, О. Григорьев, М. Хазин, Э. Кочетов, Г. Петров, Е. Светина, О. Галочкина, С. Куряков, Б. Ицкович и многие другие (Бородкина и др., 2018; Варюха и др., 2016; Харич и др., 2016; Agarkovaetal., 2016; Akhmetshinetal., 2019).

Финансовая безопасность государства в данный момент представляется, в первую очередь, как связь с мировой финансовой ситуацией и финансовыми потоками, которые складываются в условиях международной экономической интеграции и глобализации экономических процессов.

Обращаясь к проблеме финансовой безопасности и изучая ее сущностно-теоретические основы, В.В. Криворотов (2018) констатирует, что «финансовую безопасность государства определяет финансовая независимость».

Особого внимания заслуживает своеобразный подход Харич Е.А., Мамий С.А. (2016),

которые считают целесообразным определение понятия «финансовая безопасность» через категорию отношений.

Также вопросами финансовой безопасности государства занимаются различные современные ученые, в частности, можно выделить таких авторов Барановский А.И., Барикаев Е.Н., Воробьева Е.И., Филимонов Е.А., Сенчагов В.К., Олейникова Е.А.

Чтобы понять, что такое финансовая безопасность, для начала рассмотрим понятие экономической безопасности. Здесь стоит отметить, что хозяйственная жизнь страны рассматривается, как открытая система, на которую воздействует множество внутренних и внешних факторов.

Экономическая безопасность представляет собой такое состояние хозяйственной системы, при которой сохраняются стабильно и тенденции к росту под воздействием внутренней среды и внешних факторов.

Система считается безопасной, если в ней сохраняются благоприятные условия для всех макроэкономических субъектов. Как было отмечено ранее, финансовый сектор проникает во все сферы экономической жизни страны. Его влияние на благополучие национальной экономики достаточно велико.

Резюмируя вышесказанное, можно сказать, что финансовая безопасность является достаточно новым явлением как для науки, так и для практики, и не получила должного всеобъемлющего осмысления. Она относится к категории, которая, с одной стороны, всем понятна, а с другой – тяжелые для определения в достаточно исчерпывающей форме.

Методология

Мы можем выделить следующие основные отличительные черты финансовой безопасности государства (Таблица 2).

Таблица 2 – Отличительные черты финансовой безопасности государства

Характерные черты	Содержание
Стабильность и эффективность финансовой системы	Предполагает ее устойчивость к воздействию внешних и внутренних факторов и способность обеспечить достижение стратегических и тактических целей развития государства.
Совокупность мер воздействия на развитие финансовой системы	Совокупность общественно-экономических отношений, возникающих по поводу обеспечения оптимального состояния финансовой системы государства.
Зашщищенность национальных интересов в финансовой сфере	Характеризует состояние защищенности ключевых интересов государства, регионов, граждан и предпринимательских структур в сфере национальных и международных финансов от воздействия широкого круга эндогенных и экзогенных негативных факторов.
Финансовая независимость и конкурентоспособность	Способность страны реализовывать собственную финансовую политику, полноценно выполнять задачи и функции в современных условиях усиления финансовой глобализации и столкновения национальных интересов и определять механизм и пути функционирования национальной финансовой системы.
Способность к расширенному воспроизведению	Достаточное обеспечение финансовых ресурсов, которые находятся в распоряжении учреждений, организаций, компаний, домашних хозяйств, отраслей, секторов экономики, регионов и государства, которые необходимы для выполнения возложенных функций и удовлетворения потребностей, а также достижения их ликвидности и сбалансированности, что является первоочередным условием обеспечения расширенного воспроизводства.

Примечание – составлено авторами

Безопасность финансового сектора обеспечивает внутреннюю стабильность и состоятельность государства, а также делает хозяйственную структуру страны более устойчивой и конкурентоспособной на мировом и международном уровнях.

Финансовая безопасность рассматривается на государственном уровне и отдельно для субъ-

ектов реального сектора экономики, так как они обеспечивают стабильность и защищенность страны в целом.

На сегодняшний день не существует единой точки зрения среди ученых-экономистов по классификации угроз финансовой безопасности государства. Однако наиболее распространенной в отечественной и зарубежной практике

является их классификация по источнику возникновения (на внешние и внутренние) и степени опасности (на имеющиеся, формирующиеся, потенциальные и ожидаемые) (Бородкина и др., 2018).

Так среди внутренних факторов, представляющих наибольшую угрозу финансовой безопасности государства, стоит выделить бюджетный дефицит, низкую эффективность бюджетной и налоговой политики, высокие темпы инфляции, чрезмерный уровень внутренней задолженности, курсовую нестабильность, низкий уровень развития финансового рынка, инвестиционной и инновационной активности, недостаточность золотовалютных резервов, слабость денежно-кредитной системы, нестабильность банковской системы, теневизацию экономики и тому подобное.

Более высокие процентные ставки означают более высокие выплаты по ипотечным кредитам для тысяч семей. Это миллиарды рублей в месяц, которые будут поступать в банки вместо того, чтобы подпитывать потребление или сбережения. Некоторые из семей, которые за кредитованы до предела, могут быть в весьма плачевном финансовом положении. Учитывая, что внутреннее потребление является наиболее важной движущей силой роста отечественного ВВП, это создает проблемы для российской экономики.

В 2018 году уровень инфляции в годовом исчислении подскочил до 2%. Однако на 2019 год Европейская комиссия прогнозирует повышение цен на 2,6%. Это серьезный вызов для наших сбережений.

Разбалансировка государственных финансов выступает одним из ключевых факторов, который нарушает стабильность и устойчивость финансовой системы. Дефицит бюджета, который возникает в результате разрыва между законодательно установленными государственными обязательствами и объемом имеющихся финансовых ресурсов, влечет угрозу всем элементам финансовой безопасности государства и вызывает негативные тенденции в динамике государственных долговых обязательств, недofинансирование расходов и снижение уровня жизни населения. Поэтому, согласно требованиям финансовой безопасности, к важнейшим критериям формирования и исполнения бюджетов следует отнести: обеспечение целостности и единства бюджетной системы, реальность целей бюджетной политики и ее соответствие национальным интересам, расширение возможностей государства осуществлять внешнюю и внутрен-

нюю политику на основе обеспечения достаточными финансовыми ресурсами (Дрегнин и др., 2018).

Крайне негативно сказывается на обеспечении финансовой безопасности и накопление государственной задолженности, которая выступает источником наполнения доходной части бюджета с целью покрытия его дефицита и дает возможность укрепить финансовое положение страны и избежать раскручивания инфляции. Однако, несмотря на ряд преимуществ, государственный долг как источник дополнительных финансовых ресурсов в условиях направления заимствований на удовлетворение текущих расходов приводит к бюджетному дефициту и его росту, что в дальнейшем приводит к снижению расходов в связи с необходимостью обслуживания и погашения долговых обязательств, снижению уровня жизни населения, снижению уровня доверия к правительству со стороны инвесторов и росту процентных ставок, потере финансовой независимости и банкротству страны как заемщика.

С точки зрения обеспечения финансовой безопасности, вызывает беспокойство и тенденция к постоянному росту внешней задолженности и зависимость государства от иностранного кредитования. С одной стороны, рациональное использование внешних источников финансирования способствует укреплению финансовой стабильности государства, а с другой – создает угрозу потери собственной финансовой независимости и банкротства (Каранина, 2015).

Россия сильно отстает от развитых стран в области новейших технологий. Мир очень быстро меняется, и чтобы успевать за ним, нужны современные инструменты. Также одна из сильнейших угроз – это коррупция. Она серьезно тормозит многие процессы, что сказывается на темпах экономического роста.

Также среди ключевых угроз следует выделить стремительное сокращение трудоспособного населения на фоне выхода на пенсию беби-бумеров послевоенных лет. Кроме того, к угрозам относится и рост geopolитической напряженности, который наблюдается в последнее время.

Не менее важной угрозой финансовой безопасности страны является вмешательство в национальную финансовую сферу международных финансовых организаций. Эта угроза вытекает из предыдущей. Значительная зависимость государства от иностранных кредиторов и накопленный внешний долг повышают риск в финансовой сфере и для экономики страны, особенно

в ракурсе навязывания экономических программ и меморандумов, разработанных этими организациями.

Одним из главных внутренних вызовов финансовой безопасности выступает уровень инфляции, которая является следствием нарушения равновесия экономической системы, спада производства и сокращения товарного обеспечения денежной массы.

Важным индикатором финансовой безопасности страны выступает курс национальной денежной единицы и степень ее конвертируемости. Так валютный курс, оказывая влияние на торговый и платежный баланс, уровень внешней задолженности и темпы инфляции, создает угрозу экономической безопасности, в частности ее финансовой составляющей. Это требует совершенствования валютного законодательства в смысле четкости и адекватности проведения валютной политики, которая в состоянии сбалансировать реальный спрос на иностранную валюту с ее предложением, уравновесить торговый баланс и счет, который отражает операции с капиталом, способствовать росту конкурентоспособности товаров и накоплению валютных резервов.

Дедоллоризация – это наша защита в рамках обеспечения экономической безопасности страны в целом, которая придает устойчивость и значимость российской валюте, уменьшая зависимость от валют иностранных государств. Некоторые эксперты называют переход на национальную валюту дополнительным, хотя и незначительным фактором в ускорении экономического развития. Например, те европейские страны, которые не перешли в зону евро, сегодня сохраняют высокую долю финансовых операций, в том числе благодаря широкому использованию национальных валют. Они обеспечивали им активизацию экономической деятельности за счет большой значимости финансового сектора.

К факторам, которые влияют на финансовую безопасность страны, следует отнести и сальдо платежного баланса.

Неконкурентоспособность национальных товаров, нерациональная структура и ненадлежащее стимулирование экспорта выступают теми факторами, которые порождают отрицательное сальдо торгового баланса, приводя к тому, что иностранная валюта не поступает в страну, а наоборот, изымается, фактически финансируя экономику стран-экспортеров, что является существенной финансовой опасностью.

Отклонение индикаторов от пороговых значений приводит к нарушению воспроизвод-

ственных процессов и негативных тенденций в финансовой сфере и требует принятия решений по их устранению (Варюха и др., 2016).

Основная задача государства в контексте обеспечения финансовой безопасности государства – создание экономической, политической, правовой среды и институциональной инфраструктуры, которые бы стимулировали наиболее жизнеспособные предприятия, инвестиционные процессы и тому подобное. Этот процесс должен сопровождаться реализацией ряда мероприятий, в разработке которых критериями для поддержания финансовой безопасности на макроуровне являются ее составляющие, а основными стабилизационными направлениям могут быть: снижение дефицита государственного бюджета; ликвидация нецелевого использования бюджетных средств и задолженности по социальным выплатам; осуществление бюджетной реформы; совершенствование налоговой системы; детенизация экономики; снижение инфляции; создание достаточного золотовалютного запаса страны; совершенствование национальной банковской системы; реализация взвешенной политики внутренних и внешних заимствований; обеспечение положительной динамики платежного баланса и т.д. (Каранина, 2015).

Миссия системы финансовой безопасности государства заключается в своевременном выявлении и предотвращении как внешних, так и внутренних опасностей и угроз национальным интересам в финансовой сфере, обеспечении монетарного суверенитета банковской системы и страны, эффективности и конкурентоспособности финансовой системы. Миссия системы обеспечения финансовой безопасности как структурного элемента системы финансовой безопасности заключается в мониторинге угроз и своевременном реагировании на выявленные угрозы.

Результаты и обсуждение

Бюджет держит финансовую стабильность, но при экономической стагнации. Спада нет, но рост экономики около 1%. Для выполнения социальных обязательств нам нужен рост хотя бы на 2,5%.

Стабильная ситуация с внешним долгом, несмотря на санкции, свидетельствует только о том, что Россия должна ориентироваться на внутренний рынок и внутренние финансовые ресурсы, гарантирующие ей финансовую стабильность, а также на резервы, которые быстро

увеличиваются, в том числе и в металлическом золоте.

На долгосрочную перспективу Российской Федерации будет стремиться выстраивать международные отношения на принципах международного права, обеспечения надежной и равной безопасности государств.

Россия в последний год стала менее независимой от Запада в области экономики, финансов и бизнеса. В условиях санкций государство должно минимизировать возможные риски извне, хотя это возможно не во всех сферах и потребует значительных усилий.

Другие важные меры российского правительства – защита от еще не введенных, но возможных в будущем санкций. Наиболее значимые шаги в этом направлении:

Разработка Системы передачи финансовых сообщений Банка России (СПФС), пригодной для замены межбанковской системы обмена информацией SWIFT. Слухи об отключении SWIFT появились еще в 2014 г., но ни к чему конкретному до сих пор не привели.

Принятие программы импортозамещения в сфере производства сельхозпродукции. В 2019-2020 гг. на поддержку сельхозпроизводителей, попавших в программу, планируется тратить по 241 млрд. руб. в год.

Локализация в России производств СПГ-оборудования и других высокотехнологичных компонентов нефтегазовой промышленности, поставки которых из-за рубежа невозможны из-за секторальных санкций.

Принятие законопроекта о суверенном интернете 1 мая 2019 г. Хотя трудно сказать, связано ли в действительности его принятие с внешними угрозами, или с сугубо внутриполитическими полицейскими соображениями. В целом, закон предполагает создание на территории России независимой инфраструктуры, способной обеспечить бесперебойное функционирование Сети в случае отключения страны от зарубежных корневых серверов.

Безусловно, меры властей РФ по преодолению санкций этим не ограничиваются и включают в себя много частных, закулисных переговоров и договоренностей с отдельными западными

политиками и компаниями. Примером комбинаций такого рода стала поставка газовых турбин Siemens на крымские электростанции (июль 2017 г.) – сделка, безусловно, запрещенная санкционным режимом, но тем не менее состоявшаяся с использованием цепочки подставных компаний.

На сегодняшний день можно быть уверенными только в одном: санкции не исчезнут в однажды, а будут реальностью мировой политики и экономики еще не один год. Российская Федерация показала высокую способность адаптироваться к существованию в новых условиях, но развитие страны ограничительные меры серьезно тормозят. Новый виток санкций в 2020 году и обострение ситуации в экономике, а затем и политике страны, исключать нельзя до сих пор.

Заключение

Таким образом, рассмотрев и изучив современные экономические реалии, мы пришли к следующим обобщениям.

Под финансовой безопасностью государства следует понимать надежную и защищенную финансовую систему страны от внутренних и внешних факторов, которые препятствуют эффективному использованию финансовых ресурсов в интересах государства. При этом, обеспечение финансовой безопасности государства должно базироваться на механизме, который составляет систему комплексных, широкомасштабных государственно-политических решений и произведенных направлений деятельности с использованием качественных финансовых инструментов по обеспечению стабильности и эффективности финансовой системы, защиты ключевых интересов государства (регионов, граждан, предпринимательских структур, учреждений, организаций) в сфере национальных и международных финансов, способности страны реализовывать собственную финансовую политику и наращивать финансовый потенциал, полноценно выполнять задачи и функции в современных условиях усиления финансовой глобализации и столкновения национальных интересов и определять механизм и пути функционирования национальной финансовой системы.

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ОЦЕНКА ФИНАНСИРОВАНИЯ ПРОЕКТОВ ЦИФРОВОЙ ЭКОНОМИКИ В РЕСПУБЛИКЕ КАЗАХСТАН

Аннотация. Целью исследования является оценка финансирования проектов цифровой экономики, которая является приоритетной для Республики Казахстан в современных условиях. Государственные программы информатизации и цифровизации осуществляются на протяжении последних лет, так как развитие информационных и цифровых технологий оказывает существенное влияние на конкурентоспособность страны. Цифровое пространство охватывает государства ближнего и дальнего зарубежья, в том числе сопредельные страны, которые взаимодействуют с Казахстаном, вследствие чего происходит взаимное обогащение экономик. Страны СНГ, объединенные в Евразийский экономический союз (ЕАЭС), имеют не только общие границы, но также экономические и научно-технические интересы, в том числе на земле, под землей и в космосе. Все вышесказанное определяет актуальность темы исследования, которое рассматривает возможности и необходимость финансирования пилотных проектов, связанных с цифровизацией. Научная значимость исследования обоснована исследованием теории и практики проектной деятельности, особенно в области цифровой экономики. Практическая значимость исследования обоснована возможностью использования материалов исследования в экспертной оценке проектов, представляемых к финансированию международными, государственными и корпоративными фондами. Исследование осуществлялось в рамках доступной информации международных, государственных и общественных организаций, а также научно-практических публикаций в ведущих изданиях периодической печати и интернете. Исследование проводилось с использованием аналитических, сравнительных и оценочных методов, на основе статистических данных, по которым были сделаны соответствующие выводы и предложены рекомендации.

Ключевые слова: оценка, проект, финансирование, цифровизация, экономика.

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Evaluation of financing of digital economy projects in the Republic of Kazakhstan

Абстракт. The aim of the study is to assess the financing of digital economy projects, which is a priority for the Republic of Kazakhstan in modern conditions. State programs of informatization and digitalization are carried out over the past years, since the development of information and digital technologies has a significant impact on the competitiveness of the country. Digital space covers the countries of near and far abroad, including neighboring countries that interact with Kazakhstan, as a result of which mutual economies are enriched. The CIS countries united in the Eurasian Economic Union (EAEU) have not only common borders, but also economic, scientific and technical interests, including on the ground, underground and in space. All of the above determines the relevance of the research topic, which considers the possibilities and the need for funding pilot projects related to digitalization. The scientific significance of the study is based on the study of the theory and practice of project activities, especially in the field of the digital economy. The practical significance of the study is justified by the possibility of using research materials in the expert evaluation of projects submitted for financing by international, state and corporate funds. The research was carried out within the framework of accessible information of international, state and public organizations, as well as scientific and practical publications of those leading in the periodical press and the Internet. The study was conducted using analytical, comparative and evaluation methods, based on statistical data, on which relevant conclusions were drawn and recommendations were made.

Key words: evaluation, project, financing, digitalization, economics.

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**Қазақстан Республикасындағы
цифрлық экономика жобаларын қаржыландыруды бағалау**

Андратпа. Зерттеудің мақсаты – қазіргі жағдайда Қазақстан Республикасы үшін басымдық болып табылатын цифрлық экономика жобаларын қаржыландыруды бағалау. Ақпараттандыру және цифрландырудың мемлекеттік бағдарламалары соңғы жылдары жүзеге асырылуда, өйткені ақпараттық және сандық технологиялардың дамуы елдің бәсекеге қабілеттілігіне айтарлықтай өсер етеді. Цифрлық кеңістік жақын және алыс шетел елдерін, соның ішінде Қазақстанмен өзара әрекеттесетін көршілес елдерді қамтиды, нәтижесінде өзара экономика байытылады. Еуразиялық экономикалық одақта (ЕАЭО) кіретін ТМД елдері ортақ шекараларға ғана емес, сонымен бірге жердегі, жер астындағы және ғарыштағы экономикалық, ғылыми және техникалық мұдделерге ие. Жоғарыда айтылғандардың бәрі цифрландыру бойынша пилоттық жобаларды қаржыландыру қажеттілігі мен қажеттілігін қарастыратын зерттеу тақырыбының өзектілігін анықтайды. Зерттеудің ғылыми маңыздылығы, өсіреле цифрлық экономика саласындағы жобалық іс-әрекеттің теориясы мен практикасын зерттеуге негізделген. Зерттеудің практикалық маңыздылығы халықаралық, мемлекеттік және корпоративтік қорлар қаржыландыруға ұсынылаған жобаларды сараптамалық бағалауда зерттеу материалдарын пайдалану мүмкіндігімен негізделген. Зерттеу халықаралық, мемлекеттік және қоғамдық үйімдердің қол жетімді ақпараты, сонымен қатар мерзімді баспасөзде және Интернетте жетекшілік ететіндердің ғылыми және практикалық басылымдары аясында жүргізілді. Зерттеу статистикалық мәліметтер негізінде аналитикалық, салыстырмалы және бағалау әдістерін қолдана отырып жүргізілді, олар бойынша тиісті қорытындылар жасалды және ұсыныстар жасалды.

Түйін сөздер: бағалау, жобалар, қаржыландыру, цифrlау, экономика.

Введение

Целью исследования является анализ и оценка финансирования проектов цифровой экономики в Республике Казахстан в условиях информатизации и цифровизации. Для проведения идей цифровизации и информатизации утверждаются государственные программы, так как развитие информационных и цифровых технологий оказывает существенное влияние на конкурентоспособность страны и благосостояние населения. Цифровое пространство охватывает государства ближнего и дальнего зарубежья, вследствие чего происходит взаимный обмен знаниями и технологиями.

Актуальность темы исследования обусловлена возможностями и необходимостью финансирования проектов, связанных с цифровизацией и информатизацией страны.

Объектом исследования являются проекты цифровой экономики Казахстана, финансируемые из различных источников.

Предметом исследования является оценка качества финансируемых проектов, направленных на создание цифровой экономики и определение степени их влияния на повышение конкурентоспособности страны.

Научная значимость исследования заключается в теоретическом обосновании финансиро-

вания проектов по цифровизации и их влиянии на развитие экономики.

Практическая значимость исследования заключается в определении приоритетов при осуществлении отбора и экспертной оценке проектов, представляемых к финансированию международными, государственными и корпоративными фондами.

Кабинетное исследование осуществлялось по материалам изобщедоступной информации международных, государственных и общественных организаций, а также научно-практических публикаций в ведущих изданиях в периодической печати и интернете.

Исследование проводилось с использованием аналитических, сравнительных и оценочных методов, на основе статистических данных, по которым были сделаны соответствующие выводы и предложены рекомендации.

Гипотеза исследования состоит в предположении, что финансирование проектов по цифровизации и информатизации может оказать влияние на социально-экономическое развитие страны и повысить ее конкурентоспособность.

Обзор литературы

Цифровизация и информатизация экономики и общества являются признаками современно-

сти, так начали развиваться в XX веке с появлением первых криптографов и электронно-вычислительные машины. Понятие экономики имеет более глубокие корни, так как появилось при переходе человечества к товарно-денежным отношениям, точную дату которых сложно определить.

Основными учеными, теоретиками и практиками экономики как науки, можно назвать А.Смита, Д. Рикардо, К. Маркса, Ф. Энгельса, Дж.М. Кейнса, Ф. Хайека, Л. Мизеса, Й. Шумпетера, Дж.Е. Стиглица и других зарубежных ученых, которые исследовали природу капитализма, а затем рыночной экономики (Шумпетер, 2011: 15-400).

Тема исследования затрагивает различные отрасли знания и экономические дисциплины, в числе которых оценка, финансирование, цифровизация и экономика Республики Казахстан, определения которым давали различные авторы.

История формирования современного института оценки началась в 1950-е годы, когда ООН и его специализированные учреждения стали проводить оценку проектов, финансируемых международными организациями. Целью оценки являлось решение о пролонгации или закрытии проекта, а не установление ценности работы (UNISEF, 2006: 7).

В 1975 году было опубликовано первое «Руководство по проведению оценочных исследований», и с этого времени оценка стала официальной деятельностью.

Оценка используется во всем мире при определении степени влияния и качества работы для целей контроля при создании новых знаний вследствие их апробации международными институтами. Современный уровень теории и методологии оценки можно классифицировать по различным признакам, в том числе по субъектам, объектам, предмету и срокам проведения (Development Assistance Committee (DAC), 2004)

Руководство по мониторингу и оценке проектов, программ, политик, разработанное ПРООН, предполагает, что оценку следует проводить на этапе разработки проекта, затем на этапе реализации проекта и после завершения проекта (Официальный интернет-ресурс ПРООН, 2002).

Окончательную оценку можно проводить сразу по завершении проекта или через 3–7 лет после окончания для установления реального влияния проекта на последующую деятельность. При этом успешными могут считаться проекты, в результате которых поставленные цели достигнуты, а не те, которые своевременно завер-

шены и выполнены качественно в пределах объема финансирования (YanXue, 2013: 3).

Оценка характеризуется глубиной анализа большей, чем при мониторинге или аудите, так как ориентирована на последующее воздействие проекта на экономику (Gertler, 2016: 3), что подтверждается в пересмотренном руководстве ЮНИСЕФ (UNISEF, 2013: 6).

Финансирование проектов осуществляется за счет денежных, материальных и нематериальных средств участников проекта или из других источников, при котором оценка затрат и доходов производится с учётом распределения риска между участниками проекта. Финансирование производится, как правило, на безвозвратной или безвозмездной основе, так как не все проекты предполагают получение выгод или дохода.

Государственное финансирование осуществляют уполномоченные органы на основе выделяемых на эти цели средств из бюджета в соответствии с приоритетами государственной экономической политики. Другими источниками финансирования могут стать различные международные, общественные или частные фонды, средства корпораций и союзов стран или инвесторов. Существующее понятие «проектное финансирование» предполагает привлечение долгосрочного финансирования для крупных проектов, основанного на займе под будущие денежные потоки (Йескомб, 2015: 14).

Финансирование проекта представляет собой сложное организационно-финансовое мероприятие по нахождению источников финансирования и контролю исполнения проекта его участниками или инвесторами. В последние годы стали развиваться новые виды финансирования, в числе которых можно выделить краундфандинг или народное финансирование (Howe, 2012: 237). Существует несколько разновидностей такого финансирования, в том числе краудсорсинг, краудинвестинг, kickstarter и другие.

В современных условиях конкурентоспособность страны определяет степень инновационности, информатизации и цифровизации. Цифровая экономика характеризуется сокращением издержек, снижением стоимости транзакций, интеграцией и облегчением коммуникаций, большей доступностью услуг и товаров.

По оценкам Всемирного банка доля цифровой экономики в ВВП развитых стран с 2010 по 2016 годы в среднем выросла с 4,3 до 5,5%, а в развивающихся странах – с 3,6% до 4,9% (World Bank, 2016: 21).

Развитие цифровизации экономики датируется концом XX века и началом XXI века с появлением беспроводной мобильной связи, интернета, развитием компьютерной техники и информационных технологий (Shpak, 2017: 98-100). Все это позволило развивать компьютерные и мобильные приложения, новые виды финансово-экономических и прочих услуг. С утверждением государственных программ цифровизации, информатизации и инновационной деятельности стали появляться проекты по развитию данных направлений.

Финансирование проектов требует последующего контроля не только в части освоения средств, но и для получения качественных результатов научно-практических исследований, которые развиваются как стартапы или фундаментальные работы.

Методология

Цель исследования определена как оценка финансирования проектов цифровой экономики в Республике Казахстан, вследствие чего основными методами исследования являются сбор информации аналитические, статистические и сравнительные методы, а также методы оценки, на базе которых сделаны соответствующие выводы и даны рекомендации.

В исследовании приведены данные по проведению экспертных оценок, включая дельфи-метод, факторный анализ, бенчмаркинг и другие традиционные методы анализа и оценки.

Гипотеза исследования, заключающаяся в предположении, что финансирование проектов по цифровизации и информатизации оказывает влияние на социально-экономическое развитие страны и повышение ее конкурентоспособности, имеет логическое развитие в данной статье.

Проведение исследования осуществлялось по информации, полученной из различных источников, в числе которых научно-теоретические труды, официальные документы междуна-

родных и государственных организаций. Кроме этого, использовались научно-практические материалы, публикации в периодических изданий и из интернета.

Основные выводы и результаты исследования представлены в заключении, в котором даны соответствующие рекомендации.

Результаты и обсуждение

В Республике Казахстан проводится целенаправленная работа по внедрению новых технологий и техники, которые должны способствовать усилению конкурентоспособности страны и развитию экономики. С 2017 года начала действовать Государственная программа «Цифровой Казахстан» на 2017-2020 годы (www.zerde.gov.kz).

Основанием для принятия данной программы явились Указ Президента Республики Казахстан от 1 февраля 2010 года № 922 «О Стратегическом плане развития Республики Казахстан до 2020 года» и Государственная программа «Информационный Казахстан-2020», утвержденная в 2013 году.

Основной целью программы является развитие цифровой экосистемы, в соответствии с которой были поставлены задачи перехода на проактивное государство, развитие креативного общества, реализация цифрового «Шелкового пути» и цифровые преобразования в отраслях экономики.

Источниками финансирования являются государственный бюджет, займы финансовых организаций и институтов развития, средства квазигосударственного сектора и частные инвестиции. Расходы на реализацию программы запланированы в сумме 384,220 млрд. тенге на период 2017-2020 годы, однако сумма скорректированная в соответствии с бюджетом составила 150,0 млрд.тенге с соответствующей разбивкой по годам, к тому же добавлен 2021 год (таблица 1).

Таблица 1 – Расходы на реализацию Программы в 2017–2020 годы, тыс. тенге

Годы	Сумма по программе	Сумма скорректированная
2017	25216594,67	12000000
2018	102188928,31	57300000
2019	94856663,59	25700000
2020	161958215,66	37900000
2021		17800000
Всего	384220402,23	150000000

Примечание – составлено автором на основе источника www.zerde.gov.kz

Основные показатели по выполнению государственной программы по информатизации в Казахстане, рассчитанной на период до 2020 года, представлены в таблице 2.

Результаты выполнения государственной программы по информатизации в Казахстане, рассчитанной на период 2015-2019 годы, представлены в таблице 3.

Таблица 2 – Государственная программа «Информационный Казахстан – 2020»

Показатель	Ед. изм	2013	2014	2015	2016	2017
Уровень активности в области инноваций	%	8,0	8,1	8,1	9,3	9,6
Количество собственных данных центров	ед.	-	33	34	12	18
Количество собственных серверных комнат	ед.	-	2302	2618	2327	2442
Количество серверного оборудования государственных органов	ед.	-	23868	20261	6227	7016
Примечание – составлено автором на основе источника astat.gov.kz						

Таблица 3 – Результаты государственной программы «Информационный Казахстан – 2020» за 2013-2017 годы

Показатель	2013	2014	2015	2016	2017
Доля домашних хозяйств, имеющих фиксированную телефонную линию	87,7	83,6	77,7	76,5	61,5
Доля домашних хозяйств, имеющих мобильные телефоны	96,8	98,4	96,5	96,8	98,0
Доля домашних хозяйств, имеющих доступ к сети Интернет (с учетом доступа через мобильной телефон)	86,7	86,9	82,2	84,4	84,9
Доля пользователей сети Интернет в возрасте 6-74 лет (с учетом пользователей мобильного Интернета)	63,3	63,9	72,9	76,8	78,8
Уровень компьютерной грамотности населения в возрасте 6-74 лет	63,2	64,1	74,2	76,2	78,2
Уровень компьютерной грамотности работников экстренных служб	30,6	45,8	49,4	44,6	47,5
Уровень компьютерной грамотности работников в сфере ЖКХ	26,4	36,3	38,8	35,3	35,9
Доля сектора ИКТ в ВВП	3,5	3,8	3,9	3,5	3,6
Количество занятых дистанционно на 100 работающих	0,68	0,10	0,12	0,07	0,15
Уровень компьютерной грамотности медицинских работников	37,9	50,0	54,0	53,0	57,5
Количество компьютеров на 100 медицинских работников	19,2	21,1	22,1	24,7	27,9
Доля работников промышленных предприятий, прошедших обучение по повышению уровня компьютерной грамотности	1,4	1,8	1,21	2,7	2,7
Увеличение затрат на ИКТ в объеме произведенной продукции промышленными предприятиями, на % (относительно 2012 года)	-	5,6	233,3	66,7	61,1
Уровень охвата ШПД к сети Интернет на предприятиях транспортной инфраструктуры	51,2	41,1	43,5	41,4	43,1
Доля предприятий АПК, имеющих доступ к сети Интернет	27,3	26,4	27,1	35,5	31,4
Уровень компьютерной грамотности работников АПК	14,6	18,6	22,2	16,9	20,3
Уровень компьютерной грамотности работников сферы экологии и гидрометеорологии	31,8	59,6	71,4	72,8	80,6
Доля объектов сферы физической культуры и спорта, подключенных к сети Интернет	77,9	79,5	76,3	96,1	87,7
Доля объектов туристской инфраструктуры (гостиниц, баз отдыха и туристских фирм), подключенных к сети Интернет	70,9	57,7	57,4	83,1	76,9
Доля объектов туристской инфраструктуры (гостиниц, баз отдыха и туристских фирм), интегрированных в международные системы интернет-бронирования	10,7	30,3	17,9	20,4	22,8

Продолжение таблицы 3

Показатель	2013	2014	2015	2016	2017
Доля объектов туристской инфраструктуры, имеющих собственный интернет-портал	-	26,1	20,3	39,4	40,1
Доля объектов туристской инфраструктуры, автоматизировавших внутренние бизнес-процессы	1,6	20,5	14,6	11,7	11,6
Доля затрат на инновации в сфере ИКТ	0,15	0,14	0,08	0,01	0,03
Уровень активности в области инноваций сектора ИКТ в стране	16,7	16,9	17,3	14,5	12,6
Доля инновационной продукции предприятий промышленности в объеме отгруженной продукции предприятиями промышленности	2,89	2,61	1,80	1,81	3,16
Количество отечественных художественных фильмов в прокате, в % к общему количеству показанных фильмов	12,7	12,6	22,2	22,1	16,7
Доля электронной торговли в общем объеме розничной торговли	0,5	0,7	0,8	1,0	1,2
Доля электронной торговли в общем объеме оптовой торговли	0,4	0,3	0,4	0,4	0,4
Примечание – составлено автором на основе источника astat.kz					

Согласно данным таблиц 2 и 3 можно сделать вывод, что снижается стационарная телефония, при этом наблюдается рост мобильной связи. Повышается компьютерная грамотность работников туризма, промышленности, агропромышленного комплекса и других сфер деятельности, а также компьютеризация предприятий. Увеличивается доля электронной торговли в общем объеме розничной торговли, при стабильных показателях доли электронной торговли в общем объеме оптовой торговли.

В то же время снижается доля затрат на инновации в сфере информационно-коммуникационных технологий (ИКТ), что говорит об уменьшении финансирования проектов и вложений в НИОКР.

По итогам 2017-2018 годов показатели в сфере «Технологии и инновации» затраты на НИОКР в 2017 году составили 0,13% к ВВП и 0,12% в 2018 году (таблица 4).

Финансирование проектов цифровой экономики предполагает следующие направления ([www.zerde.gov.kz](#)):

«Smart City» для городов Республики Казахстан;

Применение цифровых технологий в здравоохранении;

Применение цифровых технологий в образовании;

Развитие цифрового бизнеса;

Финансовые технологии;

Электронная торговля и другие.

Таблица 4 – Стратегическая карта ключевых индикаторов

№	Индикатор	2017	2018	Периодичность, сроки формирования показателя, ответственный ГО
	Качественный рост экономики			
	Сфера: Технологии и инновации			
1	Внутренние затраты на НИОКР в % к ВВП Республика Казахстан	0,13	0,12	ежегодно 30 мая п.о.п.
Примечание – составлено автором на основе источника astat.kz				

В крупных городах Казахстана реализуются программы «Smart City», разрабатываемые в соответствии с Законом Республики Казахстан от 24 ноября 2015 года «Об информатизации». Проблема состоит в недостаточном объеме под-

держки инновационных стартапов и индивидуальных проектов в рамках программ «Smart City». Финансирование и помощь в реализации программы «Smart City» оказывает Британское посольство и консульство в Алматы, а также

другие общественные организации, кроме акимата, поэтому все проекты рассматриваются с участием спонсоров. Казахстанским институтом стандартизации и сертификации, совместно с заинтересованными сторонами, разрабатываются стандарты по «Smart City». Для этих целей планируется комплекс мер с привлечением инновационных разработок и кадрового потенциала. При этом, авторам проектов следует иметь ввиду, что отбор и оценка производятся по определенным критериям, в том числе, адекватный объем финансирования, участие иностранных специалистов, влияние результата проекта на будущее развитие экономики, политики и так далее.

Применение цифровых технологий в здравоохранении началось также сравнительно давно, но использовалось, в первую очередь, в частных коммерческих клиниках. Долгое время государственные поликлиники и больницы получали финансирование и материальное обеспечение по остаточному принципу. Лишь в последние годы, после реорганизации системы здравоохранения, лечебные учреждения стали получать новое оборудование и перешли на цифровизацию. Особенно актуальна автоматизация работ администрации в организациях здравоохранения, так как это даст возможность сократить персонал и общепроизводственные расходы. Такая возможность появилась после внедрения программы «Damumed», при которой осуществляется онлайн-регистрация, электронный документооборот, профилактическое обследование, высвобожден персонал и так далее.

Также, внедрение инноваций в медицине позволяет улучшить качество лечения и осуществлять профилактику заболеваний при помощи качественной инновационной диагностики при прохождении скрининга. Электронный паспорт здоровья дает возможность отслеживать изменения в здоровье пациентов и проводить своевременную диагностику.

Финансирование проектов в области здравоохранения осуществляется по программам Министерства здравоохранения, Министерства образования и науки, Международных фондов и организаций. Оценка проектов осуществляется с учетом приоритетов представленных организаций и при соблюдении требований к их целям и стратегии. Актуальными остаются проекты цифровизации для аналитических прогнозов, раннего выявления и предупреждения заболеваний, ведения здорового образа жизни и занятий спортом. Также важным аспектом проектов по циф-

ровизации здравоохранения является создание единой архитектуры здравоохранения страны, мониторинга здоровья населения и сопутствующей пациента инфраструктуры. Реализация программ цифровизации осуществляется в рамках Государственной программы развития здравоохранения Республики Казахстан «Денсаулық», утвержденной Указом Президента Республики Казахстан от 15 января 2016 года № 176 на 2016 – 2019 годы (adilet.zan.kz).

Применение цифровых технологий в образовании начато с появлением компьютерной техники и информационных технологий, так как образование и наука по праву считаются основными локомотивами развития страны. Как правило, основная масса проектов исходит из университетов и научно-исследовательских институтов, хотя анализ и экспертиза научных проектов последних лет показывают недостаточно высокий уровень НИОКР. Это объясняется разочарованием многих ученых в объективности и непредвзятости министерств и уполномоченных органов при распределении финансирования и грантов. Многие инновационные проекты казахстанские ученые реализуют заграницей, так как не находят поддержки в Министерстве образования и науки. К тому же, иностранные специалисты получают более высокую оплату по сравнению с местными кадрами, вследствие чего казахстанские ученые стремятся трудоустроиться в зарубежных научных центрах и университетах с более высокой оплатой труда.

Развитие цифрового бизнеса в стране предполагает открытие ИТ-компаний или ИП для производства программных продуктов, а также осуществления электронной торговли. Такие проекты могут финансироваться государством или коммерческими структурами, которые проводят конкурсы ИТ-проектов. Основная цель таких проектов заключается в восполнении дефицита продуктов в стране и обеспечение занятости. Преимущество таких стартапов в сокращении издержек, мобильности, гибкости и повышении производительности труда.

Финансовые технологии, которые используются в Казахстане, не отвечают современным требованиям, так как по оценке, данной финансовому сектору на Всемирном экономическом форуме в 2015-2016 годах, финансовый рынок находится на 91 месте, в то время как общий рейтинг конкурентоспособности показывает 42 место (<http://reports.weforum.org/>). Основные приоритеты в области цифровизации финансового сектора представляют собой управление

данными и платежная экосистема. Управление данными должно способствовать равный доступ участникам процесса, обеспечение защиты информации, повышение эффективности бизнеса и снижение процентов по кредитам. Экосистема платежей предусматривает увеличение безналичного оборота денег, электронный документооборот, объединение банкоматов, оценку риска, P2P кредитование и мобильный кошелек с различными возможностями оплаты и перевода денег.

Цифровизация финансового сектора осуществляется на основе Стратегии развития информационных технологий в Национальном Банке Республики Казахстан на 2015 – 2020 годы, утвержденной Советом Директоров от 20 июня 2016 года.

Также немаловажное значение имеет кибербезопасность финансового сектора Республики Казахстан, стратегия по которой на 2018-2022 годы утверждена Постановлением Правления Национального Банка Республики Казахстан от 29 октября 2018 года № 281 на основании Концепции кибербезопасности («Киберщит Казахстан»), утвержденной постановлением Правительства Республики Казахстан от 30 июня 2017 года № 407.

Помимо кибератак существует угроза катастроф, вследствие чего данные хранятся в удаленном месте и должны быть доступны в случае чрезвычайных ситуаций. Такие места или магистрали для передачи данных может предоставить Казахстан, который располагает обширными территориями, не подверженными катастрофам. Так, по данным Экономической и социальной комиссии для Азии и Тихого океана ООН (ESCAP), Казахстан является лидером по пропускной способности международных каналов связи в регионе. Доля Казахстана в наземном транзите Азия-Европа составляет на сегодняшний момент 10%, а трафик достигает 75 Гбит/с (<https://total.kz/ru/news>).

Электронная торговля в Казахстане регулируется и осуществляется в соответствии с Правилами осуществления электронной торговли, утвержденными приказом Министерства национальной экономики Республики Казахстан от 25 ноября 2015 года №720. Так как рынок электронной торговли в стране недостаточно развит, есть возможности для открытия и развития такого сервиса, так электронная торговля очень популярна в мире, вследствие малых издержек и отсутствия больших помещений.

Для реализации программы цифровизации промышленности в Казахстане планируется

создание Центра компетенций по цифровой промышленности совместно с транснациональными компаниями для внедрения пилотных проектов. Также в планах предусмотрена реализация 10 проектов автоматизации производства с внедрением и модернизацией системы датчиков на предприятиях добывающей промышленности. В дальнейшем планируется развитие электронной торговли, финансовых технологий, цифровизация здравоохранения и образования, а также строительство «Smart-городов» (total.kz).

Перспективными направлениями для разработки проектов цифровой экономики являются «Цифровой шелковый путь», «Креативное общество», «цифровые отрасли», «Проактивное правительство e-gov», а также технологии по работе с BigDates (большими данными), блокчейн, искусственный интеллект, робототехника, сенсорная техника и другие (www.zerde.gov.kz). На сегодняшний день программа «Цифровой Казахстан» включает 23 прорывных проекта в сфере информационно-коммуникационных технологий (ИКТ), которые должны стать основой процесса цифровизации.

Для целей сокращения расходов и снижения бюрократии перспективным является внедрение системы «E-freight», которая представляет собой международный стандарт электронного документооборота и безбумажного оформления сопроводительных документов при осуществлении грузовых авиаперевозок. Данный стандарт рекомендован Международной ассоциацией воздушного транспорта (IATA) и используется крупными авиаперевозчиками, грузовыми агентствами, организациями наземного обслуживания, аэропортами, таможенными органами, органами фито- и ветеринарной санитарии по всему миру (IATA, International Air Transport Association).

Казахстан находится на 9 месте в мире по территории, поэтому остро стоит вопрос грузоперевозок и перемещения пассажиров, в связи с чем должна быть налажена автоматизированная система мониторинга транспортно-логистической системы. Наиболее приемлемыми для адаптации в стране являются стандарты Интеллектуальной транспортной системы (ИТС), которые стали использоваться в США в период 2002-2012 годы. Данная национальная интеллектуальная транспортная система подходит для Казахстана, так как в США имеются схожие природно-климатические зоны, горы, степи, каньоны и другие местности.

Обширная территория и наличие различных

достопримечательностей дает возможность для развития туризма, гостиничного и ресторанных бизнеса, смежных услуг и образования. Данное направление также требует особого внимания к цифровизации и информатизации для развития не только внутреннего и выездного, но и въездного туризма.

Цифровизация и информатизация актуальна

также для сельского хозяйства, так как Казахстан развивает сельскохозяйственные кластеры практически во всех регионах страны.

На основе вышеизложенного, можно представить наиболее приоритетные отрасли, в которых начат процесс цифровизации в Казахстане.

В соответствии с представленной схемой

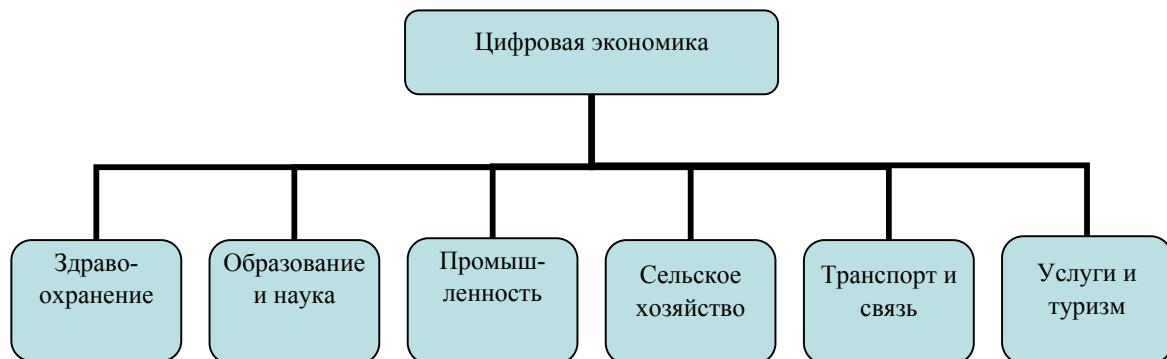


Рисунок 1 – Приоритетные отрасли цифровой экономики в Казахстане

Примечание – составлено автором

приоритетных отраслей цифровой экономики, наравне в промышленным и сельскохозяйственным производством, необходима цифровизация социальной сферы, образования, здравоохранения, туризма и сферы услуг. Для этих целей возможно усиление направления подготовки соответствующих специалистов и менеджмента, способного креативно организовать процесс цифровизации и информатизации в этих отраслях деятельности. Необходима соответствующая подготовка науки и образования, для подготовки и переподготовки необходимых кадров.

Основной задачей управления и организации цифровизации сферы является развитие государственно-частного партнерства (ГЧП) для привлечения инвестиций в цифровую трансформацию. Для этого также необходимо, чтобы все имели доступ в интернет, который является инфраструктурной основой цифровой экономики. Также необходимо уделять внимание подготовке и переподготовке высококвалифицированных кадров в области ИТ, для чего следует пересмотреть политику в образовательной сфере. Образовательная сфера является фундаментом науки и технологий, которые должны развиваться в соответствии с изменениями, происходящими в мире.

Оценка проектов цифровой экономики производится экспертами в несколько этапов, которые ранжируют проекты по степени актуальности, научной и практической значимости, качественному составу участников с привлечением иностранных специалистов, наличию материально-технической базы и другим показателям.

Критерии отбора и пролонгации проекта также включают в себя коммерческий эффект от внедрения проекта, но только для прикладных исследований, а не для фундаментальных работ, эффект от которых зачастую непредсказуем.

Заключение

Цель исследования сформулирована как анализ и оценка финансирования проектов цифровой экономики в Республике Казахстан в условиях информатизации и цифровизации, для чего были рассмотрены различные аспекты решения проблем финансирования и отбора проектов. Качественный отбор и мониторинг проектов по цифровой экономике может оказать воздействие на повышение конкурентоспособности страны и развитие экономики.

В современных условиях невозможно представить работу не только международных и государственных организаций, но и домашних

хозяйств и индивидуумов без интернета и информационных технологий.

Таким образом, наиболее актуальным вопросом является цифровизация всех отраслей деятельности, для чего требуется подготовка и переподготовка соответствующих специалистов и менеджмента. Для этого следует расширить диапазон соответствующих и актуальных дисциплин и направлений исследований в науке и образовании, так как эти сферы деятельности должны быть флагманом в построении цифрового общества.

Использование результатов проведенного исследования имеет широкий спектр действия,

так как затрагивает все отрасли экономики, социально-политической деятельности и жизни населения страны и всего мирового сообщества. Выполнение государственной задачи по информатизации и цифровизации страны является настоящей необходимостью для всего социума для повышения благосостояния общества.

Гипотеза исследования, состоявшая в предположении того, что финансирование проектов по цифровизации и информатизации может оказать влияние на социально-экономическое развитие страны и повысить ее конкурентоспособность, находит подтверждение в данной работе, однако требует дальнейшего рассмотрения.

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2-бөлім

**БІЛІМ БЕРУ МЕН УНИВЕРСИТЕТТЕРДІҢ
ҚАЗІРГІ КЕЗДЕГІ РӨЛІ**

Section 2

**THE ROLE OF EDUCATION AND
UNIVERSITIES IN MODERN CONDITIONS**

Раздел 2

**РОЛЬ ОБРАЗОВАНИЯ И ВУЗОВ
В СОВРЕМЕННЫХ УСЛОВИЯХ**

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THE ISSUE OF MANAGING THE INTERNATIONALIZATION OF THE UNIVERSITY

Abstract. The scale of internationalization of higher education in the CIS countries, along with the impact of this process on the socio-economic and cultural development of the regions, once again demonstrates the need for its close study, analysis of the experience of other countries, evaluation of the results of previous research in this area. Thus, this paper attempts to characterize the main trends in the development of research on the internationalization of higher education by comparing the competencies of the CIS countries with the EU countries and some Asian countries. The article also discusses the phenomenon of multidimensional integration processes in higher education, analyzes the main facts that affect the process of internationalization.

The aim of the study is a theoretical and methodological analysis of the constructive experience of internationalization of the educational process in EU and CIS universities.

Research methods: structural analysis and synthesis development of foreign researchers allowed to isolate in the complex phenomenon of internationalization of universities the basic elements that have a decisive influence on the nature of the object of study; methods of comparative analysis, that allowed to establish the similarities and differences between the processes of internationalization of universities in advanced foreign countries and Kazakhstan, as well as an integrated approach, allowing to consider the phenomenon of internationalization of universities in its relationships and dependencies with other processes and phenomena in the context of globalization.

The results of the study can be defined within the conduct of case studies of internationalization of European universities and the findings of prominent researchers, and, on this basis, to identify the need of implementation of internationalization processes actually contributing to the development of the modern University, improving its competitiveness on the internal and external market of educational services and research.

Key words: internationalization of education, globalization, international activities, transnational education, the quality of the educational process, integration into the European and world educational space.

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ЖОО интернационализациясын басқару туралы

Андратпа. ТМД елдеріндегі жоғары білім беруді интернационалдандыру осы үдерістің өнірлердің әлеуметтік-экономикалық және мәдени дамуына ықпалымен қатар, кезекті рет оны жіті зерделеу, басқа елдердің тәжірибесіне талдау жүргізу, осы салада бұрын жүргізілген зерттеулердің нәтижелерін бағалау қажеттігін көрсетеді. Осылайша, аталған жұмыста ТМД елдерінің құзыреттілігін Еуроодак елдерімен және Азияның кейбір елдерімен салыстыру арқылы жоғары білім беруді интернационалдандыру зерттеулерінің дамуындағы негізгі үрдістерді сипаттауга әрекет жасалды. Мақалада жоғары білім беру саласындағы интеграциялық үдерістердің көп аспекттілік құбылысы қарастырылады, интернационалдандыру үдерісіне әсер ететін негізгі фактілер талданады.

Зерттеудің мақсаты ЕО және ТМД университеттерінде білім беру үдерісін интернационалдандырудың конструктивтік тәжірибесін теориялық-әдіснамалық талдау болып табылады.

Зерттеу әдістері: шетелдік зерттеушілердің әзірлемелерін құрылымдық талдау және синтездеу, жоғары оқу орындарын интернационализациялаудың күрделі құбылысында зерттеу объектісінің мәніне шешуші әсер ететін негізгі элементтерді ажыратуға мүмкіндік берді; салыстырмалы талдау әдістері, алдыңғы қатарлы шет елдер мен Қазақстанда жоғары оқу

орындарын интернационалдандыру үрдістері арасындағы ұқсастықтар мен айырмашылықтарды анықтауға мүмкіндік берді, сондай-ақ жоғары оқу орындарын интернационалдандыру феноменін оның байланысында және жаһандану жағдайындағы басқа үдерістер мен құбылыстарға тәуелділікті қарастыруға мүмкіндік береді.

Зерттеу нәтижелері европалық жоғары оқу орындарын интернационалдандыру тәжірибесін, көрнекті шетелдік ғалым-зерттеушілердің жұмыстары мен қорытындыларын зерделеуде және осыған орай, қазіргі заманғы университетті дамытуға, білім беру қызметтері мен ғылыми зерттеулердің ішкі және сыртқы нарығында оның бәсекеге қабілеттілігін арттыруға нақты ықпал ететін интернационалдандыру процестерін енгізу қажеттілігін анықтауда айқындалуы мүмкін.

Түйін сөздер: білім беруді интернационалдандыру, жаһандану, халықаралық қызмет, білім беру үдерісінің сапасы, жалпыевропалық және әлемдік білім беру кеңістігіне кіргіу.

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К вопросу об управлении интернационализацией ВУЗа

Аннотация. Масштабы, которые принимает интернационализация высшего образования в странах СНГ, наравне с влиянием данного процесса на социально-экономическое и культурное развитие регионов, в очередной раз демонстрирует необходимость его пристального изучения, проведения анализа опыта других стран, оценки результатов ранее проведенных исследований в данной области. Таким образом, в данной работе предпринята попытка охарактеризовать основные тенденции в развитии исследований интернационализации высшего образования посредством сравнения компетенций стран СНГ со странами Евросоюза и некоторыми странами Азии. В статье также рассматривается явление многоаспектности интеграционных процессов в сфере высшего образования, анализируются основные факты, влияющие на процесс интернационализации.

Целью исследования является теоретико-методологический анализ конструктивного опыта интернационализации образовательного процесса в университетах ЕС и СНГ.

Методы исследования: структурный анализ и синтез разработок зарубежных исследователей, позволившие вычленить в сложном явлении интернационализации вузов основные элементы, оказывающие решающее влияние на сущность объекта исследования; методы сравнительного анализа, позволившие установить сходство и различие между процессами интернационализации вузов в передовых зарубежных странах и Казахстане, а также комплексный подход, позволивший рассмотреть феномен интернационализации вузов в его связи и зависимости с другими процессами и явлениями в условиях глобализации.

Результаты исследования могут быть определены в проведении изучения опыта интернационализации европейских вузов, работ и выводов видных зарубежных ученых-исследователей, и, исходя из этого, в выявлении необходимости внедрения процессов интернационализации, реально способствующих развитию современного университета, повышению его конкурентоспособности на внутреннем и внешнем рынке образовательных услуг и научных исследований.

Ключевые слова: интернационализация образования, глобализация, международная деятельность, качество образовательного процесса, интеграция в общеевропейское и мировое образовательное пространство.

Introduction

In the context of the rapidly increasing process of globalization and knowledge economy, higher education, implying its main function as a generator of knowledge and a means of its disseminating, is recognized as one of the main drivers of national development in both developed and developing countries. Concerning the functions of higher education, referring to the University and international aspects, it can be considered as both active and passive participant in the process of globalization. Considering

modern higher education through the lens of globalization, it is necessary to emphasize that the changes taking place in this area have significant consequences for higher education in terms of quality of education, access to it, diversity of education and funding. A separate, narrower topic is the impact of globalization on other aspects of education, such as research and the generation of their knowledge, the management of education, its reform, issues related to intellectual property and academic freedom.

Speaking about the impact of globalization on higher education, it is impossible not to accept the

fact of internationalization of higher education. These two terms are often mistakenly used one instead of the other. In this article, “globalization” is presented as a phenomenon that has an impact on higher education, and the internationalization of higher education-as one of the manifestations of the reaction of higher education to the opportunities and problems arising from globalization. Internationalization covers a wide range of issues such as curricula, teaching/learning, research, institutional research, inter-institutional agreements, student mobility/PPP, development cooperation and more (Knight, 2003).

Such developing aspects of the globalization of society as the increasing role of the market and the market economy, innovations in the field of ICT, the expansion of trade in educational services, act as catalysts for new phenomena in the field of higher education, including:

- emergence of new education providers such as multinational companies, corporate universities and media corporations;
- new forms of education provision, including distance, virtual and direct education, provided including by private companies;
- greater diversification of qualifications and education certificates;
- greater mobility of students, programs, projects that transcend national boundaries;
- emphasis on lifelong learning, which in turn leads to increased demand for post-secondary education;
- increase of private investment in services in the field of higher education(Zapryagayev, 2007).

Literature Review

The concept of “internationalization of higher education” first began to be used in scientific works in the early 1990s. Since that time, it began to replace such concepts as “international education”, “international cooperation”. The introduction of these terms into scientific circulation highlights the significant changes taking place in the system of higher education. The change of concepts shows the growing importance of the international aspect in the further development of higher education.

As early as 1992, Arum S. and Van de Water J. (1992) proposed to understand the internationalization of higher education as “numerous activities, programs and services that are carried out within the framework of international research, international educational exchanges and

international technical cooperation”. A somewhat different definition in 1994 was proposed by Knight (2003), which considers the internationalization of education as “the process of integrating (incorporating) international and intercultural aspects into the content of the teaching, scientific and service functions of institutions (education).” A little later, in 2003, she revised this definition, presenting it as “the process of integrating an interethnic, intercultural or global scale into the goals, functions and provision of post-secondary education”. These definitions are most often taken as a basis in various works of researchers of internationalization of HE.

In 2002 Soderqvist (2007) suggested to define internationalization of higher education as “the process of transition of national University as the leading international institution of higher education with access control system at the international level in all aspects of its activities with the aim of improving the quality of teaching and learning, as well as to achieve the desired level of competency.”

Today, among the existing approaches to the definition of the term “internationalization of higher education” there are four most common and typical:

- The activity approach within the framework of internationalization of higher education is considered through the application of such categories as the number of international students, student mobility, international double degrees (M. Harari, J. Mestenhauser, B. Ellingboe, C. Powell);
- Competency-based approach, implying a description of the internationalization of education in terms of the development of new knowledge, skills, attitudes and values in students, faculty and staff, at the same time draws attention to the improvement of the capabilities of the Institute in the field of teaching and research (R. Ayoubi, H. Massoud, G. Elkin, J. Farnsworth, A. Templer, S. McGowan, L. Potter, M. Van der Wende);
- A rationalistic approach that emphasizes the consideration of internationalization in terms of identifying goals and evaluating outcomes (H. De Wit, J. Knight);
- A process approach in which internationalization is defined as a process that aims to integrate international aspects into the teaching, research and service functions of an educational institution (H. De Wit, J. Knight).

Among these approaches, as noted by Chinese researchers Wanhu Ma and YunYue (2015), the most widely presented in the literature are activity and competence approaches that are used to study specific problems of internationalization of higher education. The difference lies in the application

of a reliable and reliable system of indicators that can be used as a tool or benchmark to study internationalization, which is the definition of their popularity.

Speaking about the increasing attention to the internationalization of higher education, it is necessary to note the work of Philip G. Altbach and Hans de Wit, who consider the formation of this phenomenon in a broad historical, political and ethno-cultural context. There is also a large number of works devoted to the history of the internationalization of higher education at the level of individual countries. Among them: S. Slaughter., L. Leslie, L. Glacier, L. Kenschaft, J. Carbone. G. Winston, W. Hoffa (on the internationalization of education in the United States), A. Yonezawa (on the internationalization of education in Japan), M. Asteris, R. Garrett (on the internationalization of higher education in the UK), G. Harmon (on the internationalization of higher education in Australia), etc.

The result of such an active interest in the process of internationalization of higher education was the differentiation of the subject area. Various forms of international cooperation in this area were identified, namely:

- Individual mobility: mobility of students or faculty for educational purposes;
- Mobility of educational programs and institutional mobility; formation of new international standards of educational programs;
- Integration of international dimension and educational standards into curricula;
- Institutional partnerships: building strategic educational alliances.

The researches of Bedenier et al. (2015). Altbach et al. (2007), L.K. Childress, J.L. Davies, A. Hamza, A. Gopaland some others are devoted to the consideration of these forms.

It is no accident that mobility of students and staff is in the first place in determining the subject areas of internationalization of the University, since it is one of the main aspects of this process, as well as one of the most important principles of globalization, which has covered all countries of the world. Table 1 shows the number of international students in different countries.

There may be observed a significant increase in cross-border mobility of students (as well as teachers, researchers and specialists), which is evidence that the topic of recognition of common or similar educational and professional qualifications is becoming one of the priorities in the agenda of international cooperation.

Table 1 – Increase in the number of international students in different countries in 2002-2019

Country	Number of foreign students	
	2002 (people)*	2019 (people)**
USA	582 996	740 482
Great Britain	229 500	427 686
France	195 000	239 344
Russia	95 960	230 000
Germany	206 141	350 000
Kazakhstan	about 1000	24 000

Sources: *Zapryagaev et al., 2007; ** UNESCO, OECD

Speaking about academic mobility in Kazakhstan, on the example of the Al-Farabi Kazakh National University, we can also trace the trend of active growth of this phenomenon. Academic mobility in the University dates back to the early 80's, when students from Cuba, Afghanistan, Laos, Vietnam began to study at the Faculty of Philosophy and Economics for mobility for 5 years, who received master's degrees upon completion of training. In parallel, students and faculty went abroad for language training for a semester or a year in Jordan, Tunisia, Egypt, China, Turkey. Of course, the current situation (which began to change after Kazakhstan joined the European higher education zone – joining the Bologna process) is radically different from the past.

The University began to actively move towards internationalization: it reached the 207th place in the international ranking QS Top Universities, moving more than 400 points over the past 5 years; it has created multilateral training programs with foreign universities, not only for exchange, but also double-diploma programs. The contingent of foreign students in Al-Farabi KazNU (which today more than 1000 people) are students from China, Russia, Spain, USA, Iran, Tajikistan, Kyrgyzstan.

Analyzing the implementation of the principles of the Bologna process in universities of the Republic of Kazakhstan, we can note the following ethnic composition of students in 2018 (table 2).

The data of table 2 indicate the attractiveness of Kazakh universities for students not only from the CIS countries, but also from abroad: Korea, India, Pakistan, etc. According to the forecasts of Kazakh researchers, universities of Kazakhstan will become more attractive for students from the EU, America, when the country's economy becomes more stable, the standard of living will increase, the social sphere and social guarantees will develop (Biyekenov, 2012: 36).

Table 2 – Implementation of the principles of the Bologna process in universities of the Republic of Kazakhstan

Ethnic composition of students of universities of Kazakhstan	Contingent	%
Total	496 209	100%
Kazakhs	429 353	86,5
Russian	30 351	6,1
Uzbeks	10 187	2
Uighurs	3 547	0,7
Peoples of India and Pakistan	3 318	0,7
Koreans	2 641	0,5
Ukrainians	2 598	0,5
Tartars	2 552	0,5
Germans	1 697	0,3
Azerbaijani	1 532	0,3
Kirghiz	1 054	0,2
Turkmen	1 001	0,2
Other ethnic groups (approx. 80 ethnic groups)	6378	1,5

Source: Analytical report on the implementation of the principles of the Bologna process in the Republic of Kazakhstan, 2018

However, it should be noted that universities cannot rely solely on attracting international students and staff, as, according to W. Brandenberg – Managing Director of the consulting firm CHE Consult and former Director of Humboldt international University- “fluctuations in the market can have a negative impact” on this, citing cuts in the implementation of some international programs. A more comprehensive approach to the internationalization of the University will pay off, as it contributes to the diversity of the contingent of both local and foreign students. D. Obst, Deputy Vice President for international relations at the Institute of International Education, noted that universities have already improved their activities in this area and “have become more guided by available information when making decisions” regarding internationalization in recent years. “They are looking not only for the individual positives of internationalization, but also for the financial benefit of collaborating on research that was not available 15 years ago.” According to D. Obst, the most successful policy of internationalization has a strategic character and is carried out both at the level of individual universities and at the level of the country, while he notes that the partnership of universities is the most effective way to attract

teachers and students, as well as the implementation of mobility (Buletten, 2016:10).

Methodology

Comparing the system of higher education of the European Union in general and the system of ensuring its quality in particular with the CIS countries, it should be noted that its origins in the most general form were the traditions of the ancient heritage, while the CIS countries began to build national systems of higher education, which, in the opinion of their political leadership, best meet the strategic interests of young sovereignties only in the early 1990s. The European system of higher education quality assurance, which is usually compared in universities of post-Soviet countries, includes, first, standards for quality assessment, accreditation agencies or bodies, assessment procedures, mechanisms for information exchange and recognition of national accreditation. At least three basic quality documents are currently in force in European educational space: Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), The European Credit Transfer and Accumulation System (ECTS users' guide 2015) and standards for a number of areas of training: in the field of engineering and technology (EUR-ACE framework standards), computer science and technology (EQUANIE standards), chemistry, Economics and management (EQUIS standards) (EUR-ACE Framework standards, 2015). These standards are designed primarily to facilitate the recognition of degrees and qualifications and to ensure the quality of educational programs in the pan-European educational space. Along with Bologna process and its outcome – the European higher education area – being unprecedented examples of regional cross-border cooperation in higher education, international higher education quality assurance systems have generated great interest in other parts of the world and have made European higher education more visible on the global map

To provide a comparison of when the internationalization process of the University and improve the quality of the graduates of this University it could be used the triad of facilities management quality of Subetto A.I.: quality of educational process, quality of educational programs and quality of graduates (Subetto, 2014a). Here the main object of management is the quality of the educational process as the unity of the main and auxiliary processes of the University. The

educational program determines the content of the educational process, curricula, drawn up taking into account the requirements of the State compulsory educational standards of the country. For example, in Kazakhstan it is the “Concept of University education” developed in 1992, which laid the model of a multi-level system of continuing education. The quality of the basic educational program often varies slightly, because it is determined by state mandatory standards, but the presence of variable University components makes this program highly dependent on the conditions of a particular University. Moreover, many leading universities have the right to set their own standards other than those of the state (Subetto, 2014b). Universities of Kazakhstan are basing on the standards defined and approved by the government; the main ones are “State compulsory standard of technical and vocational education”, “State compulsory standard of post-secondary education” and others.

As noted earlier, J. Knight, J. Beelen, P. Crowther, and H. De Wit view internationalization as a process consisting of two constantly evolving and increasingly interrelated components – “external internationalization” (internationalization abroad) and “internal internationalization” (internationalization at home).

While external internationalization is understood to mean the implementation of educational programs that require students / teachers / universities to cross state borders (academic mobility of students and teachers, mobility of projects, educational programs and education providers), internal internationalization is focused on the development of various curricula and educational programs in order to develop students ‘ professional skills that

contain international components and competencies (Crowther, 2000: 16).

Speaking of external internationalization – it can certainly successfully lead to the formation of students ‘ intercultural competencies, but often this process involves a small part of the “mobile” students and faculty, without covering the entire contingent. Internal internationalization is “an approach to internationalization that goes beyond academic mobility, with the emphasis shifting to teaching and learning activities of students in an environment of cultural diversity in their home University»(Krasilnikova, 2017: 6).

For a clearer definition of internationalization of the educational process (IEP) let's consider another approach to the analysis of its content. This is the position of Professor B. Leask, who believes that the main approach to IEP is action research. This concept was introduced by the sociologist K. Lewin, and later widely used as foreign (J. Masters, J. Elliott. J. McKenan, O. Zuber-Skerrit), and domestic researchers (K.S. Kurakbayev) to designate a continuous procedure for identifying and analyzing the results of the educational process in order to improve its effectiveness. In Russian pedagogy there is no single translation and definition of this type of research. Various authors offer translations such as applied pedagogical research, contextual research, research action (Leask, 2012a: 64). B. Leask has developed a model of internationalization of the educational process in the University in accordance with the basic provisions of the approach based on action research. IEP at the University is presented in her works as a cyclic process consisting of five stages (Figure 1) (Leask, 2012b):

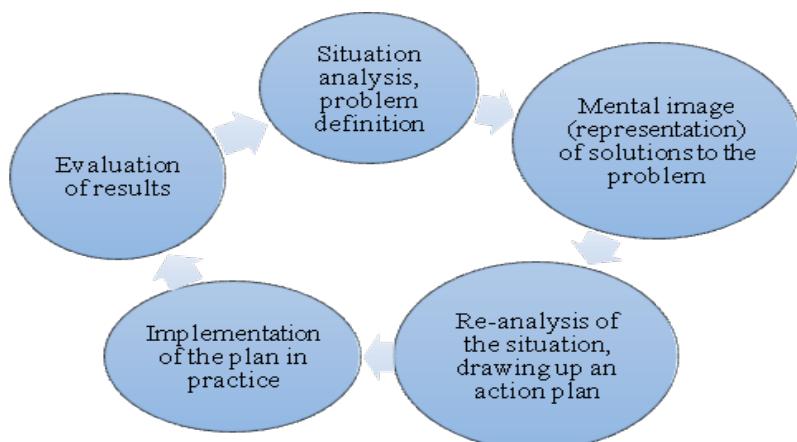


Figure 1 – Model of internationalization of educational process in higher education institution

Source: Leask, 2012b

The author gave a description of the conceptual foundations of internationalization of the educational process, indicating that it is based on what affects the content and implementation.

According to B. Leask, the internationalization of educational processes is based on knowledge not only in the field of the main disciplines studied, but also related ones, since the solution of modern problems requires knowledge that goes beyond

individual disciplines and cultures. For example, the author proposes to consider the situation if the discipline of medicine taught in Australia, to enrich knowledge from China.

Also, in his works, the author gives a detailed description of the possible measures for IEP in the University, which can be carried out at each of the stages presented in the model, indicated in Table 3.

Table 3 – Stages of internationalization of educational progress in the University

Stage	Key issue	Possible activities
Analysis of the situation, definition of the problem.	«How internationalized is the educational process?»	<ul style="list-style-type: none"> – the definition or the revision of the main compelling reason for the IEP in the framework of this educational program; – revision of the content of education, methods of teaching and evaluation within individual disciplines and the program as a whole in accordance with the goal of internationalization; – analysis of feedback from local and international students as well as other stakeholders, such as professional associations and employers, on the content elements of the education programme; – providing SWOT analysis of the educational process.
Mental image of options for solving problems.	«What other approaches to the implementation of the educational process are possible?»	<ul style="list-style-type: none"> – discussion of the cultural foundations of dominant national concepts within the disciplines taught; – analysis of the possibilities of incorporating new developing concepts into the content of the educational process; – imagine the world of the future: what will students need to live and work in this world effectively, observing the norms of morality; – discussion of possible changes in the educational process in order to internationalize it.
Re-analysis of the situation, drawing up an action plan.	Taking into account the results of the previous analysis, what changes would You make to the educational process?»	<ul style="list-style-type: none"> – define the goals and objectives of IEP within your educational program; – identify the factors constraining and stimulating the IOP process; – identify experts, potential «Champions» available on Your team or at the University who can help you achieve your goal; – identify priorities and develop an action plan that includes information on what, by whom and by what time frame should be implemented and what resources are needed; – define criteria and methods for assessing the effectiveness of the process
Practical implementation of the plan	«How will we determine whether the goals have been achieved?»	<ul style="list-style-type: none"> – development and implementation of activities to support teachers and students; – introduction of new assessment methods; – introduction of new courses / modules; – data collection to assess the formation of intercultural competence of students (qualitative and / or quantitative information).
Evaluation of results.	«To what extent have the goals been achieved?»	<ul style="list-style-type: none"> – analysis of data received from the parties involved; – analysis of performance, as well as the positive and negative impact of certain «unforeseen» events; – the collection of additional missing information; – taking stock of what has been achieved and preparing information for the transition to a new cycle of action.

Source: Leask, 2012b

Emphasizing that the content of education, teaching methods and evaluation are selected in accordance with prevailing in a particular subject area of national concepts and educational experience of the teacher, B. Leask offers to "look around" and analyze new ideas and approaches, including foreign ones. The author also focuses on the need to take into account the requirements of the professional community to graduates. However, due to the fact that higher education is not only a supply to the demand of the labor market, requiring students to have professional competencies, but also preparing students for an independent dialogue with society, the planning of the educational process should be carried out in accordance with ethical principles adopted at the institutional, local, national and global levels. The author notes that the vision and implementation of the internationalization of the educational process in the University may vary not only in different countries, but even within the same University (Leask, 2012b).

Results and Discussion

The process of internationalization of the University, undoubtedly, has a great influence on the basic components of a quality education such as quality educational programs, quality of educational process and quality directly to the graduate specialist. The most significant contribution to quality improvement is made by such components as leadership of management, mobility of staff and students, appeal to quality standards (paying attention in particular to European quality standards, being participants of the Bologna process), attraction of external financial resources.

Answering the question "What really gives and what changes internationalization in the life of the University?" there is brewing an answer "Insularity will inevitably lead to extinction in today's global world." It is necessary to recognize that in most cases, foreign experience of internationalization of higher education institution surpasses domestic practice, studying of foreign experience in this context and its introduction in domestic practice can give real results of internationalization of CIS Universities.

It is obvious that the globalization of world processes puts specialists with relevant knowledge and skills in demand, which help to quickly adapt to any new conditions and national peculiarities.

And given that in recent years the availability of international experience among graduates is becoming an increasingly important factor in their successful implementation in the labor market, the ability of the University to provide ample opportunities for internships or even part of training abroad is considered by the applicant as a weighty argument when choosing a particular University.

There is also the possibility of obtaining additional funding from external international sources, although in recent years there has been a tendency to reduce such opportunities. It could be listed a number of other reasons for the need to develop internationalization as an important part of the whole range of activities of the University.

Thus, it becomes clear that – despite some skepticism in educational circles about the processes of internationalization-these processes are becoming an integral part of the life of universities. And, most importantly, such processes really contribute to the development of the University, increasing its competitiveness in the domestic and foreign market of educational services and research. The realization of this fact, in our opinion, will happen quite quickly at the level of University management, and internationalization in the near future will turn from a fashionable trend into an effective tool for the development of educational institutions.

Conclusion

The result of the analysis can become a reflection of the fact of need to intensify the study of internationalization of higher education systems experience, identify effective mechanisms for its implementation (perhaps through the development of some strategies for the universities internationalization both at the regional and state levels), as internationalization –is not only one of the key directions of further integration of higher education systems of the CIS countries into the international educational space, reaching the leading positions in the world rankings, but also a process that is associated with profound changes in the socio-cultural aspect of society. This process can become a catalyst for significant changes in the culture and values of modern society in the CIS countries, where intangible values associated with the manifestation of interpersonal trust, respect for freedom of speech and diversity of life values are becoming increasingly important.

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THE MEDIATING ROLE OF ENTREPRENEUR EDUCATION IN THE RELATIONSHIP BETWEEN ENTREPRENEUR CAREER AND ENTREPRENEURIAL SELF-EFFICACY

Abstract. The purpose of the study is to examine the role of entrepreneur education in the relationship between entrepreneur career and entrepreneurial self-efficacy. The study serves as substantiation for the previous entrepreneurial career studies and promotes better understanding of factors prompting the antecedents to entrepreneurial behavior. There is a need for more empirical research in this aspect because reviewed literature highlighted a number of problems associated with entrepreneurial education and entrepreneurial career in many nations' world over and particular the developing countries. The study used survey-based method and SEM-PLS is employed to achieve the research objectives of the study. The data is collected from the manufacturing firms in Pakistan. The empirical evidence on the association between entrepreneurial education, entrepreneurial self-efficacy, and entrepreneurial career with moderating effect of SEN will strengthened previously established models such as the entrepreneurial intention model, which is modification in the theory of planned behavior and entrepreneurial event theory, both of which are linked to the theory of reasoned action. It is assumed that human actions are reasoned, controlled and planned. Thus, action is possible for the consequences of the reflected behavior. The findings are in line with the proposed hypothesized results. The study could offer valuable insights into the stage of entrepreneurial education for a range of stakeholders in Pakistan at particular and the world at large. Perhaps it is among the earliest studies of this kind in Pakistan that examined the effects of entrepreneurial education on students' attitude toward entrepreneurial career. The outcomes from this study would be of beneficial for variety of interested parties including academicians, policymakers, learning institutions, supervisory bodies and the public in general.

Key words: Entrepreneur education, between entrepreneur career and entrepreneurial self-efficacy, Pakistan.

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Банг Бизнес колледжі, КИМЭП университеті, Қазақстан, Алматы қ.

Мансап пен кәсіпкерлік тиімділік арасындағы қарым-қатынастағы кәсіптік білімнің дегалдық рөлі

Аннотация. Зерттеу мақсаты – кәсіпкерлік мансап пен кәсіпкердің өзіндік тиімділігі арасындағы қарым-қатынастағы кәсіпкердің білімнің рөлін зерттеу. Зерттеу кәсіптік мансаптың алдыңғы зерттеулерін негіздейді және кәсіпкерлерді кәсіпкерлік мінез-құлықта итермелейтін факторларды жақсы түсінуге ықпал етеді. Осы аспект бойынша әмпирикалық зерттеулер қажет, өйткені шолу әдебиеттерінде әлемнің көптеген елдеріндегі, сонымен қатар дамушы елдердегі кәсіпкерлік білім мен кәсіптік мансапқа қатысты бірқатар мәселелер айтылған. Зерттеуде сауалнамаға негізделген әдіс қолданылады, сонымен қатар зерттеу максаттарына жету үшін SEM-PLS әдісі қолданылады. Мәліметтер Пәкістандағы өндірістік фирмалардан алынған. SEN тежейтін әсері бар кәсіпкерлік білім, кәсіпкерлік тиімділік және кәсіпкерлік мансаптың өзара байланыстары туралы әмпирикалық дәлелдер бүрын құрылған модельдерді, мысалы жоспарланған мінез-құлық, теориясында және кәсіпкерлік оқиғалар теориясында модификация болып табылатын кәсіпкерлік ниет моделі сияқты модельдерді қүшейтеді. Адамның әрекеті негізделген, бақыланатын және жоспарланған деп болжанады. Осылайша, көрінетін мінез-құлықтың салдары үшін іс-әрекет жасалады. Алынған мәліметтер күтілетін нәтижелерге сәйкес келеді. Бұл зерттеу атап айтқанда Пәкістанның, сонымен қатар бүкіл әлемнің мұдделі тараптары үшін кәсіпкерлікті оқыту сатысы ретінде құнды

ақпарат бере алады. Бұл Пәкістанда студенттердің кәсіпкерлік мансапқа деген көзқарастарына кәсіпкерлік білімнің әсерін зерттеудің алғашқыларының бірі болып табылады. Осы зерттеудің нәтижелері әртүрлі мүдделі тараптарға, соның ішінде академиктерге, саясаткерлерге, оқуорындарына, реттеуші органдарға және көпшілікке пайдалы болады.

Түйін сөздер: кәсіпкерлік білім, кәсіпкерлік мансап пен кәсіпкердің тиімділігі арасындағы қарым-қатынас, Пәкістан.

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Посредническая роль образования предпринимателя во взаимоотношениях между карьерой и предпринимательской самоэффективностью

Аннотация. Целью исследования является изучение роли образования предпринимателей во взаимосвязи между карьерой предпринимателя и предпринимательской самоэффективностью. Исследование служит обоснованием предыдущих исследований предпринимательской карьеры и способствует лучшему пониманию факторов, побуждающих к предпринимательскому поведению. В этом аспекте необходимы более эмпирические исследования, поскольку в обзорной литературе освещается ряд проблем, связанных с предпринимательским образованием и предпринимательской карьерой во многих странах мира, в частности в развивающихся странах. В исследовании использован метод, основанный на опросе, также для достижения целей исследования используется SEM-PLS метод. Данные получены от фирм-производителей в Пакистане. Эмпирические данные о связи между предпринимательским образованием, предпринимательской самоэффективностью и предпринимательской карьерой с сдерживающим эффектом SEN укрепят ранее установленные модели, такие как модель предпринимательских намерений, которая является модификацией в теории запланированного поведения и теории предпринимательских событий, обе из которых связаны с теорией аргументированного действия. Предполагается, что действия человека обоснованы, контролируются и планируются. Таким образом, действие возможно для последствий отраженного поведения. Полученные данные соответствуют предполагаемым результатам. Это исследование может дать ценную информацию о стадии обучения предпринимательству для целого ряда заинтересованных сторон в Пакистане, в частности, и в мире в целом. Возможно, это одно из первых исследований такого рода в Пакистане, которое изучало влияние предпринимательского образования на отношение студентов к предпринимательской карьере. Результаты этого исследования будут полезны для различных заинтересованных сторон, включая академиков, политиков, учебных заведений, контролирующих органов и общественности в целом.

Ключевые слова: предпринимательское образование, взаимоотношение между карьерой предпринимателя и предпринимательской самоэффективностью, Пакистан.

Introduction

The concept of entrepreneurship education (EE) has recently become a major focus for educational systems all over the world (Lautenschläger&Haase, 2011). Acclaimed literatures indicate creation of new ventures and growing businesses are fundamental solution to unemployment and the quickest way to fast-track the economy and reduce poverty (Ndidi, 2012). Obviously, EE has succeeded in many developed countries and it has been adopted and applied in the educational institutions of many developing nations (Wang et al.,2016). Moreover, the importance of EE in the promotion of entrepreneurial career has been extensively recognized (Yang et al.,2017). In this regard, the educational

system plays an important role in developing entrepreneurial skills, competencies and attitudes in several ways which in turn stimulates future entrepreneurial career choice (Nowiński et al.,2019).

Additionally, Entrepreneurial Career Option (ECO) which turns into entrepreneurial activities support nations in developing their economies by increasing the levels of employment especially those countries that have previously suffered from high 2 unemployment (Fuller et al.,2018). Whilst Tsai et al. (2016) suggest that entrepreneurial career can be taught, and hence entrepreneurial career decision significantly influenced by EE. Accordingly, Global Entrepreneurship Monitor (GEM) reports suggest that there are opportunities to be seized for entrepreneurial education development (EED) everywhere

around the globe. Moreover, the reports emphasize that the conversion of these opportunities into viable business venture depends on individual traits, social standards and the entrepreneurial ecosystem including educational background, government policies, research and development, accessibility to finance, as well as infrastructural facilities (Singe et al., 2014). In another report, GEM specified that people at the factor-driven economies such as Pakistan incline to articulate more positive attitudes on entrepreneurial procedures such as opportunities identification and entrepreneurial skills to start a new business venture (Singe et al., 2014).

Organization for Economic Cooperation and Development (OECD) stated that the development of entrepreneurial consciousness and encouraging positive attitudes towards entrepreneurial career are among the major policy agenda of several countries worldwide (Grinshteyn & Hemenway, 2016). Furthermore, report emphasized on change in attitudes and perceptions toward entrepreneurial career for individuals to engage in any entrepreneurial activities. Eventually, graduate's unemployment in Pakistan has become an issue of national concern (Pfeiffer et al., 2016). Consequently, so many efforts were placed by the Pakistan government in that regard, such efforts include the establishment of institutions such as the Entrepreneurship Development Centre (EDC). Furthermore, the Pakistan government in efforts to ensure job security and employment opportunities for graduates and way to converts youth and graduate's unemployment introduced a compulsory entrepreneurship education course at university level of the nation's educational system. Pakistani universities were directed by the National Universities Commission (NUC) to introduce entrepreneurial studies in their curriculum as the way forward for solving severe youth and graduate's unemployment problem in the country. In addition, currently the Pakistani President Muhammadu Buhari articulated at his inauguration speech that the major challenges facing the country include general insecurity and youth and graduate's unemployment among others (Baluku et al., 2016). The president emphasized further on the readiness of present administration under his leadership to meet these challenges.

Additionally, as part of the government's several efforts to solve graduate's unemployment in the country was the recent introduction of Graduate Entrepreneurship Fund (GEF). The National Youth Service Corp (NYSC) in collaboration with BoI launched GEF in 2015 to assist graduate entrepreneurs to have easy access to finance. The managing director of BoI Mr. Rasheed Oloaluwa stressed

the need for GEF to enable graduates to actualize their entrepreneurial career aspirations since jobs availability did not keep pace with the growing of the population in the country. Furthermore, the NYSC directorate has put several efforts in promoting an entrepreneurial mind-set among the graduates through its Skill Acquisition and Entrepreneurship Development (SAED) programs. The strategy identifies the distinctive entrepreneurial abilities of university graduates as soon as they complete their study. In addition, the directorate organizes capacity building training to promote involvement of university graduates into entrepreneurial career for self-reliance, thus generating job for themselves and become self-employed (Nabi et al., 2017). Despite all these efforts many graduates in Pakistan do not prefer entrepreneurship as a career option and subsequently only few become entrepreneurs after graduation (Garba, et al., 2014). In this direction, Raimi and Okoye (2017) pointed out that graduates lack the entrepreneurial skills and confidence to be self-reliant; and this supported by Wu (1997) who viewed that graduates in Pakistan can only read and write to secure white collar jobs but lack the Entrepreneurial Self-Efficacy (ESE) and professional skills to stand on their own as entrepreneurs. In addition, Odia (2013) lamented that educational institutions in Pakistan produce thousands of graduates who are unemployed, largely because graduates were not equipped with functional knowledge and lack the entrepreneurial self-confidence and the skills that will make them self-reliant. Ogundeleji (2014) identified ESE as the major driving factor stimulating entrepreneurial career among graduates; hence need to be carefully considered in entrepreneurial training. Similarly, Ali et al. (2019) were also on the view that absence of self-efficacy been the major factor responsible for failure of many entrepreneurs in Pakistan. Meanwhile according to Oyeku (2017) entrepreneurs require competency, orientation and self-efficacy to be successful in a constantly dynamic business environment.

According to Bashir Garba et al. (2012) the attitude towards labor of average Pakistanis has been ruined and distorted due to the nation's oil explosion and that also affected the desirability for entrepreneurial career. Subsequently, an average Pakistani chooses to be employed than entrepreneurial career which needs expertise and innovation. Furthermore, the university program is not primarily geared towards providing students with ESE and skills required for self-employment. Ali et al. (2019) emphasized that desirability perceptions about entrepreneurial career are essentially important and set

the basis for becoming an entrepreneur long before an individual actually makes the choice for ECO. However, Oyeku (2017) urged the need for transformation of the individual's mind-set of average Pakistanis particularly the youths towards embracing entrepreneurial career which the desires are lacking. GEM report (2012) highlights the significance of Supportive Environment (SEN) for the promotion of entrepreneurial activity. Ali et al. (2019) suggests that fostering SEN encourages entrepreneurial career among graduates in Pakistan. Similarly, Odia (2013) recommended that the Pakistani entrepreneurial ecosystem need to be harnessed before meaningful entrepreneurship development can take place. In addition, Nabi et al. (2017) recommends that the government should establish mechanism that promote entrepreneurial career (ENCR) activities among graduates by providing enabling environment in the country. According, Wang et al. (2016) for graduates to consider ECO, government need to address urgently the dilapidated infrastructural facilities and provide SEN that encourages entrepreneurial activities in the country. Furthermore, Wang et al. (2016) suggest that SEN should be provided to enable Pakistani graduates to practice their entrepreneurial skills and consider entrepreneurship as alternative career option. However, Odia (2013) attributed to lack of government commitment in the provision of fund, ignorance on the value of entrepreneurship and poor infrastructure as the major obstacles for entrepreneurial career in Pakistan.

Literature Review

Entrepreneurial Career (ENCR)

The word entrepreneurship means different things to different writers (Tran & Von Korflesch, 2016). Therefore, there is no general consensus on the meaning and definition for the concept of entrepreneurship. As an academic discipline, the term 'entrepreneurship' was coined by French economist Richard Cantillon. Literally the term means 'to undertake' or 'go between' denoting to the situation person presumed when chasing an opportunity. However, entrepreneurship is understood as the essential behavioral patterns that are subjected by economic, social and psychodynamic factors (Ndidi, 2013). Accordingly, the concept of entrepreneurship has gained considerations among academicians Othman et al. (2018) define entrepreneurial career as a process of producing something of value from basically unknown. Bosma et al. (2012) considered entrepreneurial career as a way of thinking that gives emphasis to opportunities

over threats. Furthermore, some researchers described entrepreneurial career as engine for economic growth.

In their studies, Bosma et al. (2012) argue that public policy makers and academics worldwide agree that entrepreneurial career plays a serious part in the improvement of the welfare of a society, and consequently influences the development of nations. Its primary function is to innovate, find new ways to organize production factors, and combine these new factors. The Global Entrepreneurship Monitor (GEM), on its most extensive study on entrepreneurial activity in the world strengthens on the significance of entrepreneurial career as the catalyst for economic growth and development of nations, thus influences job creation, innovation and welfare. In addition, entrepreneurial career has been acknowledged as a key component through which country's competitiveness can be inspired. Besides, the benefits of entrepreneurial career in relations to wealth creation and economic growth have been established. Henceforth, the policy makers are concerned with the ways to inspire the entrepreneurial mind-set among individuals in the nation. Subsequently, individual's choice for ECO is considered being a deliberate and conscious process. In consequence, entrepreneurial career intention is considered as the best predictor of ECO. Furthermore, ECO can be seen as the conscious decision for involvement of a person to start a new business and thereby become an entrepreneur. According to Bosma, (2013), ECO depends on person's attitude, perceived control, and the perceived social pressure to become (or not) an entrepreneur. Likewise, Awang et al. (2014) are on the view that ECO depends on individual's beliefs that performing the behavior will result in desirable outcomes.

Entrepreneurship Education

Entrepreneurship Education (EE) is a new field in the academic circles nevertheless has attained an increasing recognition since it contributes toward the formation of entrepreneurial culture, attitude, skills and competencies among learners. Consequently, significant academic efforts have been intensified on EE in recent years helping the field to progress and to gain momentum. Whilst, according to Chang and Rieple (2013) EE aims to improve students' mind-sets, behaviors, skills and capabilities, thereby creates future graduate entrepreneurs. The 25 programs were developed as the result of the belief that entrepreneurial career can be taught rather than been destined by genes, as some scholars advocated. For instant, Bosma,

(2013) reported that EE had a positive influence on students' entrepreneurial inclination. But they found more uncertain on whether EE has an effect on the actual entrepreneurial behavior which turn into entrepreneurial career as an alternative career option. In a similar study, Lindholm, Awang et al. (2014) reported that EE influenced the students' entrepreneurial behavior and supported new business start-up. In addition, Chang and Rieple (2013) found that EE significantly affects individuals' entrepreneurial career decision. Several studies acknowledged that entrepreneurial career can be taught and be encourage by the provision of the appropriate environment. Moreover, Draycott and Rae (2011)advocates that EE has three key objects into nation's educational system: to cultivate a wide entrepreneurial culture among the learners, inculcate the entrepreneurial mind-set, as well as to train on how to starts and operates an enterprise effectively. EE was introduced to enhance the students' ability to identify business opportunities around 26 them which can possibly make them self-employed and eventually self-reliance, whilst at the same time enhances their employability skills (Draycott& Rae, 2011). In addition, Draycott and Rae (2011)recognize the necessity of HEIs promote entrepreneurial career and produce graduates with entrepreneurial mind-set through EE.

Entrepreneurial Self-efficacy

Entrepreneurial Self-efficacy (ESE) is attached in social cognitive theory and highpoints the significance of self-beliefs and self-thought in nurturing personal motivation and subsequently controls behavior. However, self-efficacy was originated from social learning theory, and describes as person's belief in his or her ability to succeed in a particular career. Self-efficacy as a domain is related to entrepreneurial career and termed as "entrepreneurial self-efficacy" (ESE). Self-efficacy is seen as individual's confidence about the chances of effectively accomplishing a specific task. It plays an important part in career-related task such as entrepreneurial process by prompting the individual's choice, determination, and 29 perseverance. Self-efficacy is concerned with individual's decision on what to be done with the skills been endowed on the individual, not just with the skills individual has experienced. The greater the individual's self-efficacy, the more confident the person has about success in a particular task domain. However, self-efficacy is generally recognized as a basic concept in social learning theory with a standpoint which adopts that actions, intuitions, and the environment constantly affect each other

in the formation of individuals' attitude toward a particular career. Several studies have established ESE to be a strong driver of entrepreneurial behavior and anticipated to effect individual choices, goals, effort, emotional responses, ability to cope, and perseverance. Similarly, Campo (2011) defined ESE as the degree at which individual is certain of that he or she can to effectively start a new business venture. Whist, Campo (2011) emphasized that individual with high ESE has the higher propensity to become an entrepreneur later in life(Khalid et al., 2018; Wijaya et al., 2019; Ahmad et al., 2019).

Subsequently, ESE involved a consideration of the responsibilities that relate to the initiation and start-up of new ventures, which is involved entrepreneurial skills. However, Piperopoulos and Dimov(2015)asserted that ESE affects career related activities and accordingly persuades entrepreneurial career decisions. Then, ESE is regarded as behavioral pattern that can transforms person's belief in his or 30 her likelihood for accomplishment the tasks requirement to efficaciously initiate and launch a new business venture. More precisely, ESE is seen as the level of individual's believes that he or she can successfully start a new business venture. In this study, ESE appears to be a key antecedent of entrepreneurial career preference. Accordingly, Campo (2011) defined ESE as concept that measures individual's confidence to effectively take-off a business venture. In several empirical studies were conducted in relation to ESE and entrepreneurial career and reported a positive association among the variables. Higher self-efficacy is connected to entrepreneurial career and new venture creation. However, individuals with high ESE ought to have higher levels of confidence that they can effectively launch and run their own businesses. According to Maueret al. (2017) ESE can best measure as a multi-dimensional concept originated from individual's goals and beliefs. There are two different dimensions of ESE which play a significant part during the process of a new business venturing. However, starting a new business venture involves interaction between the individual's personality traits and environmental factors involving activities such as identification of 31 business opportunity, development of business idea, enhancement of business idea, and finally new business launching. Furthermore, the multi-dimensional concept of the ESE construct was empirically established in relation with entrepreneurial process byPiperopoulos and Dimov(2015), result revealed that individual's level of ESE varied at each level of the four stages of a new business venture (searching, planning,

marshalling and implementing). Campo (2011), examining the association between cognitive styles and specific types ESE. The result identified the fundamental dimensions of ESE includes -1) opportunity identification self-efficacy, 2) association self-efficacy, 3) managerial self-efficacy and 4) tolerance self-efficacy, might have separate and unequal relationships to multiple dependent constructs, particularly entrepreneurial career intentions and nascent behavior.

Based on the literature review we have drawn the following hypothesis

- H1: ENCR has significant impact on ESE.
- H2: EED has significant impact on ESE.
- H3: ENCR has significant impact on EED.
- H4: EED mediates between ENCR and ESE

Methodology

The study has used the partial least squares path modeling also known as partial least squares structural equation modeling (abbreviated as PLS-SEM). The method of structural equation modeling allows estimating complex cause-effect relationship models with latent variables. A cause-effect relationship can be defining as a relationship where one factor (the cause) makes another factor happen or change (the effect). For example, one can study the relation between time spent on Facebook (and other social media) and the grade achieved by undergraduate student. By applying the PLS-SEM method we can find out whether there is a relationship.

A ‘variable’ is characteristic or property of an individual experimental unit. The name ‘variable’ is derived from the fact that any particular characteristics can vary among the experimental units in a population (McLave et al., 2005: 8).

PLS-SEM analysis starts with the assessment of measurement model or outer model as it is commonly referred to. The assessment of outer model confirms the individual item reliability, internal consistency, content and convergent validity, and discriminant validity (Hair et al., 2014). In other words, evaluation of the outer model verifies whether the survey items measure the constructs they were intended to measure, hence ensuring the validity and reliability of the measure. Obviously, outer model analysis is concerned with appraisal of the goodness of measures. This current section of study explains research methodology as cross sectional and quantitative in nature. The data was collected through survey questionnaire. The present study collected data from Educational leaders working with government and private higher education

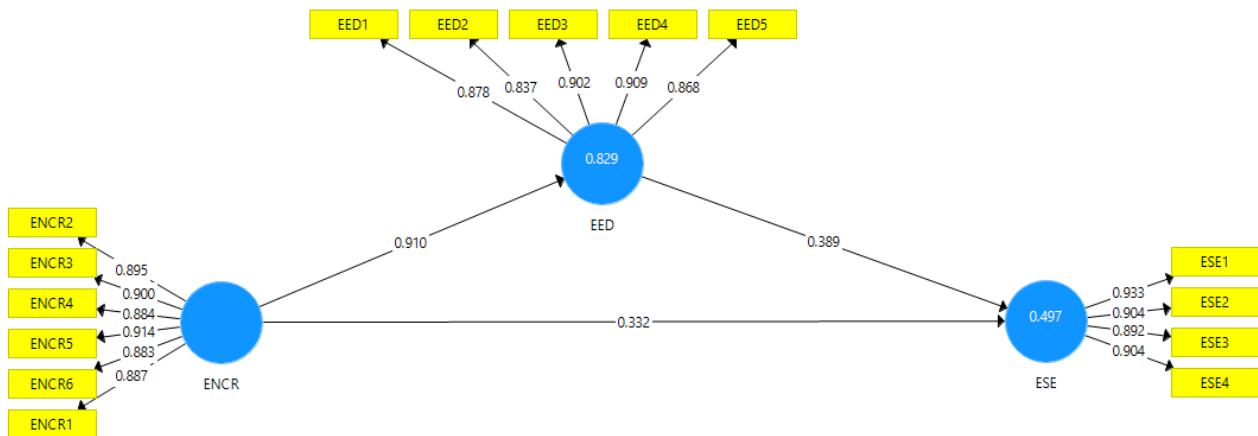
institutes in Pakistan. In total 200 questionnaires were distributed through email and face to face meeting and 114 were returned as usable responses. The response rate is turned out to be 57 percent. The study utilized SMART-PLS for data analysis through PLS algorithm and bootstrapping method. The analysis section of present study determines reliability and validity through Measurement Model (MM) and examines direct and moderating effect of proposed constructs of framework through Structural Equation Modeling (SEM).

Results and Discussion

In this study, PLS-SEM algorithm was used to assess the individual indicator’s contribution (item reliability) to assigned construct by observing at the outer loadings of individual items that made up the construct (Duarte & Raposo, 2010; Hair et al. 2013). Accordingly, Hair, Hult, Ringle and Sartedt (2014) suggest that items with outer loadings between 0.40 and 0.7 should be considered for deletion only if such removal of the item leads to an increase in composite reliability and AVE above the recommended threshold level. In line of this recommendation, observations were made on severally ran PLS-SEM Algorithms to detect and delete any item that did not meet the stated threshold.

Internal consistency reliability typically indicates how well the items in a set are positively correlated to one another (Sekaran & Bougie, 2010; Hair et al., 2013). In other words, internal consistency reliability signifies the extent to which the indicators measuring the construct produce similar scores when the construct is measures over a period of time. It measures the stability of the result concerning items of the same test (Hair et al., 2013). The most commonly used methods of evaluating the internal consistency reliability for the research’s measuring instrument are Cronbach’s alpha coefficient and composite reliability coefficient.

Discriminant validity is concern with the extent to a variable is essentially different from other variables. In other words, it can be described as the extent to which a particular latent variable is truly not the same with the other latent variables. Hence, a higher level of discriminant validity indicates that a latent variable is distinct from other latent variables and captures different phenomena from other latent variables. Subsequent to the general assessment of the measurement model (outer model), specifically when the latent variables satisfied the suggested reliability and validity index, then the following stage was assessment of the SM (inner model).

**Figure 1** – Measurement Model

Note – compiled by authors

Table 1 – Outer loadings

	EED	ENCR	ESE
EED1	0.878		
EED2	0.837		
EED3	0.902		
EED4	0.909		
EED5	0.868		
ENCR2		0.895	
ENCR3		0.900	
ENCR4		0.884	
ENCR5		0.914	
ENCR6		0.883	
ENCR1		0.887	
ESE1			0.933
ESE2			0.904
ESE3			0.892
ESE4			0.904
ENCR1		0.887	
Note – compiled by authors			

Table 2 – Reliability

	Cronbach's Alpha	rho_A	CR	(AVE)
EED	0.926	0.928	0.944	0.773
ENCR	0.950	0.950	0.960	0.799
ESE	0.929	0.930	0.950	0.825
Note – compiled by authors				

Table 3 – Validity

	EED	ENCR	ESE
EED	0.879		
ENCR	0.810	0.894	
ESE	0.791	0.786	0.908
Note – compiled by authors			

The evaluation of the SM involved measuring the model's predictive capabilities and abilities to measure relationships between the constructs. Accordingly, inner model assessment involved the determination of the latent variables' path coefficients, coefficients of determination, effect size and the model's predictive relevance (Hair et al., 2014; Hair et al., 2013). In this section, the main focus was the examination of the relationships among the latent variables and the general analysis of modelling as a whole. In addition, the section also assessed the path coefficient of the latent variables and tested the hypotheses linked with the main, mediating and moderating effects.

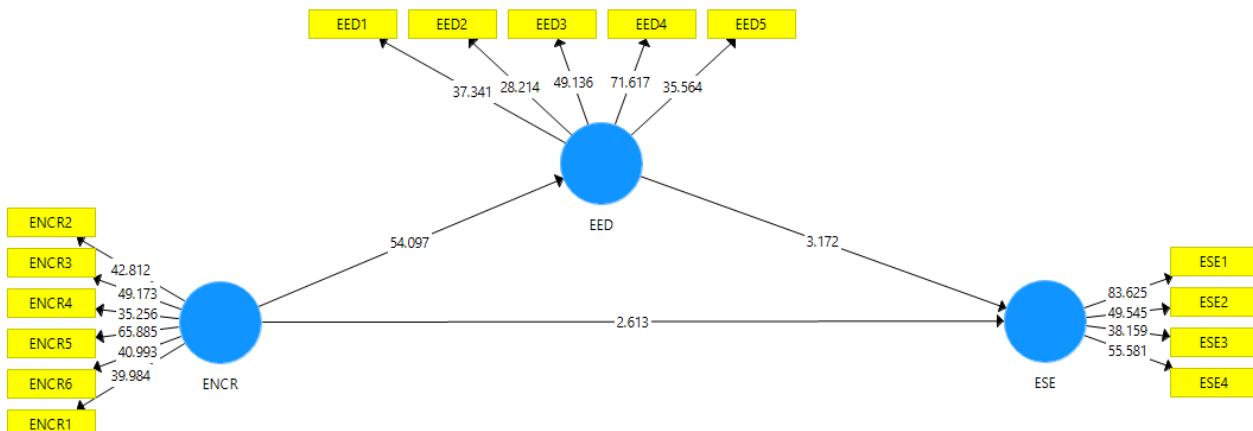


Figure 2 – SM
Note – compiled by authors

Table 4 – Direct relationship

	(O)	(M)	(STDEV)	(O/STDEV)	P Values
EED -> ESE	0.389	0.392	0.123	3.172	0.001
ENCR -> EED	0.910	0.911	0.017	54.097	0.000
ENCR -> ESE	0.332	0.331	0.127	2.613	0.004
Note – compiled by authors					

Table 5 – Mediation

	(O)	(M)	(STDEV)	(O/STDEV)	P Values
ENCR -> EED -> ESE	0.354	0.357	0.113	3.139	0.001
Note – compiled by authors					

Table 6 – R-square

	R Square
EED	0.829
ESE	0.497

Note – compiled by authors

Accordingly, the appraisal of the inner model started with considerations of the direct relationship between the independent latent variable and the dependent latent variable. A logical PLS-SEM model analysis of the SM was carried out to make available a comprehensive presentation of the outcomes of the model, and test hypotheses with direct relationship in the SM effectively. The path coefficients' size of the latent variables was observed through PLS-SEM Algorithm, and the direct relationships between the independent latent variables and the dependent latent variable were tested by means of PLS-SEM bootstrapping technique using Smart PLS 2.0. In addition, the original number of cases (359) was applied as the number of cases, and 5000 as bootstrapping samples (Hair et al., 2013).

The R² value explain the level of variation in the endogenous latent variable(s) that can be characterized by one or more exogenous latent variable(s).

Conclusion

The study provided empirical evidence on the relationship between EE and ECO using both ESE and ENCR as mediating variables and SEN as moderator. Therefore, study serves as further substantiation for the previous entrepreneurial career studies and promotes better the understanding of factors prompting the antecedents to entrepreneurial behavior. However, there is need for more empirical researches in this aspect

because reviewed literature highlighted a number of problems associated with EE and entrepreneurial career in many nations world over and particular the developing countries; Furthermore, the empirical evidence on the association between EED, ESE, and ENCR with moderating effect of SEN will strengthened previously established models such as the Entrepreneurial Intention Model, which is modification the, both of which are linked to the theory of reasoned action. It is assumed that human actions are reasoned, controlled and planned. Thus, action is possible consequences of the reflected behavior. The study could offer valuable insights into the stage of EE for a range of stakeholders in Pakistan at particular and the world at large. Perhaps it is among the earliest studies of this kind in Pakistan that examine the effects of EE on students' attitude toward ENCR. Consequently, the outcomes from this study would be of beneficial for variety of interested parties including academicians, policymakers, learning institutions, supervisory bodies and the public in general. More specifically, the study would serve as a feedback for policymakers and other stakeholders on the level of achievement for the new curriculum of EEDin relation to the goals of the program.

This empirical result concurs with the findings of other several previous studies that reported ESE positively influences ENCR. For instance, Sesen (2013) empirically tested an inclusive model on the entrepreneurial career intentions among the university students. The study reported that personality traits such as locus of control and ESE have significant influences on students' entrepreneurial career intentions. Similarly, Sesen, (2013) conducted a study on the relationship between ESE, entrepreneurial capacity and ENCR. The study reported a significant and a positive association exist among ESE, entrepreneurial capacity and preference for entrepreneurial career option.

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3-бөлім

ӘЛЕУМЕТТИК МАРКЕТИНГ ЕРЕКШЕЛІКТЕРІ ЖӘНЕ ЗЕРТТЕУ ӘДІСНАМАСЫ

Section 3

FEATURES OF SOCIAL MARKETING AND RESEARCH METHODOLOGY

Раздел 3

ОСОБЕННОСТИ СОЦИАЛЬНОГО МАРКЕТИНГА И МЕТОДОЛОГИЯ ИССЛЕДОВАНИЯ

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FEATURES OF CONSUMER BEHAVIOR WHEN BUYING SOCIALLY IMPORTANT GOODS

Abstract. The place of a person in a particular society is largely defined by what and how they purchase. This process is easily perceived by the reference group. Social group determines the motivation of a young person when they buy some kinds of goods. In this regard, a problem of social audience management through specific consumption and purchase models arises.

The aim of the present study is modeling the purchasing process of goods that have a certain social status on the youth market: mobile phones (smartphones) and fitness bracelet (trackers). The object of study is the young audience; the subjects are the motives and determinants of consumer behavior during decision-making, and the principles of demand formation.

Students of the Economics Faculty of the Peoples' Friendship University of Russia (RUDN), Moscow, conducted the study of consumer behavior in April-May 2018. In-depth interviews and questionnaires were used as methods of research.

The following models of the consumer behavior processes were used: Stimulus-Organism-Response Model of Decision Making, the Foote, Cone and Belding Model, the Howard-Sheth model, and O'Shaughnessy studies.

The results of the modeling process are the basis for creating marketing communication with consumers on a commercial basis and may be of interest to manufacturers and sellers of this type of products in Russia.

Key words: consumers, reference groups, goods, young social group.

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Әлеуметтік маңызды тауарларды сатып алу кезіндегі тұтынушылық мінезд-құлқық ерекшеліктері

Андратпа. Адамның белгілі бір қоғамдағы орны көбінесе ол нені және қалай сатып алғатындығына байланысты. Бұл процесті анықтамалық топ оңай қабылдайды. Әлеуметтік топ жастардың белгілі бір тауар түрлерін сатып алуға деген ынтасын анықтайды. Осыған байланысты белгілі бір тұтыну және сатып алу үлгілері арқылы әлеуметтік аудиторияны басқару мәселесі туындаиды.

Бұл зерттеудің мақсаты жастар нарығында белгілі бір әлеуметтік мәртебесі бар тауарларды сатып алу процесін модельдеу: ұялы телефондар (смартфондар) және фитнес білезіктер (трекерлер). Зерттеу нысаны – жас аудитория; субъектілер шешім қабылдау кезіндегі тұтынушылық мінезд-құлқытың себептері мен айқындаушысы, сонымен қатар сұраныстың қалыптасу принциптері болып табылады.

Ресей халықтар достығы университетінің экономика факультетінің студенттері 2018 жылдың сәуір-мамыр айларында тұтынушылардың мінезд-құлқына зерттеу жүргізdi. Зерттеу әдістері ретінде сұхбат және сауалнамалар пайдаланылды.

Тұтынушы мінезд-құлқының процестерінің келесі модельдері қолданылды: дененің реакциясын ынталандыратын шешім қабылдау моделі, Фут, Кон және Белдинг моделдері, Говард-Шет моделі және О'Шоннесидің зерттеулері.

Модельдеу процесінің нәтижелері коммерциялық, негізде тұтынушылармен маркетингтік байланыс құру үшін негіз болып табылады және Ресейде осы тауар түрінің өндірушілері мен сатушылары үшін қызығушылық тудыруы мүмкін.

Түйін сөздер: тұтынушылар, анықтамалық топтар, тауарлар, жас әлеуметтік топ.

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Особенности потребительского поведения при покупке социально важных товаров

Аннотация. Место человека в определенном обществе во многом определяется тем, что и как он покупает. Этот процесс легко воспринимается референтной группой. Социальная группа определяет мотивацию молодых людей при покупке некоторых видов товаров. В связи с этим возникает проблема управления социальной аудиторией через конкретные модели потребления и покупки.

Целью настоящего исследования является моделирование процесса покупки товаров, имеющих определенный социальный статус на молодежном рынке: мобильные телефоны (смартфоны) и фитнес-браслеты (трекеры). Объект исследования – молодая аудитория; субъектами являются мотивы и детерминанты поведения потребителей при принятии решений, а также принципы формирования спроса.

Студенты экономического факультета Российского университета дружбы народов (РУДН, Москва) провели исследование потребительского поведения в апреле-мае 2018 года. В качестве методов исследования были использованы интервью и вопросы.

Использовались следующие модели процессов потребительского поведения: модель принятия решений, стимулирующая реакцию организма, модель принятия решений, модель Фута, Кона и Белдинга, модель Говарда-Шета и исследования О'Шонесси.

Результаты процесса моделирования являются основой для создания маркетинговой коммуникации с потребителями на коммерческой основе и могут представлять интерес для производителей и продавцов данного вида продукции в России.

Ключевые слова: потребители, референтные группы, товар, молодая социальная группа.

Introduction

In today's business environment, companies face increased competition, especially on the multinational level. Market leaders try to create their own consumer, explaining them how to dress and what to eat and drink in order not to be a loser. The tendency of introducing ideological processes into the model of consumer behavior is fast developing. The Coca-Cola Company sells a way of life, a way of seeing the world which you can join using the advertised products. The main approach in this case is introducing the advertised product to the community for further transformation in accordance with the values of the American culture the advantages of which are not even questioned. This can be achieved by making an element of American culture – the advertised drink – an integral part of the daily life of the recipient. The result is a blending of American culture with the culture of the community where the advertising campaign is conducted, with the continued dominance of American culture¹. How much is this experience reflected in the purchase of other

products, and, in a wider sense, to what extent can the product become an attribute a certain way of life and of the social community? How can this factor be used to promote Russian products?

The place of a person in a particular society is largely defined by what and how they purchase. This process is easily perceived by the reference group. Social group determines the motivation of a young person when they buy some kinds of goods. In this regard, a problem of social audience management through specific consumption and purchase models arises.

A wide range of models are used to evaluate processes related to consumer behavior. The black-box model (more popular and more common) is based on external stimulus-response, meaning something triggers the consumer to make buying decisions that are influenced by many factors, including marketing messages, sampling, product availability, promotions, and price. When influenced by the personal-variable model, consumers make decisions based on internal factors².

¹ Analysis of the influence of culture and subculture on consumer behavior. Retrieved from https://studwood.ru/1857063/marketing/vliyanie_amerikanskih_tsennostey_primere_kompanii_coca_col

² What Is Consumer Behavior in Marketing? – Factors, Model & Definition. Business Courses. Study.com. <https://study.com/academy/lesson/what-is-consumer-behavior-in-marketing-factors-model-definition.html>

Methodology

The aim of the present study is modeling the purchasing process of goods that have a certain social status on the youth market: mobile phones (smartphones) and fitness bracelet (trackers). The choice of these products is dictated by their popularity in the youth (student) environment. The object of study is the young audience; the subjects are the motives and determinants of consumer behavior during decision-making, and the principles of demand formation. The results of the modeling process are the basis for creating marketing communication with consumers on a commercial basis and may be of interest to manufacturers and sellers (for example, Chinese) of this type of products in Russia.

The study of consumer behavior was conducted in 2018 by students of the Economics Faculty of Peoples' Friendship University of Russia (RUDN, Moscow). Methods of research: content-analysis of scientific literature, in-depth interviews and questionnaires. The study sample was formed among the young people from Moscow and the region. The status of respondents was students and working people under 30 years of age; the number of respondents was 256 people.

The theoretical basis for the field study comprised several most practical models of consumer behavior. Consumer behavior is a complex process and a significant amount of research has been devoted to it. The most frequently used model is 'stimulus-reaction' – the cognitive approach to consumer behavior. The 'stimulus-reaction' model considers the reaction of buyers to certain stimuli: internal or external. All these get into the 'black box' of the buyer, where they induce (or do not induce) a person to act, choosing the brand, the dealer, the time of purchase, and the purchase amount. The task of marketing research is to find out how the reaction to various stimuli occurs and which of them trigger the buyer's response, i.e. purchase (Jisana, 2014).

Another interesting model of consumer behavior is the model of Foote, Coon and Belding or the 'Involvement Matrix'. The model considers (in addition to the cognitive component in the decision making process) the aspect of the complexity of the buying process for a person. That is, there is some complication of the process, namely, the buying process is considered as: routine, hedonism, training or emotionality, depending on how important the purchase is (Tumashevich, 2012). Based on this model, four strategies for advertising planning are considered, by combining high or low involve-

ment with decision-making methods (based on the thought process, logic and feelings) (Ghafelehbashi et al., 2011).

The buyer behavior theory of Howard-Sheth also develops a cognitive consumer study and focuses on how to choose brands. The authors of the theory distinguish certain elements of the purchasing decision-making process, consider changes that occurred over a given period of time as a result of the circular nature of human actions, and also show how the combination of the various components of the decision-making process affects the processing and retrieval of information (Stankevich, 2017). This model assumes three levels of decision-making: comprehensive problem solution; limited problem solution and habitual reaction.

Also highly important is the desire of a person to seek information about the product. In this regard, the 'Information Processing Model' by J. Bettman should be considered. The model assumes the description of processing information about a product or service. The reasoning is based on the fact that the consumer has limited opportunities for searching and processing information. Bettman emphasizes that instead of the complex alternatives, the consumer chooses simple strategies when deciding on a purchase (Baskov, 2011). The key positions that should be taken into account by marketers when using this model are the ratio of the value of the purchase to the difficulty of finding information about the product of interest; the degree of involvement and awareness of the buyer; and simplicity and availability of information about the product/service.

The following models of the consumer behavior processes were used: Stimulus-Organism-Response Model of Decision Making, the *Foote, Cone and Belding Model*, the Howard-Sheth model, and O'Shaughnessy research on competitive marketing (O'Shaughnessy, 2014).

Results and discussion

The classic definition of management is 'influencing an object to gain a certain result'. Consumer market leaders and strong and significant brands influence their target groups and educate them, alluring them to specific behavior type. How strong are some brands' and their products action force on the youth market in the Russian Federation? This research is devoted to revealing consumer behavior models when choosing, purchasing and using certain products.

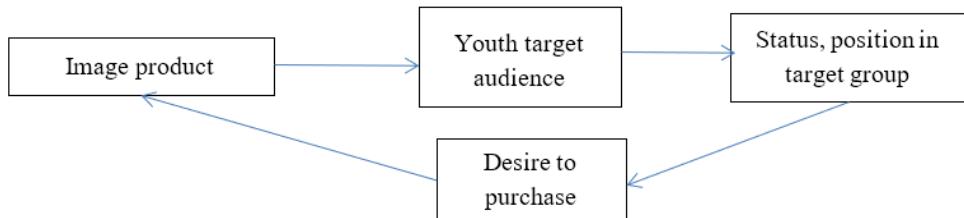


Figure 1 – Hypothesis of consumer's behavior when buying image product.
Source: results of the previous research, Peoples' Friendship University of Russia, 2018

The choice of the research subject is explained by the form of product use: mobile phones (smartphones) and fitness-bracelets are visible to surrounding people. The aim of this research lies in defining what is actually important for the young people when purchasing a smartphone: simply a good ratio of price/quality or rather the prestige of the smartphone brand; that is, whether the cognitive or affective component is a priority. The identification of this aspect will give direction to the formation of the direction of communication with the client.

Working hypothesis

Figure 1 depicts a hypothesis of consumer behavior when purchasing an image product. It is assumed that the purchase is frequently made to achieve a certain status in the person's reference group. The motives that form the need in a smartphone are personal. As of stimuli, those are likely to be the desired optimal product characteristics which to a large degree influence consumer's final decision. It will be made only based on the match of the specific smartphone with the desired characteristics for personal fulfillment in the given moment of time. A young person expresses themselves through the product. As said above, smartphones and fitness-trackers were chosen to represent the products that influence young people's status in their group. Consciously, in this research the authors do not focus on the brands, as their position is well known.

The analysis of smartphones use

The main goals of this research are:

- To reveal the perception of smartphones;
- To define the inner motives that form the need;
- To define the desired optimal characteristics;
- To define the stimuli which influence the algorithm and form the perception of smartphones.

At the first stage, a qualitative study was conducted with the help of in-depth interview, the scenario of which was the following sequence:

1) Usage:

- Do you use a mobile phone?

- Is your phone a smartphone?
 - How did you get the smartphone?
 - Why do you use your smartphone?
 - What is the first thing you do when you take your phone in your hands?
- 2) Attitude:
- How do you feel when using a smartphone?
 - Do you think a smartphone reflects a person's social status or not?
 - Can you express your personality with the help of your smartphone?
 - Is a smartphone a nice gift?
 - Is a smartphone an indispensable attribute for maintaining a lifestyle 'in step with the times'?
 - Can you imagine your life without a smartphone?
 - What do you associate with the word 'smartphone'?
- 3) Questions about purchasing decision:
- What is the reason for acquiring a smartphone?
 - What can influence the decision to purchase?
 - Your friend has a new phone, what are you thinking about at this moment?
 - What motivate other people to change their phones?
- 4) Questions about the choice:
- How do you choose a smartphone?
 - What information sources do you use to choose a smartphone?
 - How long do you choose a smartphone?
 - What criteria are the most important for you when buying a smartphone?
 - In your opinion, what characteristic do people wish to find in their smartphone?
 - Do you consider people who only use an iPhone adequate?
- 5) About the purchase:
- How does the purchase go? (Where do you purchase a smartphone?)
 - When exactly do you buy smartphones? (an occasion, a season, dates and events, time of purchase, etc.)

– How do you feel about smartphone as a gift? (It is important for you to know in advance about what kind of smartphone your gift will be?)

– Coming to the store and looking at other people, what do you think their thought are?

6) Maintenance:

- How often do you use your smartphone?
- How often do you change your smartphone?

Below are the results of in-depth interviews.

1) Using mobile phones. All the respondents use mobile phones.

2) Using smartphones. Most of the respondents use smartphones, in general, for social networking and as a photo camera. A smartphone becomes an indispensable attribute; no one can imagine life without it. The phone is no longer a device, but an assistant.

3) The reasons for buying smartphones. More often, people make the purchase themselves, and sometimes receive smartphones as gifts. Even if it's a gift, it happens on 'pre-order' – "a girl can nag her boyfriend for a month about what she really wants".

4) Stereotypes and associations:

- The more expensive the phone, the cooler you are.
- Division of people according to the 'Lovemark'.
- The constant rivalry between Android and Apple.
- Brand means quality and status.

5) Reflection of a person's social status through the acquisition of a smartphone. The majority of respondents believe that smartphones are able to reflect the social status of a person, since the price range is very wide, and rich people have more expensive and high-quality smartphones. Most respondents also believe that smartphones help express individuality.

6) Reasons for buying a smartphone. Most respondents purchase smartphones for personal use, and most often do not need a special reason for this, since they consider it a necessity. Also, buying a smartphone can be timed to certain events (holiday, black Friday, etc.). Some respondents purchase smartphones as gifts (for their girlfriends, daughters, etc.). The frequency of buys can be affected by discounts, the appearance of new models, and also due to the fact your acquaintance bought a better phone than yours. Most respondents do not need a special reason to use a smartphone and often use it every minute (communication, weather, time, etc.). Regardless of the frequency of use, all the respondents carry a smartphone with them

everywhere and constantly and cannot imagine their life without this gadget.

7) Nature of the decision-making process to purchase a smartphone. The decision-making process is relatively complex and time-consuming, taking from a day to a week. In the case of a preliminary choice, the decision is relatively fast. As a source of information, the consumer usually uses Internet forums; the following data are required: technical characteristics of the brand, warranty and information about the manufacturer; all these are highly important for consumers.

8) Choice complexity and time spent on choosing a smartphone. For most respondents, choosing a smartphone is not too difficult. Often, they go to the store, assuming which smartphones they want to purchase. The selection process takes place before going to the store and lasts from a day to a week.

9) Factors that consumers are guided by when choosing a smartphone. Almost all the respondents are guided by the choice of the majority. As parameters the consumer considers when comparing alternatives, the following (in descending order of importance) can be noted: technical characteristics, price, and brand. The brand is an important factor determining the choice, and also which model is most common – some people want to stand out and thus choose something unusual, others are looking for a similar phone, but a little cheaper, to have something to brag about.

10) Place and time of buying a smartphone. Some respondents consider the place of purchase of little importance, although in fact they all purchase smartphones in special mobile communication stores. One third of respondents purchase smartphones in online stores. The time of purchase is irrelevant.

11) People and factors affecting the choice and purchase of a smartphone. Some respondents prefer to consult someone, and mostly it's their friend or partner, very rarely the shop assistant. As factors influencing the purchase, respondents usually name the absence of a smartphone – breakage, loss, etc.

12) Features of purchasing a smartphone as a gift. Most respondents believe that acquiring smartphones as a gift is a risky business: everyone selects smartphones based on their needs and preferences and may be disappointed with the model. If smartphones are purchased as gifts, then the model is approved in advance.

Over 200 people were interviewed: young men and women aged 18-27, high school students, students of Moscow higher education institutions and working young people. Practically all of them

own a smartphone – 98% of respondents. The most frequently used mobile apps are: social networking apps – 68%, Instagram – 66% and Internet browsing apps – 60%. These answers confirm the importance of social groups among young people (Figure 2).

The majority of respondents claimed that the smartphone does not represent a person's status (!) – 73%. The most popular opinion is that a smartphone price for a successful businessman equals to 40-60 thousand RUR (700-1000 EUR); this price represents high social status for young people. However, the average purchasing price (demand) was around 3000 RUR (45 EUR).

It is interesting to know the opinion of respondents regarding brand acceptance for a certain consumer segment. Respondents were offered the following set: Samsung, Apple, Nokia, Vertu, Lenovo, Huawei, Meizu, and Sony. The main preferences are shown in Table 1. When comparing the desired prices for smartphones and the preferable brands, discrepancy between real purchase and preferable brands is clearly visible. Modern Samsung and Apple smartphones cannot cost 45 EUR – they are at least 5 times more expensive. Young people dreams of expensive and currently unaffordable smartphones' brands.

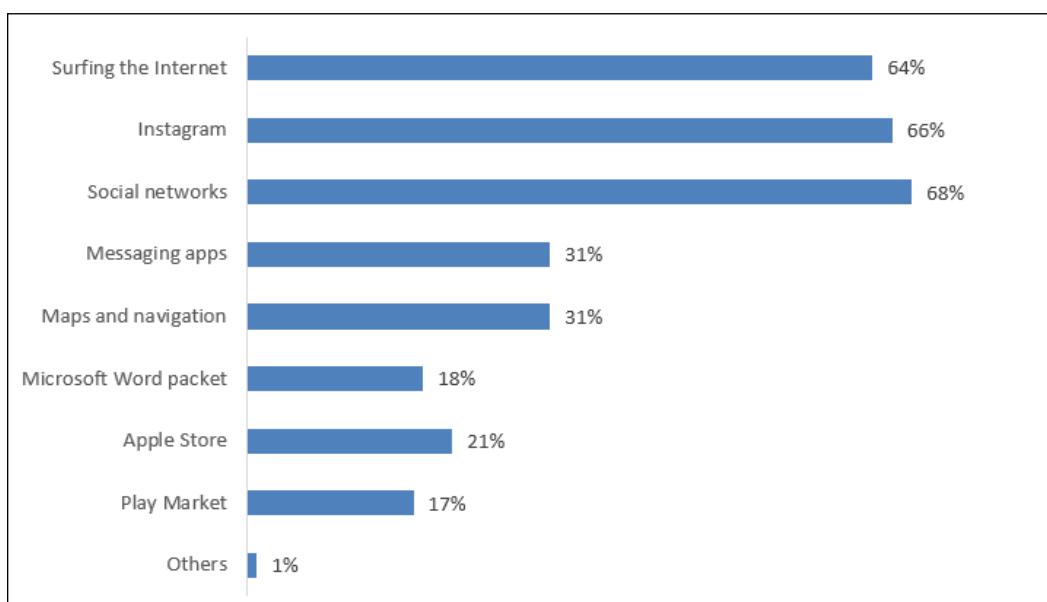


Figure 2 – The most frequently used applications in smartphones
Source: results of the field research, Peoples' Friendship University of Russia, 2018

Table 1 – Brands preferences

Target audience	Main preferences
Schoolchildren	Samsung, Apple
Students	Apple
Retired	Nokia
Workers	Samsung, Apple, Nokia
Office workers	Apple
Servicemen	Samsung
Businessmen	Apple
Housewives	Samsung, Apple

Source: results of the in-depth interview, Peoples' Friendship University of Russia, 2018

Looking at the responses regarding the satisfaction with smartphones (which is almost at 70%) we can conclude that the desire to replace the mobile phone is associated with the status of possession of certain brand.

It is necessary to note that various surveys of the young generation show a hidden problem of 'being untrue' in their statements. Respondents often unconsciously overestimate their capabilities and consumption patterns.

Based on the questionnaires and focus group data, a scheme of purchasing a smartphone by young people was developed. Figure 3 provides a model of smartphone purchasing.

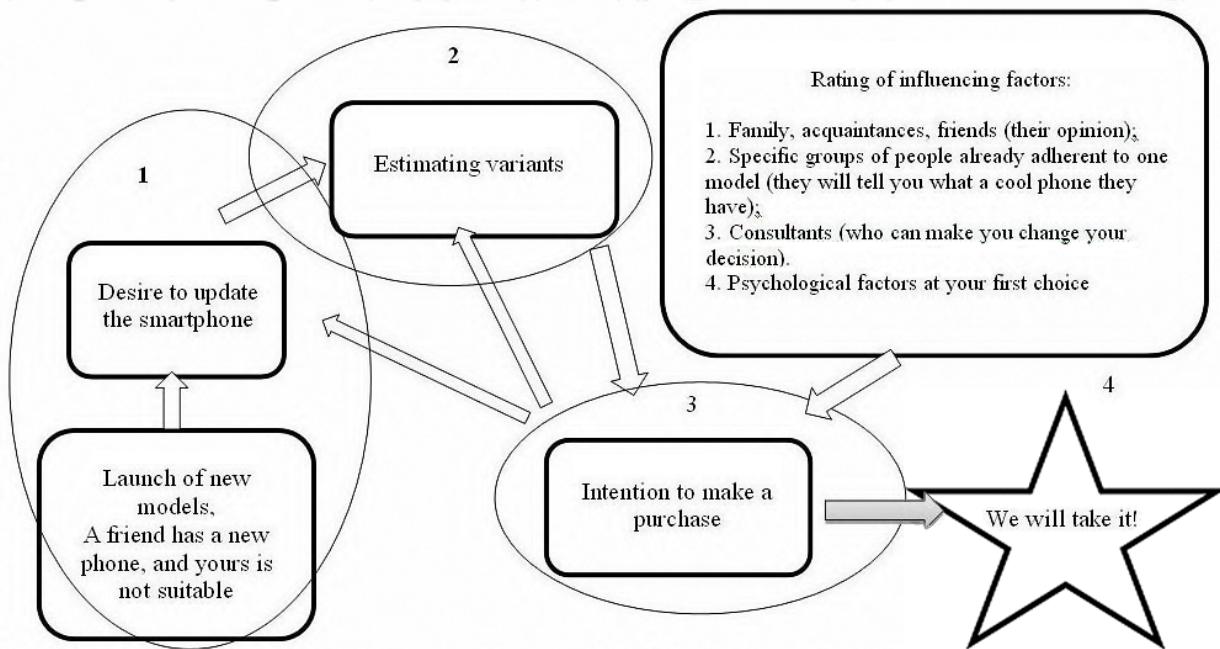


Figure 3 – The scheme of consumer behavior when making a purchase
Source: results of a field survey, Peoples' Friendship University of Russia, 2018

The whole process consists of 4 stages: stimuli to purchase, estimation of variants, intention to make a purchase and factors influencing the purchase. Position 1 shows the stimuli to make the purchase decision. Researches showed there were 3 stimuli to purchasing a new phone:

An introduction of a new smartphone model that is able to attract the attention of the target group (which people own);

Not being satisfied by the current phone, frustration;

Mobile phone being broken.

Among the main stimuli for the purchase, the first two (the dominating) are emotional, the third one is rational. The first stimulus is directly linked to the target group behavior to which the customer belongs or wants to belong.

The reference group was then asked to express their opinion about what influences their choice of smartphone (Position 2). The mentioned features are the following: quality, price, distinctiveness, availability, characteristics, after-sales service. Note that the answers 'quality' and 'characteristics' are separate factors. Quality is not so much associated with actual characteristics, but with something more. Here, one can talk about the extended quality which does not include just a rational 'set of characteris-

tics'. The emotional component is sometimes able to outweigh the rationality in the buying process³.

Discussion of smartphone research results

Product characteristics meeting the customers' expectations is not always enough to be the reason to purchase. The research revealed that a large number of respondents are influenced by other factors not related to the qualities of the smartphone itself. The most curious is Stage 4. The intention to purchase has appeared, but the final decision is not formed – it is almost always formed under the pressure of the external factors that determine the final choice.

These factors are:

The opinion of close and familiar people (reference group) who have learned of the desire to purchase a smartphone and feel the need to express an opinion. They consider it is necessary to share their own vision and to give advice.

Consultant's opinion in the store. Surprisingly, respondents noted that these consultants rarely tell the truth, being interested in their 'own goals in terms of what they have to sell'. Very seldom it is

³ Why It's Important To Understand The Customer's Buying Behaviour(2016). Retrieved from <https://blog.oxford-collegeofmarketing.com/2014/11/27/why-its-important-to-understand-the-customers-buying-behaviour/>

possible to meet honest managers who actually want to help.

Psychological factors that are influenced by the assessed reliability of the vendor, trust towards the brand and tactile sensations.

Taking into account the fact that the target audience are people aged 18 to 27, for promotional needs it is possible create communities and web pages where consumers could share the characteristics of the phone they found out about. Moreover, on these web pages it would be possible to upload photos and videos made with this specific phone model, to propose possible usage methods and to offer promotions providing the consumers with information on the given phone.

Besides, there is an idea to use several promoters who in a very crowded place would approach people and ask to take a photo of them via this phone. At this moment, the first contact with the potential consumer with this product will occur, and some will be interested in it. It is important that the search for information is simple and accessible to the consumer, since it will allow the potential buyer to make a decision on purchase faster (Spennner, 2017).

The basic principles of smartphone promotion can be formulated as: pleasant-to-use, preferably ‘like the one my friend uses’. A smartphone is associated with a ‘successful businessman’ status, which creates a certain reference group.

Study of fitness trackers usage

The second product that was researched to reveal its status when purchased is the fitness tracker. Unlike a smartphone, it is a less popular gadget, but its popularity is growing. A considerable number of young people are engaged in sports and want to keep their whole body toned. Being sporty has become fashionable. Can a fitness tracker become one of the attributes of a sporty person?

The modern positioning of the fitness tracker can be expressed as follows: the fitness tracker is a convenient and functional device which saves your time and helps you stay in shape, tracks your health and improves the physical state of your body. All the data about your physical activity is compiled and systematized in one application in the form of clear statistics. With this device it is pleasant to do sports, to wake up in the morning and aspire to new achievements. The following hypotheses were tested:

- People engaged in some sports do not pay enough attention to such an accessory as a fitness tracker;

- Fitness tracker can be useful in everyday life;

- Fitness bracelet is known to a wide audience;
- Basically, people learn about the fitness bracelet from friends and acquaintances;
- Fitness bracelet is a more attractive accessory than its competitors;
- Emotional response from fitness trackers is missing or minimal;
- Fitness trackers are part of fashion;
- Visual component is one of the most important purchasing criteria;
- Purchase decision is made under the influence of friends and relatives;
- A small percentage of consumers reach a purchase.

The interview includes four main topics – the basic questions related to the respondents’ hobbies, for example whether they do sports, which type, how often, etc. The behavioral questions were related to the consumers’ knowledge of such product as a fitness-bracelet and their awareness of its functionality. The emotional aspect reflecting the inner response of consumers, how important fashion and the appearance of goods are. The behavioral aspect reflecting the willingness and customers’ ability to buy goods was also reflected.

Based on in-depth interviews it can be concluded that such device as a fitness-bracelet is known to a wide audience, but only a small number of consumers actually purchase it. Mainly, these are people who do sports quite frequently or purchase the fitness-bracelet as a gift. The consumers most often learn about the fitness tracker via an acquaintance. The emotional component in such product as fitness tracker is not that important, however, visual design is one of the main selection criteria.

The second stage of the research – the survey – was conducted on the Internet and involved over 200 respondents between ages 18 and 27. The questions were based on the Howard-Sheth model and in-depth interviews. Initially the awareness of the researched product was defined. As can be seen in Figure 4, almost 90% of respondents heard about the fitness-tracker one way or another.

Most people learn about the fitness-tracker from friends and acquaintances (80%) and via the Internet (20%). There is an emotional response from the fitness-tracker. To the question “Can a fitness bracelet bring emotions?”, over 60% have answered positively: it can be pleasant to the eye, create a sense of style, provide self-confidence and improve the sporty attitude. A negative answer was given by less than 40%.

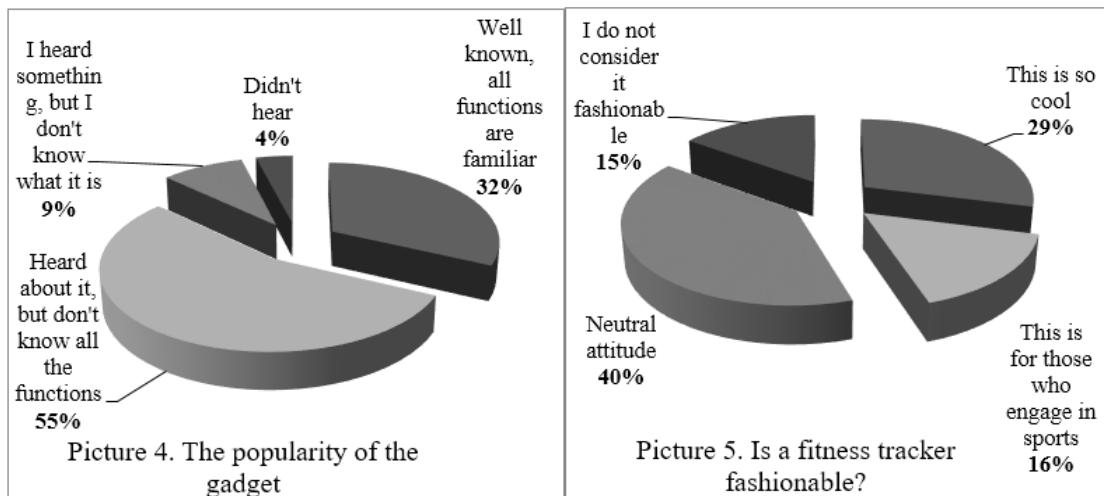


Figure 4

Source: results of field research, Peoples' Friendship University of Russia, 2018

The visual component is an important criterion when selecting a product; this was considered by 35% of the respondents, although 40% pay attention to the functionality of the product. Price does not demonstrate a large significance.

Fitness-bracelets are a part of the young fashion. Only 30% consider fitness trackers a part of fashion

appropriate not only at the gym but also in everyday life (only when doing sports – 16%). A neutral attitude was expressed by 40%, and 15% do not consider it fashionable. Therefore, it is necessary to create fashion trends with the inclusion of a fitness tracker and invest more emotional components in the brand.

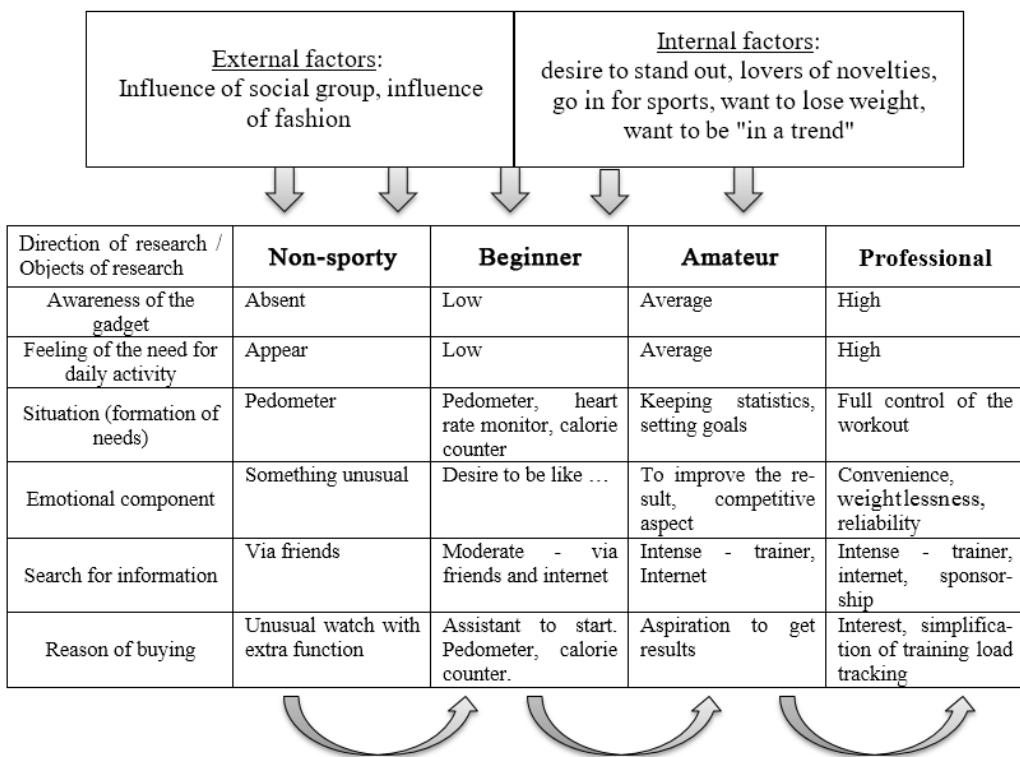


Figure 5 – Model of purchasing process

Source: results of a field survey, Peoples' Friendship University of Russia, 2018

One of the main problems emerged from the survey. Fitness bracelet is perceived as a classic accessory, which complicates its promotion. Of the proposed product forms (wrist accessories), the classic wristwatch was most often chosen, since it is more attractive and familiar. The second and third place was shared by smart watches and usual bracelets. The fourth place was taken by a fitness bracelet. This shows a strong adherence to the classics and the fact that fitness bracelets still occupy a small share of the market of wrist accessories and are not perceived as ‘independent’ gadgets.

With the help of a quantitative survey, the following hypotheses were confirmed: “A fitness bracelet is known to a wide audience”, “A fitness tracker can be useful in everyday life”, “Basically, one learns about a fitness bracelet from friends and acquaintances” and “Visual component is one of the most important criteria for choosing”, nevertheless only about a third of those surveyed consider accessories a part of modern fashion. Despite the fact that the bracelet is known to a large

audience, the number of people willing to buy it or receive it as a gift is considerably low, and among the respondents interested in buying, the bracelet from the low and below average price segment is usually chosen.

Discussion of fitness trackers research results

The final model of the behavior of the consumer fitness trackers is presented in Figure 5. Analyzing the research data, it can be concluded that the fitness tracker is a typical product ‘for the group’. As a result of the research, four groups of consumers were identified: non-sporty, beginners, amateurs, professionals. All these consumers are influenced by social groups and fashion for a “sporty” look. The initial motive for buying is the desire to stand out, to own something unusual to attract attention. A significant reason for buying is the desire to lose weight. In addition, the fitness tracker is a little known product with a significant emotional component.

Table 2 – Promotion of a fitness bracelet for 4 groups

Target group	Activities	Objective	Communication structure	The problem to be solved
Non-sporty	1. Cooperation with clothing stores. Offering the bracelet as an imagesupplement.	Make a fitness bracelet part of fashion. Create the need to wear it in everyday life	Shop assistants offer a fitness bracelet as an imagesupplement. In the case of buying a bracelet, the customer receives a discount in the store.	Strengthen the perception of the fitness bracelet as an integral part of the image. Increase customerbase. Emphasize the image of activity.
Beginners	1. ‘Bring a ticket to the gym and get a 10% discount on the bracelet’. 2. To organize the sale of fitnessbracelets ingyms.	Create the link of perception of sports to a fitness bracelet	Communication is carried out directly in the store when choosing and buying goods	The bracelet is not perceived as a separate device, but goes in tandem with fitness and sports, a stable perception is formed
Amateurs	1. ‘Bring a friend – get a 10% discount’.	Attract more consumers	Communication is carried out directly in the store when choosing and buying goods	The bracelet is not perceived as a separate device, but goes in tandem with fitness and sports, a stable perception is formed
Professionals	1. Offer sponsorship to a male and a female runner.	Increase brand loyalty among professionals	Communication with potential consumers goes through ‘word of mouth’	Distrust is eliminated. A loyal group of sportsmen appears which will be referential for beginners.

Source: results of a field survey, Peoples' Friendship University of Russia, 2018

Having a fitness tracker also helps move from one segment to another (as shown in Figure 6). Such transition strengthens and develops social groups, making them more motivated and united.

Speaking about the promotion program, its main goal is to create the need for the ‘non-sporty’ to make a bracelet part of fashion and of everyday life. It is necessary to create the desire to use the

bracelet more often and to explain its importance and usefulness. In Table 2, for each selected group measures were developed to promote the fitness bracelet, taking into account the possible motives for the purchase.

Conclusion

Consumer behaviour is an integral part of our daily lives. The psychological and social processes involved in buying and consuming goods and services form the subject matter of this text. As leading experts in the field of consumer behavior pay attention, the objective positivist approach to studying cause and effect in consumer behaviour (as in any other kind of behaviour), will be combined with the interpretivist emphasis on trying to understand the emotional, non-rational aspects of the process (Statt, 2013). This study showed these trends. In this research a link between the purchase and the buyer's affiliation to a certain reference group was established. Conventionally, these groups can be named 'a successful businessman' and 'sporty'; each has their own symbols and motivation. The research does not state that *only* smartphones are the symbol of a 'successful businessman', and fitness-tracker a symbol of a 'sporty' person. However, the correlation between the product and social status is defined.

The motives that form the need for smartphones have both personal and group-based nature. As of stimuli, the most common is the desired optimal characteristics which largely influence the customer's final decision which will be made only based on the compliance between a specific smartphone and the desired characteristics (in order to feel fulfilled, a successful person). The majority of respondents believe that smartphones are able to reflect one's social status, as the price range is very

wide, and successful people possess smartphones of certain brands. Most respondents also believe that smartphones help express individuality.

A fitness-tracker is an item that can also carry a certain 'element of the group'. This is a slightly different group believing that "a sound mind lives in a healthy body". Based on in-depth research, it can be concluded that such device as a fitness-tracker is known to a wide audience, but it is purchased by people with clear motivation associated with the external effect produced on others. The fitness-tracker is considered a good gift. The emotional part in this product is not important; however, visual design is one of the main selection criteria. Purchasing a tracker is not always a rational choice. Fitness tracker on a person's wrist is a symbol of mobility, health and pursuit of success.

The study of symbols in the life of different cultures is a highly interesting and fascinating process. A person's behavior speaks much more than words, yet people can be interpreted not only by words and actions, but also by what and how they buy. A purchase of a smartphone, a car or a book can provide a lot of information about a person. The ability to 'decipher' and, if possible, to structure a principle of choosing a particular product is an interesting and important task not only for commercial needs, but also for the social sphere.

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THE TRENDS OF SOCIAL MARKETING DEVELOPMENT IN KAZAKHSTAN

Abstract. Whilst social marketing has been continuing to capture increasing research attention in different settings across the globe, local movements and organizations in Kazakhstan are getting more involved in social marketing activities as well. The research objective of the current study is to explore the trends and challenges of social marketing in Kazakhstan. The study uses qualitative depth interview method. Combined mixed purposeful sampling approach was employed with maximum variation sampling technique used to select the participants. The phenomenological research was used to analyze qualitative data to generate meaning units and develop descriptions. The analysis of the sixteen interviews with experts revealed the major trends and challenges representing the current state of social marketing in Kazakhstan. The key findings of this study include the following: social marketing is growing and developing in Kazakhstan; the challenges facing social marketing in Kazakhstan include general misconceptions about marketing and social marketing, lack of funding and marketing expertise, and weak governmental support and regulation.

Key words: social marketing, social advertising, development.

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Қазақстандағы әлеуметтік маркетингтің даму үрдістері

Андратпа. Әлеуметтік маркетинг бүкіл әлемнің назарында, бүгінгі күні Қазақстанда да жергілікті үйімдар әлеуметтік маркетингті белсенді қолданып жатыр. Бұл мақаланың мақсаты Қазақстан Республикасындағы әлеуметтік маркетинг пен әлеуметтік жарнаманың негізгі үрдістерін зерттеу болып табылады. Зерттеу барысында іріктеудің үйлестірілген мақсатты тәсілін және респонденттердің таңдау үшін максималды вариация әдісін пайдалана отырып, сапалы талдау әдісі қолданылды. Феноменологиялық тәсіл сапалы мәліметтерді талдау және Қазақстандағы әлеуметтік маркетингтің дамуы мен жай-күйін сипаттайтын негізгі трендтерді айқындау үшін қолданылды. Сарапшылардан алынған он алты сұхбаттың мазмұнын талдау барысында Қазақстанда әлеуметтік маркетингтің ағымдағы дамуы мен жай-күйін көрсететін бірқатар үрдістер мен мәселелер айқындалды. Негізгі тұжырымдар әлеуметтік маркетингтің Қазақстанда есіп, дамып келе жатқандығын көрсетеді, алайда дамуда кедегілер кездеседі, олар – коммерциялық маркетинг пен әлеуметтік маркетингтің арасындағы айырмашылықты жалпы түсінбеу, әлеуметтік маркетинг пен әлеуметтік жарнама бағдарламаларын жеткіліксіз қаржыландыру, мемлекеттік органдар тараپынан жеткіліксіз реттеумен қатар әлеуметтік маркетинг саласындағы білікті кадрлардың жетіспеушілігі болып табылады.

Орталық Азиядағы әлеуметтік маркетинг бойынша аз ғана зерттеулер жүргізілгендейten, Қазақстандағы әлеуметтік маркетингтің тұжырымдамаларды қолдану туралы зерттеулер академиктер, практиктер және саясаткерлер үшін үлкен маңызды ие болады.

Түйін сөздер: әлеуметтік маркетинг, әлеуметтік жарнама, даму.

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Тенденции развития социального маркетинга в Казахстане

Аннотация. В то время как социальный маркетинг продолжает привлекать внимание по всему миру, местные организации Казахстана так же все более активно практикуют социальный маркетинг. Целью данной статьи является исследование основных тенденций в развитии социального маркетинга и социальной рекламы в Республике Казахстан. В исследовании используется качественный метод анализа с использованием комбинированного целевого подхода для выборки и техники максимальной вариации для выбора респондентов. Феноменологический подход был применен для анализа качественных данных и выявления основных трендов, описывающих состояние и развитие социального маркетинга в Казахстане. Анализ содержания шестнадцати интервью с экспертами выявил ряд тенденций и вызовов, которые отражают текущее состояние развития социального маркетинга в Казахстане. Основные выводы говорят, что социальный маркетинг растет и развивается в Казахстане, но существуют препятствия в развитии, такие как общее непонимание разницы между коммерческим маркетингом и социальным маркетингом, недостаточное финансирование программ социального маркетинга и социальной рекламы, нехватка квалифицированных кадров в области социального маркетинга наряду с недостаточным регулированием со стороны государственных органов.

Ключевые слова: социальный маркетинг, социальная реклама, развитие.

Introduction

The research objective of the current study is to explore the trends and challenges of social marketing in Kazakhstan. Whilst social marketing has been continuing to capture increasing research attention in different settings across the globe, local movements and organizations in Kazakhstan are getting more involved in social marketing activities as well. With little research conducted on social marketing in Central Asia, the study on applications of social marketing concepts in Kazakhstan becomes of high value to academicians, practitioners, and policy makers. Having the top priority and importance of the development and improvement in social security and well-being of the citizens, social marketing is becoming of a growing interest and potential for academicians, practitioners, and policy makers in “applying marketing interventions directed at social issues at the policy, tactical and operational levels of practice” (French, 2011: 154). The use of conceptual and practical tools of social marketing, introduced as an approach to planned social change (Kotler & Zaltman, 1971) and further defined as “the systematic application of marketing concepts and techniques to achieve specific behavioral goals, relevant to a social good” (French & Blair-Stevens, 2005: 4), opens new horizons for social change in Kazakhstan.

Literature Review

Continuing and growing interest in social marketing

Since the term social marketing was first coined by Kotler and Zaltman (1971), it has gained increased attention of academicians and practitioners in different areas as proved by the growing number of published articles (Truong & Hall, 2013). Along with the interest in the evolution of the marketing thought (Bartels, 1988; Wilkie & Moore, 1999), social marketing has attracted specific attention as a particular area of research within the marketing literature (Duhaime et al., 1985; Kotler & Levy, 1969). Thus, Fox and Kotler (1980), in their review of first decade of social marketing development, indicated the shift in social marketing from social advertising to social communications approach. Bloom (1980) in a study on evaluation of social marketing programs, reported that many studies were weak in design and implementation. A need for more rigorous theoretical foundation for the social marketing was highlighted by Bloom and Novelli (1981); they pointed out such issues as organization and management, long-term positioning strategies, audience segmentation, and media channels. Later, Lefebvre (1996), in the review of the 25-year development of social marketing, indicated more issues to be considered, such as theoretical, strategic and creative

development of social marketing campaigns, children and teenagers as target audiences, social marketing applications for the private sector, and new research agenda and techniques. In the review of the effectiveness of social marketing interventions in different settings, the evidences were found that social marketing programs were effective across a spectrum of behaviors and can influence individuals, professional practitioners, and policy makers (Stead et al., 2007). In a systematic review of the body of social marketing knowledge, Truong (2014) analyzed the content of social marketing articles published in refereed journals from 1998 to 2012. This research indicated that social marketing continued to capture increasing research attention, with a focus on downstream social marketing, especially in the public health sector. Given the growing interest in social marketing in different settings, the following section will provide more details on the definition of social marketing as a concept and as a discipline.

Social marketing defined

Social marketing as a discipline has developed significantly since its inception in early 1970's and had a pervasive impact on the issues in the areas of public health, environment protection, sustainable development, tourism, safety, communication, transport, human rights, poverty, and others. However, social marketing as a term is often misunderstood and misused by both practitioners and academicians. Social marketing has its roots in the commercial sector. During the 1950s and 1960s, marketing researchers, including Bill Novelli, Paul Bloom, Dick Manoff, Karen Fox, and others, considered applying marketing concepts and techniques to the new areas such as social or political (Manoff, 1985; Walsh et al., 1993). Many of the early programs, in developed world and developing countries, were mostly social communications, but they were important for the development of social marketing as a discipline (Bloom &Novelli, 1981; Lefebvre, 1987). Wiebe (1951) rose a question "Can brotherhood be sold like soap?", and suggested that the more social change campaign use the techniques of commercial marketing, the greater the chances of its success. Kotler and Levy, in their pioneering article 'Broadening the Concept of Marketing', suggested that marketing as a 'persuasive societal activity' goes far beyond the selling of the soap and toothpaste, and marketing academicians and practitioners are to consider "whether traditional marketing principles are transferrable to the marketing of organizations, persons, and ideas" (Kotler & Levy, 1969: 10). Subsequently, the term social marketing

was coined by Kotler and Zaltman in 1971 in their seminal article 'Social marketing: An approach to planned social change'. They defined social marketing as "the design, implementation, and control of program calculated to influence the acceptability of social ideas and involving considerations of product planning, pricing, communication, distribution and marketing research" (Kotler &Zaltman, 1971: 5). Kotler and Zaltman were the first to formalize a definition of social marketing, addressing the use and application of marketing for social change already practiced by a number of researchers during the 1960s (MacFadyen et al., 1999). Although social marketing has a relatively short history, it is an evolutionary concept. It has been developing gradually along with the growth of public and non-governmental organizations and movements, and other socioeconomic developments. There are many contributors to social marketing. Several modifications have been made to the early definitions, thus the social marketing concept was redefined as:

- the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence voluntary behavior of target audiences in order to improve their personal welfare and that of the society (Andreasen, 1995: 7);
- the adaptation and adoption of commercial marketing activities, institutions and processes as a means to induce behavioral change in a targeted audience on a temporary or permanent basis to achieve a social goal (Dann, 2010: 151);
- the application of marketing knowledge, concepts, and techniques to enhance social as well as economic ends. It is also concerned with the analysis of the social consequences of marketing policies, decisions and activities (Lazer& Kelly, 1973);
- the use of marketing principles and technologies to influence a target audience to voluntary accept, reject, modify, or abandon a behavior for the benefit of individuals, groups, or society as a whole (Kotler et al., 2002: 5);
- the systematic application of marketing concepts and techniques to achieve specific behavioral goals, relevant to a social good (French & Blair-Stevens, 2005: 4).

It can be noted from the definitions listed above, that with all the variations in the wording, they were "relatively consistent in the use of commercial marketing principles and techniques, voluntary action by the target of the social change, and the accrual of benefit to the individual and the broader society through the self-interest motivated actions

of the individual" (Dann, 2008: 94). The essence of social marketing is that it is a distinct discipline within the marketing area, it is for the good of the target audience and society as a whole, and it uses commercial marketing techniques and principles.

At the emerging stage of social marketing, the idea of expanding commercial marketing to social problems was repulsive for some academicians. Following the traditional approach to the rightful role and purpose of marketing, researchers raised concerns about the threat to the economic exchange concept by replacing a tangible product with an idea (Luck, 1969; 1974) and doubts about the power of using marketing for propaganda and social change (Laczniack et al., 1979; Lusch, 2007). The conflict between social and commercial marketing appeared when the American Marketing Association (AMA) redefined marketing as "an organizational function and a set of processes for creating, communicating and delivering value to customers and for managing customer relationships in ways that benefit the organization and its stakeholders" (AMA, 2004). Discussions have started about fundamental differences between social marketing, with direct benefits to the target groups and society, but indirect benefit to the organization and commercial marketing, with the direct benefit to the organization. Questions were raised on "whether models developed to explain sales and practices designed to generate them, apply to these social marketing challenges" (Andreasen et al., 2008). Furthermore, Andreasen (2002) pointed out the barriers to grow in the field of social marketing, such as poor brand positioning.

These limitations were overcome to some extend when the American Marketing Association released a new definition of marketing in 2007, "as with the dawn of each era of commercial marketing, social marketing academics and practitioners had the opportunity to revisit how commercial marketing can be adapted into the development of social marketing theory and practice" (Dann, 2008: 93). The AMA's revised version of definition describes marketing as "the activity, set of institutions and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large" (AMA, 2013). Social marketing has benefited from the use of the new AMA definition of marketing by adopting such concepts as 'clients as the recipient of offerings of value' that matches consumer centric system of social marketing approach that addresses social needs. The concept of exchange among customer, partners, clients, society, and organization

fits social marketing in balancing the needs of the target market, society, and various stakeholders such as partner organization, government, donors, and others. Having described various definitions of social marketing and its relationship to commercial marketing and the fact that "there are too many definitions of social marketing being used, and these definitions conflict in major and minor ways" (Andreasen, 2002: 4). Recent studies showed the effectiveness of social marketing interventions at different points in complex dynamic system (Hodgkins et al., 2019; Kassirer et al., 2019; Saunders & Truong, 2019). Whilst social marketing has been continuing to capture increasing research attention in different settings across the globe, local movements and organizations in Kazakhstan are getting more involved in social marketing activities as well. Thus the research objective of the current study is to explore the trends and challenges of social marketing in Kazakhstan.

Methodology

As the objective of this study was to explore the state of social marketing and major trends and challenges in social marketing in Kazakhstan, a qualitative depth interviews method was used. Combined mixed purposeful sampling approach was employed with maximum variation sampling technique used to select the participants. Based on the value of variety of opinions, potential areas were first selected for this study, namely marketing and advertising, public health, education, movements, government and youth organizations. Sample organizations were identified. Based on education and work experience in related fields potential participants were selected and informed about the purpose of the study and procedure for conducting interviews. Sixteen individuals agreed to be interviewed. The same interview protocol was used for both audio-recorded and notes interviews. After an introduction about the project, respondents were asked questions about social marketing in general and specifically the trends, challenges, and effectiveness of social marketing in Kazakhstan. The interviews varied in terms of content depending on the areas of expertise of respondents. The audio-recorded interviews were transcribed into text. The texts were analyzed first for the general sense of the information and subsequently analyzed in more details employing coding process, whereas coding was used as a process of organizing the collected information into "chunks" before interpreting the meaning of those "chunks" (Rossman& Rallis, 1998). The

results of the coding process were used to generate a description of themes for further interpretation and analysis. Thus, the phenomenological research, as recommended by Moustakas (1994), was used to analyze qualitative data to generate meaning units and develop descriptions. Finally, descriptions of themes were developed using short and long text-embedded quotations, wording from participants, and special formatting of the paper to draw attention to quotations from participants.

Results and Discussion

The analysis of the sixteen interviews with experts revealed the major trends and challenges representing the current state of social marketing in Kazakhstan. There was a complete agreement among all respondents that social marketing has been growing in the recent times. The further analysis benefitted from unique opinions of each interviewee bringing marketing and advertising, educational, medical and public health, governmental, movements and youth organizations perspectives on the state of social marketing in Kazakhstan. Common issues reported by experts included the content of social marketing message, media channels used, selection of the target audience, lack of funding and marketing expertise, and weak governmental support and regulation. Every respondent admitted that social marketing has been developing rapidly in the recent years. Respondents state that:

– “When social marketing emerged on the market of Kazakhstan, it used to be like small sparkles, however with the government paying more attention to social issues in the country and with the development of marketing and advertising in Kazakhstan, social marketing is becoming of high importance and better level of implementation”(Respondent ID: MKAD_02);

– “Nowadays wherever you go, you can see a social ad. They are on every corner” (Respondent ID: EDU_01);

– “Social marketing has penetrated our everyday life to a deep extent ...people see, hear, and notice it every day” (Respondent ID: MED_01);

– “Social marketing is quite developed... in terms of quantity, there are lots of social ads, the total amount of social advertising is twice higher than the biggest commercial clients on all media platforms” (Respondent ID: MKAD_04).

The expert in advertising explained that media and marketing research companies counted ads by commercial clients, however there were no statistics on non-for-profit and social marketing by client.

Therefore, the numbers in reports indicate that social marketing tops all lists, but it is important to note that the reports indicate the aggregate numbers for all social ads produced for the period. Another expert from the Department on the Control of Advertising in Almaty city (Respondent ID: GOV_02) indicated that their Department exerted control over commercial advertising, while social advertising was executed under the local administration or organizations of interest for example public health or road police. Therefore, there was no statistics on social ads by area or topic.

Despite the increasing numbers of social ads and social marketing interventions in Kazakhstan, as one respondent noted “the level of social marketing in our country is not up to the highest standards... there is a room for improvement” (Respondent ID: YOUTH_01). Common issues reported by experts included general misconceptions about marketing and social marketing, lack of funding and marketing expertise, weak governmental support and regulation, the content of social marketing message, media channels used, selection of the target audience and value proposition, and unrealistic expectations and poor implementation. Specifically, respondents commented that:

– “There are lots of social marketing, however often it does not reach the target audience due to its content; seems that there is a message in the ad, but the audience is interpreting it differently” (Respondent ID: MKAD_04);

– “Organizations who do social marketing are often NGOs or movements. They do not know how to do effective ads, how to do social ads, and they do not have money for execution and production” (Respondent ID: GOV_02);

– “Consumers preferences in media consumption are changing, especially among youth. Old TV, radio and press do not work any more” (Respondent ID: MKAD_03).

The common issue identified by respondents is the fact that social marketing is usually practiced by small movements or big organizations and institutions lacking marketing expertise. Employees in the public organizations involved in design and implementation of social marketing activities have weak understanding and comprehension of marketing. Therefore, often there are mistakes at both strategic and tactical level. Many social ads are designed without “an idea of who the target market is” as one marketing expert emphasized (Respondent ID: MKAD_03). Another expert pointed out that especially for the risk behavior “individuals, taking drugs, consuming alcohol or smoking, get pleasure

from these activities and they do not want to change and they do not want to listen to your ads ..., ads against smoking are designed by non-smokers who do not understand smokers at all" (Respondent ID: GOV_01). Thus, from the strategic analysis and planning down to concept development, execution, and evaluation, social marketing is often performed by organizations lacking marketing competences and therefore at suboptimal level.

Participants in the interviews drew special attention to the message and media decisions. Opinions about the content of the message varied among interviewees. Some suggested that the threat and fear appeals were not effective for individuals already exhibiting risk behaviors, while these messages can work well for adolescences and those who do not perform risky activities and therefore framing techniques can be used to design social marketing messages. Others believed that threat appeal and shock messages should be used to the greater extent than now to prevent and reduce risk behaviors. Another trend confirmed by respondents was changing media preferences of consumers and shifting to the use of digital and social media.

Most of the interviewees shared an opinion that social marketing is represented in the areas of public health, safe driving, ecology and animal protection, and charity. The public health issues included preventive medicine and regular medical examination, family, women and kids' health issues, transmitted diseases, and substance use (alcohol, tobacco, drugs). The analysis of the interviews revealed that activities and communications related to the issues of political parties and elections, patriotism, art, heritage and culture, city and events, such as Nauryz or Victory Day, were considered as social marketing as they were not related with commercial profit making and were aimed at creating favorable attitudes towards politicians, art and heritage assets, or events. However, respondents stressed that the critical role of social marketing was to change attitudes and behaviors of the groups at risk in the areas related to current social problems existing in the country. The section below describes the findings related to the objective of social marketing to change behavior and solve social problems.

Conclusions and Recommendations

This chapter provides a summary of the major findings of this study along with recommendations and implications of the study's findings for social marketing academicians, practitioners, and policy

makers. The research objectives of the current study were to analyze the trends and challenges of social marketing in Kazakhstan. Based on the findings of the qualitative depth interviews used in the current study, the following conclusions can be made in regard to social marketing in Kazakhstan: a) Social marketing is growing and developing in Kazakhstan; b) The challenges facing social marketing in Kazakhstan include general misconceptions about marketing and social marketing, lack of funding and marketing expertise, weak governmental support and regulation, the content of social marketing message, media channels used, selection of the target audience and value proposition, emphasis on the tactical level with insufficient understanding of the social marketing strategies; c) The two main areas of social marketing applications are country related and risk related. The country stream includes promoting patriotism, art and culture, and marketing of city and country events. The risk stream covers public health, including substance use, ecology and environmental risks, safe deriving, financial risks, hazards and emergences; d) Marketing research, segmented and targeted social marketing communications, proper message and media decisions can improve the effectiveness of social marketing interventions.

Based on the review of the literature and findings of the current study, the following recommendations are proposed as to improve the effectiveness of social marketing communications. The recommendations address the challenges facing social marketing in Kazakhstan identified in this study such as general misconceptions about marketing and social marketing, lack of funding and marketing expertise, weak governmental support and regulation, the content of social marketing message, media channels used, selection of the target audience and value proposition, emphasis on the tactical level with insufficient understanding of the social marketing strategies. Whilst marketing has become a common practice in commercial organizations and a part of the core curricular in business education, public sector in Kazakhstan still lacks knowledge and practices of marketing. These findings are supported by the studies in other countries as well demonstrating that despite the growth and popularity of using social marketing in public sector, many public professionals have an incomplete understanding of the field (Grier & Bryant, 2005). Therefore, the recommendation for educators is to add courses on social marketing such as social marketing, marketing for public health, sustainable marketing, green marketing, and community based

marketing, to the curricular in public administration educational institutions. Moreover, various trainings and seminars can be offered to employees at the public sector to provide them with knowledge and develop their competences to design and implement effective social marketing intervention. In designing social marketing courses and training programs, it is important to provide knowledge about both strategies and tactics of social marketing. As the core of social marketing is voluntary change of behavior for the benefit of individual and society as a whole, consumer orientation and client centered approached are to be emphasized and robust understanding of the customer needs to be developed with a focus on their behaviors, attitudes, beliefs and understanding the factors that influences them. The major elements or benchmarks of social marketing identified in the literature (Andreasen, 1995; 2002; French & Blair-Stevens, 2006; French et al., 2010) must be discussed in the course including the adoption of the customer centric marketing philosophy; using market research to make decision and track the implementation of campaigns; segmenting target audiences; creating mutually beneficial exchanges between the organization and its client base incorporating an ‘exchange’ analysis that provides understanding about costs, and benefits associated with target behaviors and the development of possible interventions; using all elements of the ‘marketing mix’; and analyzing competition to understand what competes for the time and attention of the audience and competition planning to reduce the impact of these factors. This recommendation is supported by the recent review social marketing interventions and their evaluations published between 2000 and

2014 (Kubacki et al., 2015) where authors suggest that the absence of complete benchmark criteria limits effectiveness of social marketing and propose to enhance the reputation of social marketing as an effective change agent via more comprehensive application of social marketing benchmark criteria.

The findings about the lack of funding, weak governmental support and regulation confirm the results of other studies indicating that “despite growing popularity among public health professionals, resistance by senior management, community advocates, policy makers, and others can create barriers to the use of the social marketing model” (Marshall et al., 2006: 206). The situation will potentially change for better as Kazakhstan implementing its 2050 program aiming to become one of the 50 developed countries in the world. Moreover, the educational programs proposed above could help to reduce resistance among practitioners and policy makers in applying social marketing principles and techniques. However, further research is recommended to examine the reasons of resistance.

The study has several limitations related to sampling and data collection. For the qualitative depth interviews, there were difficulties in recruiting participants, thus the most knowledgeable experts having access to the statistics on social marketing or being heavily engaged in production of social marketing communications were difficult to reach. Despite using maximum variation sampling technique to select the participants, the final sample was suboptimal for this study. The future research can explore selected specific areas where social marketing is applied.

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COMBINING SIMULATION WITH GENETIC ALGORITHM FOR SOLVING STOCHASTIC MULTI-PRODUCT INVENTORY OPTIMIZATION PROBLEM

Abstract. All companies are challenged to match supply and demand, and the way the company tackles this challenge has a tremendous impact on its profitability. Due to the fact that markets are rapidly evolving and becoming more complex, flexible, and information-intensive, notorious binging-and-purging approach is inappropriate. Such an approach, in which product is, firstly, overpurchased or over-produced in order to prepare for expected demand spikes and then discarded by sharp decline in price. Thus, in order to tailor inventory control to urgent industrial needs, the discrete-event simulation model is proposed. The model is stochastic and operates with multiple products under constrained total inventory capacity. Besides that, the model under consideration is distinguished by uncertain replenishment lags and lost-sales. The paper contains both mathematical description and algorithmic implementation. Besides that, an optimization framework based on genetic algorithm is proposed for deriving an optimal control policy. The proposed approach contributes to the field of industrial engineering by providing a simple and flexible way to compute nearly-optimal inventory control parameters.

Key words: stochastic inventory control, constrained optimization, simulation-optimization, genetic algorithm.

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Стохастикалық мультиөнім қорларын басқару жүйесін оңтайландыру мәселелерін шешуге арналған имитациялық модельдеу мен генетикалық алгоритмнің үйлесімі

Андратпа. Әрбір компания сұраныс пен ұсынысты үндестіру қажет және компанияның осы тапсырманы қалай орындағаны оның табыстырынына үлкен әсер етеді. Нарықтың тез дамып, күрделі, икемді және өзгермелі болуына байланысты артық өндіру, сатуды ынталандыру мақсатында бағаларды құрт төмендету сияқты тәсілдер қазіргі кезде ескеріп, қолданылмайды. Осыланысты, бұл мақала басқарудың оңтайлы параметрлерін табу үшін қорларды басқару жүйесінің дискретті-оқиғалы имитациялық модельнің жасауды көздейді. Сипатталған модель стохастикалық болып табылады және агрегаттық сыйымдылығы шектеулі бірнеше өніммен бір кезде жұмыс істейді. Сонымен қатар, қарастырылып отырған модель өнімді жеткізу арасындағы белгісіз үақыт айырмашылығымен ерекшеленеді. Мақалада математикалық сипаттама және алгоритмдік орындалу орын алады. Сонымен қатар, оңтайлы басқару саясатын табу үшін генетикалық алгоритм негізінде тәсіл ұсынлады. Сипатталған әдіс – қорларды басқару жүйелері үшін оңтайлы параметрлерді есептеудің қарапайым және икемді әдісі.

Ұсынылған әдіс өнеркәсіптік машина жасау саласына ықпал етеді, бірақ тәуекелдер мен сенімділік саясатына қатысты түгендеудің оңтайлы параметрлерін есептеудің қарапайым, бірақ тиімді әдісін ұсынады. Сонымен қатар, әдіс автоматтандырылған тапсырыс беру жүйесінде қолданылуы мүмкін.

Түйін сөздер: қорларды стохастикалық, басқару, шектеулермен оңтайландыру, симуляция-оптимизация, генетикалық, алгоритм.

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**Комбинация имитационного моделирования и генетического алгоритма
для решения задач оптимизации стохастической
многопродуктовой системы управления запасами**

Аннотация. Каждая компания сталкивается с необходимостью синхронизации спроса и предложения и то, насколько компания справляется с данной задачей, оказывает огромное влияние на ее прибыльность. В связи с тем, что рынки быстро развиваются и становятся все более сложными, гибкими, волотильными и информационно насыщенными, устаревшие подходы, предполагающие перепроизводство, сменяющее резким снижением цены для стимулирования продажи излишней продукции, являются неприемлемыми. В этой связи, данная статья преследует цель – разработать реалистичную дискретно-событийную имитационную модель системы управления запасами для нахождения оптимальных параметров контроля. Описываемая модель является стохастической и работает с несколькими продуктами при ограниченной совокупной вместимости. Кроме того, рассматриваемая модель отличается неопределенными временными лагами между поставками продукции. Статья содержит как математическое описание, так и алгоритмическую реализацию. Кроме того, для нахождения оптимальной политики управления предлагается подход на основе генетического алгоритма. Описанный метод является простым и гибким способом вычисления около-оптимальных параметров для систем управления запасами.

Предложенный подход вносит свой вклад в область промышленного проектирования, предоставляя простой, но все же эффективный способ вычисления почти оптимальных параметров запасов с учетом политики риска и надежности. Кроме того, метод может быть применен в автоматизированных системах заказа.

Ключевые слова: стохастическое управление запасами, оптимизация с ограничениями, симуляция-оптимизация, генетический алгоритм.

Introduction

Modern markets are extremely competitive. Businesses are facing unceasingly growing pressure on both prices and quality. Besides that, the company is required to swiftly respond to stochastic market conditions. Incorrect inventory policy leads not only to corporate losses, but also to overproduction (Altıok, 2012). In this regard, traditional inventory policies are not appropriate anymore. Moreover, overproduction causes serious environmental problems, depleting natural resources and polluting the atmosphere.

The real-world inventory optimization is commonly characterized by the large-scale size and the necessity for nearly-optimal solutions in feasible computing times (Angun, 2011). That is why, the metaheuristics in general and genetic algorithms in particular are used so widely to define an optimal inventory policy. The world is full of uncertainty, which frequently makes classical deterministic approaches unsuitable due to excessive simplicity.

As it is mentioned in the recent research (Juan et al., 2015), real-life stochastic combinatorial optimization problems may be reformulated as a simulation in a natural way. Thus, the hybridization of metaheuristics and simulation techniques

promises to be an efficient solution of stochastic inventory optimization and inventory control problems. First and foremost, the combination of simulation and metaheuristics is focused on efficiency taking into account stochastic components that may be contained either in the objective function or in the constraints. Such approaches are conventionally called simulation-based optimization or “simheuristics”. The method aims to utilize a simulation instead of an objective function in traditional form and apply the genetic algorithm to find such simulation adjustments that would lead to the optimal output. In the proposed method, the iterative searching process of the genetic algorithm has to assess the quality of individual solutions, highlighting the promising ones. Besides, real-world stochasticity may be modelled throughout the best-fit probability distribution. The distribution may be either theoretical or empirical, without the need to be approximated to normal or exponential.

Nowadays discrete-event simulation is the most dominant simulation paradigm for simulation-optimization frameworks (Gosavi, 2015). The first simulation-based optimization of inventory control system dates back to Fu and Hill (1997). The model assumes zero replenishment lead time and periodic review. The cost function comprises holding, purchasing, transportation and backlogging.

Among modern papers metaheuristic in general and genetic algorithms in particular are distinguished. For instance, researchers considered a stochastic supply chain management problem (Peirleitner et al., 2016). The problem is stated as bi-objective optimization problem. Such that overall supply chain costs are subject to minimization, while service level must be maximized. Such optimal control parameters as reorder points and lot sizes are derived by combining genetic algorithm with discrete-event simulation. In the same year discrete-rate simulation paradigm is used as a core to solve single-product inventory control problem (Zvirgzdina and Tolujew, 2016). In this study the model is developed in ExtendSim using inbuilt genetic algorithm to find optimal control parameters. The recent research focuses on spare part inventory control for an industrial plant. Assuming that the demand is driven by maintenance requirements, spare part provision for a single-line conveyor-like system is considered (Zahedi-Hosseini, 2018). Average cost per unit time is taken as the optimality criterion and optimization is conducted using SimRunner's inbuilt genetic algorithm.

This paper describes a possible combination of discrete-event simulation and genetic algorithm to define the optimal inventory policy in stochastic multi-product inventory systems. The discrete-event model under consideration corresponds to the just-in-time inventory control system with a floating reorder point. The system operates under stochastic demand and replenishment lead time. The utilized genetic algorithm is distinguished by a non-binary chromosome encoding, uniform crossover and two mutation operators. The proposed approach contributes to the field of industrial engineering by providing a simple, but still efficient way to compute nearly-optimal inventory parameters with regard to risk and reliability policy. Besides, the method may be applied in automated ordering systems.

Materials and methods

First of all, the method requires designing a simulation that corresponds to the real system with a high degree of accuracy. As it is already mentioned, such a simulation will play the role of an objective function. Thus, an optimization process will be reduced to the search of the best simulation adjustments. The inventory theory at its current stage has developed a significant mathematical foundation for solving problems related to the determination of the optimal inventory policy (Zipkin, 2000). The most suitable model among considered is the model

of Hopp and Spearman (2008). It is also worth noting that several distinguishing features were taken from “lost sales (r, Q) inventory control model” (Kouki et al., 2015). The considered model makes several assumptions:

- Unfulfilled demands are defined as a lost opportunity and no backlog shall be fulfilled late;
- Demand size, demand frequency and replenishment lead time are continuous random variables;
- Product of a particular type is replenished by an individual supplier.

Discrete-event simulation paradigm is chosen in order to take into account random components without a dramatic increase in system complexity at the computational level. Unlike in continuous simulation, system dynamics is not unceasingly tracked during the simulation time. Discrete-event simulation contains a list of events, such that each event takes place at a particular instant of time altering the state of the system. It is important to emphasize that there are no changes in the system between consecutive events. That is why, the simulation laps in time from previous event to the next one and runs much faster saving precious computational resources. Each event is scheduled according to preliminary generated time t_n and executes sequentially. Generated time is appended to a time vector $T = (t_0, t_1 \dots t_n)$, which may be interpreted as a time-counter. The total inventory assortment corresponds to the set of products P , such that each product $p_i \in P$. The storage capacity allocation is the first priority task. Presuming that I_{max} is the total storage capacity, we declare B as a vector of individual storage capacities assigned for products:

$$\sum_{i=1}^{|P|} b_i = I_{max}; \forall b_i \in B \quad (1)$$

The simulation begins with an initial inventory level of I_p at t_0 . During the simulation, emerging demands $x_{p,t}$ are satisfied and the stock level declines gradually. If the stock level falls below a reorder point $r_{p,r}$, the inventory places a new order $y_{p,t}$ to refill the stock. Therefore, an inventory level at a particular moment of time equals to an inventory level in previous moment subtracting received demand and adding an order that was placed at $t - L$ Equation 2. Where L_p is the replenishment lead time for a product p . It is also worth noting that such a model aims to represent the inventory under some sort of just-in-time policy, thus, the order size $y_{p,t}$ equals to the corresponding maximal inventory capacity b_p subtracting the difference between the

current inventory level $I_{p,t}$ and adjusted safety-stock SS_p Equation 3. In the proposed model, a new reorder point r_p is recalculated after each replenishment Equation 4. Where $m_{p,[t-L,t]}$ stands for a mean demand during the replenishment lead time and SS_p is a value of the corresponding safety-stock. Based on that, the number of arisen backorders for product p at time t may be determined as the step function:

$$I_{p,t+1} = I_{p,t} - x_{p,t} + y_{p,t-L} \quad (2)$$

$$y_{p,t} = \begin{cases} b_p - (I_{p,t} - SS_p), & \text{if } I_{p,t} > SS_p \\ b_p, & \text{if } I_{p,t} \leq SS_p \end{cases} \quad (3)$$

$$r_{p,t} = m_{p,[t-L,t]} + SS_p \quad (4)$$

$$o_{p,t} = \begin{cases} 0, & \text{if } x_{p,t} \leq I_{p,t} \\ x_{p,t} - I_{p,t}, & \text{if } x_{p,t} > I_{p,t} \end{cases} \quad (5)$$

Discrete-event simulation of such models is simple enough and can be performed by the iterative algorithm (Figure 1).

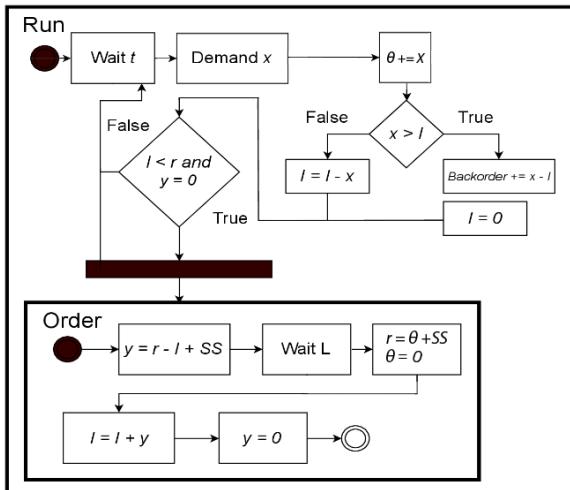


Figure 1 – The logic behind the simulation

Each product in an assortment has a different market price and thus a different backorder cost o_p . Likewise, unit costs of storage and shipping, h_p and l_p respectively, vary depending on product's properties and subtleties of handling. Thereby, the total cost function for each product is the sum of the products of unit costs on number of units shipped, stored or backordered respectively:

$$TC_p = l_p \sum_{i=0}^t y_{p,t} + h_p \sum_{i=0}^t I_{p,t} + o_p \sum_{i=0}^t o_{p,t} \quad (6)$$

In such settings, an overflow may occur:

$$F_t = \sum_{i=1}^{|P|} I_i > \sum_{i=1}^{|P|} b_i \quad (7)$$

Such a case may be taken into account by declaring a specific cost s related to the unit overflow and tracing the overflow level. In real world, such a cost corresponds to the warehouse outsourcing or reverse logistics (Bijvank and Vis I, 2011).

$$F_t = \begin{cases} 0, & \text{if } \sum_{i=1}^{|P|} I_i \leq \sum_{i=1}^{|P|} b_i \\ F_t, & \text{if } \sum_{i=1}^{|P|} I_i > \sum_{i=1}^{|P|} b_i \end{cases} \quad (8)$$

In this regard the total costs function for an inventory as a whole TC takes the following form

$$TC = \sum_{p=1}^{|P|} TC_p + s \sum_{i=0}^t F_t \quad (9)$$

The genetic algorithm was invented and firstly introduced by Holland (1975). To date, genetic algorithms have been successfully implemented in logistics and supply chain management (Yeh and Chuang, 2011). The motivation for combining genetic algorithm with simulation is that in real-life inventory problems, it is highly preferable to obtain a nearly-optimal solution for a precisely accurate model than the absolutely optimal solution for an oversimplified deterministic model. Genetic algorithms are totally different in comparison with the conventional search techniques. The optimization procedure starts with an initial set of randomly generated solutions that are called population. Each individual solution in the population is called a chromosome. The chromosomes undergo changes through sequential iterations. Such iterations are called generations. The chromosomes within the generation are evaluated, according to a fitness function. The next generation is composed by a set of new chromosomes, called offspring. Offspring, in its turn, is mainly formed by the fittest chromosomes, partially altered by either crossover or mutation operators.

In order to apply genetic algorithm, the following initial parameters are required:

- Population size (N) – the number of chromosomes in each generation;
- Crossover rate (P_c) – the probability of executing a crossover operator;
- Mixing ratio (P_u) – the probability for each attribute to be exchanged;

- Mutation rate (P_{m_1}) – the probability of executing a mutation operator 1;
- Mutation rate (P_{m_2}) – the probability of executing a mutation operator 2;
- Mutation step (δ) – the gene-multiplier used by the mutation operator 2;
- Tournament size (t).

Practically, genetic algorithm is quite efficient in cases of large search space with lack of knowledge on the structure of the fitness function. The stochastic inventory optimization problem undoubtedly belongs to this domain. Moreover, in cases of high stochasticity, it becomes difficult to apply some traditional optimization techniques.

Genetic algorithm is quite famous as a problem-independent approach, nevertheless, the chromosome representation is a critical issue. Applying genetic algorithm to the inventory optimization problem under consideration, we are looking for such adjustments to simulation parameters: storage-resources allocation B and corresponding safety-stock levels SS that lead to the best fitness. The chromosome may be encoded as a $|P|$ size list of integers $v = (b_1, SS_1, b_2, SS_2, \dots, b_{|P|}, SS_{|P|})$. In such a list each odd element stands for the inventory capacity allocated to each product p and each even element represents adjusted safety-stock level for the corresponding product p (Figure 2).

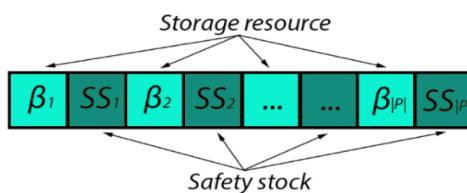


Figure 2 –Chromosome representation

In such a simulation-driven approach, fitness function is evaluated by sequential runs of several simulations. In this case, fitness is the mean value of total costs calculated in several sequential simulation's runs. with the same parameters. We are looking for such parameters that lead to the minimal mean value of the total cost function satisfying the constraints:

$$\min_{\alpha \in A} E[\sum_{p=1}^{|P|} TC_p(\alpha)] \quad (10)$$

$$\sum_{i=1}^{|P|} b_i \leq I_{max}; \forall i = 1, 2, 3, \dots, |P| \quad (11)$$

$$SS_i \leq b_i; \forall i = 1, 2, 3, \dots, |P| \quad (12)$$

In case the solution does not satisfy constraints, the fitness will take extremely high values, due to infeasibility of such a solution. During the optimization procedure, such individuals (candidate solutions) will have only an insignificant chance to pass to the next generation.

It is pointing out that a suitable chromosome representation for the particular problem domain is an extremely important task, since a good choice will make the search faster and easier by restricting the search space. However, it is tremendously important to keep in mind that the crossover and mutation operators must take into account the design of the chromosome. It is important to emphasize that in the considered problem a non-binary chromosome representation was chosen. The main reason why binary representation is the most frequent is the simplicity to implement and popularity in academic papers (Davis, 1991). Moreover, binary chromosome representation is usually space-efficient, that is why it was so popular in times, when memory was a serious problem. However, in real-world problems, it becomes common to create a genotype representation that corresponds to the considered problem with a high degree of accuracy. Crossover is the distinguishing operator of the genetic algorithm. Basically, it is a process of taking two parent solutions and production of offspring solutions in order to get a new, potentially better one. Crossover is used to vary chromosomes from one generation to the next. In order to solve the stochastic inventory problem, the uniform crossover is proposed (Figure 3).

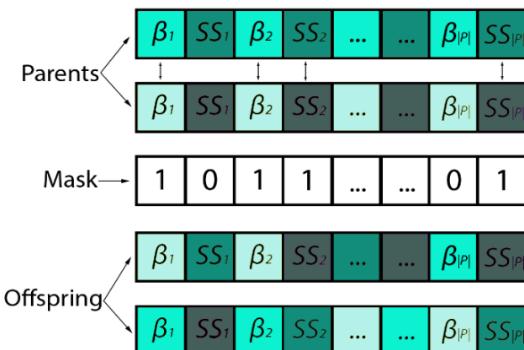


Figure 3 –Uniform crossover representation

In the uniform crossover individual genes in the chromosome are compared between two parents and swapped with the fixed mixing ratio P_u . Uniform crossover is chosen for two main reasons. Firstly, since genes in the chromosome correspond

to different simulation parameters SS and B , we seek a way to keep odd and even genes separated. Secondly, the uniform crossover is an efficient way to avoid the premature convergence (Michalewicz, 1996).

```

 $P_u \leftarrow$  probability of swapping values
 $\vec{v} \leftarrow$  first vector  $\langle v_1, v_2, \dots, v_n \rangle$ 
 $\vec{w} \leftarrow$  second vector  $\langle w_1, w_2, \dots, w_n \rangle$ 
for  $i$  in  $(1, \text{length of vector})$  do
  if  $P_u \geq \text{random number}$  then
    swap the values of  $v_i$  and  $w_i$ 
  return  $\vec{v}$  and  $\vec{w}$ 
```

Besides, genetic algorithm requires a mutation operator to perform the optimization. Taking into account the particularities of chromosome encoding, it is proposed to apply two different mutation operators ("mild" and "radical"). The radical mutation is applied in order to prevent the premature convergence (otherwise population may get stuck in local optima). In radical mutation we replace gens in the chromosome by a new integer number in a feasible range $(0, I_{\max})$ with the probability P_{m1} .

```

 $P_{m1} \leftarrow$  probability of replacing
 $\vec{v} \leftarrow$  vector
for  $i$  in  $(1, \text{length of } \vec{v})$  do
  if  $P_{m1} \geq \text{random number}$  then
     $v_i \leftarrow \text{random integer}$ 
  return  $\vec{v}$ 
```

On the other hand, mild mutation is applied to accelerate convergence. The mild-mutation operator alters genes in the chromosome with the probability P_{m2} by multiplying them on the step $delta$ rounding to the nearest integer after that.

```

 $P_{m2} \leftarrow$  probability of altering value
 $\vec{v} \leftarrow$  vector
for  $i$  in range  $(1, \text{length of } \vec{v})$  do
  if  $P_{m2} \geq \text{random number}$  then
     $v_i \leftarrow \text{round}(v_i * delta)$ 
  return  $\vec{v}$ 
```

It is concluded that tournament selection is an efficient and robust mechanism for working with imperfect fitness functions (Miller and Goldberg, 1995). Tournament selection runs several "tournaments" among t individuals (chromosomes) randomly chosen from the population. The fittest individual in each tournament is selected for the following crossover. Since weak individuals have relatively a small chance to be selected in large tournaments, it is quite important to find the optimal tournament size t . Tournament Selection can be programmed by the extremely simple algorithm:

```

 $P \leftarrow$  population
 $t \leftarrow$  tournament size,  $t \geq 2$ 
```

```

 $Best \leftarrow$  random individual from  $P$ 
for  $i$  in range  $(2 \text{ to } t)$  do
   $Next \leftarrow$  random individual from  $P$ 
  if  $\text{Fit}(Next) > \text{Fit}(Best)$  then
     $Best \leftarrow Next$ 
  return  $Best$ 
```

Tournament selection has several significant benefits over alternative selection methods, namely, it is both simple and efficient to code, it works with parallel architectures and, lastly, it may be easily adjusted.

Results and Discussion

Consider an example of the six-product inventory control system that operates under just-in-time policy. There is a retailer selling products of 6 types that are replenished by an individual supplier. Products of all six types share a common storage with a limited capacity of 150 pallets $\sum_{i=1}^6 = 150$. Each type of product has a unique triangular distribution for both demand size and replenishment lead time and exponential distribution for demand interarrivals.

We apply given adjustments and execute 60-days simulation of the inventory control system. As the result, the algorithm has successfully converged at the optimum in 122 generations. The optimal solution is represented by the chromosome $\vec{v} = (30, 4, 17, 2, 24, 4, 41, 5, 15, 1, 13, 1)$ with the expected total costs of $E[\sum_{p=1}^6 T C_p(\vec{v})] = 2828835$ USD. The fittest chromosome \vec{v} stands for the following simulation adjustments: storage-resources allocation $B = (30, 17, 24, 41, 15, 13)$ pallets with the corresponding safety-stock levels $SS = (4, 2, 4, 5, 1, 1)$ pallets. The pivotal advantage of the involved discreet-event simulation is a possibility to perform risk and reliability analysis. Additionally, such an approach allows the researcher to plot the inventory dynamics in details and easily spot existing bottlenecks or system vulnerabilities.

Since the parameters of a genetic algorithm (especially a population size N and a tournament size t) have tremendous impact on convergence speed and a probability of premature convergence, it is very important to find a balance between search speed and premature convergence prevention.

Parameters with such a balance may be found empirically. We also can conclude that even relatively insignificant alterations in parameters of the genetic algorithm noticeably affect the convergence speed. Furthermore, some unsuccessful settings may result a premature convergence.

Conclusion

In conclusion, the proposed optimization technique is a simple to design and computationally efficient approach to find nearly-optimal inventory policy in stochastic multi-product inventory systems. Additionally, the combination of discrete-event simulation and genetic algorithm provides a flexible method to solve complex problems with lack of knowledge on the structure of the objective function. Besides, the key advantage of such a simulation-driven approach is the possibility to trace inventory dynamics in details. It is supposed that the method may be applied in automated ordering

systems by retail companies.

The research also concludes with a statement that the non-binary chromosome encoding in combination with uniform crossover and two mutation operators provide a fine balance between convergence speed and likelihood of premature convergence. There are still several minor problems to solve, such as the program-optimization of both the simulation and genetic algorithm. Moreover, it is crucially important to test the proposed approach on problems with higher dimension and compare it to alternative metaheuristic techniques. These issues are waiting to be deeply explored in a future research.

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EXPERIMENTAL RESEARCH WORK: EARNINGS MANAGEMENT (EM) AND FIRM-LEVEL DETERMINANTS

Abstract. The experiment aims to establish major firm-level EM determinants with significant impact between state and private ownership structure companies. Sample includes 20 largest corporations by size and sales across different industries listed on KASE stock exchange operating during last 10 years period 2009–2018. (180 observations available). To estimate the discretionary accruals EM, the Modified Jones (1995) model is utilized. The residuals (discretionary accruals) are regressed on a set of explanatory variables (ownership structure, capital structure and dividend policy) that hypothesize to determine EM. We also examined the influence of ownership structure, capital structure and dividend policy decisions on EM between state and private companies. Overall, the extent of manipulations is significantly higher in companies with private ownership structure though factors that determine EM turned to be different compared to state-owned enterprises. The experimental study is considered the first to relate EM and firm-level determinants between different ownership structures (state vs private) in Kazakhstan. Due to issues with manual data collection and market results generalization based on small population of KASE listed companies, research literature on Kazakhstani data is scarce. So, our experiment definitely brings theoretical value and reduces literature gap. Empirical results believe to bring additional analysis to the market participants (investors, owners, regulators, standard-setters etc.) to improve decision-making and corporate reporting.

Key words: Earnings management, Kazakhstan, Experiment, Firm-level Determinants.

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Ғылыми тәжірибелік зерттеу жұмысы: есептілікті бүрмалай және бүрмалану деңгейін анықтаушы факторлар

Аннотация. Ғылыми тәжірибе мемлекеттік және жеке құрылымдық меншік түріндегі компанияларда ауқымды ықпал ететін негізгі ЕМ дәтерминанттарын (корпоративтік есептілік деректермен айла-шарғы жасау деңгейін) анықтауға бағытталған. Іріктемеге 2009–2018 жылдар аралығындағы кезең ішінде соңғы 10 жыlda жұмыс істеген, KASE қор биржасында бағасы белгіленетін, әртурлі салалардағы сатылым мөлшері мен көлеміне қарай ең ірі 20 корпорация енді (180 бақылау қол жетімді). ЕМ дискрециялық есептеуін бағалау үшін Джон Modified Jones үлгісі қолданылады (1995). Қалдықтар (дискрециялық есептеулер) ЕМ белгілеуге тиісті ауыспалы мәндерді түсіндіретін жиынтықта қарай ылдилайды (меншік құрылымы, капитал құрылымы және дивидендтік саясат). Біз сондай-ақ жеке-жеке мемлекеттік және жеке компаниялар арасында дивидендтік саясат бойынша шешімдердің, меншік құрылымының, капитал құрылымының ЕМ-ге ықпалын зерттеп, оларды салыстырудық. Жалпы алғанда, айла-шарғы жасау деңгейі жеке меншік құрылымдағы компанияларда айтартықтай жоғары, дегенмен, ЕМ белгілейтін факторлар мемлекеттік кәсіпорындармен салыстырылғанда әртурлі болып шықты. Ғылыми тәжірибелік зерттеуді Қазақстанда алғашқылардың бірі деп сенімді айтуда болады. Деректерді қолмен жинауға және KASE-та тіркелген компаниялардың шағынғана көлемі негізінде нарықтық нәтижелерді жалпылауға қатысты қындықтардың туындауына байланысты қазақстандық деректер бойынша зерттеу әдебиеті шектеулі болып табылады. Осылайша, біздің ғылыми тәжірибеміздің нақты теориялық құндылығы зор және зерттеу әдебиетіндегі олқылықтарды азайтады. Эмпириялық нәтижелер нарыққа қатысушыларға қосымша талдауды ұсынады (инвесторларға, иегерлерге, реттеуші органдарға, стандарттарды

әзірлеушілерге және т.б.), бұл шешім қабылдауға және корпоративтік есептілік үдерісін жақсартуға бағытталуы мүмкін.

Түйін сөздер: деректермен айла-шарғы жасау, Қазақстан, эксперимент, детерминанттар.

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Экспериментальная научно-исследовательская работа: искажение отчетности (через управление доходами) и факторы, определяющие уровень искажения

Аннотация. Эксперимент направлен на установление основных детерминантов EM (уровень манипуляций данных корпоративной отчетности), которые оказывают существенное влияние в компаниях с государственной и частной структурами собственности. В выборку включены 20 крупнейших корпораций по размеру и объемам продаж в различных отраслях, котирующихся на фондовом рынке KASE, которые работали в течение последних 10 лет в период 2009-2018 гг. (Доступно 180 наблюдений). Для оценки дискреционного начисления EM используется модель Джона ModifiedJones (1995). Остатки (дискреционные начисления) регрессируются на набор объясняющих переменных (структура собственности, структура капитала и дивидендная политика), которые должны определять EM. Мы также изучили влияние структуры собственности, структуры капитала и решений по дивидендной политике на EM между государственными и частными компаниями по отдельности и сравнили их. В целом, степень манипуляций значительно выше в компаниях с частной структурой собственности, хотя факторы, определяющие EM, оказались разными по сравнению с государственными предприятиями. Экспериментальное исследование можно по праву считать одним из первых в Казахстане. Из-за проблем с ручным сбором данных и обобщением рыночных результатов на основе небольшого числа компаний, зарегистрированных на KASE, исследовательская литература по казахстанским данным является ограниченной. Таким образом, наш эксперимент определенно приносит теоретическую ценность и уменьшает пробелы в исследовательской литературе. Эмпирические результаты дают дополнительный анализ участникам рынка (инвесторам, владельцам, регулирующим органам, разработчикам стандартов и т.д.), который может быть направлен для улучшения процесса принятия решений и корпоративной отчетности.

Ключевые слова: манипуляции данных, Казахстан, эксперимент, детерминанты.

Introduction

Research Background and Problem

Proper functioning of capital markets highly depend on transparency and quality of financial information. Despite regulatory efforts to protect investors, even nowadays accounting fraud in stock markets is taking place – what in turn again makes financial scandals become debatable and relevant in light of business ethics failure. Different groups, including academia and regulators, are paying significant attention to the issue of quality of corporate reporting.

Interest to EM and its determinants has been accentuated with the increasing number of financial scandals, which have reduced investors trust on information published on capital market (Fernandez and Garcia, 2007).

Annual financial statements should give a true and fair view of an undertaking's assets and liabilities, financial position and profit and loss. Audit opinion should state whether financial statements

give a true and fair view in accordance with the relevant financial reporting framework. When the results of firm's performance are unfavorable or less favorable, the management may depart from the "true and fair" view to report more favorable financial results. This opportunistic use of financial reporting strategy usually leads to accounting manipulations.

Research Objective and Questions

The experiment seeks to prove the existence of accruals' EM practice and set up its major determinants in context of Kazakhstan during last 10 years.

Referring to the general research objective of the study we formulate the following specific research questions, which in turn transformed into more detailed conceptual hypotheses:

RQ1. Can we establish the association between Capital structure and EM practices?

RQ2. How Ownership structure may influence EM activity?

RQ3. Is there any implications of Dividend policy for EM level manipulation?

Context Analysis and Contributions to the literature

The study of EM and its determinants in Kazakhstani context is interesting because Kazakhstan is a developing country with an emerging capital market, whose structure is consistent with international standards. The majority of Kazakhstani firms are family owned or controlled.

Improvement of corporate reporting through EM moderation are more likely appreciated by all market participants in the region. It's expected to diminish information asymmetry, promote foreign capital inflow through investor confidence increase.

The experimental study is considered the first to relate EM and firm-level determinants between different ownership structures (state vs private) in Kazakhstan.

Due to issues with manual data collection and market results generalization based on small population of KASE listed companies, research literature on Kazakhstani data is scarce. So, our experiment definitely brings theoretical value and reduces literature gap.

The rest of the paper is organized as follows. In Literature Review section, we develop the research hypothesis on the basis of literature review. In Research Design section, we describe our empirical methodology. Then, we present our results in Empirical Findings section. Finally, we conclude.

Literature Review

Framework: Theories of EM and Conceptualization

EM influences decision-making; therefore is regarded as a strategic tool by market participants. In academia world there are several theories attempting to explain reasons behind EM utilization. For the purpose of current experiment, we base analysis with reference to positive accounting theory and entrenchment theory.

Politico-contractual theory or positive accounting theory (Watts and Zimmerman, 1986) suggests debt, size and compensation as 3 major determinants of EM. Contractual clauses prevent wealth transfers between shareholders and various creditors by means of dividend rate limitation and restrictions of debt levels. Larger companies are assumed to be monitored more in order to avoid law violations. (Compensation of executives is out of scope for this experiment)

Entrenchment theory proposes the inevitable impact of managerial leadership in the companies because the replacement of leaders become too ex-

pensive and bear operational costs. In Kazakhstani companies, this is an important issue, because very often President or General Director is at the same time on the board list as well as among the major shareholders.

Although the term "earnings management" is widely used in the literature, there is no consensus on its definition.

Healy & Wahlen(1999) define EM as follows: "earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers".

Beneish & Vargus (2002) state that there are two perspectives of EM: opportunistic EM and informative EM. While opportunistic EM seeks either to mislead investors or to secure managers' jobs, reputations, and compensation within the firm, the informative EM aims to provide private information to the investors about the firm's future performance.

Therefore, it is important to identify managers' intent in order to determine whether EM is opportunistic behavior or informative exercise. Hence, many attempts have been made in the previous literature to identify various motivations to manage earnings. Academia world distinguish 3 types of incentives for EM behavior. Executives manipulate results to save job and own reputation. Companies manage earnings to avoid losses or decreases or correct forecasts. Last motivation associates with investors and creditors – manipulate numbers to attract external funding and meet investors' expectations.

Major Findings from Literature Review

In attempt to review EM literature relevant to Kazakhstan, we encounter scarcity issue right away. Few articles overall on Mendeley Web and Research gate (and other databases) and couple related to EM area.

Baimukhamedova et al.(2015) examined the effect of Corporate Governance on companies' EM in natural resources sector of Kazakhstan.

Another article presented by R.Makarov(2015) who seeks to investigate correlation between EM and quality of audit provided by Big4 in agricultural sector of Kazakhstan and revealed that neither Jones nor Modified Jones model is capable capture idiosyncrasies of the sector and disaggregate discretionary accruals.

One more study, more or less related to corporate reporting in Kazakhstan, was brought by

N.Orazalin, R.Makarov, and M.Mahmood(2014) whose study aims at investigating the extent and determinants of voluntary disclosures and their relationship with the corporate governance (CG) aspects of banking companies in Kazakhstan. The empirical results suggest that the number of outside directors has significant positive impact on a disclosure score.

So for the purpose of the experiment, we reviewed several articles with important findings evident from developing and emerging markets leaving cases of developed countries out of scope for the reason.

Ding et al. (2007) investigated the role played by a firm's ownership structure in EM, with reference to the Chinese capital market and found that the relationship between EM measures and ownership concentration exhibits a statistically significant non-linear, inverted U-shape pattern known as the "entrenchment versus alignment" effect.

Siregar & Utama(2008) investigates whether companies listed on the Jakarta Stock Exchange (JSE) conduct efficient or opportunistic EM and to examine the effect of ownership structure, firm size, and corporate-governance practices on it and found inconsistent evidence with regard to the impact of institutional ownership, firm size, and corporate-governance practices on type of EM.

Agustia(2014) examined the impact of good corporate governance, free cash flow, and leverage ratio on EM and found that all components of good corporate governance (audit committee's size, the proportion of independent commissioners, institutional ownership, and managerial ownership), have no significant effect on EM, while leverage ratio has a significant effect on EM, and free cash flow has a negative and significant effect on EM.

Yi & Kim (2005) investigated whether, and how, the deviation of controlling shareholders' control from ownership, business group affiliation, and listing status differentially affect the extent of EM and found that stock markets create incentives for public firms to manage reported earnings to satisfy the expectations of various market participants.

Yang et al.(2010) examined the relation between managerial ownership structure and EM. For a large sample of Taiwanese listed firms over the period 1997 and 2004, authors found that discretionary accruals first increase and then decrease with executive ownership, forming an inverted U-shaped relationship. However, discretionary accruals are positively affected by director ownership and blockholder ownership.

Al-Fayoumi et al. (2013) examined the relationship between EM and ownership structure for a sample of Jordanian industrial firms during the period 2001-2005. Results indicate that insiders' ownership is significant and positively affect EM.

Mohd Ali et al.(2008) examines the association between the level of managerial ownership and EM activities and found that large-sized firms demand and use better corporate governance mechanisms due to higher agency conflicts, and, therefore, less managerial ownership is needed for control.

Saona & Muro(2018) analyzed firm- and country-level determinants of the EM for a sample of Latin American companies from 1997 to 2015. Results show that dividend pay-outs impact positively on EM. The ownership structure, however, is a double-edged sword as a controlling mechanism that may constrain EM but may also exacerbate it.

Shen & Chih (2007) studied the impacts of corporate governance on EM and found that firms with good corporate governance tend to conduct less EM. Size effect for earnings smoothing is large size firms are prone to conduct earnings smoothing, but good corporate governance can mitigate the effect on average. There is a turning point for leverage effect, when the governance index is large, leverage effect exists, otherwise reverse leverage effect exists. Firms with higher growth (lower earnings yield) are prone to engage in earnings smoothing and earnings aggressiveness.

Conceptual Hypotheses

Based on the review of the relevant literature and mixed results as well as theoretical framework we formulate the following hypothesized relationships.

H1: Inverse U-shaped relation between Leverage and EM supported by the interaction between the Leverage (Debt-equity hypothesis) and the reverse Leverage effects(Shen & Chih, 2007).

On one side managers manipulate numbers to meet debt covenants which is called Leverage effect. On the other hand high debt level serves control mechanism constraining EM because debt reduces resources necessary for discretionary projects of managers' interests – reverse Leverage effect.

H2: Positive relationship between EM and the Dividends. The seminal work of Lintner (1956) documents that managers are reluctant to cut dividends and target long-term pay-out ratios (Dividend conservatism hypothesis)(Saona & Muro, 2018).

Daniel et al. (2008) dividend-paying firms tend to manage earnings upward when their earnings would otherwise fall short of expected dividend levels because such fall impacts payment capacity constrained by debt covenants.

Mitton (2004) argues that preference for dividends may be stronger in emerging markets with weak investor protection.

H3: Negative relationship between the corporate Ownership concentration and EM.

López Iturriaga & Saona Hoffmann(2005)argued that capital structure and the ownership structure as mechanisms of control of the managers of the firms and to reduce their accounting discretionary power for a sample of Chilean firms.

Concentrated ownership structures is expected to solve some vertical agency problems through direct supervision of managers.

Jensen& Meckling(1976) – ownership concentration according to the efficient monitoring hypothesis leads to a less opportunistic behavior.

H4: Political cost (size) hypothesis suggests that large firms are more likely to choose income-decreasing EM.

H5: Firms with low performance are more intended to manage earnings. (preservation of reputation hypothesis).

Methodology

Sample selection and Data collection

KASE stock exchange list counts about 35-40 (out of 170 eminent) companies across different industries excluding banks, insurance companies, leasing companies, pension funds and other investment holdings.

Sample includes 20 largest corporations by size and sales across different industries listed on KASE stock exchange operating during last 10 years period 2009-2018.

20 major companies sampled from the list of 36 listed on KASE excluding investments funds, pension funds, banks, financial institutions, leasing companies, those already consolidated within parent which already on the list represent 98% of population assets and sales. (refer to Appendix 3 for the full list of companies)

Data is manually extracted from the annual audited financial reports and / or yearly corporate reports of the companies listed on Kazakhstan Stock Exchange (KASE). As a two-eye review procedure, we asked help from two students to minimize errors in data extraction into excel / stata spreadsheets.

Table 1 – Sample selection

mln KZT 2017	Assets	Sales	#
Total for 36 listed KASE companies exclfin.inst., funds, banks etc.	23,362,056	6,175,886	36
Sample chosen	22,987,680	6,049,182	20
notinthesample	374,376	126,704	16
coverageby	98%	98%	56%

Operationalization of EM and Variables

Accruals EM – cross-sectional model of discretionary accruals based on Jones (1991) model as described in Dechow et al. (1995) and Kothari et al. (2005) Model.

The independent variables include the Capital structure measured by leverage, Dividend policy by dividends paid presented in financing part of CF statement, and Ownership structure as % shares of major shareholder described in Capital / Equity notes of the financial report.

- Leverage – Liabilities / Assets or Liabilities / Equity

- Dividends policy – Cash Dividend / NI or Dividend / CFO

- Ownership Concentration – % shares held by majority shareholder

The following factors are incorporated as controls, since these variables may influence EM:

- Size – Ln (Total Assets or Sales) or Ln (MV Equity)

- ROA (or ROE) – NI / Assets (Equity)

- Growth – Change % (Sales)

Applied Research Methodology

To estimate the discretionary accruals EM, the Modified Jones (1995) model is utilized that regresses the residuals (discretionary accruals) on a set of explanatory variables (ownership structure, capital structure and dividend policy) that hypothesize to determine EM.

TA are calculated according to the formula (Leuz et al., 2003):

$$\begin{aligned} TA = & (\Delta CA_i - \Delta Cash_{i,t}) - \\ & - (\Delta CL_{i,t} - \Delta STD_{i,t}) - Dep_{i,t} \end{aligned} \quad (1)$$

where CA – current assets, CL – current liabilities, STD – current portion of loans and short loans, and Dep – depreciation.

$$\begin{aligned} TA_i / A_{i,-1} &= \alpha_1 / A_{i,t-1} + \\ &+ \alpha_2 (\Delta Rev_{i,t} - \Delta AR_{i,t}) / A_{i,t-1} + \quad (2) \\ &+ \alpha_3 (PPE_{i,t}) / A_{i,t-1} + \mu \end{aligned}$$

where A – total assets, Rev – sales, AR – trade receivables, PPE – fixed assets, μ – DA.

Because EM practice may be upward and / or downward, we take module form of μ .

$Abs(DA)_{i,t} = F(Ownership\ Structure; Capital\ Structure, Dividend\ Policy, Control\ Variables)$

Results and Discussion

1. Modified Jones Model (1995) and Discretionary accruals (DA)

Lagged TA is regressed on lagged PPE and lagged difference of change in sales and receivables. Coefficients except for intercept are significant at 95% confidence level (P-value 0,003) that proves the validity of the model. Using stata we generate DA based on pooled OLS. For the purpose of this experiment we are interested in the extent of DA without specific directions (+ or -) that is absolute values of DA.

Table 2 – Modified Jones Model (1995)

Source	SS	df	MS	Numberofobs	=	160
				F(3, 157)	=	9.18
Model	0.5190312	3	0.1730104	Prob> F	=	0.0000
Residual	2.9577232	157	0.0188390	R-squared	=	0.1493
				Adj R-squared	=	0.1330
Total	3.4767544	160	0.0217297	Root MSE	=	0.1373
<hr/>						
L_TAC	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
LTA	-570.5729	404.7324	-1.41	0.161	-1370.00	228.85
L_d_Sales_AR	0.1189462	0.03225	3.69	0.000	0.05525	0.18265
L_PPE	-0.058252	0.019248	-3.03	0.003	-0.09627	-0.02023

Table 3 – Discretionary accruals (DA)

One-sample t test	
Variable Obs	Mean Std. Err. Std. Dev. [95% Conf. Interval]
absDA 160	.0909428 .0080154 .1013875 .0751125 .1067732
mean = mean(absDA)	t = 11.3460
Ho: mean = 0	degrees of freedom = 159
Ha: mean < 0	Ha: mean != 0
Pr(T < t) = 1.0000	Pr(T > t) = 0.0000
Pr(T > t) = 0.0000	

Applying stata we test whether DA statistically different from 0. Within 95% confidence level (P-value 0,000, t-stat = 11.34) results prove the existence of EM among the listed companies in Kazakhstani market. It means that Kazakhstani companies did manipulate and applied EM practices during given period 2010-2017.

On the basis of literature review, chosen theoretical framework and developed hypotheses

we establish absDA derived from Modified Jones Model 1995 as a function of the following factors or firm-level determinants.

$$Abs(DA)_{i,t} = F(Ownership\ Structure;\ Capital\ Structure, Dividend\ Policy, Control\ Var) \quad (3)$$

where, control variables includes Growth, Profitability ROE and Size (lnSales)

2. Main regression: model selection

At this point, we observe Size, Profitability, Leverage and Dividends policy play important role as factors that determine and impact manipulation practice among the listed Kazakhstani companies. (P-value < 0,1, Confidence level 90%). However, since we deal with panel data we are required to check whether the company's error term is not correlated with the predictors, which allows for time-invariant variables to play a role as explanatory variables.

Table 4 – Main regression (EM vs Firm-level Determinants)

Source	SS	df	MS	Numberofobs	=	160
				F(6, 153)	=	5.66
Model	0.296904	6	0.049484	Prob> F	=	0.0000
Residual	1.337524	153	0.008742	R-squared	=	0.1817
				Adj R-squared	=	0.1496
Total	1.634428	159	0.010279	Root MSE	=	0.0935
absDA	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
levlta	0.144284	0.03209	4.50	0.000	0.08089	0.20768
payoutratiodevni	0.029557	0.014751	2.00	0.047	0.00042	0.05870
own_concentration	0.039008	0.038622	1.01	0.314	-0.03729	0.11531
sizelnsales	-0.00583	0.002488	-2.35	0.020	-0.01075	-0.00092
roa	0.07741	0.044269	1.75	0.082	-0.01005	0.16487
growth	-0.00525	0.012319	-0.43	0.670	-0.02959	0.01908
_cons	0.038815	0.039909	0.97	0.332	-0.04003	0.11766

Referring to methodology of Model selection for panel data, we follow testing procedures:

- Fixed effects are tested by the F test,
- Random effects are examined by the Lagrange multiplier (LM) test.
- F-test by Chow for poolability.

Panel data models examine group (individual-specific) effects, time effects, or both in order to deal with heterogeneity or individual effect that may or may not be observed. A fixed effect model examines if intercepts vary across group or time period, whereas a random effect model explores differences in error variance components across group or time period. If individual effect (cross-sectional or time specific effect) does not exist, ordinary least squares (OLS) produces efficient and consistent parameter estimates.

If the null hypothesis is not rejected in either test, the pooled OLS regression is favored if not then perform Hausman test. Results show insignificant both F-test (P-value 0,23) and LM-test (P-value 0,27). Let's check LM-test in details. Breusch-Pagan Lagrange multiplier (LM) test: RE effects vs pooled OLS regression. Test verifies whether variances across companies present or not. The LM test helps you decide between a random effects regression and a pooled OLS regression. The null hypothesis in the LM test is that variances across companies is zero. This means no significant difference across units or no panel effect.

H0: OLS regression, variances across entities is zero

Ha: Random effects model

Table 5 – Breusch-Pagan Lagrange multiplier (LM) test

Breusch and Pagan Lagrangian multiplier test for random effects		
absDA[companyN,t] = Xb + u[companyN] + e[companyN,t]		
Estimated results:		
Varsd = sqrt(Var)		
absDA .0102794 .1013875		
e .008484 .0921085		
u 7.87e-06 .0028057		
Test: Var(u) = 0		
chibar2(01) = 0.38		
Prob> chibar2 = 0.2698		

Here P-value equal 0,27 and we don't reject the null and conclude that pooled OLS is appropriate. This means no sufficient evidence of significant differences across companies.

Poolability asks if slopes are the same across group or over time. One simple version of poolability test is an extension of the Chow test (Chow, 1960). The null hypothesis of this Chow test is the slope of a regressor is the same regardless of individual for all k regressors. Slopes remain constant in fixed and random effect models; only intercepts and error variances matter.

F-test by Chow for poolability:pooled OLS vs Random Coefficient model (mixed), is performed manually calculating SSE for each group regression and plug-in results into F-test formula. It verified

existence of heterogeneity in slopes rather than in intercepts (FE) or error-component (RE).

Chow F-test for poolability / heterogeneity in slopes check results in small $F = 1,01$ and we don't reject null hypothesis H_0 : the slope of a regressor is the same.

3. Main regression: refined robust OLS estimator

Finally, we established the pooledOLS model as the most appropriate after tests. To solve possible Heteroscedasticity problem, Robust SE are added to the regression.

Table 6 – Pooled OLS refined regression with robust OLS estimator

Linearregression		Numberofobs = 160					
		$F(6, 153) = 5.76$					
		Prob> F = 0.0000					
		R-squared = 0.1817					
		Root MSE = .0935					
		Robust					
absDA	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]	
levlta	0.144284	0.034427	4.19	0.000	0.076270	0.212299	
payoutratiiodivni	0.029557	0.017648	1.67	0.096	-0.005309	0.064422	
own_concentration	0.039008	0.036851	1.06	0.291	-0.033793	0.111810	
sizelnsales	-0.00583	0.001453	-4.01	0.000	-0.008705	-0.002963	
roa	0.07741	0.041956	1.85	0.067	-0.005478	0.160297	
growth	-0.00525	0.009556	-0.55	0.583	-0.024132	0.013625	
_cons	0.038815	0.029671	1.31	0.193	-0.019803	0.097434	

Table 7 – Autocorrelation test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity				
Ho: Constantvariance				
Variables: fitted values of absDA				
chi2(1) = 8.70				
Prob> chi2 = 0.0032				
Wooldridge test for autocorrelation in panel data				
H0: no first-order autocorrelation				
F(1, 19) = 0.126				
Prob> F = 0.7262				

Findings appear to be quite significant except for Ownership concentration and Growth:

- Overall regression F stat is equal 5,76 (P-value 0,000)
- Overall R-squared amounts to 18,17%
- Leverage t-stat = 4,19 within 99% Confidence interval
- Dividends policy t-stat = 1,67 within 90% CI
- Size t-stat = -4,01 within 99% CI
- ROA t-stat = 1,85 within 90% CI

After solving Heteroskedasticity issue with Robust SE, we keep our parametric t-tests robust to normality assumption due to sufficient sample size. Autocorrelation turns not to be an issue.

4. Descriptive Statistics

Using stata we summarize descriptive statistics for all variables in the regression below. It provides measures of central tendency, spread of distribution, median (p50), min and max values plus degree of asymmetry and heaviness of tails.

Table 8 – Descriptive statistics

stats	absDA	DA	levlta	payout~i	own_co~n	sizel~es	roa	growth
mean	0.090943	-0.0067	0.535563	0.258188	0.758625	11.66819	0.088	0.211125
sd	0.101388	0.136224	0.267616	0.539007	0.243808	3.390677	0.20672	0.647348
skewness	2.327886	0.480404	0.731091	3.338	-0.49762	1.960732	0.456567	7.16727
kurtosis	9.931823	7.39043	3.187762	21.14072	1.758875	6.223452	6.800877	72.02883
p50	0.058436	-0.00467	0.485	0.06	0.86	10.8	0.06	0.13
iqr	0.100005	0.116715	0.36	0.31	0.46	1.89	0.105	0.255
min	0.000715	-0.47288	0.11	-1.14	0.3	6.5	-0.64	-0.72
max	0.634669	0.634669	1.35	4.2	1	21.9	0.82	6.87

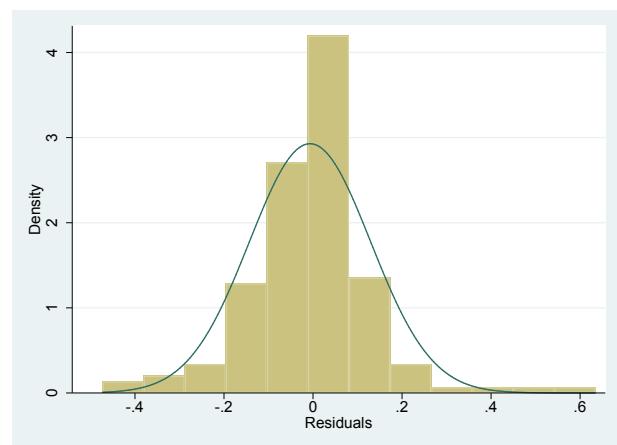
Table 9 – Pearson's correlation

	absDA	levlta	payout~i	own_co~n	sizel~es	roa	growth
absDA	1						
levlta	0.2983*	1					
payoutrat~i	0.1716*	-0.0904	1				
own_concen~n	-0.0883	-0.4264*	0.1162	1			
sizelnsales	-0.1918*	-0.1536	0.0704	0.4533*	1		
roa	0.081	-0.3685*	0.3145*	0.3393*	0.0399	1	
growth	0.025	0.0041	-0.0615	0.0899	-0.0591	0.2955*	1

Our measure of EM is DA, which has mean and median close to zero (-0,006; -0,004); deviation 0,13; and max value of 0,63. It's not skewed since 0,48 value is within the acceptable range (-1, +1). However, it's a bit heavily tailed since Kurtosis is more than 3 and equal about 7. This supports our conclusions that Normality issue is mainly due to Kurtosis.

The Pearson product-moment correlation coefficient, often shortened to Pearson correlation or Pearson's correlation, is a measure of the strength and direction of association that exists between two continuous variables. If the p-value is not less than the significance level ($\alpha = 0.05$), decision: Do not reject the null hypothesis.

There is sufficient evidence to conclude there is a significant linear relationship between absDA and Leverage, Dividend policy and Size at 5% significance level (star 5), because the correlation coefficient is significantly different from zero.

**Figure 1** – Normality

5. Interpretation of the results

We formulated, tested and interpreted the following conceptual hypotheses.

Table 10 – Conceptual hypotheses' results interpretation

Hypothesis	Determinant	Expected	Actual	Yes / No (significance)
H1	Leverage	U-shaped	+	Partialat 99% CI
H2	Dividends	+	+	Yesat 90% CI
H3	Ownership	-	0	No
H4	Size	+	-	Noat 99% CI
H5	Performance	-	+	Noat 90% CI

H1: Debt-equity hypothesis is partially supported. Managers do manipulate information to meet debt covenants; however Leverage effect doesn't reverse at the point where high debt level is supposed to serve as control mechanism constraining EM, because debt reduces resources necessary for discretionary projects. (Coefficient of squared Leverage is not significant)

H2: Dividend conservatism hypothesis is supported according to which managers are reluctant to cut dividends and target long-term pay-out ratios. Dividend-paying firms are expected to manage earnings upward.

H3: Efficient monitoring hypothesis is not supported.

H4: Political cost hypothesis is not supported whereas significant. Negative relationship indicates that large firms tend to manipulate less. Large firms were expected to choose income-decreasing EM; however, they tend to reduce EM.

H5: Preservation of reputation hypothesis is also significant though not supported. Positive relationship indicates that firms with low performance are less intended to manage earnings.

Conclusion

To sum up, we examined the influence of ownership structure, capital structure and dividend policy decisions on EM among state and private companies. Kazakhstani companies have been manipulating earnings through discretionary accruals during 2009-2018 period. 4 of 5 established hypotheses are significant and only one (Dividends) meets its concept in full. Profitable, leveraged, small-sized dividend-paying listed companies tend to engage into EM. Dividend policy plays a key role in determination of EM among companies.

Next step is to investigate which factors are more influential in companies when we consider

ownership structure, private vs state. Factors that determine EM are expected to differ.

KASE stock exchange list counts about 35-40 companies across different industries excluding banks, insurance companies, leasing companies, pension funds and other investment holdings. Even though findings due to small population cannot be generalized to the whole CIS region, such list represents Kazakhstani market and should be analyzed as such. It implies that in some cases analysis of small Kazakhstani market is more useful and representative for conclusions and interpretations than results generalized from the whole CIS region.

Empirical results believe to bring additional analysis to the market participants (investors, owners, regulators, standard-setters etc.) to improve decision-making and corporate reporting.

Future research recommendation

Comparison of different EM measurements: Besides cross-sectional model of discretionary accruals based on Jones (1991) model as described in (Dechow, Sloan, and Sweeney 1995), we may use and compare effectiveness of the different models:

- Kothari and al. (2005) Performance-Matched Model,
- Jones (1991) Model,
- The Healy (1985) Model,
- The Industry (Dechow and Sloan 1991) Model,
- The DeAngelo (1986) Model.

Although total-accruals models, specific-accruals models, and the frequency distribution approach are used as alternative approaches, the total-accruals approach is the most widely-used approach in the literature because it attempts to capture the total effect of accruals on earnings. The models under the aggregate accruals approach are based on classifying the total accruals into two components: discretionary and non-discretionary accruals.

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4-бөлім

**ЭКОНОМИКА САЛАЛАРЫН
МЕМЛЕКЕТТИК РЕГУЛЕУДІҢ АСПЕКТІЛЕРІ**

Section 4

**ASPECTS OF STATE REGULATION
OF SECTORS OF THE ECONOMY**

Раздел 4

**АСПЕКТЫ ГОСУДАРСТВЕННОГО
РЕГУЛИРОВАНИЯ СЕКТОРОВ ЭКОНОМИКИ**

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ПОНЯТИЕ ОСНОВНЫХ СРЕДСТВ: ЭКОНОМИЧЕСКАЯ СУЩНОСТЬ И ОСНОВНЫЕ ЭТАПЫ ИХ ВОСПРОИЗВОДСТВА В СЕЛЬСКОМ ХОЗЯЙСТВЕ

Аннотация. Авторами систематизированы теоретические концепции воспроизведения основных средств, предложено идентифицировать понятия теории воспроизводственного процесса, их взаимодействие и отличие в виде схемы взаимодействия основных категорий воспроизводственного процесса.

Имея четкое представление об отдельном элементе основных средств в процессе производства, о физическом и моральном их износе, о факторах, влияющих на использование основных производственных фондов и производственных мощностей сельскохозяйственных организаций, выделены обстоятельства, обеспечивающие оптимизацию издержек производства и повышения эффективности использования основного капитала.

Гипотезой данного исследования является предположение о том, что основные средства в сельскохозяйственном производстве содержат в себе разные средства труда. В процессе производства сельскохозяйственной продукции в зависимости от их функционального назначения их можно разделить на основные средства производственного и непроизводственного назначения.

Целью данного исследования является систематизация и обоснование понятий, определяющих экономическую сущность понятий основных средств, основного капитала, основных производственных фондов в сельскохозяйственных организациях.

Научная новизна исследования заключается в разработке и обосновании отличительных особенностей экономических дефиниций: основные средства, основной капитал, основные производственные фонды сельскохозяйственных организаций в условиях взаимодействия в воспроизводственном процессе в сельском хозяйстве с целью развития производства, увеличения эффективности использования основного капитала.

Ключевые слова: основные средства, производственные фонды, сельское хозяйство, производственный процесс, инновации.

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The concept of fixed assets: the economic essence and the main stages of their reproduction in agriculture

Abstract. The authors systematized the theoretical concepts of reproduction of fixed assets, proposed to identify the concepts of the theory of the reproduction process, their interaction and difference in the form of a scheme of interaction of the main categories of the reproduction process.

Having a clear idea of each element of fixed assets in the production process, their physical and moral deterioration, the factors affecting the use of fixed assets and production capacity of agricultural organizations highlighted the circumstances that ensure the optimization of production costs and improve the efficiency of the use of fixed capital.

The hypothesis of this study is the assumption that fixed assets in agricultural production contain different means of labor. In the process of agricultural production, depending on their functional purpose, they can be divided into fixed assets for production and non-production purposes.

The purpose of this study is to systematize and substantiate the concepts that determine the economic essence of the concepts of fixed assets, fixed capital, fixed assets in agricultural organizations.

The scientific novelty of the study is to develop and substantiate the distinctive features of economic definitions: fixed assets, fixed capital, fixed assets of agricultural organizations in terms of interaction in the reproduction process in agriculture in order to develop production, increase the efficiency of fixed capital.

Key words: fixed assets, production assets, agriculture, production process, innovation.

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Негізгі құралдар түсінігі: экономикалық мәні және олардың ауылшаруашылығында қайта өндірудің негізгі кезеңдері

Аннотация. Авторлар негізгі қорларды ұдайы өндірудің теориялық концепцияларын жүйелендірді, ұдайы өндіру процесі теориясының ұйымдарын, олардың өзара іс-қимылмен ұдайы өндіру процесінің негізгі санаттарының өзара іс-қимыл схемасы түріндегі айырмашылықтарды сәйкестендіруді ұсынды.

Өндіріс процесіндегі негізгі қорлардың әрбір элементі туралы, олардың физикалық, және моральдық, тозуы туралы, негізгі өндірістік қорлар мен ауылшаруашылығы ұйымдарының өндірістік құаттарын пайдалануға әсер ететін факторлар туралы нақты түсінікке ие бола отырып, өндіріс шығындарын оңтайландыруды және негізгі капиталды пайдаланудың тиімділігін арттыруды қамтамасыз ететін жағдайлар бөлінген.

Осы зерттеудің гипотезасы – ауылшаруашылық өндірісіндегі негізгі қорлардың құрамында әртүрлі еңбек құралдары бар деген болжам. Ауылшаруашылық өнімдерін өндіру процесінде олардың функционалдық мақсатына қарай оларды өндірістік және өндірістік емес мақсаттар үшін негізгі құралдарға бөлуге болады.

Бұл зерттеудің мақсаты – ауылшаруашылық ұйымдарындағы негізгі құралдар, негізгі капитал ұйымдарының экономикалық мәнін анықтау, жүйелеу және негіздеу.

Зерттеудің ғылыми жаңалығы экономикалық дефинициялардың ерекше ерекшеліктерін өзірлеу және негіздеу болып табылады: негізгі қорлар, негізгі капитал, ауылшаруашылығы ұйымдарының негізгі өндірістік қорлары өндірісті дамыту, негізгі капиталды пайдалану тиімділігін арттыру мақсатында ауылшаруашылығындағы қайта өндіру процесіндегі өзара іс-қимыл жағдайында.

Түйін сөздер: негізгі құралдар, өндірістік қорлар, ауылшаруашылығы, өндірістік процесс, инновациялар.

Введение

Россия – страна с огромным сельскохозяйственным потенциалом и огромными возможностями. Кроме того, можно поставлять урожай и в другие страны. Но эта цель является достаточно труднодостижимой. Хотя Российская Федерация имеет очень большую площадь пахотных земель на душу населения в мире, в то же время наша страна зависит от импорта сельхозпродукции почти на сорок процентов.

Корень этой проблемы лежит в географической структуре сельскохозяйственного производства, доставшейся нам из коммунистического прошлого.

Плюс к тому, когда в России стал строиться капитализм в девяностые годы, то новые предприниматели сосредоточили свою деятельность на видах бизнеса, обеспечивающих получение быстрой прибыли. В частности, на торговле, гор-

нодобывающей промышленности и финансовых услугах. Сельскохозяйственные предприятия были уничтожены, так как мало кто мог вложить достаточную сумму денег, необходимую для модернизации методов выращивания урожая и системы сбыта продукции.

Правительство страны приложило значительные усилия для решения вопросов финансирования сельхозпроизводителей через государственные банки и лизинговые компании. Это помогло восстановить сельскохозяйственное производство.

Процесс воспроизведения основных средств подвергался исследованию ученых-аграриев на протяжении последних 100 лет. При этом теоретически уточнялись и изменялись взгляды ученых не только по концепции воспроизведения в целом, но и изменялось содержание понятий капитала, ресурсов, основного капитала, основных средств, основных производственных фондов и др.

Гипотезой данного исследования является предположение о том, что основные средства в сельскохозяйственном производстве содержат в себе разные средства труда. В процессе производства сельскохозяйственной продукции в зависимости от их функционального назначения их можно разделить на основные средства производственного и непроизводственного назначения.

Целью данного исследования является систематизация и обоснование понятий, определяющих экономическую сущность понятий основных средств, основного капитала, основных производственных фондов сельскохозяйственных организаций.

В соответствии с обозначенной целью были поставлены и решены следующие задачи:

Систематизированы концепции выявления отличительных особенностей экономических дефиниций – основных средств, основного капитала, основных производственных фондов.

Предложена схема взаимодействия основных категорий воспроизводственного процесса в сельскохозяйственном производстве.

Научная новизна исследования заключается в разработке и обосновании отличительных особенностей основных средств, основного капитала, основных производственных фондов сельскохозяйственных организаций в условиях взаимодействия в воспроизводственном процессе в сельском хозяйстве.

Обзор литературы

Ученые-экономисты неодинаково определяли понятие «капитал» как основной производственный фактор. Так основоположник экономической теории А. Смит определял его как накопленный труд, а Д. Рикардо к капиталу относил средства производства. Но А. Смит правильного определения капитала не дает. В его трактовке капитал – это запасы, используемые в процессе производства.

Основной капитал является участником воспроизводственного процесса.

Наряду с понятием «основной капитал» в экономической теории и практике управления экономическими процессами используются понятия «основные средства» и «основные средства». Многие авторы не разделяют понятия «основные средства» и «основной капитал». Такие понятия даже неразделимы в нормативно-правовых документах. Основные средства и основные средства признаются синонимами.

Обоснование и трактовка основных понятий, связанных с трактовкой основных средств, основного капитала, основных производственных фондов, представлено в работах А. Смита, Д. Рикардо (1955), Каламбета А.П., Минаевой Т.В (2002), Горфинкеля В.Я., Швандара В.А., Райзберга Б.А. и др.

Определим, что же входит в понятие основного капитала. Дж. С. Милль считает, что к основному капиталу относят капитал, выраженный в долговечной форме и от которого длительное время поступает прибыль.

Резюмируя вышесказанное можно, сказать, что основной капитал – это часть принадлежащих организации активов, использующихся длительное время и частями переносящее свою стоимость на вновь созданный продукт в виде амортизационных отчислений. Основной капитал при этом делится на основные средства, нематериальные активы и долгосрочные финансовые вложения.

Российские ученые-экономисты Каламбет А.П. и Минаева Т.В. (2002) определяют основной капитал как совокупность средств и орудий труда, используемых в производстве товаров, обращении материальных ценностей и (или) оказании различных услуг. В своих трудах они не разделяют такие понятия, как «основной капитал» и «основные средства».

В экономике нередко отождествляют понятия основного капитала и основных средств. В связи с нечетким разделением понятий «основные средства» и «основной капитал», необходимо выделить их основные различия.

Горфинкель В.Я. и Швандар В.А. в понятие «основных средств» вкладывают определение материально-вещественных ценностей, которые появляются в процессе производства и используются более одного года для производства товаров и оказания услуг.

В экономической теории и теории финансового менеджмента природа капитала рассматривается в совокупности с фактором времени. Время как фактор влияет на получение дохода. Более подробно фактор времени имеет значение в приложении при оценке эффективности инвестиционных проектов (Подколзина и др., 2018). Фактор времени рассматривается в трех плоскостях: динамичность, сезонность, физический износ основных средств.

Современная теория капитала отличается от традиционной, но, тем не менее, продолжает использовать и совершенствовать подходы классической политической экономии в области обще-

ственного производства, которая основывается на применении основных средств, совершающих полный кругооборот.

По мнению Райзберга Б.А., понятия «основной капитал» и «основные средства» не имеют существенного различия. Он определяет их как средства производства, имеющие длительный период эксплуатации, а соответственно и амортизации, используются несколько производственных циклов. К таким активам он относит здания, сооружения, машины, оборудование и другие материальные активы (Agarkova et al., 2016). Следовательно, можно сделать вывод, что автор относит к основным средствам только те активы, которые имеют только материально-вещественное воплощение.

С таким заключением мы не можем согласиться, так как основные средства в процессе своей эксплуатации при соблюдении определенных правил и своевременного обслуживания не теряют свою физическую форму, в то время как основные средства имеют различную стоимость в процессе производства – стоимость приобретения, балансовую, восстановительную и остаточную, что делает необходимым разделение двух этих понятий.

Кроме того, общепризнанным является и финансовое понимание парадигмы «основные средства». Так С. Фишер и др. под категорией «основные средства» понимает общий совокупный запас физического капитала, накопленный экономикой (Taranova et al., 2018).

Таким образом, основные средства и основные средства, являясь составной частью капитала, участвуют в производственном процессе в натуральной и денежной формах.

Основные средства могут принимать активное участие в производственном процессе, а могут опосредованно участвовать, кроме того часть основных средств не являются производственными, хотя имеют определенную стоимость. К таким фондам в сельском хозяйстве можно отнести средства труда и объекты природопользования. В целом они представляют средства труда и не являются основными производственными фондами, но входят в состав капитала.

На наш взгляд, под категорией «основные средства» можно понимать денежное выражение части стоимости основных средств организации, имеющихся в ее распоряжении. Не все средства труда можно отнести к основным производственным фондам, а только имеющие стоимость, например, земельные участки и участки

природопользования – это средства труда, но не основные производственные фонды.

Также в экономической литературе смешивают понятия «основной капитал», «основные средства», «основные производственные фонды», «капитальные вложения», «материальные ресурсы» и «финансовые вложения». Основные средства, непосредственно участвующие в производственном процессе, можно отнести к основному производственному капиталу.

Методология

В связи с переходом российского бухгалтерского учета к международным стандартам учета, в экономической науке появляются новые термины и трактовки. Например, основные средства стали рассматривать как фиксированный капитал. Но в практике бухгалтерского учета нельзя применять данный термин, поскольку остаточная стоимость основных средств постоянно меняется. Советские экономисты считали, что термину «основные средства» в зарубежной экономике соответствует категория «основной капитал», что не совсем корректно. Категория «капитал» в отечественном учете и международных стандартах рассматривается как источник, а, следовательно, отражается в пассиве бухгалтерского баланса, а не в активе. В российской экономической литературе понятие «капитала» характеризует денежную оценку имущества организации, в зарубежной – источники средств, за счет которых финансируются активы хозяйствующего субъекта. «Капитал» в этой интерпретации представлен основными фондами, совокупностью производственных ресурсов и оборотным капиталом.

Соотношение представленных выше понятий теории воспроизводственного процесса, их взаимодействие и отличие представлены на рисунке 1.

Основные производственные фонды в современных условиях выполняют следующие функции:

- при производстве продукции использовать новые технологии и инновационные технологии;
- обеспечивать производство новых потребительских стоимостей;
- организовать создание условий общекономического роста организации.

Структура основных производственных фондов в сельскохозяйственных организациях подвержена влиянию экономических и природно-климатических факторов, а также от их

специализации. На структуру основных производственных фондов влияет и транспортная удаленность сельхозорганизаций от каналов ре-

ализации произведенной продукции, материально-техническое обеспечение организаций, доля транспортных затрат.

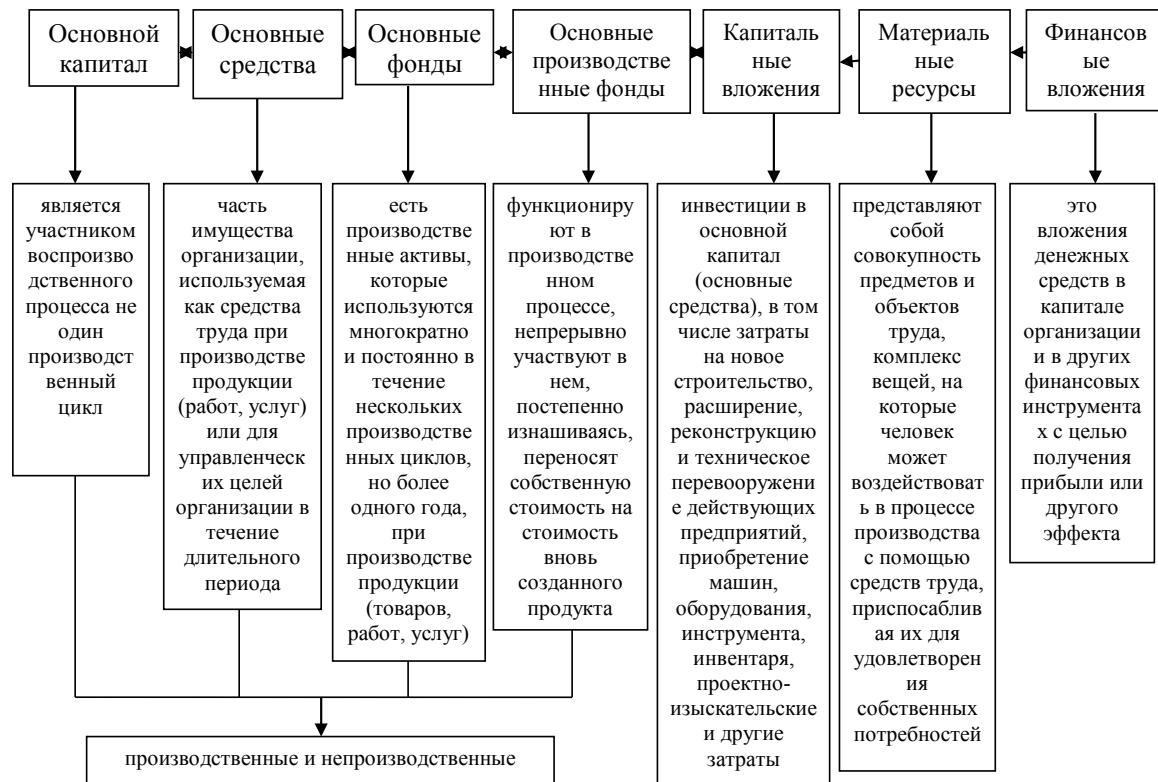


Рисунок 1 – Схема взаимодействия основных категорий воспроизводственного процесса

Решающим фактором повышения экономической эффективности аграрного производства является характер использования основных производственных фондов. Более эффективное их применение приводит к увеличению производства сельскохозяйственной продукции без каких-либо дополнительных денежных вложений, которые имеют определенную направленность на воспроизводственный процесс основных производственных фондов, уменьшает потребность в приобретении новой сельскохозяйственной техники и новом строительстве производственных помещений. Как следствие – снижение фондемкости и себестоимости сельскохозяйственной продукции и увеличение рентабельности ее производства.

Для непрерывного производственного процесса основной капитал должен постоянно возобновляться, как в натуральном выражении (в виде основных производственных фондов) и в

стоимостном выражении для обеспечения воспроизводственного процесса. Стоимость основных средств постепенно отделяется в виде амортизационных отчислений.

Важной категорией в теории процесса воспроизводства основных производственных фондов являются капитальные вложения. Не менее значимой категорией для теории воспроизводства является понятие «материальные ресурсы», которые представляют собой совокупность предметов и объектов труда, комплекс вещей, на которые человек может воздействовать в процессе производства с помощью средств труда, приспособливая их для удовлетворения собственных потребностей.

В процессе производства сельскохозяйственной продукции основные средства теряют свои первоначальные качества и становятся непригодными для дальнейшего использования.

Таблица 1 – Социально-экономический механизм инвестирования на основе дифференцированного подхода с учётом экономического состояния сельхозпредприятий

Типы хозяйств		Стратегические направления воспроизводства основных средств	
	Первоочередные 5-7 лет	На среднесрочную и более отдалённую перспективу	Главные направления социально-экономического развития сельского хозяйства
экономически крепкие, высоко-рентабельные	строительство новых объектов, приобретение новой техники	комплексная модернизация основных средств социального, производственного и инженерного назначения	Инновационно-инвестиционное развитие, экономика знаний, интеграция
средние по экономическому положению	модернизация основных средств (капитальный ремонт, техническое перевооружение) основных средств	создание хороших условий для труда, быта и отдыха населения, модернизация основных средств сельского хозяйства	освоение достижений науки и техники, передовых технологий, развитие инноваций
экономически слабые	продление сроков службы основных средств путём их реконструкции, ремонта, сокращения долгостроя	обновление основных средств путём их реконструкции и технического перевооружения	рациональное использование ресурсов, развитие предпринимательства, рыночных отношений

Современная теория капитала использует и развивает подходы классической экономической теории на основе принципа общественного воспроизводства, в основе которого лежит применение основных производственных фондов и их кругооборот в процессе производства. Основной капитал в процессе полного воспроизводственного цикла кругооборота должен пройти три основных этапа:

- на первом этапе кругооборота основной производственный капитал, выраженный в денежной форме, авансируется в средства труда и переносится в форму производительного основного капитала;

- на втором этапе производительная форма основного капитала постепенно меняет свою стоимость и частями переносит свою стоимость на стоимость вновь произведенной продукции посредством амортизации. Данный процесс проходит несколько производственных фаз и продолжается пока основной капитал полностью не износится;

- на третьем этапе при реализации произведенной продукции, входящая в нее стоимость основных производственных фондов переходит в основной капитал в стоимостной форме в виде амортизационных отчислений и может авансироваться в средства труда, посредством текущего ремонта или приобретения новых основных средств.

Результаты и обсуждение

Основные средства в сельскохозяйственном производстве охватывают разнообразные средства труда. В процессе производства сельскохозяйственной продукции в зависимости от их функционального назначения их можно разделить на основные средства производственного и непроизводственного назначения. В составе основных средств производственного назначения выделяют основные средства, непосредственно участвующие в материальном производстве при получении основной продукции сельского хозяйства.

Помимо основных производственных фондов в аграрном производстве применяются и основные непроизводственные фонды, служащие для приобретения нематериальных благ. К ним относят основные средства культурно-бытового назначения и жилищно-коммунального хозяйства: жилые дома, общежития, клубы и другие социальные объекты, принадлежащие сельскохозяйственным организациям. Данные основные средства не принимают непосредственного участия при производстве продукции в сельском хозяйстве, но играющие значимую роль в воспроизводственном процессе при формировании трудовых ресурсов и в конечном итоге создающие необходимые условия для роста производительности труда.



Рисунок 2 – Особенности и типы воспроизведения в сельском хозяйстве

Отдельные виды производственных основных средств по-разному участвуют в сельскохозяйственном производстве. Некоторые из них напрямую связаны с основным сельскохозяйственным производством и являются основным фактором роста растениеводческой и животноводческой продукции. К ним относят трактора, грузовые автомобили, комбайны, сельскохозяйственные машины, производственное оборудование, рабочий и продуктивный скот. Следовательно, производственные основные средства можно разделить на фонды сельскохозяйственного и несельскохозяйственного назначения.

Процесс воспроизведения основных производственных фондов в аграрном секторе связан с определенными особенностями, которые специфичны для отрасли:

В агробизнесе экономические процессы зависят от естественных природных, следовательно, воспроизведение целого ряда основных производственных фондов (многолетних насажд-

дений, рабочего и продуктивного скота) связано не столько с экономическими и финансовыми ресурсами сельскохозяйственной организации, сколько со сроками выращивания растений и животных.

Большую часть основных и оборотных фондов сельскохозяйственные организации производят в своем хозяйстве (рабочий и продуктивный скот, корма, органические удобрения, семена, многолетние насаждения). Следовательно, степень обеспеченности основными и оборотными производственными фондами напрямую зависит от результатов деятельности самой организации.

Земля в агробизнесе является основным средством производства, но в тоже время, она обладает различным уровнем плодородия. От ее плодородия и качества зависит урожайность сельскохозяйственных культур, а, следовательно, и эффективность использования основных производственных фондов.

Кроме того, на воспроизводственный процесс основных производственных фондов значительно влияет сезонный характер производства. В период проведения сезонных работ в растениеводстве необходима значительная концентрация трудовых, финансовых и материальных ресурсов. Кроме этого, сезонный характер сельскохозяйственного производства предполагает разрыв в процессе производства и реализации произведенной продукции, что ведет к перебоям в приобретении основных производственных и оборотных фондов.

Агропромышленный комплекс – весьма перспективная отрасль экономики. Инвестиции в сельское хозяйство быстро окупаются и приносят значительную прибыль.

К инвестициям в АПК относятся вложения денежных средств и материально-технических ресурсов, акции и облигации. Валюта инвестиций может быть национальной, иностранной или смешанной.

Инвестиции могут быть внутренние и внешние, собственные и привлеченные, финансовые и интеллектуальные. Их источниками служат собственные средства предприятий АПК, то есть прибыль, банковские кредиты, вливания из региональных бюджетов, зарубежные инвестиции, инвестиционные фонды.

Сейчас инвестирование в АПК реализуется следующим образом:

Снижение ставок по сезонным кредитам до 12% годовых. Из федерального бюджета было направлено 14 млрд. рублей для субсидирования ставок. Предприятия, задействованные в сельском хозяйстве, получают скидку в 10% при покупке ГСМ. Регионы, пострадавшие от засух или наводнений в рамках господдержки, получают как бюджетные кредиты, так и дотации, предназначенные для покрытия ущерба.

В результате инвестирования в разных регионах России производство сельхозпродукции за 10 лет увеличилось в 3 раза и продолжает расти. Тесная связь показателей – непременное условие его успешного функционирования механизма инвестирования в основные средства и одна из основных задач обеспечения благосостояния населения.

Общая господдержка сельского хозяйства в 2019 г. с учетом бюджетных средств на реализацию госпрограммы развития АПК и нацпроекта по экспорту сельскохозяйственной продукции составила 302 млрд руб.

Проект федерального бюджета на 2019 г. и на плановый период 2020 и 2021 гг. предполагает,

что расходы бюджета на госпрограмму развития сельского хозяйства и регулирования рынков сельскохозяйственной продукции, сырья и продовольствия в 2019 г. составят 241,446 млрд руб., в 2020 г. – 241,63 млрд руб., в 2021 г. – 229,412 млрд руб.

Правительство РФ заинтересовано в развитии сельского хозяйства и для его поддержки утвердило ряд льгот:

сниженные налоговые ставки. Предприятия сельского хозяйства платят в бюджет 12 % налога;

освобождение от НДС, налога на имущество и транспортного налога;

особые условия кредитования. Часть займа компенсируется государством в виде льготы;

поддержку государством российского производителя. Таможенная ставка на экспорт составляет 15 %, а на импорт – 60 %. Что существенно стимулирует сельское хозяйство в целом;

рост цены на землю, пригодную для сельскохозяйственной деятельности. Сельскохозяйственные угодья можно сдавать в аренду, перепродавать или использовать как залог при получении кредита.

Но, несмотря на поддержку, инвестиции в сельское хозяйство недостаточны. Аграрии России нуждаются в большем количестве финансовых ресурсов, и этот дефицит существенно влияет на эффективность инвестиций.

Заключение

Основные средства можно рассматривать как фиксированный капитал. Термин «основные средства» в зарубежной экономике соответствует категория «основной капитал», что не совсем корректно. Категория «капитал» в российском бухгалтерском учете рассматривается как источник и отражается в пассиве бухгалтерского баланса, а не в активе. В отечественной экономической литературе понятие «капитал» отражает денежную оценку имущества организации (актив бухгалтерского баланса), в зарубежной – источники средств, за счет которых приобретаются активы организации (пассив бухгалтерского баланса). «Капитал» в данной интерпретации включает в себя основные средства, совокупность производственных ресурсов и оборотный капитал.

Кризисное время вынуждает людей быстро выбирать направление, куда они смогут инвестировать имеющиеся финансы. При этом они стремятся к тому, чтобы эта область не была свя-

зана с колебаниями курса валюты, стоимостью нефти или развитием современных технологий. Они отдают предпочтение отрасли, которая про-

должит оставаться востребованной очень долгое время. Хорошим вариантом в таком случае является вложение финансов в сельское хозяйство.

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DIGITAL TRANSFORMATION OF PUBLIC ADMINISTRATION: PROACTIVE CUSTOMER SUPPORT

Abstract. The article considers the issue of digital transformation, which can become the basis for the further development of the principle of management by results of the state, since it allows you to overcome its previously identified limitations. The purpose of this article is a detailed study of new business models, including the so-called proactive service based on data, as well as the integration of modern fragmented information systems and communication channels. It is shown that despite the results achieved, problems associated with an insufficient level of openness, customer orientation and activity remain relevant. For example, government agencies are reluctant to disclose information that can be used to create added value in the form of relevant and relevant open data. The e-government development index (EGDI) in the Republic of Kazakhstan is analyzed. The results of the analysis revealed a high level of development of e-government. However, according to the authors, it is necessary to study in more detail new business models, including the so-called proactive service based on data, as well as the integration of modern fragmented information systems and communication channels to implement a multi-channel service model by creating a single "front office" aimed at providing the availability of information and services at anytime, anywhere and on any device (contact center, web portal, smart messengers, mobile applications, SMS messages).

Key words: public administration, digital transformation, proactive and omnichannel services, e-government development index.

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Мемлекеттік басқарудың цифрлық трансформациясы: проактивті қызмет көрсету

Андратпа. Мақалада бұрын анықталған шектеулерді еңсеруге мүмкіндік беретін нәтижелер бойынша басқару қағидасын мемлекеттің одан әрі игеруіне негіз бола алатын цифрлық трансформация мәселесі қарастырылған. Мақаланың мақсаты деректер негізіндең проактивті дәп аталағын қызметті қоса алғанда, жаңа бизнес-моделдерді егжей-тегжейлі зерттеу, сондай-ақ қазіргі заманғы шашыраңқы ақпараттық жүйелер мен байланыс арналарын интеграциялау болып табылады. Қол жеткізген нәтижелерге қарамастан, ашықтық, клиенттерге бағдарлану, белсенділіктің деңгейінің жеткіліксіз болуына байланысты өзекті проблемалар болып қалуда. Осылайша, мысалы, мемлекеттік органдар өзекті және талап етілген ашық деректер түріндең қосымша құнды құру үшін пайдаланылуы мүмкін ақпаратты әлі де болса лажсыздан ашуда. Қазақстан Республикасында электрондық үкіметтің даму индексі (EGDI) талданды. Талдау нәтижелері бойынша электрондық үкіметті дамытуың жоғары деңгейі анықталды. Алайда, авторлардың пікірінше, деректер негізіндең проактивті дәп аталағын қызметті қоса алғанда, жаңа бизнес-моделдерді, сондай-ақ кез келген уақытта, кез келген орында және кез келген құрылышыда (байланыс орталығы, веб-портал, зиаткерлік мессенджерлер, мобиЛЬДІ қосымшалар, SMS-хабарламалар) ақпарат пен қызметтердің қолжетімділігін қамтамасыз етуге бағытталған бірыңғай «фронт-офисті» құру жолымен, омниканальді қызмет көрсету моделін іске асыру үшін бүгінде шашыраңқы ақпараттық жүйелер мен арналарды интеграциялауды егжей-тегжейлі зерттеу қажет.

Түйін сөздер: мемлекеттік басқару, цифрлық трансформация, проактивті және омниканальді қызмет көрсету, электрондық үкіметтің даму индексі.

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Цифровая трансформация государственного управления: проактивное обслуживание

Аннотация. В статье рассмотрены вопросы цифровой трансформации, которая может стать базой дальнейшего освоения государством принципа управления по результатам, поскольку позволяет преодолеть его ранее выявленные ограничения. Целью данной статьи является детальное изучение новых бизнес-моделей, включая так называемый проактивный сервис на основе данных, а также интеграцию современных фрагментированных информационных систем и каналов связи. Показано, что несмотря на достигнутые результаты, проблемы, связанные с недостаточным уровнем открытости, ориентации на клиента и активности, остаются актуальными. Так, например, правительственные учреждения неохотно раскрывают информацию, которая может быть использована для создания добавленной стоимости в форме релевантных и релевантных открытых данных. Анализирован индекс развития электронного правительства (EGDI) в Республике Казахстан. По результатам выявлен высокий уровень развития электронного правительства. Однако, по мнению авторов, необходимо более детально изучить новые бизнес-модели, включая так называемый проактивный сервис на основе данных, а также интеграцию современных фрагментированных информационных систем и каналов связи для реализации модели многоканального сервиса путем создания единого «фронт-офис», нацеленного на обеспечение доступности информации и услуг в любое время, в любом месте и на любом устройстве (контакт-центр, веб-портал, смарт-мессенджеры, мобильные приложения, SMS-сообщения).

Ключевые слова: государственное управление, цифровая трансформация, проактивное и омниканальное обслуживание, индекс развития электронного правительства.

Introduction

Today, the Internet economy is growing at a rate of up to 25% per year in developing countries, while no sector of the economy can even come close to such a pace. 90% of all global data was created in just the last 2 years. Already 35 billion devices are connected to the Internet and exchange data – this figure is five times the total population of the world. Digitalization efforts lead to the creation of a new society where human capital is actively developing – the knowledge and skills of the future are brought up from a young age, business efficiency and speed are enhanced through automation and other new technologies, and the dialogue of citizens with their states becomes simple and open. The digital revolution is happening before our eyes.

These changes are caused by the introduction in recent years of many technological innovations used in different industries. The methods of production and gaining added value are radically changing, and new requirements for people's education and labor skills appear. The industrial Internet of things is shaping the future of manufacturing industries, leveraging the power of flexible and smart manufacturing, and revolutionizing productivity. Artificial intelligence is being introduced, including

in conservative industries, such as financial services and medicine. 3D printing technology is already contributing to the transformation of industries such as aviation, logistics, biomedicine and the automotive industry. Blockchain has all the prerequisites to make a global transformation of the monetary system. Big data and the widespread availability of communications are some of the factors that underlie the “sharing economy,” which is expanding globally at an accelerated pace. The leading companies in the “joint consumption in the absence of physical assets” segment in terms of capitalization exceed the value of traditional companies with multi-billion-dollar physical assets on the balance sheet.

The President of the Republic of Kazakhstan, N. Nazarbayev, in his traditional annual Address to the Nation of Kazakhstan on January 10, 2018, “New Development Opportunities in the Context of the Fourth Industrial Revolution” (Nazarbayev, 2018), pays special attention to ubiquitous digitalization. Kazakhstan within the framework of the State Program “Digital Kazakhstan” (State program “Digital Kazakhstan”, 2017) plans to introduce information technologies in five main areas: digitalization of economic sectors, transition to a digital state, implementation of a digital silk

road, development of human capital, creation of an innovation ecosystem. This program has set ambitious goals for digitalizing the activities of government agencies. To achieve these goals, a support infrastructure will be created in the form of adapted legislation, measures to support business, education and science, simplifying business procedures, and reducing transaction costs when interacting with the state. Moreover, the state will anticipate the needs of its citizens in obtaining services, freeing up time for productive labor and stimulating economically active behavior.

As of July 2017, more than 740 services and services were transferred into electronic form, 83 mobile services were implemented. In 2015, the volume of public services provided in electronic form on the web portal amounted to more than 36 million, in 2016 – about 40 million. As of September 2017, the number of registered unique users has reached more than 6.6 million people. As of October 2017, there are 349 service centers for the population in the country. In 2013, the Unified Contact Center was created on the basis of the Call Center of the “electronic government” with a free phone number of 1414. At least 14 thousand calls from citizens are received daily at the Unified Contact Center, with a projected growth of an average of 15% of the total appeals annually. This creates a big burden on operators, leads to problems with dialing and reduces the quality of services. A large number of calls contain the same type of calls; they could be transferred to the automatic processing or self-service mode. Despite the results achieved, problems associated with an insufficient level of openness, customer focus and proactivity remain relevant. So, for example, government agencies are reluctant to disclose information that can be used to create added value in the form of relevant and relevant open data.

The profile activities of state bodies are being automated – however, there are still areas of activity that are not sufficiently covered by informatization. The advent of new technologies makes it possible to provide services of higher quality than those that are currently implemented. For example, the use of big data technologies can lead to a fundamentally new approach to analyzing the needs of the population, and, as a result, improving the quality of service.

The purpose of this article is to detailed study of the new business models, including so-called proactive service based on data, as well as the integration of today's fragmented information systems and communication channels.

Literature review

Digitalization has become a global trend. The development and development of digital technologies are associated with the possibility of achieving key goals of socio-economic development of Kazakhstan. An adequate digitalization of public administration is of fundamental importance for their implementation.

In foreign literature and practice, various versions of the agendas of digitalization of public administration have been formed and are being implemented (Giritli Nygren, 2012; Natalini et al., 2012; Wihlborg et al., 2017; Kirov, 2017), including its digital transformation, versions of the evolution of digitalization of public administration are presented (Janowski, 2015; Kamolov, 2017; McNutt, 2014; Liu et al., 2015; Iovan, 2016), standards (models) of maturity of digital public administration are prepared and implemented (Andersen et al., 2011; Bertot et al., 2016; Valdés et al., 2011; Eom et al., 2014).

An analysis of recent research and publications has shown that the work of domestic and foreign researchers is devoted to the study of the essence of digital transformation of public administration. So, in the research of Weerakkody et al. (2016) examines how institutional pressures contribute towards the emergence of Digitally-Enabled Service Transformation (DEST) projects in public agencies and how newly introduced transformation is implemented and diffused within the institutional setting. The main goal of the research work of Janowski, T., Estevez, E., & Baguma, R. (2018) is to offer a conceptual framework for citizen-administration relationships under the platform paradigm. According to research of Tassabehji et al. (2016) the potential of e-government to enact organizational change in the public sector remains unclear, as well as in their work the role of ‘institutional entrepreneurs’ for Digital Era Governance (DEG) is emphasized. Mergel (2019) notes that national governments are setting up digital service teams (DST) – IT units outside the centralized CIO’s office – to respond to complex governmental and societal challenges in a responsive and agile manner. DSTs emerge as a third space between centralized and decentralized IT departments that are triggered by large-scale IT failures and the need to abandon black swan IT projects – tasks that traditional CIO offices were not able to handle so far. In the research of Smotrickaya et al. (2018) the current trends in the transformation of public administration in the context of the growing global

challenges of digital technological development are considered. Holodnaya (2018) analyzes the basic directions of development of e-government, as well as the possibility of practical implementation of the new principle of "digital by default" in relation to public services. In the research of Efimova (2019) discusses the main stages and results of digitalization of public administration in Estonia. The purpose of the article is to demonstrate the experience of digital transformation of Estonian public administration in the digital economy. In the research of Korchagin et al. (2018) the main factors of the emergence and development of the digital economy and its impact on public administration are analyzed. The world experience of using digital technologies to strengthen state control over socio-economic processes is described. The risks caused by the development of the digital environment are shown. Author's recommendations on Russia's adaptation to new digital realities are given.

Despite the presence of scientific interest in the research as a whole, currently the unresolved part is the problems associated with an insufficient level of openness, customer focus and proactivity remain relevant. On this basis, there is a need for a more detailed study of the new business models, including so-called proactive service based on data. Moreover, it is necessary to consider the integration of modern fragmented information systems and communication channels to implement a multi-channel service model by creating a single "front office". A single "front office" is aimed at ensuring the availability of information and services at anytime, anywhere and on any device (contact center, web portal, smart messengers, mobile applications, SMS messages).

To analyze the concept of digital transformation in public administration, it seems useful to highlight the main stages of digitalization. Thus, OECD experts identify three main stages of digital transformation:

- digitization of processes, within the framework of which the implementation of traditional digital technologies is carried out to improve the efficiency of government, data management;

- e-government, involving the introduction of digital technologies, especially based on the use of the Internet, to improve public administration;

- digital government, in which the latest generation digital technologies (such as the Internet of things, artificial intelligence, predictive analytics) allow you to take into account the preferences of users in the formation of the composition of the services

and procedures associated with their receipt. Digital technologies are becoming a tool for implementing the strategy of modernizing public administration. They also largely determine the direction of change (OECD, 2016).

According to Gartner experts (2017), the digital transformation in public administration involves five stages of maturity from e-government to smart government. These stages differ both in their priority aspects and in the channels and technologies for the provision of public services, as well as in terms of implementation indicators, based on which it would be possible to measure the implementation of a particular stage. It is important to emphasize that technological solutions relevant to the initial stages of maturity of the digital government are not adequate in relation to the later stages of its formation. For example, portals of public services that are created at the e-government stage will largely become outdated after automating routine procedures and moving to machine-to-machine interaction at the "smart government" stage. If at the first stages of the state they seek to maximize the share of public services available in electronic form, then with the digital transformation, the composition of public services will change and the number of types of services provided will decrease. Similarly, the popular idea of "state as a platform" is not relevant for the stages of a fully digital and "smart government" (Table 1).

An analysis of the stages of maturity of digital public administration proposed by Gartner experts shows that an important sign of digital transformation is a change not only in the way public functions (public services) are implemented, including the processes and sub-processes performed in the implementation of public functions and public services, but and their understanding and composition.

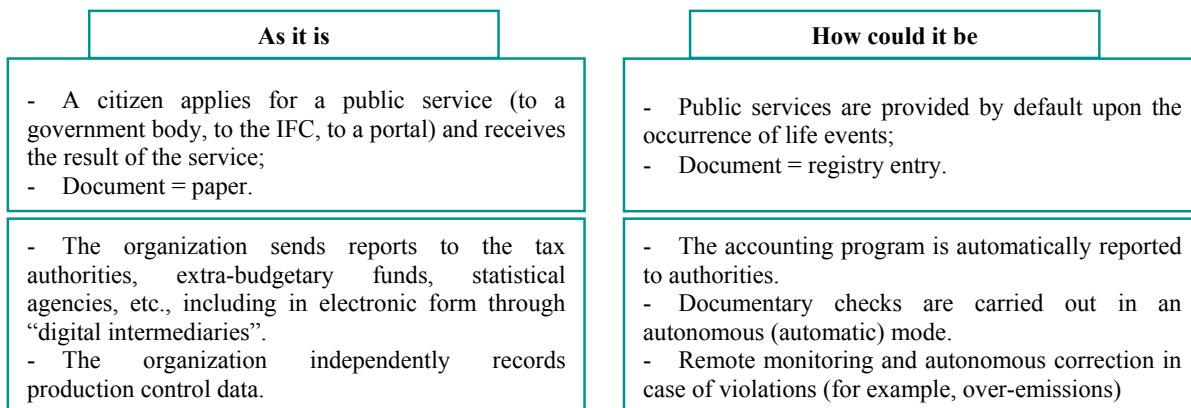
We illustrate these considerations with the example of some types of state functions (services) (Figure 1).

Therefore, at present, one of the signs of a public service in accordance with applicable law is the fact of citizens applying for its provision. In the context of digital transformation, this feature may disappear in most public services: some of them will not be provided at all, because they will disappear (for example, if there is the possibility of checking data online, extracts from state registers and registers will not be required). Moreover, some services may be provided by default, that is, without a statement by citizens (Dobrolyubova et al., 2018).

Table 1 – Maturity stages of digital government: from e-government to smart government

Parameter	I – E-government	II – Open government	III – Datacenter government	IV – Fully digital government	V – “Smart Government”
	Initiation	Development	Definition	Control	Optimization
Priority aspects	Fulfillment of requirements, efficiency	Transparency and openness	Subjective value	Transformation	Sustainability
Main channel for the provision of public services	Government services portal	Public administration as a platform	Non-government channels	Using different channels	Automation replaces portals
Core technology	Service oriented architecture	Open data, open services	Opening all data	Things as data	Smart cars (robotics)
Performance indicators	Proportion of online services	Share of open data in total data	Number of services provided based on data	Share of data obtained on the basis of inter-machine interaction	Degree of reduction (optimization) of the number of services provided

Source: Gartner, 2017

**Figure 1** – The impact of digitalization on public administration

Source: Dobrolyubova et al., 2018

Methodology

The implementation of the event on digitalization of public administration, as a rule, is aimed at improving the effectiveness of public administration, including the quality of public services provided and its effectiveness that is, reducing the costs of the state, business and citizens associated with the implementation of certain public functions. Thus, we can assume that a high level of digitalization of public administration provides a higher level of quality of public administration in general or its individual parameters.

To analyze the level of digital transformation, the study used the e-government development

index. From a mathematical point of view, the electronic government development index (EGDI) is the weighted average of the normalized indicators for the three main aspects of electronic government:

The volume and quality of online services, expressed as an online service index (OSI);

The state of development of the telecommunications infrastructure or telecommunications infrastructure index (TII);

Internal human capital or human capital index (HCI).

Each of these indices is a composite indicator that can be extracted for independent analysis (UN E-Government Survey, 2018).

$$EGDI = \frac{1}{3} (OSI_{normalized} + TII_{normalized} + HCI_{normalized}) \quad (1)$$

Before normalizing the three component indicators, a Z-transform procedure is performed for each component indicator to ensure that the overall EGDI is determined equally on the basis of the three component indices. Thus, each component index reflects a comparable variance before the Z-transform. Without the Z-transform procedure, EGDI is mainly dependent on the component dispersion index with the greatest dispersion. After the Z-transformation, the sum of the arithmetic means becomes an appropriate statistical indicator in which “equal weight” really means “equal significance”.

$$Z_{transform} = \frac{x - \mu}{\sigma} \quad (2)$$

The formula of Z-transformation for each component indicator:

x – net standardized rate;

μ – average value of the sample;
 σ – standard deviation of the sample.

The composite value of each component index is then averaged to a range from 0 to 1, and the total EGDI value is determined as the arithmetic average of the three component indices (UN E-Government Survey, 2018).

Results and discussion

The E-Government Development Index (EGDI) measures how countries use information and communication technologies to provide public services. It reflects the volume and quality of online services, the status of telecommunication infrastructure and existing human potential. Table 2 shows information on the indicator of the development of online services, ICT infrastructure, human capital in the Republic of Kazakhstan.

Table 2 – The level of three-component indicators of the E-Government Development Index (EGDI)

Country	The volume and quality of online services, expressed as an online service index (OSI)	The state of development of the telecommunications infrastructure or telecommunications infrastructure index (TII)	Human capital index (HCI)
Kazakhstan	0,8681	0,5723	0,8388

Note – compiled by the authors based on the source UN E-Government Survey (2018)

Based on formulas 1 and 2, the index of development of e-government was calculated.

$$EGDI = \frac{1}{3} (0,8681 + 0,5723 + 0,8388) = 0,7597$$

According to the results, Kazakhstan ended up in a group of countries with a very high rating. Despite the results achieved, problems associated with an insufficient level of openness, customer focus and proactivity remain relevant.

Conclusion

The digital transformation of public administration is not just automation and optimization of individual processes in the provision

of public functions, including the provision of public services, the introduction and use of various modern ICTs in the interests of ensuring the activities of government authorities. Digital transformation is conscripted to qualitatively change the content of public administration, including its individual procedures, stages of the managerial cycle, state functions, their composition and types. Such a change should lead to an increase in the quality of public administration: to ensure greater justification for government intervention (and reduce the role of the state in overall), increasing the effectiveness and efficiency of public authorities. The above calculations show that increasing the level of digitalization of public administration is closely interconnected with increasing the effectiveness of public administration, reducing corruption, and improving the conditions for doing business.

In Kazakhstan and in foreign countries, the digital transformation is traditionally considered primarily as a driver for increasing the availability and quality of public services. Digital technologies make it possible to transform the implementation of all types of state functions and the functions for their implementation – from standard-setting to control and oversight activities and revenue administration. An unprecedented expansion of the possibilities of working with a wide variety of data in real time allows government authorities to completely plan their results, monitor and evaluate their achievement, as well as the participation of their staff. In this sense, digital transformation is becoming a driver, a mechanism for implementing public administration based on results.

In order to ensure the use of digital transformation as a driver and mechanism for implementing public administration according to the results of the implementation of the state program "Digital Kazakhstan", it is advisable to ensure the implementation of measures aimed at:

transition from the responsibility of departments for the preparation and submission of reports on achieved results to their responsibility for posting data on achieved results, generated mainly automatically on a single platform and making decisions based on these data;

expansion of the use of "big data" for the development of public policy, the formation of official statistics, revenue administration, audit of the effectiveness of budget expenditures and the implementation of other public functions;

expansion of methods for assessing the performance of state bodies: the transition from a binary assessment of "completed – not completed" to the use of predictive analytics, selective controlled trials, and other analytical methods based on artificial intelligence technologies;

use of digitalization as a tool for optimizing budget expenditures: introducing the practice of calculating transaction costs and evaluating their reduction through digitalization.

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ПРОЕКТНОЕ УПРАВЛЕНИЕ В ГОСУДАРСТВЕННОМ РЕГУЛИРОВАНИИ: ПРОБЛЕМЫ И РЕШЕНИЯ

Аннотация. Усиление глобализации обусловило широкое применение системы управления проектами во многих сферах экономической деятельности. Цель данной статьи состоит в рассмотрении теоретико-методологических подходов проектного управления в обеспечении конкурентоспособности национальной экономики в части реализации ее государственных программ и проектов. Посредством научного анализа современных публикаций по проектному управлению в государственном секторе авторами обосновывается необходимость его внедрения в казахстанскую практику, что повысит конкурентоспособность хозяйственной деятельности. Теоретико-методологическое обоснование строится на использовании магического треугольника проектного управления: «качество – сроки – бюджет», позволяющего выработать алгоритмы по исполнению государственными органами основных функций проектного менеджмента.

В статье особо подчеркивается необходимость использования опыта зарубежья по внедрению проектного управления в практику функционирования государственных органов при выполнении государственных программ и проектов в условиях глобальной неустойчивости, которая сопровождается различными рисками, кризисными ситуациями, ограниченностью ресурсов и многими другими проявлениями. В отечественной науке еще предстоит проделать большую работу по тщательному анализу вопроса о внедрении системы управления проектами в государственных органах на пути вхождения Казахстана в 30-ку наиболее конкурентоспособных стран мира.

В этой связи, в данной статье рассматриваются вопросы, возникающие при внедрении системы управления проектами в государственных органах Республики Казахстан и пути их решения.

Ключевые слова: проект, управление проектом, проектная деятельность, метод проекта, проектный офис.

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Project management in state regulation: problems and solutions

Abstract. Increased globalization has led to the widespread application of project management systems in many areas of business operations. This article is intended to examine the theoretical and methodological approaches to project management in ensuring the competitiveness of the national economy as it pertains to the implementation of its government programs and projects. Through the scientific analysis of current-day publications on project management in the public sector, the authors substantiate the need for its introduction into Kazakhstan's practice, which will increase the competitiveness of economic activity. The theoretical and methodological substantiation is based on the utilization of the magic triangle of project management: "quality – time – budget", which makes it possible to develop algorithms for the performance of the main functions of project management by government agencies.

The article emphasizes the need to use the international experience in the practical implementation of project management of public authorities in the execution of government programs and projects in the

context of global instability, accompanied by various risks, crisis situations, limited resources, and many other effects. In the national science, there is yet a lot to be done on a thorough analysis of a project management system implementation in government agencies on the path of Kazakhstan's entry into the top 30 most competitive countries in the world.

In this regard, this article discusses issues arising in the implementation of the project management system in the government bodies of the Republic of Kazakhstan and ways to address them.

Key words: project, project management, project activity, project method, project office.

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Мемлекеттік реттеудегі жобалық басқару: мәселелер мен шешімдер

Андратпа. Ғаламдық жаһандану үрдісінің нәтижесінде жобалық басқару жүйесі экономикалық, қызметтің көптеген салаларында қолдана бастады. Мақаланың мақсаты мемлекеттік бағдарламалар мен жобаларды жүзеге асыру кезінде ұлттық экономиканың бәсекеге қабілеттілігін қамтамасыз етуде жобалық басқарудың теориялық және әдіснамалық тәсілдерін қарастыру болып табылады. Авторлар мемлекеттік сектордағы жобалық басқаруға арналған соңы басылымдарды ғылыми зерделеу арқылы, шаруашылық қызметтің бәсекеге қабілеттілігін арттыратын жобалық басқаруды Қазақстанның тәжірибесіне енгізу қажеттілігін негіздейді. Теориялық және әдіснамалық негіздеме мемлекеттік органдарда жобалық басқарудың басты функцияларын жүзеге асыруының алгоритмін жасап шығуға мүмкіндік беретін, жобалық басқарудың «сапа – уақыт – бюджет» сикырылы үшбүршының қолдануға негізделген.

Мақалада әртүрлі тәуекелдер мен дағдарыстық жағдайлар кезінде, шектеулі ресурстар және көптеген басқа да көріністермен ұштасқан әлемдік тұрақсыздық жағдайында мемлекеттік органдардың бағдарламалар мен жобаларды жүзеге асыру қызметіне шетелдердің жобалық басқаруды енгізуі озық тәжірибесін қолдану қажеттілігі ерекше аталағы өткен. Отандық ғылымда Қазақстанның әлемдегі бәсекеге қабілетті 30 мемлекеттің қатарына кіру жолында мемлекеттік органдарға жобалық басқару жүйесін енгізу мәселесін жан-жақты талдауға арналған жұмыстарды көптеп жүргізу қажет.

Осыған орай, бұл мақалада Қазақстан Республикасының мемлекеттік органдарында жобалық басқару жүйесін енгізу кезінде туындастырылған мәселелерді анықтау мен оларды шешу жолдары қарастырылған.

Түйін сөздер: жоба, жобалық менеджмент, жобалық қызмет, жобалық әдіс, жобалық кеңсе.

Введение

Необходимость преодоления последствий глобальной неустойчивости вызвала развитие нового подхода, возникшего на базе проектного менеджмента. Данный подход, его инструментарий начал применяться в середине прошлого века и хорошо зарекомендовал себя в реализации проектов, касающихся различных сфер деятельности, в том числе в выполнении планов и программ таких стран как США, Япония, Великобритания, Китай и многие другие. Сильные стороны проектного управления связаны с тем, что он позволяет осуществлять контрольные функции по качеству выполнения намеченного, своевременности и расходами, то есть по всем заинтересованным параметрам проектов.

В этой связи возникает повышенная необходимость внедрения управления проектами в си-

стеме государственных органов Казахстана. Это – требование сегодняшнего времени. Данный вопрос прошел обсуждение на самом высоком уровне у нас в стране. И было принято решение о необходимости внедрения управления проектами в систему государственных органов. Однако, это не означает, что вопрос разностороннего исследования и изучения применения инструментов управления проектами на этом может быть закрыт.

В связи с чем целью данной научной статьи является исследование процесса внедрения управления проектами в систему государственных органов Казахстана и других стран, а также изучение динамики его развития. Объектом исследования являются государственные органы РК и зарубежных государств, имеющих как положительный, так и отрицательный опыт внедрения проектного управления в своей деятельности.

Знание зарубежного опыта внедрения проектного управления в государственные органы необходимо для того, чтобы заранее учесть возможные положительные или отрицательные факторы того или иного проекта при его внедрении, поскольку государственные органы разных стран по своей функциональности и осуществляющей деятельности во многом имеют схожие черты.

Общемировая практика показывает, что бизнес-структуры всегда более оперативно и гибко реагируют на происходящие инновационные процессы, поскольку от этого зачастую зависит их конкурентоспособность и прибыльность. В процессе вхождения Казахстана в тридцатку конкурентоспособных государств мира, повышение эффективности деятельности государственных органов в части достижения намеченных целей, своевременного и качественного их выполнения можно достичь с помощью инструментов проектного управления.

С этих позиций представляет значительный интерес исследование процесса внедрения проектного управления в сфере государственных органов развитых стран мира. Опыт Китая показывает, что, применяя проектное управление, экономика страны преображается, что позволяет ей встать в один ряд с государствами, с которыми вынуждены считаться сверхдержавы мира. Изучение и анализ опыта внедрения управления проектами в других государствах позволит Казахстану заимствовать его при использовании в собственной системе государственных органов, что возможно поможет избежать многих ошибок в продвижении управления проектами в стране.

Методология

Статья подготовлена на основе изучения публикаций из зарубежных и отечественных источников по проблемам управления проектами.

В основе методологического подхода лежат сложившиеся представления о процессе реализации проектного управления в соответствии с критериями «железного треугольника», когда возможны различные последствия. Последние могут иметь положительный и отрицательный результат. В первом случае при положительном исходе проект может оцениваться в виде «абсолютного успеха» либо как ощутимый успех. Такая оценка положительного результата определяется восприятием заинтересованных сторон, участвующих в выполнении проекта (Baker, 1998). Имеется немало примеров, когда проек-

ты, отвечающие вышеназванным критериям «железного треугольника», в конечном итоге оказались неудачными и вошли в разряд провального опыта ведения бизнеса (Shenhar, 2005). С другой стороны, есть проекты, которые не соответствовали ограничениям по времени, стоимости и качеству, но позже стали успешными (Pinto, 1989). По анализу мнений 650 руководителей проектов получен вывод, что достижение успешного выполнения проекта, его предполагаемых целей не всегда зависит просто от соответствия критерию «железного треугольника». С расширением перспектив производительности проекта по утверждению некоторых авторов неправильно управляемый проект может стать успешным и, наоборот, он может не достичь ожидаемых результатов, несмотря на то, что хорошо управляется (DeWit, 1988; Munns, 1996).

Для исследования поставленной в работе проблемы применен метод эмпирического исследования, включая наблюдение и сравнение, использованы методы анализа и синтеза, а также построение гипотез.

Обзор литературы

Проектное управление приобретает все большее распространение как способ обеспечения паритетных позиций на рынке. Определение менеджмента как «искусство достижения целей в условиях ограниченности ресурсов», данное Терри Гибсоном, известным современным специалистом в области управления, можно с полным основанием отнести к проектному управлению. Именно в этом заключается формула успеха этой технологии: правильное управление проектами, следуя по пути создания и внедрения инноваций в самых разных сферах экономики и производства, позволяет грамотно планировать и успешно реализовывать проекты, оптимизируя затраты временных, денежных и человеческих ресурсов, не отклоняясь при этом от запланированного качества конечного продукта проекта. Магический треугольник проекта (тройное ограничение): «качество – сроки – бюджет» – всегда подвластно тому, кто знает, как применять инструменты проектного менеджмента. Это подтверждается результатами практического использования проектного управления в самых разнообразных областях современного менеджмента (Культура управления, 2014). Управление проектами необходимо в современном мире, где постоянное совершенствование происходит с помощью различных типов проектов. Управ-

ление проектами является не только необходимостью для улучшения, но и одной из областей, которая ищет пути развития, через воздействие на различные факторы успеха проектного управления (Radujkovića, 2017).

Согласно Э.У. Ларсон и К.Ф. Грей, проект – это комплексное, не повторяющееся, однократное мероприятие, ограниченное по времени, бюджету, ресурсам, а также четкими указаниями по выполнению, разработанными под потребности заказчика (Грей, 2003).

Сам по себе проект это не конечный результат, будь то новый продукт, производственное сооружение, завод, информационная система, процесс реинжиниринга, новая организационная структура, документ или любое другое достижение. Правильнее сказать, что проект – это процесс создания нового конечного результата. Одни и те же принципы управления проектами применимы к проектам во всех предметных областях, хотя существуют значительные различия в акцентах и деталях планирования и исполнения проектов, зависящие от конкретной предметной области и культурной среды (Арчибальд, 2006).

В основном осуществляемые под эгидой государственных органов проекты, их реализация связаны с решением проблем, отвечающих интересам страны. Они могут быть нацелены на обеспечение национальной безопасности, ускорение экономического развития, улучшение условий жизни граждан страны, содействие социальному прогрессу. К таким проектам относятся масштабные, сложные и не очень объемные, простые инфраструктурные проекты, но в любом случае они связаны с решением государственных задач, реализацией интересов страны.

Разработка и реализация государственных проектов может занимать годы. Всегда в выполнении заинтересовано несколько сторон. Одну сторону могут представлять государственные структуры, другую – исполнители, осуществляющие реализацию проектов и, наконец, третью – те, в чьих интересах будут функционировать проекты, потребители. Выполнение проектов связано с расширением компетенций, для кого собственно они и предназначены.

Важным условием успешного выполнения проекта является осуществление постоянного мониторинга и контроля на всех этапах реализации. Только таким образом конечным итогом проектного управления может стать его завершение.

Существует множество работ, посвященных изучению возможностей применения проектно-

го управления в целом, а также есть труды, описывающие различные кейсы. Однако перечень работ, посвященных исследованию поставленных автором проблем, очень ограничен.

В трудах Gomesa (2016), Webster (1999) исследованы факторы, способствующие успеху проектов. В работах других ученых (Baker, 1998; Shenhari, 2005; Pinto, 1989; DeWit, 1988; Munns, 1996), исследовавших данные вопросы, приводится множество примеров успешных и неудачных проектов, не оправдавших надежды или же с неожиданными поворотами при их выполнении.

В работе Patanakul (2014) изучены сложности осуществления правительственные проектов и программ, которые требуют планирования, координаций и сотрудничества через процессы управления проектами, сильные командные усилия и участие нескольких заинтересованных сторон.

Помимо системных вопросов, так же есть вопросы, посвященные исследованию принципов управления проектами и его природы (Арчибальд, 2006).

В трудах Грядуновой А.В., Крюковой О.А., Леоновой О.В. (2016) рассмотрены возможные проблемы внедрения системы проектного менеджмента, а также пути их решения. А в работах Alias (2014) описываются критические факторы успеха (CSF), которые могут прямо или косвенно привести к успешной реализации проекта.

В трудах Баранской А. (2007) было подчеркнуто, что внедрение управления проектами в странах с переходной экономикой должно проходить вместе с другими преобразованиями, что даст этим странам возможность достичь тех же результатов, что и в развитых странах.

Результаты и обсуждение

Начавшийся процесс внедрения проектного управления в государственных органах РК подогревает исследовательский интерес к поиску ответов на следующие вопросы:

1. Способны ли государственные органы РК так же успешно управлять проектами, как это делают коммерческие и бизнес-структуры многих стран мира и иностранные правительства?

2. Какие казусы могут возникнуть или уже возникли при внедрении проектного управления в государственном секторе РК?

3. Какова текущая ситуация проектного управления (ПУ) в государственных органах РК.

4. Достигнуты ли промежуточные показатели внедрения ПУ в государственных органах РК и каковы его результаты?

5. Применимы ли широко известные инструменты проектного управления в Казахстанской реальности либо необходимо будет разработать свой образец стандарта проектного управления для государственных органов на подобии Японии и Великобританий?

6. Целесообразно ли создавать в системе государственных органов временное предприятие либо оно должно быть постоянно действующим универсальным структурным подразделением какого-нибудь государственного органа?

Прежде чем найти ответы на поставленные вопросы, были изучены труды зарубежных и отечественных авторов, также интернет-ресурсы в свободном доступе, посвященные этой и смежной тематике, что позволило сделать ряд выводов в исследуемой области.

Поскольку проектное управление в Казахстане начало применяться недавно, по этой самой причине обратимся к примеру других государств, которые уже имеют определенный опыт в решении проблем при внедрении проектного управления в государственном секторе. Это необходимо, чтобы избежать последствия зарубежных провальных проектов и применить лучшие и действенные методы проектного управления в наших государственных органах.

Проектное управление отраслей народного хозяйства, в ряде государств на протяжении уже нескольких лет успешно применяется и в государственных органах. Это такие страны как Америка, Великобритания, Китай, Япония, Малайзия, Россия и т.д. В Казахстане органы государственной власти тоже начали внедрять проектное управление. Данное обстоятельство вызвано тем, что, как было заявлено в мае 1993 года на Первом съезде инженеров Казахстана, «управление проектами» или «проектный менеджмент» имеет особенность и преимущество, что ориентирует на непрерывное отслеживание и инженерное сопровождение всего инвестиционного цикла от поиска идеи до получения прибыли» (Первый съезд инженеров Казахстана, 1993).

В 2010 году СПМ РК в инициативном порядке разработана Концепция развития проектного менеджмента в РК на 2010–2020 годы. Прорабатывается вопрос о создании полноценного офиса управления проектами ГПФИИР.

К примерам положительного опыта проектного управления можно отнести результаты участия проектов Генеральной прокуратуры РК в 2017 году в международном конкурсе «Проектный Олимп», ставшей единственным финалистом из Казахстана по проектному управлению

в государственном секторе, проводившемся в Москве. Сразу 5 проектов Генпрокуратуры стали победителями конкурса. Проект «10 мер по снижению тюремного населения» занял 1 место в номинации «Управление комплексным проектом – «Лучший проект года». В номинации «Прокуратура. Smart – управление» первого места удостоился проект «Защита бизнеса». Второго – «Зандылық». Третьего – «Казахстан без насилия в семье» и «В прокуратуру – лучшие кадры». Кроме того, в отдельной номинации «Лучший цифровой проект» победу одержал проект «Зандылық». Отдельным сертификатом была отмечена система внутренних коммуникаций «Программы перемен» Генеральной прокуратуры.

Важнейшие правительственные решения, их выполнение связано с использованием подходов планирования, координации и сотрудничества. Формой осуществления этих решений является разработка планов и программ, в которых четко формулируются цели и задачи, пути реализации, сроки и этапы, заказчики и исполнители, инвесторы и бюджеты.

Во многом реализация названных решений связывается с использованием методологии проектного управления, в основе которой лежит следование принципам магического треугольника. Помимо перечисленного прорабатываются вопросы контроля и степень ответственности за результаты выполнения объемов работ (Patanakul, 2014).

Если организации вложили значительные средства в технологии, надеясь получить конкурентные преимущества в условиях современного динамичного рынка, то они должны проводить значительные изменения и внедрение новых практик, более адаптированных к реальности, включая использование подходов управления проектами. Традиционные организационные структуры очень жесткие и бюрократические, они не могут быстро или точно реагировать на постоянные изменения бизнес-среды. В этой связи необходим поиск лучшего использования и контроля существующих ресурсов и возможностей. Управление проектом требует разработки организационных стратегий путем укрепления профессиональных навыков и возможностей, представляет интерес для проведения исследований с целью определения факторов, способствующих успешной реализации проектов (Gomesa, 2016).

Содержание проекта должно осуществляться соответствующим комитетом с прозрачным

принятием решений. Эту рекомендацию поддерживают некоторые ученые (Webster, 1999), которые считают, что хорошее управление факторами успеха на этом этапе необходимо для того, чтобы сформировать прочную основу для успеха всего проекта. При определении проекта и его масштабов комитет должен учитывать все аспекты оценки проекта, в частности, анализ заинтересованных сторон, экономический анализ, финансовый анализ и социальный анализ. Этой важной задаче должно бытьделено достаточно времени.

Профessor университета Индианы доктор Карл Бригз, изучавший вопрос о том, как Китай довольно быстро превратился в экономически мощную страну, проводил опрос среди специалистов в сфере проектного менеджмента. По его итогам было выявлено, что 83% компаний придерживаются основ проектного менеджмента по принципу западной теории; у 57% опрошенных компаний головные офисы находятся в США; 82% компаний Китая во время тестирования вели деятельность в КНР; 90% управляют проектами в КНР(Майер, 2015). Таким образом больше половины Китайских компаний успешно осуществляют свою деятельность с помощью проектного управления, что в свою очередь положительно отразилось на Китайской экономике.

В значительной степени результаты проектного управления зависят от профессионализма и подготовленности всех участников, включая как исполнителей, так и заказчиков проектов. Помимо того, требуется предварительная проработка возможных рисков и определение шагов по преодолению возникающих вызовов.

Из опыта проектного управления следует, что зачастую выполнение проектного управления наталкивается на разногласия среди участников, когда их интересы не совпадают. Например, одни участники могут быть заинтересованы в выполнении проектов с минимальными рисками. Другие вопреки возникающим вызовам вовлекаются в рисковые ситуации. В любом случае и те, и другие с разной степенью сталкиваются с вызовами и стоят перед выбором при принятии решений. Очевидно, что в казахстанской практике проектного управления подобные ситуации нередки, когда интересы участников процесса вступают в некое противоречие и реализация проектов требует взвешенных решений для максимизации результатов и минимизации рисков. И тогда возникает потребность в состыковке интересов всех участников процесса при принятии решений (Баранская, 2007).

Авторы статьи «Governance of institutional complexity in megaproject organizations» («Управление институциональной сложностью в мегапроекте организации») Yumin Qiu, Hongquan Chen, Zhaohan Sheng, Shuping Chengc, остановились на нескольких видах институциональных конфликтов, которые присутствуют в мегапроекте организации. Согласно мнению этих авторов существует шесть типов институциональной сложности. Это нормативная, политическая, социальная, культурная сложности, сложность отношений и эволюционная сложность или, так сказать, конфликты.

Нормативная сложность или же сложность регулирования, которая возникает из-за различия правил и политик, приводит к противоречивым требованиям одновременно.

Политическая сложность обусловлена тем, что интересы и ожидания многих сторон участвующих в проекте могут различаться, что способствует конфликту интересов.

Социальная сложность, возникает из-за того, что обеспокоенность общественности и понимание мегапроектов разнообразны.

Культурная сложность возникает из-за того, что в мегапроект может вовлекаться много участников, что приводит к смешиванию разных культурных элементов, принадлежащих различным средам.

Сложность отношений может возникать из-за того, что множество действующих лиц взаимодействуют и влияют друг на друга.

Эволюционная сложность обусловлена динамичностью мегапроектов в течение всего их жизненного цикла (Qiu, 2019).

В энциклопедическом словаре «Слово о человеке» институциональный конфликт рассматривается как институционализированное, т.е. введенное в рамки действующих в данном обществе социальных институтов (право, государство и т.п.) конфликтное противоборство, цель которого состоит не в разрушительной, изнурительной и дорогостоящей борьбе с соперником, а в поисках возможностей направлений согласия сторон, для взаимного урегулирования возникших разногласий.

Помимо выше перечисленных сложностей, ученые из Поднебесной остановились еще на одном виде сложности, так называемой «относительной». Относительная сложность указывает на интерактивную неопределенность, которая возникает из-за того, что множество людей, групп и организаций участвуют в реализации мегапроекта, где взаимодействия и отношения

между ними становятся критическим элементом, который формирует успешную реализацию проекта.

Проект имеет реалистичный график в качестве основы для мониторинга и контроля прогресса. Исследования некоторых ученых проиллюстрировали проблему, выявленную в других проектах (Chan&Kumaraswamy, 1997), что при некоторых обстоятельствах задержка – это не следствие плохой работы, а результат чрезмерно амбициозного планирования лицами, принимающими решения по проекту.

Во многих литературных источниках выделяются ряд проблем, с которыми сталкиваются при определении способов и направлений реализации проектов. С этих позиций интерес представляют работы, в которых предлагаются методы и пути проведения проектного управления (Грядунова, 2016), например, посредством оценки результатов управления через мониторинг показателей результативности и степени рациональности расходования средств. В этом

случае приемлемым становится организационно-экономический учет параметров выполнения проектов.

Другой из возникающих проблем, относящихся к разряду важнейших, считается так называемая инертность кадров, неспособность переориентироваться при проявлении новых или неучтенных вызовов. И тогда предлагается предварительная работа с персоналом, проведение опроса сотрудников на предмет их осведомленности, компетентности, по выполнению возможных действий в случае рисковых ситуаций.

При внедрении проектного управления в государственные органы возможно огромное многообразие вызовов и рисков. Нами в дополнение к перечисленным Грядуновой Ф.В. рискам, которая выделяет девять видов проблем перехода к системе проектного управления добавлены еще три, поскольку они представляются часто возникающими в практике проектного управления (таблица 1).

Таблица 1 – Проблемы (риски) внедрения системы проектного менеджмента, пути их решения

Проблемы перехода к системе проектного управления	Признаки наличия проблем	Пути решения проблем
Нежелание государственных служащих покидать зону комфорта.	Отсутствие мотивации к изменениям и улучшениям.	Проведение соответствующих курсов повышения квалификаций с последующим проведением аттестаций.
Бюрократия и ориентированность на соблюдение всех необходимых формальных процессов, а не на достижение конечного результата.	Отсутствие положительных результатов и улучшений	Уменьшение полномочий либо перераспределение функций и полномочий госслужащих.
Недостаточная компетенция государственных органов.	Отсутствие полномочий в принятии решений и исполнении тех или иных функций.	Реструктуризация государственных органов либо перераспределение функций и полномочий государственных органов. Придание новых полномочий и функций.
Примечание – составлено авторами		

По нашему мнению, необходимо найти грань между проблемами, которые могут возникнуть в процессе внедрения проектного управления в систему государственных органов от тех классических проблем, которые проявляются внутри жизненного цикла проекта. Невыявление и неустранение проблем внедрения в корне может лишить возможности осуществить проект в том или ином государственном органе.

Поскольку полномочия и функции государственных органов закреплены нормативно-правовыми актами, заниматься не свойственными

им видами деятельности запрещено на законодательном уровне. Просто так взять и начать проектное управление не получится. В этом и заключается сложность внедрения проектного управления в государственные органы. Только после выполнения всех необходимых организационно-подготовительных работ можно внедрять проектное управление в государственные органы и смело приступать к осуществлению проекта.

Основы и принципы проектного управления, по нашему мнению, следует использовать при

реализации важнейших решений на самых разных уровнях, при выполнении правительственный постановлений.

Приведенные примеры из сегодняшней казахстанской практики наглядно указывают на необходимость применения проектного управления в государственных органах РК и убеждают в своевременности его внедрения. Только посредством внедрения и применения проектного управления можно достичь эффективности использования государственных средств и получения полной отдачи от использования этих благ, доведения до минимума рисков при осуществлении государственных программ, достижения конечной цели, преследуемого государственными программами, повышения эффективности деятельности государственных органов в целом и, самое главное, достижения всех других ценностей проектного управления, для которого он и разрабатывался.

Наши исследования показывают, что, хотя вся мировая литература по управлению проектами подробно расписывает весь процесс жизненного цикла проекта, за его пределами остались немаловажные и нерешенные проблемы, которые могут оказать существенное и отрицательное влияние на результаты проекта.

Наш анализ выявил существование двух отдельных и относительно независимых проблем, возникающих в сфере проектного управления. Первая группа проблем возникает в процессе внедрения проектного управления в системе государственных органов, вторая группа проблем проявляется непосредственно внутри жизненного цикла проектного управления. Решение первой группы проблем обеспечит правильное внедрение и успешность реализации проектного управления в государственных органах. Проблемы второй группы решаются непосредственно самим проектным управлением с помощью воздействия на девять областей знаний.

Заключение

Таким образом, проведенное исследование позволяет нам сделать вывод о том, что не существует эталона успешного внедрения проектного управления в государственные органы, который идеально подходил бы для всех государств без исключения. Успешная реализация проектов в государственных органах Республики Казахстан на прямую зависит и от его правильного внедрения с учетом всех его особенностей.

Система успешного внедрения проектного управления в государственные органы является неповторимой для каждого конкретного государства и делает невозможными шаблонные, типовые подходы при его внедрении. Каждое государство является уникальным, поскольку имеют свои специфики в экономике, политике и в государственном строе. Поэтому простое копирование успешных зарубежных методов внедрения и управления проектами в государственных органах не дают гарантии его успешности и для нашего государства. Технология и система внедрения, инструменты и методы реализации проектного управления в государственных органах РК будут отличаться большим многообразием.

В соответствии с началом третьей модернизации Казахстана формируется новая модель экономического роста, которая обеспечит глобальную конкурентоспособность нашей экономики и позволит войти в число 30-ти развитых стран мира. Для ее достижения все элементы государственной системы должны обладать способностью выполнять свои функции с помощью инструментов управления проектами. От возможности эффективной реализации государственных программ с ограниченным количеством средств будет зависеть многое.

Предстоит проделать большую работу по тщательному анализу вопроса о внедрении системы управления проектами в государственные органы РК. В связи с этим вопросы, возникающие при внедрении системы управления проектами в государственных органах Республики Казахстан, и пути их решения должны быть тщательно изучены.

Практическая ценность выводов и научных разработок, сделанных в рамках данной статьи, заключается в возможности их применения в качестве методической основы оценки эффективности деятельности государственных органов РК. Результаты исследовательской работы могут быть применены в качестве административных регламентов исполнения государственных услуг. В связи с проведением регламентации и стандартизации деятельности органов государственного управления на современном этапе результаты исследования могут быть использованы при разработке методов и способов улучшения работы системы управления непосредственно в их практической повседневной деятельности.

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