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Ключевые слова: маркетинг, налоги, образование, общество, технология, проект, финансы, экономика.

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Keywords: marketing, taxes, education, society, technology, project, finance, economy.

THE PRINCIPAL SESSION

ВИЗУАЛИЗАЦИЯ И ВИЗУАЛЬНЫЕ ФОРМЫ В ПЕЧАТНЫХ СМИ (НА ПРИМЕРЕ ЖУРНАЛА «ОГОНЕК» (1985-1991)

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Аннотация. В статье представлено исследование тенденция визуализация в печатных СМИ. Анализируется ей определение, появление и развитие. Исследуются визуальные элементы в журнале «Огонек», охарактеризовано использование декоративного и иллюстративного визуальных форм в печатных изданиях.

Abstract. This article presents a study of the trend of visualization in print media. It analyses its definition, appear and development. Investigating visual elements in the journal «Ogonyok», the use of decorative and illustrative visual forms in print media is characterized**.**

Ключевые слова*: визуализация, визуальные формы, печатное СМИ, журнал «Огонек», перестройка.*

Keywords**:** *visualization, visual forms, print media, journal "Ogonyok", Perestroika.*

В конце прошлого века быстрое развитие новых медиа и усиление конкуренции между традиционными печатными изданиями вызвали тенденцию визуализации в газетах и журналах. Увеличивающееся количество визуальных элементов в печатных СМИ указывает, что человеческая цивилизация вступила в новую эру, в которой визуальная коммуникация занимает ведущие позиции. Такое изменение привлекло внимание ученых к исследованию визуализации в печатных СМИ. Появился ряд публикаций, таких как «Дизайн периодических изданий» В. В. Тулупова, «Визуальные коммуникационные образы с сообщениями» американского ученого П. М. Лестера, «Введение в визуальную художественную культуру» китайского ученого Го Маолай и др., эти исследования направляют развитие изданий в сторону визуализации.

Слово «визуализация» происходит от латинского visualis, что означает «представление физического явления или процесса в форме, удобной для зрительного восприятия»[1]. Доктор В. Э. Шевченко из Киевского Национального университета определяет визуализацию как «способ графического представления смысла, изложение события невербальным

[1] Э. Г. Азимов, А. Н. Щукин. Новый словарь методических терминов и понятий (теория и практика обучения языкам). М.: Издательство ИКАР, 2009.

способом»[1]. Китайские ученые Ли Бинюй и Сунь Инчунь считают, что «визуализация — это преобразование содержимого, первоначально описанного языковыми символами, в визуальные символы, такие как изображения»[2]. На наш взгляд, визуализация в современных СМИ является новой тенденцией представления информации через визуальные формы, в сравнении с традиционными способами подачи информации посредством текста или звука.

Обобщенная визуализация существует уже давно в истории человечества, а в печатных СМИ популярность визуализации обусловлена появлением технологий фотографии и печати, позволяющей эффективно и точно воспроизводить реальность, что породило потребность в более массированных визуальных формах и также привело к усилению визуальной составляющей в печатных изданиях. Однако, с другой стороны, визуализация также может считаться неизбежным результатом эволюции СМИ.

Визуализация в публикациях разной тематики имеет свои особенности, есть различия в выборе и использовании той или иной визуальной формы. Для изучения современной тенденции нельзя оставлять без внимания исторический опыт. В данной статье в качестве примера для анализа визуальных форм выбрано одно из самых популярных изданий советской эпохи: журнал «Огонек» в период 1985–1991 гг., который является наиболее свободным периодом для журналистики в Советском Союзе.

Квалифицируя визуальные формы по той функции, которую они выполняют на полосе издания, можно выделить две категории: *декоративные* визуальные формы (играющие декоративную и орнаментальную роль, например: типографика, графические символы, геометрические фигуры и т. д.) и *иллюстративные* визуальные формы (изображения, которые поясняют и дополняют какой-либо текст, например: фотографии, рисунки, карикатуры, коллаж, инфографика и т. п.).

Геометрические фигуры: линейки, рамки, точки, треугольники и т. д. — одни из наиболее широко используемых декоративных визуальных форм в изданиях. В период перестройки около половины страниц каждого выпуска разделяют, украшают полосу и ориентируют нужную информацию горизонтальными или вертикальными линейками, затем выделяют визуальный центр, первичную и вторичную информацию. Разные размеры точек показывают расположение каждых пунктов информации, треугольники и стрелки направляют читателей в нужную сторону и указывают место следующей информации (рис. 1, рис. 2).

[1] Шевченко В.Э. Визуальный контент как тенденция современной журналистики [Электронный ресурс] // Медиаскоп: электрон. журн. 2014. Вып. 4. 02.12.2014. Режим доступа: http://www.mediascope.ru/1654 (дата обращения: 10.02.2021).

[2] Ли, Б. и Сунь, И. Тенденция визуализации межкультурной коммуникации и практики глобализации китайского издательского дела // Современная коммуникация. журн. 2020. Вып. 1. — С. 125

ПЕРЕСТРОЙКЕ — УЖЕ ШЕСТЬ... ●
ПО СЧЕТУ СОЦИАЛЬНОЙ СПРАВЕДЛИВОСТИ ●
ПРИБАЛТИКА — НАША ОБЩАЯ БОЛЬ ●

Михаил ЗАРАЕВ

Заметки со съезда крестьянской партии

Б. Н. Ельцина? Да потому, что он прямо заявил: с Президентом договориться невозможно, и верить ему нельзя. Вот это прямое, без дипло-

Из его книги явствует, что партийный выговор, полученный им во Владивостоке в начале войны (кстати, тогда его высказывания против Ста-

Совре

Теперь мы снисходительно улыбаемся, читая эти строки. Люди давно живут и работают в Арктике. А 21 мая 1937 года в районе Северного полюса приводнился красноярский самолет, который высадил на льдину папанинцев. Это была советская дрейфующая станция № 1. Сорок девять лет спустя, 21 мая 1986 года, на льдине за восьмидесятой параллелью готовились к открытию комсомольско-молодежной станции «Северный полюс-28».

Суета, суета, тысяча дел... Она только родилась, эта станция, и, как с каждым новорожденным, с ней столько хлопот. Ушла на материк первая метеосводка — визитная карточка новой дрейфующей. Вчерне на льдине работает ЭВМ — в небольшом домике с белыми буквами ВЦ (вычислительный центр) уютно светится зеленоватый экран дисплея. Врач Сергей Каргаполов канду отсутствия работы по специальности (все здоровы) занят ответственным делом — выпекает снежные кирпичики и складывает трибуну для почетных гостей. Слабый ветерок доносит с камбуза аппетитные запахи — готовит что-то вкусненькое кок Борис Гончиев. Забегает на минутку в кают-компанию

— Новоселье — событ

Рис. 1 Рис. 2

В журнале тоже широко используют буквицы в начале статьи, и они помогают привлекать внимание читателей и делать полосу более интересный и живой.

Что касается выбора иллюстративной визуальной формы, то журнал «Огонек» в период перестройки сосредоточился на фотографиях. Фотопортрет — неизменный элемент «Огонька», через портреты можно не только рассказывать личную историю, но и историю отдельной группы людей, даже целого народа. В журнале печатают портреты советских политиков, работающих граждан, детей, и обычных людей (рис. 3, рис. 4).

Рис. 3 Рис. 4

Фотожанр, который чаще всего используется в журнале «Огонек» — фотоочерк, отражающий жизнь простых советских людей или какую-либо общественную проблему (рис. 5). Мы тоже можем встретить фоторепортажи, которые иллюстрируют отдельные события (рис. 6), и исторические военные события тоже можно сообщать в жанре фоторепортажа (Рис. 7).

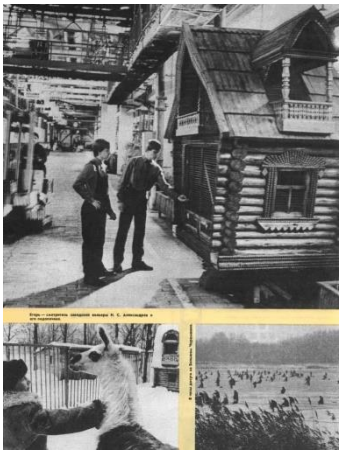

Рис. 5

Рис. 6

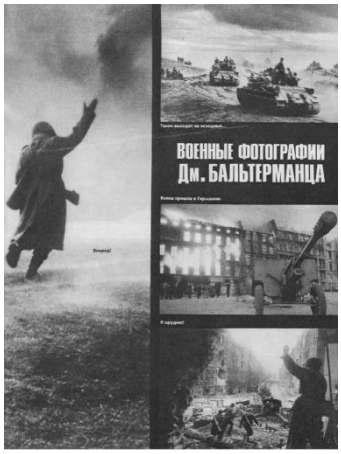

Рис. 7

Важную роль в отражении и оценке горячих точек текущих событий и влиянии на общественное мнение играют рисованные иллюстрации, прежде всего карикатура: информация и эмоция, передаваемая в карикатуре, часто оказывается сильнее, чем большой текст. В периодике перестройки в журнале «Огонек» они чаще всего выполняли сатирическую и воспитательную функцию (рис.8, рис. 9).

Рис. 8

Рис. 9

Встречаются в журнале и собственно рисунки, они часто используются в качестве иллюстрации к рассказам на современную (рис. 10) или историческую тематику (рис. 11).

Рис. 10

Рис. 11

Таким образом, данный анализ позволяет сказать о том, что визуализацией является неизбежная тенденция в традиционных и современных печатных СМИ. Визуалиация является постепенном процессом, популярность фотографий не значит, что надо бросить старые визуальные формы. Изучив использование различных визуальных форм в журнале «Огонек», мы пришли к следующему выводу: с помощью всяких различных декоративных и иллюстративных визуальных форм печатные издания могут улучшить способ подачи материалы и информации, создать визуальный центр на газетной и журнальной полосе, повысить конкурентоспособность.

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СИСТЕМА ПРОСВЕТИТЕЛЬСКОЙ ДЕЯТЕЛЬНОСТИ В ИНФОРМАЦИОННОМ ОБЩЕСТВЕ КАК ОСНОВА ФОРМИРОВАНИЯ НАУЧНО-КРИТИЧЕСКОГО МЫШЛЕНИЯ МОЛОДЁЖИ В УСЛОВИЯХ МАНИПУЛИРОВАНИЯ МАССОВЫМ СОЗНАНИЕМ

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Аннотация Проект направлен на создание оптимальной системы популяризации науки среди детей, подростков и молодёжи, а также формирование у них устойчивого научно-критического мышления в условиях манипулирования массовым сознанием в современном информационном обществе. Система выстроена вне контекста государственных и муниципальных учебный учреждений, а базируется на сети самоорганизующихся сообществ учёных, экспертов и научных популяризаторов в стране и за рубежом. На примере деятельности таких сообществ показано какими механизмами и инструментами оптимально воздействовать на массовое сознание для формирования в обществе необходимых ментальных маркеров и трендов**.**

Abstract: The project is aimed at creating an optimal system for popularizing science among children, adolescents, and youth, as well as the formation of sustainable scientific and critical thinking in them in the context of manipulating mass consciousness in a modern information society. The system is built outside the context of state and municipal educational institutions but is based on a network of self-organizing communities of scientists, experts, and scientific popularizers in the country and abroad. Using the example of the activities of such communities, it is shown what mechanisms and tools can optimally influence the mass consciousness for the formation of the necessary mental markers and trends in society**.**

Ключевые слова*: просветительская деятельность, популяризация науки, информационное общество, научно-критическое мышление, молодёжь, манипуляция сознанием, массовое сознание, некоммерческие организации, молодые учёные.*

Keywords*: educational activities, popularization of science, information society, scientific and critical thinking, youth, manipulation of consciousness, mass consciousness, non-profit organizations, young scientists.*

ВВЕДЕНИЕ

В условиях современности перед российским обществом стоит задача сохранения государства как целостной системы охранения многонационального, многоконфессионального и разноуровневого в социально-экономическом плане общества. Основным инструментом

сохранения русского общества в этой сложной реальности, является создание позитивного созидательного Образа будущего (цели существования, миссии общества), основанного на созданных новых передовых научных технологиях и наукоёмких высокотехнологичных экологичных производствах (в рамках VI технологического уклада), нового типа инфраструктурного построения поселений (поместно-полисная урбанизация) и новом подходе к системе образования молодёжи (наличие среды интенсивного самообразования и развития активной, талантливой и одарённой молодёжи).

Для того чтобы чего-то достичь – надо понять, что именно нужно достичь, то есть поставить цель (для общества – Образ будущего). Когда общество сможет сформировать свой Образ будущего (договорится об общей цели своей деятельности, о миссии своего существования), тогда будет смысл каждому человеку из этого общества трудится, напрягаться, усердствовать и плодотворно расходовать свою жизнь.

Это достаточно сложный вопрос, но решаемый. Нужно чётко понимать, что только благодаря научным открытиям, полёту мысли, стремлению понять жизнь, природу, самих себя – люди смогли преодолеть границы животного бытия. Именно благодаря изобретательству и науке мы сегодня можем не только наблюдать на экранах мониторов фотографии далёких планет, но и совершить первые межпланетные перелёты. Поэтому основу Образа будущего должно составить стремление изучить и освоить космос, мировые океаны, подземные пространства с помощью новых передовых технологий. Если ориентироваться на VI технологический уклад, технологии которого позволят русскому обществу войти не просто в ряд стран с высоким уровнем социально-экономического положения, но и преобразить свою повседневную действительность, то магия этих технологий поможет достичь желаемого позитивного Образа будущего и создать качественно новый мир.

Что ж это за магические технологии? В комплект таких технологий входят: биотехнологии, инфотехнологии, нанотехнологии, когнотехнологии. По сути, все эти технологии будут нацелены на одно – на Человека. Формирование новых наук лежит в плоскости не узконаправленных дисциплин, а на появление качественно нового знания путём синергетического эффекта кооперации многих дисциплин. Например, выращивание человеческих органов, различных видов клеток в массовом масштабе на основе соединения искусственного интеллекта, нанотехнологий и биоформирования. Представьте работу многочисленным нанороботов (невидимых глазу) в организме человека, воссоздающих или обновляющих ткани (и остальные важные элементы для внутренней системы организма человека) автоматически, по заложенным человеком в программы алгоритмам. Или, например, управление биопротезами частей тела (рук, ног) силой мысли – так же как и своими руками или ногами. Или биоэкзоскелеты для работы позвоночника и костей. По сути, данные технологии уже созданы сегодня, осталось их внедрить в массовое производство.

В целом новые технологии всё больше и больше нацелены на создание системы управления различными социально-экономическими, биологическими и технологическими процессами в обществе и природе одной силой мысли! Это ли не магия? И это уже реальность.

Второй важной составляющей Образа будущего будет инфраструктурные пространственно-территориальные технологии (терраформ), связанные с окружающим людей пространством проживания и деятельности. Существующие сегодня города преобразованы под цель и задачи эпохи XX столетия – с разбивкой на города-заводы, города-курорты, города-центры, города-периферия. Всё это не сможет соответствовать новому Образу будущего (отличного от экономико-политических категорий – коммунизм, капитализм и т.д.).

Новые пространственно-территориальные технологии будут формировать новое пространство под новую цель и новые задачи развития общества. Как первоначальные формы – будут (и уже есть начало) формироваться поселения нового типа в виде родовых (не по крови, а по приверженности к идее) поместий или полисов. Основное отличие городского центра и периферии сейчас является уровень и наличие или отсутствие доступности к различного рода общественному взаимодействию, а также уровень комфорта. Но даже нынешние технологии позволяют стирать данные различия между центром городской жизни и периферией. Соответственно уже сейчас многие понимают, что жить в комфортной не только для тела, но и для души среде (то есть близость к природе, возможность неформального общения, дружбы, узнавание своих соседей в лицо) – является главной ценностью для всестороннего развития детей. Это понимание будет пространственно-территориальной основой нового Образа будущего русского общества.

Итак, управление материальными предметами одной силой мысли уже технологически возможно, но вот социально-культурные процессы в обществе будут сложнее. Однако, применение информационных технологий уже сегодня позволяют человеку при желании воздействовать на большое число людей. А представьте, если человек сможет свои мысли передавать другому человеку на расстоянии без помощи говорения слов и письма? Если можно будет в режиме реального времени общаться мысленно с любым человеком в любой точки планеты Земля? И это тоже возможно!

Но для того, чтобы возможное стало повседневной реальностью, надо поняв, чего мы хотим, начать работать над развитием тех технологий, которые нужны для достижения нашей цели (Образа будущего).

И тут надо решиться обществу на следующий шаг: признаться наконец-то себе в том, что мы идём не той дорогой (даже не идём, а топчемся на месте в грязи). Общество должно принять это и сформировать реальный созидательный позитивный Образ своего будущего, и сформировав – работать упорно над созданием новых технологий, которые обеспечат достижение данной цели.

Самым трудным тут окажется даже не отсутствие каких-то финансовых ресурсов, а отсутствие целенаправленных, идейных, профессиональных,

трудолюбивый специалистов, готовых реализовывать самые сложные научно-исследовательские, социально-инженеренговые (меняющие сознание, мышление и деятельность общества) и управленческие проекты.

Почему так получилось, объяснить не сложно. Помните Перестройку, лихие 90-е, приватизацию и все-все прелести рубежа XX – XXI столетий? Всё это привело к уничтожению советского Образа будущего – коммунизма, к уничтожению позитивных образов крестьянина, учителя, учёного, милиционера, инженера, врача – всех, кто составляет реальную элиту общества, его опору и основу существования и развития. Всё это было уничтожено!

Последние годы особенно в голливудских фильмах особенно чётко присутствует негативный образ науки и учёных. Кто смотрит фильмы в кинотеатрах или многочисленные сериалы постапокалипсического будущего, тот сможет вспомнить образы чокнутых профессоров, маниакальных злых изобретателей, «ботаников» неудачников, безумных гениев, по вине которых случаются катастрофы или мир стоит на грани уничтожения – всё это сформировало недоверие к науке, технологиям, не элитность и не успешность профессии учёного, врача, учителя, инженера, изобретателя. На фоне социально-экономического и кадрово-управленческого разрушения науки в России как социального института, молодёжь не видит для себя выгодным и необходимым заниматься наукой, аналитикой, исследованиями… остаются только посредственности или единицы энтузиастов.

Актуальность. Для создания позитивного Образа будущего, для создания передовых технологий достижения желаемого будущего, необходимо сформировать новое поколение молодёжи (с системно-стратегическим, проектно-аналитическим и научно-критическим мышлением), нацеленного на саморазвитие, самообучение, изучение различных наук; умеющего анализировать и сравнивать; имеющего опыт созидания и создания проектов в команде; понимающего личные цели и общую цель существования и развития русского общества.

Объект исследования: стратегическое планирование в государственном и муниципальном управлении молодёжной политикой и в популяризации науки.

Предмет исследования: система просветительской деятельности среди детей, подростков и молодёжи как основа формирования у них научно-критического мышления.

Цель исследования: изучить систему просветительской деятельности среди детей, подростков и молодёжи как основу формирования у них научно-критического мышления. Исходя из цели, были поставлены следующие **задачи:** 1) изучить образ будущего *России и роль молодых учёных*; 2) рассмотреть молодёжные научные мероприятия и проекты как инструмент формирования интеллектуально развитой молодёжи; 3) проанализировать популяризация научно-критического мышления среди молодёжи: опыт системного социального проектирования. Для решения поставленных задач нами была проанализированы личная практическая

деятельность, реализация проектов общественного движения «Сообщество молодых учёных» и научная литература.

МОЛОДОЙ УЧЁНЫЙ РОССИИ: ОБРАЗ БУДУЩЕГО

«Нам нужно изменить
отношение россиян к науке».
Дмитрий Ливанов

Существование отечественной науки, её будущее, а также судьбы молодых учёных, остаётся одной из центральных проблем для понимания вектора развития России в будущем. «В современном мире наука – одна из главных основ независимости и процветания государства. Это не только разработки в области технологий, но и общая степень образованности народа той или иной страны: образовательная сторона науки также очень важна».1

Формирование понимания у общества того, что именно наука и образование являются самыми главными основами существования государства и жизни народа – является на наш взгляд основной задачей научного сообщества России. Активная общественная позиция именно молодых учёных является основой для формирования позитивного образа учёных в обществе.

В сентябре 2012 г. новый министр образования и науки РФ Дмитрий Ливанов отметил, что «именно от молодых учёных зависит будущее российской науки. И мы хотим знать, что мешает развитию науки и что нужно сделать в первую очередь»[2].

Проблемы, мешающие развитию науки и общества, включают в себя: 1) кадрово-профессиональную (демографическую) катастрофу, которая приведёт к исчезновению научного сообщества в стране; 2) разрушение научной инфраструктуры (приватизация научных фондов – как материальных в виде зданий, так и интеллектуальной собственности в виде патентов и прав на открытия); 3) уничтожение позитивного (благородного) образа учёного и учителя в массовом сознании общества (поверхностный контент-анализ современных фильмов показывает тотальное внедрение образа сумасшедшего ненормального кровожадного неудачника учёного и коррумпированного непрофессионального бездушного учителя)[3].

Данные ВЦИОМ[4] подтверждают наши опасения, хотя благодаря созданному в СССР культу учёного и учителя, большинство населения (в

[1] Мартынов К. Отношение к ученым на Западе - как в СССР в 60-ые годы // URL: http://www.apn-nn.ru/diskurs_s/419.html

[2] Ливанов Д. Нам нужно изменить отношение россиян к науке // Научное обозрение. № 1(8) / сентябрь // URL: http://scientific.ics.org.ru/18-sentyabr/dmitrij-livanov-nam-nuzhno-izmenit-otnoshenie-rossiyan-k%C2%A0nauke

[3] Власенко И.А. Лидеры XXI века – молодые учёные России // Феринские чтения: материалы II Всероссийской научно-практической конференции, посвящённой памяти М.А. Ферина. – Уфа, 2013. С. 61 – 63.

[4] Пресс-выпуск ВЦИОМ №2082. Учитель, врач, священник… Кому доверяют россияне? // URL: http://wciom.ru/index.php?id=459&uid=112942

основном старшего возраста) доверяют учёным и учителям, несмотря на все негативные явления и низкий социальный статус этой категории профессионалов в 90-е годы XX века.

В связи с чем, очевидным и необходимым является формирование позитивного образа учёного и науки среди молодёжи и общества, а также создание системы выявления и поддержки талантливой и одарённой молодёжи в исследовательской сфере.

Для формирования позитивного образа молодого учёного на региональном уровне, например в Самарской области, активно проводиться просветительская деятельность. Так, Общественное движение «Сообщество молодых учёных» (в 2009 – 2016 гг. действовало как Самарская городская общественная организация «Сообщество молодых учёных») реализует социально-образовательные проекты, которые аккумулируют внимание общества и молодёжи на престижности учёных и важности научной деятельности.

С 2009 г. реализуется конкурс работ «Семейная история», в котором любой может поучаствовать и выступить в качестве исследователя собственной родословной. Данная форма исследования позволяет большому кругу молодёжи вовлечься в исследовательскую деятельность ввиду наибольшей доступности информации. Привлечение бизнеса и власти в качестве партнёров конкурса позволяет повысить уровень престижности для молодёжи и общества данной исследовательской деятельности. В подобном русле проводится и ежегодный конкурс «Документ в современном мире».

Активная жизненная позиция и социальный статус членов ОД «Сообщество молодых учёных» (многие являются помощниками депутатов, сотрудниками, консультантами и экспертами администраций городов, преподавателями вузов, бизнесменами) создаёт образ престижности науки. И одним из важных элементов здесь является информационное сопровождение деятельности организации и молодых учёных в СМИ. Отличие деятельности общественной организации от разного рода совещательных структур типа Советов молодых учёных заключается в свободе действий и изначальной самостоятельности и инициативности, что позволяет эффективнее (для результата, а не для отчёта) реализовывать социально-образовательные и исследовательские проекты.

Общественное движение «Сообщество молодых учёных» с 2010 г. реализовывает проект «Образ будущего», в рамках которого изучаем образ молодого учёного на сегодняшний день, и формируем образ молодого учёного для будущего. Проведённый анализ показывает, что в обществе и, особенно среди молодёжи, нет моды на науку, моды на интеллект. «Есть, конечно, интеллектуальные игры, но всё-таки это всего лишь игры. До сих пор существует некое пренебрежение, особенно среди школьников: вот, мол, «ботаник»… А мы хотим создать позитивный образ молодого учёного. Чтобы считалось, что «ботаник» – это круто. Чтобы на последних страницах газет вместо гадалок наконец-то начали печатать учёных с их разработками и предложениями. Спорт сейчас вошёл в моду, и спортсменов, в том числе молодых, усиленно пиарят. А всех остальных – учёных, добровольцев,

общественников – мы не знаем, не видим, не слышим. В СССР мода на интеллект была: газеты говорили о покорении учёными космоса, об отважных исследователях океанов. Девушки влюблялись в учёных, о них писали книги и снимали фильмы. А сейчас в моде «шуры-муры», мистика, потусторонние миры…» (из интервью автора в газете «Аргументы и факты»)[1].

Формирование же Образа будущего страны и науки происходит через активную просветительскую деятельность для детей, подростков и молодёжи в образовательных учреждениях и проведения специальных образовательных программ. Данная система нацелена на выявление и поддержку талантливой и одарённой молодёжи, успешное становление которой в обществе станет залогом увеличения сторонников исследовательской деятельности.

Итак, образ будущего молодого учёного включает в себя такие характеристики как: успешный, материально состоятельный, авторитетный (эксперт), влиятельный, уважаемый, социально активный, проживающим в родном городе. Данные характеристики включают слова, относящиеся к деятельности – это для респондентов (участников проекта «Образ будущего») является первоочередным. Безусловно, само понятие молодого учёного включает в себя интеллект, знания и практический опыт. Что касается моральных характеристик, то на данном этапе они для респондентов практически не существенны. Однако, уважение и авторитет – на наш взгляд, само по себе подразумевает наличие высоких моральных норм.

У России нет будущего, потому что у общества нет образа своего будущего. Лишь прорисовав и обозначив новый образ будущего, основанного на науке и развитой, доступной всем, системе образования позволит нашему обществу быть в будущем. Это возможно только при условии тотального формирования системно-стратегического, проектно-аналитического и научно-критического мышления у детей, подростков, молодёжи и их родителей, бабушек и дедушек.

МОЛОДЁЖНЫЕ НАУЧНЫЕ МЕРОПРИЯТИЯ И ПРОЕКТЫ КАК ИНСТРУМЕНТ ФОРМИРОВАНИЯ ИНТЕЛЛЕКТУАЛЬНО РАЗВИТОЙ МОЛОДЁЖИ

«Любая достаточно
развитая технология
неотличима от магии».
Артур Кларк

Современные научные достижения позволяют людям реализовывать самые невероятные мечты, и начало XXI столетия предвещало эпоху

[1] Исмайлова А. Молодые учёные Самарской области собираются создать себе будущее // Аргументы и факты. Самара. 19 ноября 2012 // URL: http://www.samara.aif.ru/society/article/29528

стабильности, эпоху плодотворной международной дипломатии и решения многих международных вопросов. Однако реальность оказалась иной. События 2014 года показали, что на международной арене существуют глубокие цивилизационные противоречия. Русские и западноевропейские элиты оказались втянутыми в процесс столкновения на почве разночтения понимания «либерально-демократических» принципов управление обществом.

В условиях жёсткой внешнеполитической обстановки, для русского общества и государства становится актуальным вопрос самосохранения, основанного на создании передовых технологиях, передовой науки и на поколении профессиональной интеллектуально развитой молодёжи.

Всё современное потребительское (как бы капиталистическое) общество построено на прямой манипуляции сознанием: от убеждения потребителя в том, что ему нужна та или иная вещь (мода как инструмент), до убеждения граждан в необходимости выбора того или иного политика (политтехнологии). Целью манипуляции является управление обществом так, чтобы граждане находились в иллюзии, что они что-то решаю, и на что-то влияют. Более сложным является воздействие на другие общества (культуры, народы). И здесь, прежде чем продавать свои товары и навязывать потребности, необходимо сформировать поколение молодёжи, которое будет воспитываться на идеалах чужой для неё культура, таким образом, сделав эту чужую культуру частью или полностью своей.

Безусловно, русская культура достаточно мощная для того, чтобы впитать в себя различные культурные изменения и дополнения, но если русские дети воспитываются героями США, то основная цель изменения культурного кода (ядра) народа выполнена. И первые десятилетия последствия можно не разглядеть, но последствия будут обязательно.

Надо создавать в семье такую систему воспитания и прививания культурных ценностей русского народа (или народов бывшего СССР), которая бы становилось у молодого поколения культурным кодом (ядром), позволяющий им понимать – что в информационном пространстве создаётся для их развития, а что – для разрушения.

В основе культурного ядра должны быть аналитическое, системное и проектное мышление. Молодой человек должен задаваться вопросами: «Кто?», «С какой целью?», «Какими инструментами?», понимать, когда на него воздействует, и как избегать манипулирования его чувствами, его убеждениями и действиями.

Что касается современной России, то сейчас мы видим понимание у высшего руководства государством того, что без сохранения русской культуры, без сохранения истории как основного предмета в школе, без воспитания молодёжи и понимания к какому будущему идёт общество – без всего этого невозможно построить созидательную, позитивно развивающуюся страну.

Необходимо чётко осознавать, что в политике (а особенной мировой) – нет друзей, и если культурное ядро (система образов и установок на поведение) одного из народов не сохраняется и не развивается в

последующих поколениях, то этот народ обречён на исчезновение. Необходимо помнить, что, если хочешь победить врага – воспитай его детей. Именно так на протяжении многих тысячелетий существует китайская цивилизация. Именно так сегодня в России мы наблюдаем перекодирование русского кода на североамериканский. Именно так на наших глазах происходит внедрение чуждых славянской (советская тоже была основана на ней) культуре элементов. Именно так мы можем стать носителями другой культуры[1].

В условиях современности перед российскими органами власти стоит задача сохранения государства как целостной системы охранения многонационального, многоконфессионального и разноуровневого в социально-экономическом плане общества. Основным инструментом сохранения русского общества в этой сложной реальности, является создание позитивного созидательного Образа будущего (цели существования, миссии общества), основанного на созданных новых передовых научных технологиях и наукоёмких высокотехнологичных экологичных производствах (в рамках VI технологического уклада), нового типа инфраструктурного построения поселений (поместно-полисная урбанизация) и новом подходе к системе образования молодёжи (наличие среды интенсивного самообразования и развития активной, талантливой и одарённой молодёжи).

Для того чтобы чего-то достичь – надо понять, что именно нужно достичь, то есть поставить цель (для общества – Образ будущего). Когда общество сможет сформировать свой Образ будущего (договорится об общей цели своей деятельности, о миссии своего существования), тогда будет смысл каждому человеку из этого общества трудится, напрягаться, усердствовать и плодотворно расходовать свою жизнь.

Это достаточно сложный вопрос, но решаемый. Нужно чётко понимать, что только благодаря научным открытиям, полёту мысли, стремлению понять жизнь, природу, самих себя – люди смогли преодолеть границы животного бытия. Именно благодаря изобретательству и науке мы сегодня можем не только наблюдать на экранах мониторов фотографии далёких планет, но и совершить первые межпланетные перелёты. Поэтому основу Образа будущего должно составить стремление изучить и освоить космос, мировые океаны, подземные пространства с помощью новых передовых технологий. Если ориентироваться на VI технологический уклад, технологии которого позволят русскому обществу войти не просто в ряд стран с высоким уровнем социально-экономического положения, но и преобразить свою повседневную действительность, то магия этих технологий поможет достичь желаемого позитивного Образа будущего и создать качественно новый мир.

Что ж это за магические технологии? В комплект таких технологий входят: биотехнологии, инфотехнологии, нанотехнологии, когнотехнологии. По сути, все эти технологии будут нацелены на одно – на Человека.

[1] Власенко И.А. Информационное общество: современная молодёжь и культурный код // Журнал «Зебра». №4(14). 2014. С. 24 – 25.

Формирование новых наук лежит в плоскости не узконаправленных дисциплин, а на появление качественно нового знания путём синергетического эффекта кооперации многих дисциплин. Например, выращивание человеческих органов, различных видов клеток в массовом масштабе на основе соединения искусственного интеллекта, нанотехнологий и биоформирования. Представьте работу многочисленным нанороботов (невидимых глазу) в организме человека, воссоздающих или обновляющих ткани (и остальные важные элементы для внутренней системы организма человека) автоматически, по заложенным человеком в программы алгоритмам. Или, например, управление биопротезами частей тела (рук, ног) силой мысли – так же как и своими руками или ногами. Или биоэкзоскелеты для работы позвоночника и костей. По сути, данные технологии уже созданы сегодня, осталось их внедрить в массовое производство. В целом новые технологии всё больше и больше нацелены на создание системы управления различными социально-экономическими, биологическими и технологическими процессами в обществе и природе одной силой мысли! Это ли не магия? И это уже реальность.

Второй важной составляющей Образа будущего будет инфраструктурные пространственно-территориальные технологии (терраформ), связанные с окружающим людей пространством проживания и деятельности. Существующие сегодня города преобразованы под цель и задачи эпохи XX столетия – с разбивкой на города-заводы, города-курорты, города-центры, города-периферия. Всё это не сможет соответствовать новому Образу будущего (отличного от экономико-политических категорий – коммунизм, капитализм и т.д.).

Новые пространственно-территориальные технологии будут формировать новое пространство под новую цель и новые задачи развития общества. Как первоначальные формы – будут (и уже есть начало) формироваться поселения нового типа в виде родовых (не по крови, а по приверженности к идее) поместий или полисов. Основное отличие городского центра и периферии сейчас является уровень и наличие или отсутствие доступности к различного рода общественному взаимодействию, а так же уровень комфорта. Но даже нынешние технологии позволяют стирать данные различия между центром городской жизни и периферией. Соответственно уже сейчас многие понимают, что жить в комфортной не только для тела, но и для души среде (то есть близость к природе, возможность неформального общения, дружбы, узнавание своих соседей в лицо) – является главной ценностью для всестороннего развития детей. Это понимание будет пространственно-территориальной основой нового Образа будущего русского общества[1].

Итак, управление материальными предметами одной силой мысли уже технологически возможно, но вот социально-культурные процессы в обществе будут сложнее. Однако применение информационных технологий уже сегодня позволяют человеку при желании воздействовать на большое число людей. А представьте, если человек сможет свои мысли передавать

[1] Власенко И.А. Наука – будущее – молодёжь // Журнал «Зебра». №1(15). 2015. С. 24 – 25.

другому человеку на расстоянии без помощи говорения слов и письма? Если можно будет в режиме реального времени общаться мысленно с любым человеком в любой точки планеты Земля? И это тоже возможно! Но для того, что бы возможное стало повседневной реальностью, надо поняв, чего мы хотим, начать работать над развитием тех технологий, которые нужны для достижения нашей цели (Образа будущего).

И тут надо решиться обществу на следующий шаг: признаться наконец-то себе в том, что мы идём не той дорогой (даже не идём, а топчемся на месте в грязи). Общество должно принять это и сформировать реальный созидательный позитивный Образ своего будущего, и сформировав – работать упорно над созданием новых технологий, которые обеспечат достижение данной цели. Самым трудным тут окажется даже не отсутствие каких-то финансовых ресурсов, а отсутствие целенаправленных, идейных, профессиональных, трудолюбивый специалистов, готовых реализовывать самые сложные научно-исследовательские, социально-инженеренговые (меняющие сознание, мышление и деятельность общества) и управленческие проекты.

В последние годы особенно в голливудских фильмах особенно чётко присутствует негативный образ науки и учёных. Кто смотрит фильмы в кинотеатрах или многочисленные сериалы постапокалипсического будущего, тот сможет вспомнить образы чокнутых профессоров, маниакальных злых изобретателей, «ботаников» неудачников, безумных гениев, по вине которых случаются катастрофы или мир стоит на грани уничтожения – всё это сформировало недоверие к науке, технологиям, не элитность и не успешность профессии учёного, врача, учителя, инженера, изобретателя. На фоне социально-экономического и кадрово-управленческого разрушения науки в России как социального института, молодёжь не видит для себя выгодным и необходимым заниматься наукой, аналитикой, исследованиями… остаются только посредственности или единицы энтузиастов.

Ввиду этого, нужно понимать, что для создания позитивного Образа будущего, для создания передовых технологий достижения желаемого будущего, необходимо сформировать новое поколение молодёжи: нацеленного на саморазвитие, самообучение, изучение различных наук; умеющего анализировать и сравнивать; имеющего опыт созидания и создания проектов в команде; понимающего личные цели и общую цель существования и развития русского общества.

Молодёжные научные мероприятия и проекты (такие как различного рода студенческие научно-практические конференции, научные форумы, школы молодых учёных, образовательные площадки) являются одним из эффективных инструментов для формирования интеллектуально развитой молодёжи. Но это при условии, что данные мероприятия проводятся не формально и для галочки (отчёта), а для конкретной целевой аудитории, с конкретными задачами и описанными результатами.

Примерами успешных научных мероприятий могут служить проекты общественного движения «Сообщество молодых учёных»

(https://vk.com/molnauka): Школа молодых исследователей в Тольятти, Форум молодых учёных, конкурс «Семейная история», лекторий и другие научные конференции, круглые столы, экспертные клубы.

Деятельность в популяризации науки затрагивает все возрастные категории от детей, подростков и молодёжи до их родителей и бабушек – дедушек, которые в свою очередь формируют отношение детей к науке и учёным. Одной из ведущей роли в популяризации науки занимают библиотеки и музеи, максимально использующие современные технологии донесения информации[1].

Таким образом, для формирования интеллектуально развитой молодёжи в будущем, уже сейчас популяризаторам и организаторов науки, экспертам, молодым и маститым учёным необходимо использовать все возможные эффективные многочисленные инструменты от лекций и встреч, до крупных социальных проектов и массового информационного воздействия через социальные сети, СМИ и интересные книги и журналы.

ПОПУЛЯРИЗАЦИЯ НАУЧНО-КРИТИЧЕСКОГО МЫШЛЕНИЯ СРЕДИ МОЛОДЁЖИ: ОПЫТ СИСТЕМНОГО СОЦИАЛЬНОГО ПРОЕКТИРОВАНИЯ

Ускорение технического прогресса приводит и к изменению самого общества, что в свою очередь требует структурного изменения социальных институтов. Для тиражирования успешного опыта социальной инженерии было введено понятие «социальной технологии».

Само понятие «социальная технология» вошло в употребление управленческих наук лишь в 70–80-е годы XX столетия. Как отмечает Попова С.Ю. «Социальная технология – это и область знания, рассматривающая вопросы создания, использования, распространения соответствующих методов и процедур преобразовательной деятельности, т.е. являющаяся научной дисциплиной. Это и сама деятельность по целенаправленному преобразованию социальных субъектов. Это и оптимизация развития и функционирования объектов, субъектов, явлений, социальных процессов, настоятельно требующая использования технологического подхода к управлению социальной деятельностью»[2].

Не смотря на множество социальных технологий[3], в рамках исследования, нами были апробированы две социальные технологии,

[1] Власенко И.А. Технологии, меняющие мир. Образ будущего и детские библиотеки // Библиотечное дело. 2018. № 22. С. 9 – 10. // URL: https://www.elibrary.ru/item.asp?id=36565500

[2] См.: Попова С.Ю. Понятие образовательных и социальных технологий: теоретический анализ // Технологии работы с молодежью (опыт работы кафедры социальных технологий и организации работы с молодежью МГГУ им. М.А. Шолохова). Коллективная монография под ред. С.Ю. Поповой (Смолик). – М.: Москва-Тверь: «СФК-Офис», 2015. – 326 с. С. 19.

[3] См.: Оганян К.К. Принципы, методы и классификация социальных технологий по формированию лидерства в студенческой среде // Теория и практика общественного развития. – 2012. №3. С. 53 – 56. // URL: https://cyberleninka.ru/article/n/printsipy-metody-i-klassifikatsiya-sotsialnyh-tehnologiy-po-formirovaniyu-liderstva-v-studencheskoy-srede

формирующие лидерские качества молодёжи путём включения её в активную общественную деятельность некоммерческих организаций: «Образ будущего» и «Социальное проектирование».

СОЦИАЛЬНАЯ ФОРСАЙТ-ТЕХНОЛОГИЯ «ОБРАЗ БУДУЩЕГО»

«Если вы не думаете о будущем, у вас его не будет».
Джон Голсуорси

Умение создавать «Образ будущего» – есть качественное отличие Человека от его животного состояния. Вся история Человечества – это история превращения мечты, идеи, сказки – в результат, реальность, быль. Итак, создание Образа будущего является для Человека и общества не только необходимостью, но и технологией формирования Человека, новых поколений молодёжи, нового общества.

«Будущее само по себе – это огромная ценность, включающая потенции и надежды. Моделирование Образа будущего как детерминанты ценностных установок является механизмом формирования социальной мобильности молодежи»[1] и её полипрофессионального саморазвития.

В Самарской области существует практика выявления Образа будущего среди молодёжи. Так, в ноябре 2009 г. члены общественного движения «Сообщество молодых учёных» (https://vk.com/molnauka) провели Форум «Молодёжная политика: проблемы, идеи, решения», на котором были обсуждены различные аспекты молодёжной политики в стране, регионе и городе. С 2010 г. организация реализует социальную форсайт-технологию «Образ будущего»[2] (https://vk.com/nashobraz). Технология включает несколько элементов: проводились мероприятия, направленные на формирования у молодёжи проектно-стратегического мышления; были проанализированы варианты развития событий в случае социальных потрясений; разработан алгоритм продвижения (популяризации, PR) идеи о необходимости формирования Образа будущего. «Сообщество молодых учёных» систематически проводит круглые столы, семинары, форумы на тему «Образа будущего», деловую игру «Город будущего» (авторы – Власенко И.А., Безденежных П.В.).

В общественном движении «Сообщество молодых учёных» в рамках форсайт-технологии сформирована экспертная команда, созданы научные тексты и проанализированы исследовательские подходы к созданию Образа будущего (провела анкетирование, интервьюирование, фиксация образов

[1] Образ будущего в оценках нового поколения россиян: монография / В.В. Гаврилюк, Л.Л. Мехришвили, Н.И. Скок, Х.Н. Садыкова, Ш.Ф. Фарахутдинов, В.В. Маленков, Т.В. Гаврилюк, О.Л. Сотков, И.Н. Голиков. – Тюмень: ТИУ, 2016. – 166 с. С. 42. // URL: http://elib.tyuiu.ru/wp-content/uploads/2016/07/2016_2.pdf

[2] Власенко И.А. Образ будущего как социальная технология формирования молодёжи // Материалы Международного молодежного научного форума «ЛОМОНОСОВ-2019» / Отв. ред. И.А. Алешковский, А.В. Андриянов, Е.А. Антипов. [Электронный ресурс]. – М: МАКС Пресс, 2019 // URL: https://lomonosov-msu.ru/archive/Lomonosov_2019/data/employment.htm

будущего через рисунки, макеты и т.д.), проводятся социальные и просветительские проекты по формированию у молодёжи навыков необходимых для работы над Образом будущего, а так же пролоббирован вопрос включения необходимости формирования Образа будущего в Стратегии развития города Тольятти до 2037 года.

Автор исследования, являясь активистом организации с 2019 г., совместно с экспертами ОД «Сообщество молодых учёных» (Власенко И.А., Дементьев И.Н., Дёмин И.В. и др.), проанализировал опыт практической реализации и был описан алгоритм применения новой социальной форсайт-технологии по формированию у молодёжи Образа будущего.

Для изучения роли форсайт-технологии «Образ будущего» как инструмента формирования лидерских качеств личности нами были использованы **методы:** наблюдение и анализ.

Наблюдение за участниками мероприятий в рамках проекта «Образ будущего» показало, что у молодёжи нет осознанного видения развития страны в целом и мегаполиса в частности, а также своей роли в происходящих процессах. Они мыслят настоящим, перенося его реалии в антураж будущего. В рамках деловой игры «Город будущего» проводилась командная работа по составлению Образа будущего. В процессе прорисовки на ватманах образа Города будущего нами наблюдалось позитивный эффект командной творческой работы. Однако когда игра переносилась на игровое поле, то между командами начиналась борьба за ресурсы, что приводило к конфликтам и взаиморазрушению построенных объектов инфраструктуры Города будущего. Так же в процессе проведения игры «Город будущего» в командах выявляются лидеры, как тайные, так и официально избранные командой. Зачастую именно тайные лидеры являются более эффективными. По окончанию деловой игры «Город будущего» проводилась рефлексия, на которой участники проводили самоанализ своего поведения и приобретённого опыта. Участники отмечали первоначальное непонимание ситуации, приобретение опыта командной работы и формирование знания о преимуществах кооперационной работы над конкурсенцией, позволяющей совместно достичь большего, чем по отдельности. Часть участников обнаружила в себе лидерские устремления, что позитивно повлияло и на их самооценку.

Анализ результативности форсайт-технологии «Образ будущего» показал, что данная технология оказывает допинговую роль в выявлении лидерских качество у молодёжи ввиду того, что лидер в условиях неопределённости предлагает обществу новаторские идеи и проекты (Образ будущего), способные решить хотя бы часть проблем.

Алгоритм применения новой социальной технологии формирования молодёжи «Образ будущего»:

I. Формирование команды экспертов по вопросам футурологии, форсайт-техник, социальной и технической инженерии, высоких гуманитарных технологий, истории техники и т.д.

II. Создание научной базы понимания различных аспектов и вариантов развития технологий и социальной структуры общества (подготовка текстов

и визуальных образов). Эксперты проекта должны быть активны в написании научных тексов по различным вопросам развития технологий и общества.

III. Разработка методов, программ и мероприятий работы с молодёжью по вопросу формирования следующих навыков:

- целеполагание (создания Образа будущего);
- разработка стратегии достижения Образа будущего (цели);
- анализ современной действительности (описание реальных процессов);
- поиск причин современного состояния проблемы, общества, системы (история вопроса);
- применение социального проектирования для успешной реализации стратегии.

IV. Реализация программ и проведение мероприятий (социальных и просветительских проектов), целью которых является формирование у молодёжи, общественности, органов власти, бизнеса и в среде профессионалов понимания необходимости создания консолидированного позитивного Образа будущего.

V. Проработка деталей Образа будущего как с технологической точки зрения, так и с точки зрения качеств нового поколения молодёжи и её внутренней картины мира. Дорабатывается на основе множественного восприятия развития общества у различных социальных групп населения. Формирование консолидированного понимания позитивного Образа будущего.

VI. Публичная презентация консолидированного понимания позитивного Образа будущего как в СМИ, так и на мероприятиях городского, регионального и федерального уровнях. Создание видео-контента Образа будущего.

VII. Включение Образа будущего в законодательные документы, стратегии социально-экономического развития и другие нормативно-правовое акты, связанные со стратегическим развитием общества, регионов и городов.

В общественном движении «Сообщество молодых учёных» в рамках форсайт-проекта сформирована экспертная команда, созданы научные тексты и проанализированы исследовательские подходы к созданию Образа будущего (провела анкетирование, интервьюирование, фиксация образов будущего через рисунки, макеты и т.д.), проводятся социальные и просветительские проекты по формированию у молодёжи навыков необходимых для работы над Образом будущего, а так же пролоббирован вопрос включения необходимости формирования Образа будущего в Стратегии развития города Тольятти до 2037 года.

Всё это в совокупности позволило общественному движению «Сообщество молодых учёных» задолго до тренда говорения об Образе будущего на федеральном уровне (который начался в 2016 г.) сформировать научно-практическую базу и описать алгоритм реализации новой социальной технологии формирования молодёжи «Образ будущего».

СОЦИАЛЬНАЯ ТЕХНОЛОГИЯ «СОЦИАЛЬНОЕ ПРОЕКТИРОВАНИЕ»

Социальный проект (от лат. «projectus» – брошенный вперёд) – это описанная деятельность (текст, визуализация), направленная на качественное изменение общества (или его части) сообразно сформированному образу будущего, с достижением реальных результатов в определённый промежуток времени, при наличии подсчитанных ресурсах в соответствии с целью и задачами[1].

Социальное проектирование можно разделить на исполнительное (заказ грантодателя), инициативное (самостоятельная мотивация гражданина или организации) и профанационное (в целях пиара, или бессмысленные действия на основе непонимания социального проектирования). Реальное социальное проектирование направлено на реальное изменение общества (или его части) к лучшему, то есть переход общества в новое качественное состояние (которое желаемо и позитивно)[2].

Для недопущения этого, считаем, что необходимо применять на уровне государства, общества и личной деятельности следующий **алгоритм любого реального проекта (и в первую очередь социального):**

1. Формирование Образа будущего (точка Б).
2. Анализ нынешней ситуации (точка А) – изучение ситуации в обществе на предмет формирования представления о том, что именно происходит на данный момент.
3. Выявление проблем, мешающих достижению Образа будущего (перехода из точки А в точку Б).
4. Определение конкретных причин определённой проблемы.
5. Формирование социального проекта, нацеленного на уничтожение одной конкретной причины определённой проблемы (постановка цели и задач).
6. Описание плана событий и результата социального проекта, исходя из цели и задач.
7. Мониторинг и позиционирование проекта в обществе.

Если говорить об опыте системного социального проектирования, то здесь можно привести пример деятельности некоммерческой организации «Сообщество молодых учёных» и её партнёров[3].

1. Формирование Образа будущего (точка Б).

У России есть будущее только в том случае, если будет сформирован Образ будущего страны и общества. Без Образа будущего невозможно попасть в то будущее, которое мы хотим себе и своим детям. А для

[1] Власенко И.А. Социальное проектирование в образовании. Рабочая программа дисциплины. АНО ВО «Поволжский православный институт имени Святителя Алексия, митрополита Московского». – Тольятти, 2017. – 32 с. С. 26.

[2] Власенко И.А. Технология социального проектирования: суть, смысл и алгоритм. // URL: https://www.child-lib.ru/upload/iblock/ef6/2019.03.13_Seminar_Vlasenko.pdf

[3] Власенко И.А. От семейных ценностей к гражданской активности: опыт социального проектирования / И.А. Власенко. – Текст: непосредственный // Библиотечная палитра. – 2018. – № 2. – С. 3 – 7.

формирования Образа будущего города, региона, страны, необходима консолидация научных, творческих и управленческих сил по внедрению социально-гуманитарных технологий.

Некоммерческая организация «Сообщество молодых учёных» с 2010 г. реализовывает закрытый проект «Образ будущего», в рамках которого формируется целенаправленный контент позитивного будущего в информационном пространстве, формируется образ молодого учёного для будущего, проводятся многочисленные мероприятия регионального и городского уровня на данную тематику.

Образ будущего молодого учёного включает в себя такие характеристики как: успешный, материально состоятельный, авторитетный (эксперт), влиятельный, уважаемый, социально активный, проживающим в родном городе. Данные характеристики включают слова, относящиеся к деятельности – и это для респондентов (участников проекта «Образ будущего» некоммерческой организации «Сообщество молодых учёных») является первоочередным. Безусловно, само понятие молодого учёного включает в себя интеллект, знания и практический опыт. Что касается моральных характеристик, то на данном этапе они для респондентов практически не существенны. Однако, уважение и авторитет – на наш взгляд, само по себе подразумевает наличие высоких моральных норм[1].

2. Анализ нынешней ситуации (точка А).

В современных условиях тотальной мировой конкуренции, очевидным является необходимость обеспечить стабильно развивающуюся систему подготовки высококвалифицированных специалистов, готовых обучаться на протяжении всей жизни и уметь определять тенденции развития современных технологий. Это возможно обеспечить лишь на основе всестороннего системного подхода к такому социальному институту как НАУКА. Всё наше существование как цивилизованных людей основано на достижениях науки: от колеса до космических станций, от унитаза до сотовых телефонов… Весь комфорт, всё наше благополучие строиться на основе тех открытий и достижений, которые смогли подарить человечеству учёные[2].

Наступает время новой научно-технической революции в мире, и если мы не сможет в неё включиться, то наша страна не сможет уже претендовать даже на роль регионального научного лидера. Только понимание и активные целенаправленные действия по выстраиванию научно-промышленной

[1] Власенко И.А. Молодой учёный России: образ будущего // Итоговый сборник III молодёжного фестиваля науки стран СНГ / Под общей редакцией д.полит.н., профессора И.В. Ильина. – М.: Издательство Московского университета, 2012. С. 56.

[2] Власенко И.А. Возможности и перспективы развития молодых учёных: молодёжная политика и образ будущего // Материалы XI Международной научно-практической конференции «Татищевские чтения: актуальные проблемы науки и практики» // Гуманитарные и социальные науки, образование. Часть I. – Тольятти: Волжский университет им. В.Н. Татищева, 2014. – 362 с. С. 3 – 15.

инфраструктуры для развития отраслей VI технологического уклада[1] даёт шанс сохранения русского общества как уникальной цивилизации.

3. Выявление проблем, мешающих достижению Образа будущего (перехода из точки А в точку Б).

Одной из явных проблем, мешающей коренному изменению ситуации, является отсутствие позитивного (благородного) образа учёного и учителя в массовом сознании общества. Контент-анализ современных фильмов показывает тотальное внедрение образа сумасшедшего ненормального кровожадного неудачника учёного и коррумпированного непрофессионального бездушного учителя. Проведённый анализ показывает, что в обществе и, особенно среди молодёжи, нет моды на науку, моды на интеллект. «Есть, конечно, интеллектуальные игры, но всё-таки это всего лишь игры. До сих пор существует некое пренебрежение, особенно среди школьников: вот, мол, «ботаник». Необходимо создать позитивный образ молодого учёного. Чтобы считалось, что «ботаник» – это круто. Чтобы на последних страницах газет вместо гадалок и магов, наконец-то, начали печатать учёных с их разработками и предложениями. В СССР мода на интеллект была: газеты говорили о покорении учёными космоса, об отважных исследователях океанов. Девушки влюблялись в учёных, о них писали книги и снимали фильмы»[2].

4. Определение конкретных причин определённой проблемы.

Отсутствие системы формирования системно-стратегического, проектно-аналитического и научно-критического мышления у молодёжи.

5. Формирование социального проекта.

В связи с чем, очевидным и необходимым является формирование позитивного образа учёного и науки среди молодёжи и общества, а также создание системы выявления и поддержки талантливой и одарённой молодёжи в исследовательской сфере. Для создания позитивного образа (популяризации) науки необходимо эффективно использовать механизм формирования системно-стратегического, проектно-аналитического и научно-критического мышления среди молодёжи путём реализации просветительских, образовательных и социальных проектов.

Цель – создать систему формирования системно-стратегического, проектно-аналитического и научно-критического мышления у молодёжи через разветвлённую сеть представительств (отделений» общественного

[1] Впервые термин «технологический уклад» был предложен в 1986 г. советскими экономистами Д.С. Львовым и С.Ю. Глазьевым. Ядро VI технологического уклада: нанотехнологии (наноэлектроника, молекулярная и нанофотоника, наноматериалы и наноструктурированные покрытия, нанобиотехнология, наносистемная техника), клеточные технологии и технологии виртуальной реальности. Преимущество VI технологического уклада, по сравнению с предыдущим, по прогнозу С.Ю. Глазьева будет состоять в резком снижении энергоёмкости и материалоёмкости производства, в конструировании материалов и организмов с заранее заданными свойствами. Основные положения о VI технологическом укладе приводятся в работах Г.Г. Малинецкого.

[2] Исмайлова А. У нас нет будущего? Молодые учёные губернии собираются его создать. (Из интервью с Игорем Власенко) // Аргументы и факты – Самара. №46, 19 ноября 2012. С. 3.

движения «Сообщества молодых учёных» и дружественным ему сообществ и популяризаторов науки.

Задачи: 1) организация сети сообществ молодых учёных, экспертов и популяризаторов науки; 2) разработка и реализация социально-культурных, научно-исследовательских и просветительских проектов; 3) организация цепи событий, направленных на реализацию проектов и формирование системно-стратегического, проектно-аналитического и научно-критического мышления у детей, подростки, молодёжи и их родителей (в том числе на базе вузов, колледжей, школ, библиотек, музеев, арт-пространств, домах культуры и других партнёрских организациях); 4) привлечение ресурсов (фандрайзинг) на реализацию проектов; 5) информационное продвижение проектов по популяризации науки (социальные сети и другие инструменты); 6) создание личных брендов молодых учёных, экспертов и популяризаторов науки; 7) создание сети поддержки популяризаторов науки и сообществ молодых учёных от представителей органов власти, бизнеса и образовательных учреждений.

6. Описание плана событий и результата социального проекта.

Для формирования позитивного образа молодого учёного на региональном уровне активно проводиться просветительская деятельность. Повышению социального статуса способствует и активная жизненная позиция молодых учёных: некоторые являются помощниками депутатов, сотрудниками, консультантами и экспертами администраций городов, преподавателями вузов, бизнесменами – всё это создаёт образ престижности науки в области. И одним из важных элементов здесь является информационное сопровождение деятельности организации и молодых учёных в социальных сетях и СМИ.

Отличие деятельности общественных организации от разного рода совещательных структур типа советов молодых учёных заключается в свободе действий и изначальной самостоятельности и инициативности, что позволяет эффективнее (для результата, а не для отчёта) реализовывать социально-образовательные и исследовательские проекты.

Проведение научно-просветительских проектов, таких как Форум молодых учёных в Тольятти[1], Школы молодых исследователей в Тольятти, Конкурс «Молодой учёный Тольятти», научно-просветительский лекторий «Пандорум», конкурс «Семейная история», Клуб настольных стратегических игр, Информационная безопасность в ВКонтакте[2], Академия конного туризма «Власенко» и др., позволяет популяризировать науку среди общественности и молодёжи.

Один из экспертов форума, к.ист.н., заведующий отделом Азии и Африки ИНИОН РАН А.И. Фурсов отметил, что пообщавшись с участниками Форума, увидел потенциал для дальнейшего развития науки в г. Тольятти: «Я вижу, что молодёжь развивается вопреки тому, что у нас

[1] См.: Форум молодых учёных: удачный старт. // Волжский университет. №8 (140). 30 октября 2013 г. С. 1, 4.

[2] Власенко И. А. Алгоритм мониторинга страниц социальной сети «ВКонтакте» / И. А. Власенко // Библиотечное дело. – 2017. – № 15. – С. 5 – 8.

происходит в стране последние 20 лет. Если в 90-е годы многое казалось беспросветным, то сейчас ситуация другая. И то поколение, которым сейчас 20 – 22 года. Несмотря на то что образование в школе хуже, чем в советское время, проявляют интерес к жизни и неравнодушие к тому, что происходит. Это не только интеллектуальная позиция, но и социальная. Это очень важно»[1].

За последние несколько лет происходим мощный всплеск процесса самоорганизации молодёжи и гражданского общества. Происходят бурные события, мероприятия, акции и маленькие факты истории, которые говорят о наступившей необходимости взаимодействия ради создания будущего и прозревшего понимания, что только при нашем личном и командном активном участии молодых учёных в жизни общества у России есть будущее!

7. Мониторинг.

Формирование понимания у общества того, что именно наука и образование являются самыми главными основами существования государства и жизни народа – является на наш взгляд основной задачей научного сообщества России. Активная общественная позиция именно молодых учёных является основой молодёжной политики России для формирования позитивного образа учёных в обществе.

Для мониторинга развития популяризации науки необходимо учёным и организаторам науки активно участвовать в общественной жизни на уровне городов, регионов и федерации через включение в общественные советы, через приобретения статуса экспертов конкурсов проектов, через иные статусы при органах власти, через развитие и продвижение личного бренда, через эффективное ведение социальных сетей.

Таким образом, опыт общественного движения «Сообщество молодых учёны» по системному социальному проектированию выявил актуальные эффективные методы, формы и инструменты популяризации науки и формирования системно-стратегического, проектно-аналитического и научно-критического мышления у детей, подростков, молодёжи и их родителей.

Основным механизмом достижения позитивного Образа будущего, основанного на системно-стратегическом, проектно-аналитическом и научно-критическом мышлении нового поколения молодёжи, является наличие (создание) кооперационных интеллектуальных площадок развития (КИПР) из экспертов, популяризаторов науки и молодых учёных. Эти КИПРы, в свою очередь, берут на себя право и ответственность тотально информационно воздействовать на общество, и в первую очередь детей, подростков и молодёжь.

[1] Староверова Ю. Расшифровали кризис. Лучшие лекторы России увидели в тольяттинцах потенциал. (Из интервью с Андреем Фурсовым) // Площадь свободы. №192 (5589). 16 октября 2013. С. 1.

ЗАКЛЮЧЕНИЕ

Тезис первый (и главный): необходимо сформировать Образ будущего для региона (и страны), что позволит выстроить стратегию развития, и понять и какие именно гуманитарные и технологические инфраструктуры общество необходимо создавать. Исходя из этого, будет чёткое понимание алгоритма достижения результата (образа будущего).

В центре развития цивилизации XXI века стоят те виды деятельности, которые основаны на VI и VII технологических укладах. Центром влияния и изменения станет тот регион, где самоорганизующееся сообщество высокопрофессиональных экспертов будет проводить систематическую созидательную работу по формированию Образа будущего технологической (VI техноуклад) и социально-гуманитарной инфраструктуры цивилизации (VII техноуклад).

Тезис второй (исходя из образа будущего): кадры решают всё. Для изменения ситуации необходимо создать продуманную региональную стратегию по созданию системы поиска, подготовки, привлечения, популяризации и поддержки молодых учёных и специалистов с чёткими параметрами реализации и конкретными сроками и ресурсами.

Первоочередным является выстраивание системы формирования научных кадров не на уровне вузов и ведомств, а на уровне региона – на основе информационной базы молодых учёных и специалистов.

Тезис третий: среди предпринимателей (малого, среднего и крупного бизнеса) нет понимания необходимости участия в научно-исследовательских проектах (и в первую очередь социально-гуманитарных) на стратегическую перспективу. В общем, эта ситуация характерны для всего капиталистического пространства, когда поддерживаются бизнесом только те проекты, которые могут принести сиюминутную прибыль (и с точки зрения бизнеса это понятно и верно).

Для изменения ситуации необходимо в процессе создания новых технологий необходимо чёткий заказ со стороны государства (региона и муниципалитета на своём уровне). Необходимо создание специализированного регионального ресурсного фонда, нацеленного на обеспечение внедрения передовых технологий VI технологического уклада.

Тезис четвёртый (последний): в обществе, и особенно среди молодёжи, существует негативный образ науки, учёных и учителей. Поэтому очевидным и необходимым является создание системы целенаправленного формирования моды на интеллектуальную и научно-исследовательскую деятельность, позитивного образа учёного и науки среди молодёжи и общества. Также необходимо создание системы выявления и поддержки талантливой и одарённой молодёжи в исследовательской сфере.

Итак, существование отечественной науки, её будущее, а также судьбы молодых учёных, остаётся одной из центральных проблем для понимания вектора развития России в будущем. «В современном мире наука – одна из главных основ независимости и процветания государства. Это не только разработки в области технологий, но и общая степень образованности

народа той или иной страны: образовательная сторона науки также очень важна»[1]. Современные молодые учёные активно участвуют в создании тех технологий, которые станут основой развития человеческой цивилизации в ближайшем будущем. Именно в их руках сосредоточены ключи понимания того, как будет выглядеть будущее России.

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ТЕХНОЛОГИЯ ДВИГАТЕЛЬНОЙ РЕАБИЛИТАЦИИ ДЕТЕЙ С ФОРМОЙ СПАСТИЧЕСКОЙ ДИПЛЕГИИ I И II УРОВНЯ ПО ШКАЛЕ GMFCS СРЕДСТВАМИ ФИГУРНОГО КАТАНИЯ НА КОНЬКАХ

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Аннотация. В данной работе речь ведется о двигательной реабилитации детей с формой спастической диплегии I и II уровня по шкале GMFCS средствами фигурного катания на коньках, развитии проприоцептивной ориентации, кинестезического дифференцирования. Рассматривается коррекция двигательных, сенсорных нарушений, нарушений коммуникации; предотвращение клинических нарушений; социальная адаптация детей**.**

Abstract. In this paper, we are talking about the motor rehabilitation of children with a form of spastic diplegia of level I and II on the GMFCS scale by means of figure skating, the development of proprioceptive orientation, kinesthetic differentation. The correction of motor, sensory disorders, communication disorders, prevention of clinical disorders, social adaptation of children is considered**.**

Ключевые слова: *спастическая диплегия, фигурное катание, двигательная реабилитация, кинестезическое дифференцирование, проприорецепция, технология***.**

Keywords: *spastic diplegia, figure skating, motor rehabilitation, kinesthetic differentiation, proprioception, technology***.**

ВВЕДЕНИЕ

Проблема исследования заключается в научном обосновании технологии двигательной реабилитации детей с формой спастической диплегии I и II уровня по шкале GMFCS средствами фигурного катания на коньках.

Объект исследования – процесс двигательной реабилитации детей с формой спастической диплегии I и II уровня по шкале GMFCS.

Предмет исследования – сформированность координационных способностей у детей 7-8 лет с формой спастической диплегии I и II уровня по шкале GMFCS.

Цель исследования – разработать технологию двигательной реабилитации детей с формой спастической диплегии I и II уровня по шкале GMFCS средствами фигурного катания на коньках.

Задачи исследования.

1. Провести анализ реабилитационной деятельности и особенностей реабилитационного процесса детей 7-8 лет с формой спастической диплегии I и II уровня по шкале GMFCS.

2. Изучить динамику показателей координационной подготовленности детей 7-8 лет в годичном цикле реабилитации, а также взаимосвязь эффективности реабилитационной деятельности с изучаемыми показателями.

3. Разработать реабилитационное вспомогательное устройство – ботинки и коньки для детей со спастической диплегии I и II уровня по шкале GMFCS.

4. Разработать технологию двигательной реабилитации детей с формой спастической диплегии I и II уровня по шкале GMFCS средствами фигурного катания на коньках.

5. Проверить эффективность разработанной технологии двигательной реабилитации детей с формой спастической диплегии I и II уровня по шкале GMFCS средствами фигурного катания на коньках.

Гипотеза исследования. Предполагается, что использование в реабилитационном процессе детей с формой спастической диплегии I и II уровня по шкале GMFCS технологии двигательной реабилитации средствами фигурного катания на коньках в соответствии с возрастными особенностями и приоритетными задачами этапов реабилитационного периода, позволит повысить эффективность реабилитационного процесса, что отразится в улучшении показателей физической подготовленности, функционального состояния организма, результативности двигательной деятельности, социальной адаптации детей.

Методы исследования – для решения поставленных в работе задач использовались следующие методы: - теоретический анализ и обобщение литературных данных; - педагогические наблюдения; - анкетирование (опрос); - педагогический эксперимент; - педагогические тестирования; - антропометрические измерения; - медико-биологические методы исследования; - методы математической статистики.

РЕЗУЛЬТАТЫ

После проведенного курса реабилитации вместе с разработанной тренировочной программой с включенным специальным комплексом упражнений с испытуемыми были проведены тестирования. Данные результатов тестирования двигательных умений испытуемых контрольной и экспериментальной группы отображены в таблице.

Таблица - Результаты тестирования двигательных умений испытуемых со спастической диплегией

№	Виды испытаний	Экспериментальная группа (n=4)			Контрольная группа (n=4)		
		октябрь 2020 г.	январь 2021 г.	p	октябрь 2020 г.	январь 2021 г.	p
1.	Из положения лежа на спине сесть махом	4,23±0,02	10,25±0,04	p<0,05	3,02±0,04	6,15±0,06	p<0,05

	рук						
2.	Лежа на спине удерживать голову	0,19±0,02	1,09±0,04	p<0,05	0,16±0,05	0,46±0,07	p>0,05
3.	Упр. Ландау	0,21±0,02	0,62±0,03	p<0,05	0,17±0,04	0,36±0,05	p<0,05
4.	Лежа на животе руки в упоре	1,29±0,02	2,17±0,04	p<0,05	1,17±0,04	1,49±0,06	p<0,05
5.	Стоя на четвереньках на трех точках опоры	0,13±0,02	0,62±0,04	p<0,05	0,09±0,04	0,39±0,06	p<0,05

ВЫВОДЫ

1. Анализ структуры построения системы двигательной реабилитации детей с формой спастической диплегии I и II уровня по шкале GMFCS в годичном макроцикле, а также распределения тренировочных нагрузок в средствах тренировки по ее этапам, периодам выявил их слабые стороны. Основным является то, что в распределении объема и интенсивности реабилитационной нагрузки не прослеживается последовательное соединение постепенности и предельности в динамике развивающе-тренирующих координационных воздействий.

2. Теоретическое и экспериментальное обоснование составляющих компонентов системы двигательной реабилитации детей с формой спастической диплегии I и II уровня по шкале GMFCS в годичном макроцикле, а также уточнение организационных и методических ее особенностей позволило определить ее содержание, оптимальные нагрузки и эффективные методы тренировки, исходя из конкретных задач, решаемых на каждом этапе и периоде реабилитационного процесса, и на этой основе разработать модель организации двигательной реабилитации детей с формой спастической диплегии I и II уровня по шкале GMFCS средствами фигурного катания на коньках.

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TECHNOLOGY OF IMPULSE LASER CUTTING IN AVIATION BUILDING PRODUCTS

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Abstract. In this paper, we present some experimental data on obtaining the optimal variants of the limiting speed of laser gas cutting with use of active and neutral process gases (oxygen and nitrogen) at different thicknesses of materials processed. We show also that the largest speed of laser gas cutting can be attained with use of oxygen depending on the material thickness. This effect can be explained by that the thermal energy of chemical reaction at burning of titanium OT4 in the medium of active gas is added to the overall balance of energy**.**

Keywords: *Laser cutting, surface roughness, nozzle, cutting parameters, modes*

INTRODUCTION

The titanium alloys have found wide use in aviation, rocket technology, shipbuilding, as well as in chemical and some other branches of industry. They are used for production of skins of supersonic airplanes, parts of reactive engines (e.g., disks and blades of compressors, parts of air intakes, and the like), cases of rocket second- and third-stage engines, compressed gas bottles, shells of sea crafts, submarines, and some other products.

The laser technology is at present one of the foreground kinds of material processing in aero- and rocket production, as well as in information handling, biology, medicine, and in scientific investigations.

The laser processing of materials (cutting, welding, drilling of openings, marking, and modification of surfaces) is distinguished by a number of advantages over the conventional technologies.

Among them, we can mention the following ones:

- high efficiency, automation of processes, and accuracy of processing,
- quick payback of capital outlays for equipment, especially in connection of appearance of fiber lasers having high efficiency, reliability, and long service life.

The principle of laser cutting action is based on the processes that take place due to thermal action of laser radiation such as melting, evaporation of material, and removal of products of destruction of fluid melt from the zone of processing.

At present, wide use is made of the laser gas cutting technologies (up to 50%). The rest 50% are the laser technologies of welding, surface processing, marking, punching of openings, modification of surfaces, and some other ones.

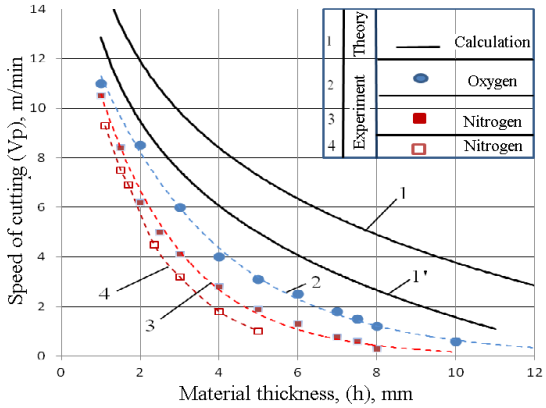

Fig.1. Dependence of LGC speed on the thickness of titanium OT4 when using the process gases (oxygen and nitrogen): (1, 1'- calculation, 2 - oxygen, 3, 4 - nitrogen).

Figure 1 presents the regions of limiting values of the process efficiency (speed of cutting). As is seen from this figure, the speed of cutting decreases in both the oxygen medium and in the nitrogen medium as the material thickness increases.

DISCUSSIONS

The main aim of our investigation is the experimental determination of the GLC optimal parameters of cutting speeds and thicknesses of sheet specimens, i.e., plates of titanium alloy OT4 by using the high-purity process gases such as oxygen (O_2 - 99,994%) and nitrogen (N_2 - 99, 997%). The experiments were conducted with use of the laser technological complex LTK-5[1, 2].

CONCLUSIONS

1. The speed of titanium cutting with use of oxygen in titanium sheets of 5 mm in thickness increases, at identical parameters of LGC process, by a factor of 2,7 as compared with laser cutting with use of nitrogen; if the sheet thickness is 10 mm, the speed will be increased by a factor of 3,5.

2. In order to increase the speed of titanium cutting with use of nitrogen, we increased power of laser radiation from 1,6 for thicknesses in the range from 1 mm up to 1,2 and for thicknesses of 10mm; when increasing the pressure of process gas by a factor of 2,3 it led to the increase of cutting speed up to 10,5 m/min for the thickness of 1mm and 0,3 m/min for the thickness of 10 mm, respectively.

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USING VISUAL IMPACT TO SEND MARKETING MESSAGES TO THE CONSUMER'S MEMORY

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Abstract Against the background of the challenges faced by companies in influencing the consumer's perception of brands and the importance of using pragmatics in advertising discourse to draw a mental image of the consumer, this study attempts to evaluate the effects of the sense of sight and hearing on the perception of the brand, through perception and the use of semantic art, which is considered a form of visual communication. Perception is the way in which consumers imagine the world around them using different senses as receptors for information around them, and one of the most Important ways to influence the consumer is the stimulation and the involvement of the visual and auditory senses in constructing the pragmatic text ,Because the main goal of using sensory pragmatism in advertising discourse is to send a message directly to the consumer's mind to arouse interest, and to entice the customer to buy that particular product which creates a bond between the customer and the product. Therefore vision and hearing play an important role, and the creation of brands is of a great importance in the market and it has a direct impact on the consumer and his behaviour.

Keywords: *Visual, Auditory, Tactile, Sensory Branding, Senses, Sensory Brand, Brand Value, pragmatic, advertising.*

MOTIVATION ANALYSIS

In the era of handicrafts, companies used to focus their competition on the quality advantage, but modern technology was able to control quality by applying mass production and quality standards, and while some still use the quality advantage, most advertisers are now using psychological means and Pragmatics to push consumers towards the desired product, which are easy targets (soft target) to penetrate, pushing into buying by influencing them through advertisements, and for this, many of them went to extensive research to find out the consumer weaknesses and maximize the profits of the declared companies.

Advertisers use the method of "motivational analysis" to access buried human desires. These approaches gained a strong impetus in the fifties when they were developed by American researchers, "Louis Chen Kean" and "Ernst Doktor". These approaches are based on the principle of transcending awareness and perception and directly reaching the subconscious level by influencing it by sensory means. And in 1973 AD, the researcher, "Wilson Brian Key," published the book "The Temptations of Sub consciousness", which elaborated on the

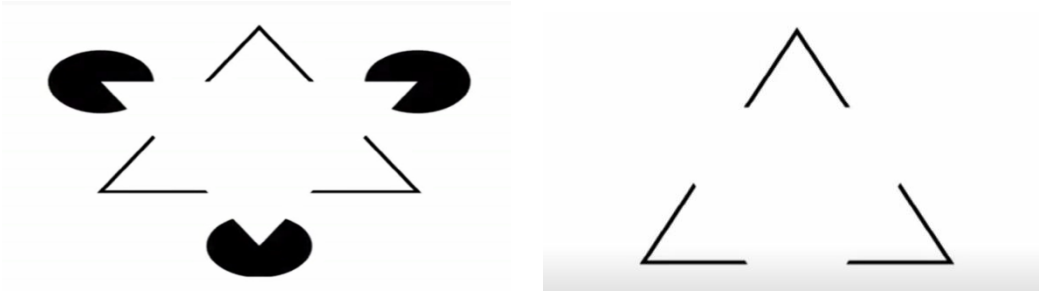
application of these concepts and researched them in a detailed manner.

Concludes: Advertising companies and public relations agencies circumvent the minds of others and exploit audiences without their awareness or knowledge by influencing them.

HOW DOES THE BRAIN RECEIVE IMAGES?

How we understand the information received depends on the way our mind analyzes the images, extract information from them, and perceives them, meaning that the images are not considered valuable without the ability of the mind to analyze them. Thus, the mind can sometimes be fooled into seeing images that do not exist by having the mind analyze images in a wrong way by playing on the way the mind analyzes images.

As it's shown in the following example:



BRAIN AREAS UNDERLYING VISUAL MENTAL IMAGERY AND VISUAL PERCEPTION:

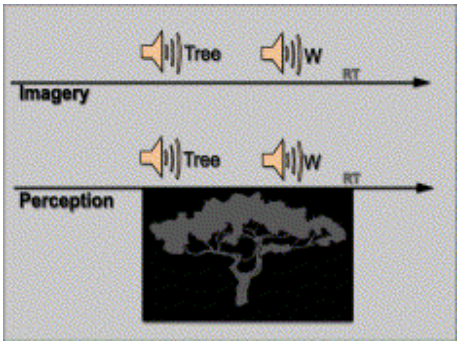
We used functional magnetic resonance imaging (fMRI) to assess the maximal degree of shared neural processing in visual mental imagery and visual perception. Participants either visualized or saw faint drawings of simple objects, and then judged specific aspects of the drawings (which could only be evaluated properly if they used the correct stimulus). The results document that visual imagery and visual perception draw on most of the same neural machinery. However, although the vast majority of activated voxels were activated during both conditions, the spatial overlap was neither complete nor uniform; the overlap was much more pronounced in frontal and parietal regions than in temporal and occipital regions. This finding may indicate that cognitive control processes function comparably in both imagery and perception, whereas at least some sensory processes may be engaged differently by visual imagery and perception. [1.2]

Schematic of the structure of a trial in the imagery and perception conditions.

In the imagery condition, participants kept their eyes closed throughout the scan.

Each trial began with the name of a previously studied object, presented auditory via headphones.

[1] https://www.sciencedirect.com/science/article/pii/S0926641004000709?via%3Dihub
[2] https://www.sciencedirect.com/science/article/pii/S0926641005000595?via%3Dihub

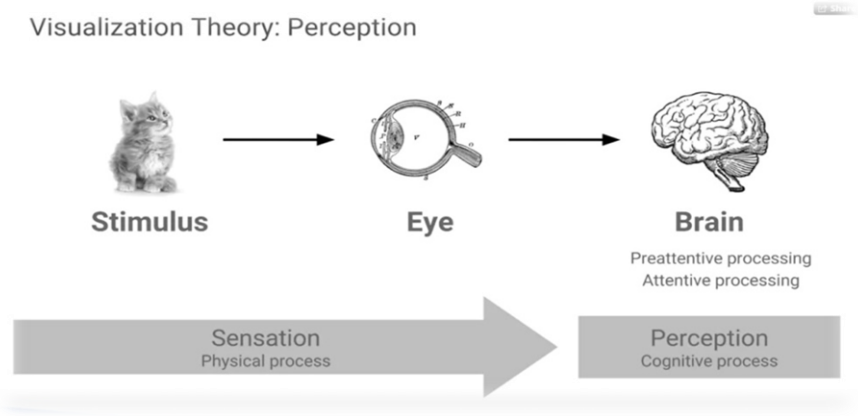


In the imagery condition, participants had to generate a visual mental image of the object.

In the perception condition, participants saw a faint picture of the named object.

In both cases, participants had to wait for the auditory probe (4.5 s later; "W", meaning "wider than tall" in this schematic) specifying the judgment to be performed.

Upon hearing the probe, participants performed the judgment as quickly and accurately as they could, and response times (RT) and accuracy were recorded. [1.2.3]



HOW DOES THE ADVERTISEMENT COMMUNICATE, INFLUENCE OTHERS, STIR THEIR EMOTIONS, AND NOT BE FORGOTTEN BY THEIR MINDS?

Whether people turn to the right or to the left, they will find an advertisement.

Our current world has become crowded with pragmatic advertisements,

Whether direct or indirect, which contain implicit messages and speeches.

So whether people use their mobile phone to browse or go inside applications or watch their favorite program on TV or going to work,

They are going to see advertisements a lot… but

How many of them are cemented to their memory?

Which of them can they remember at the end of their day?

Did they receive the intended message from the advertisement?

And how does that affect decisions?

[1] R.A. Finke, K. SlaytonExplorations of creative visual synthesis in mental imagery Mem. Cogn., 16 (1988), pp. 252-257

[2] M.J. FarahThe neurological basis of mental imagery: a componential analysis Cognition, 18 (1984), pp. 245-272

[3] J.B. Brewer, Z. Zhao, J.E. Desmond, G.H. Glover, J.D. GabrieliMaking memories: brain activity that predicts how well visual experience will be remembered Science, 281 (1998), pp. 1185-1187

Designing an advertisement that stimulates the consumer's feelings by stimulating his senses,

Can in turn lead to making the product unforgettable to the consumer's mind.

For example: McDonald's ads display its famous red and yellow logo,

Which in turn stimulates what this famous brand represents in our minds through the sense of sight,

And accompanied by its well-known melody that stimulates the sense of hearing.

In doing so, McDonald's brand becomes coded in our memory with the help of visual and audio components. That creates an immediate, subconscious connections between the sensory stimuli - that is, the images and sounds - and the product shown in the ad.

Where advertisers use language and images that stimulates other senses besides the sense of sight, with the aim of conveying an integrated sensory message within a medium that is received mainly through the sense of sight.

Also, words and pictures can stimulate the sight of the recipient through the use of pictures with a pragmatic meaning and influence it using the most creative ways of using letters design.

The ideal strategy for creating pragmatism in printed advertising is to employ what is called linguistic synesthesia.

Synesthesia: is a metaphor for the process of combining specific linguistic expressions so that they can refer to different meanings at once.

CONVEYING A MESSAGE

Sensory connections can be created through pragmatic advertising, using what is called a visual metaphor, It can send a message to the consumer using pragmatism in pictures without using words.

For example, company “Popclik” advertises its headphones by displaying it in a black-and-white background drawn in a comic strip style. [1.2.3.4]

In this ad, the images in the space surrounded by the headphones are highlighted in color, while the background is shown in black and white. This is in order to deliver an implicit positive message to the consumer about the quality of sound from headphones. Where polychrome is associated with a positive feeling compared to the negative feeling associated with black and white, meaning that he uses colors to deliver a message to the consumer.

In other words, this advertisement is an example of a pragmatic visual advertisement in which the sound is described with color characteristics without the use of speech in it.

[1] Https://www.Google.Com/search?Q=mcdonald+logo&client=tablet-android-huawei&prmd=ivn&source=lnms&tbm=isch&sa=x&ved=2ahukewimo6vys9bfahxlzlakhfukah4q_auoaxoecasqaq&cshid=1546683459819#imgrc=tzobhhzmrhivim

[2] Https://www.Thoughtco.Com/synesthesia-language-and-literature-1692174

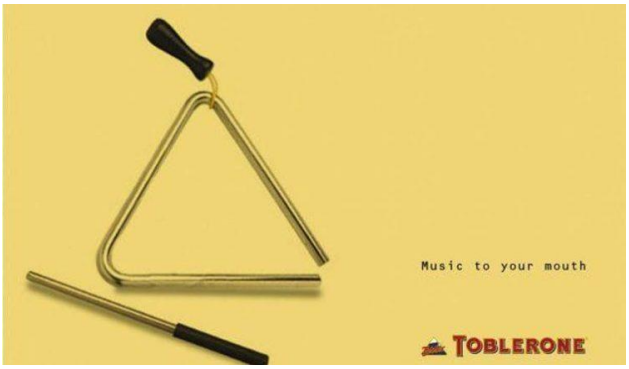
[3] Https://www.Youtube.Com/watch?V=ord_kgldo98&feature=youtu.Be

[4] Https://trendland.Com/popclik-headphones/

Sometimes language and visual marketing can overlap to create a combined form of sensory marketing, the following picture from the famous chocolate company "Toblerone" advertises its chocolate bar. [1]

Chocolate company "Toblerone"

Music to your mouth



By reviewing the musical instrument (called the triangle) that represents the distinctive feature of the chocolate bar –its distinct triangular shape -.

The written advertisement slogan also uses the word (music) in the phrase **"it tastes in the mouth as the sound of music to the ear"**, where the advertisement links the music with the flavour as this advertisement contains a pragmatic message to the consumer to fix the look and taste of the chocolate in the consumer's mind.

Music = taste

In other advertisements, the images used appear to embody a mixture of pragmatic messages conveyed using a mixture of images and words.

For example, in the following advertisement for a lemon-flavored soft drink.

[1] https://toblerone.fr/

Advertisers showed a photo of a lemon wearing a mask with pointed heads

This image was mixed with the following slogan: “L&P Fizzy Drink with Lemon Flavor: Sour as the sharpness of these heads, it is different from others”

The combined image and words provide the consumer with a visual perception of the perceptual linguistic meaning of the traditional and commonly used term "sharp flavor"; the image of lemon represents the flavor, and the pointed heads in the mask represent the intensity that elicits the sense of touch.

So what is the message here?

Genius advertisement for Diet Pepsi

The company took advantage of the Pepsi buyer’s focus on this type of product (Pepsi Diet) on fitness, thinness, and health, so designed an advertisement according to this segment of consumers.

And it used a pragmatic aim of cat-mouse hostility to reflect this on its products and their importance.

The semantic content here is that the cat, after it finished drinking the Pepsi Diet, got thinned to the point that it was able to enter the hole to the mouse's house despite the small size of the hole due to the speed of the “Pepsi diet” effect and its usefulness.

The message from this advertisement is that it will make you leaner and thinner and it's good for those who care about their health.

EMOTIONAL IMPACT

Emotional impact can also be created through pragmatic advertising, using visual metaphor in the same manner as the visual stimulation but with a dipper and more emotionally stimulating depictions, that can create a more lasting effect and a stronger message.

As we will see in the following advertisement.

And in this awareness-raising advertisement

We like to direct the attention to the use of the bomb shape and the keyboard for a pragmatic purpose.

A famous internet security company is trying to express the dangers of cyber-terrorism while using the Internet.

So what is the meaning here?

The bomb-shaped keyboard is considered as an awareness-raising advertisement with a pragmatic purpose to the dangers of cyber terrorism and hacking, and how keyboards nowadays are considered as a weapon in the hands of cybercriminals and why is it necessary to be protected from it.

And this ad is used to invoke a feeling of danger related to the bomb image, and this has a significant emotional and visual impact.

This advertisement was created by McCann, Germany for L'Oréal

The sad truth about gender equality in Germany: Men dominate the management and executive boards - with 91.4%. Time to prove that women belong in leadership too. Based on a data project, L'Oréal Paris collected and analyzed several studies and data sets with results that led to the first cosmetic advertising for men.

Simplified infographics with products prove that women belong in leadership roles. For good reasons: With women in 30% of management positions profitability increases by 15%.

They perform 24% better in management reviews.

And help to develop more innovations, for example with 20% more patents per year.

And this advertisement used the topic of gender inequality and the employment gap between both genders to formalize a powerful ad that plays on the reader's emotion and definitely create a permanent imprint on the reader's mind, by incorporating a highly controversial message to create an emotional impact…

ARTISTIC ADVERTISEMENTS

Art in advertising Traditional artwork and concepts have become a source of inspiration for many advertising agencies. Which is being used for pragmatic purposes and to convey implicit messages to the public More importantly, it is the way people understand these ads, and will they reach the correct meaning or not ?

Here are some examples of the creative mixing of advertising and art the ads displayed in this group are inspired by famous popular paintings, which makes artistic advertisements more popular every time and can deliver the message in a faster way.

First I looked at how advertisement has transformed from art, and how brands are using the ideas from some of the great artist.

Salvador Dali

Dali the surrealist painter had created some adverts in his time as an artist but a few that his art work had been made into advertisement.

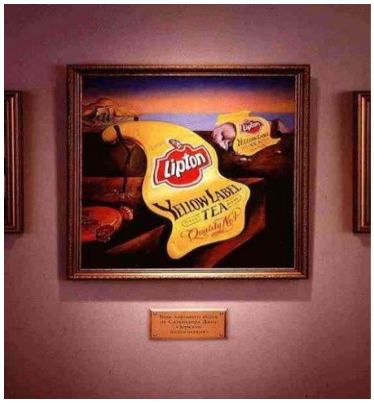
In the first image, we see Russian brand Hi-Fi Audio’s advertisement by copying Dali’s Madonna of Port Lligat.

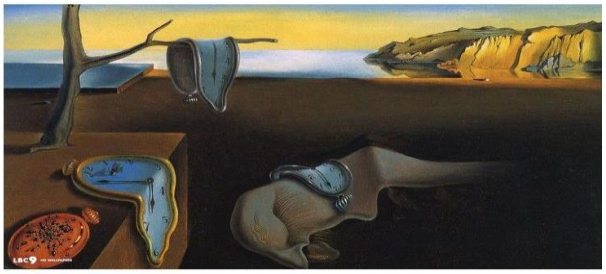
Salvador Dali created Madonna of Port Lligat in 1949. The painting depicts an image of Mary holding baby Jesus in her lap.

Each seemingly random element in the painting has a purpose and however vague it is meant to communicate something to the viewer. For example, the Child is holding a globe in one hand and a cross in the other, and both Mary and the Child are joined in what seems like a mirror-like reflection, symbolizing the reach of spirituality.

But someone who didn't know about this painting can't get any of these meanings from the Hi-Fi Audio's version. In the image, there is a woman holding a headphone between her hands, surrounded by big speakers. The surrealism factors in the advertisement and hole in the torso of the woman grab people's attention easily. So, even though the meaning changed a lot this is a very interesting advertisement and, this can make people look for the inspiration of painting and learn much more about painting.

That's why I think this advertisement benefits the art as much as it harms the meaning of the painting.The Lipton concept of the famous Dali melted watches using melted Lipton labels.





Free reinterpretation of Las Medinas or The Family of Phillip IV (Velázquez, 1656) in an advertising campaign by El Corte Ingles in 2011 directed at the international tourist. In this case, the cultural symbolic universe of the Prado Museum was the insight to attract quality shopping tourism to the capital of Madrid,

Las Mininas or the family of Philip IV (1656-57) Las Mininas or the Royal Family were used here.

Velasquez's most famous paintings are described by the Neapolitan painter Luca Giordano as "the theology of painting." It was considered a masterpiece in Spain.

And he used the painting for a pragmatic purpose to express the luxury of this store, the quality of its products, its fame, its originality, its art and we note the writing of the phrase (Welcome where the fashion is art)

And this sentence contains indicative content that the outfits and fashions in this store are our art and talent and you will enjoy our shopping that's why he wrote (your best shopping) its aim is to reach the wealthy class and rich people And who is interested in art and excellence.[1]

REAL LIFE INTERACTION

Interactive advertising focuses on engaging the reader or potential customers with smart visual design whether it is printed or tactile objects to deliver ads with a pragmatic message.

Since the common way of interaction between the company and the customers takes place through digital means (for example social media, email, and the website), intelligent interactive design is an amazingly dynamic mental dialogue between visual materials(with incorporating of simple texts sometimes)and individuals in real life, stimulating them to think about what they see.

By maximizing the practical potential of the message, this type of advertising can grab our attention with unusual deigns while at the same time making sure that a new way of interacting is presented, so this whole process of advertisement medium can introduce a new way of delivering a pragmatic message. Whether it's inviting people to take a funny photo, solve a puzzle, or test drive a car.

The following examples is a representation of real-time interactions and a direct speech between the company and the customer.

The target audience in this case are dog owners who shop in malls.

Therefore, this ad addresses the consumer problem of keeping the family dog free of fleas and ticks.

So the intended message is "Get them off your dog" and everyone will be happy…

The theme of this ad is simple; Frontline is a caring brand that is concerned about keeping pets healthy.

The use of large key visuals is important in this ad's strategy, and the dialogue between the company and the customers.

This ad would not be as effective if it was the same size but filled with scientific facts and stats about how Frontline can help keep your dog healthy.

The nature of the ad allows for great interaction, and the amplification of fleas. (This dog looks extremely itchy).

[1] Source: http://24. media.tumblr.com/tumblr_lb0m5nadrv1qduvm4o1_500.jpg

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Alteco super glue: Steel span wire!

Note here that the message conveyed by this advertisement about how strong this adhesive is by (fixing the bridge pillars).

Through this type of advertisement, which depends on sending a quick and simple message with a popular character and on direct repetition with a large number of people that can create a mental image of this product.

IWC watches Very creative!

Due to the large number of passengers in buses and their frequent use.

Of public transport, IWC watches took advantage of this situation and designed bus handles with a model for their products.

We notice here in this type of advertisement that it is directed at stylish people, and people with limited income.

This may give the passengers the opportunity to get acquainted with the watch model and try it thus making it stuck in their minds.

Through the implicit message (This watch looks good on you) during the costumers bus ride, which permanently reminds him of the product (every time that he uses the bus).

This type of communication is very important because it is a direct contact with the costumers, and the method of influencing and communicating the message is extremely important.

ACKNOWLEDGMENT

The preferred spelling of the word “acknowledgment” in American English is without an “e” after the “g.” Use the singular heading even if you have many acknowledgments.

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THE PRINCIPLE OF FAIRNESS IN INTERGOVERNMENTAL RELATIONS: AN ANALYSIS OF RUSSIA'S CONSTITUTIONAL COURT RULINGS

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Abstract. The creation and use of automated information systems of population registers reflects the necessity to ensure citizens' rights in various spheres of public life - education, healthcare, taxation, social security, etc. However, the security of citizens' personal data stored in them is questionable for a large number of people. So, does the Unified Register of data on the population bring positive or negative effect? Some issues pro and contra of such Unified Register are analyzed in the presented paper**.**

Keywords**:** *register, personal data, Federal Tax Service, public services, budget policy, information security***.**

INTRODUCTION

Nowadays, due to the widespread development of technologies and informatization of the activities of state bodies, which is one of the main tasks set in the Strategy of the Information Society development in the Russian Federation for 2017-2030, the introduction of Federal Register of information on the population of the Russian Federation is more than ever a relevant tool that contributes to the transformation of the Russian Federation into a post-industrial information state.

In this regard, in June 2020, the Federal Law "On the Unified Federal Information Register containing information about the population of the Russian Federation" was adopted. The law provides for the creation of a Federal Register of information on the population of the country with the Federal Tax Service as its operator. The centralized database will include data on Russians, foreigners and stateless people who are recognized as refugees and who temporarily or permanently reside in the Russian Federation or work in it.

RESULTS

The Register will contain the following information: full name, date and place of birth and death, citizenship, and marital status; - passport data and documents on education, qualifications, academic degree and academic title; - data on tax, military, employment and compulsory insurance systems registration; - an account on the Public Services Portal of the Russian Federation.

The information will be delivered to the Register through the system of interdepartmental electronic interaction. The Register will allow to obtain complete and reliable information about citizens, increase the efficiency and quality of public services provided to the population.

Register advantages

1.All information about a person will be collected in one place. When receiving public services, a person will not need to collect certificates and documents from different institutions.

2. Procedures for obtaining various benefits and subsidies, tax deductions, mortgages and other loans will be simplified (there will be no need to collect income certificates).

3. It will be easier to change documents: passport and other ones. When changing documents, the information will be updated automatically.

4. The introduction of the Register will help to avoid the problem of "doubling data" in the operational systems of state bodies.

5. The Register will have a positive impact on the development of the budget policy by providing more information for making socially significant financial government decisions.

Register disadvantages

1. The emergence of a risk of leakage of large amounts of personal data, a threat to information security.

2. Distrust of citizens, fear of being chipped and drawing analogies with the regime of concentration camps.

3. There are fewer and fewer opportunities for doing business in the shadow economy due to the receipt by the Federal Tax Service of data on all property of citizens and transactions requiring registration with state bodies.

One of the goals of the introduction of the register, according to the law, is to improve the provision of state and municipal services and the performance of state and municipal functions, including in electronic form. The Register will help to get rid of the problem of data doubling, when the information systems of state bodies of different levels or departments contain similar information about people with the same name, and law enforcement agencies may mistakenly impose penalties or apply other measures of state coercion to a wrong person.

Due to the completeness of its data, the Register will help to determine the strategic directions of further economic and social development of the state more accurately, speed up the process of making managerial decisions, help to plan budgets more competently, in particular spendings on social benefits, since when making such decisions, the state will have an exact number of people who fall under the conditions of payment of a subsidy.

Thus, the following conclusion can be drawn: the Register is an element in the work of state bodies that can improve the lives of both ordinary citizens in view of improving the ways of obtaining public services, and the state, represented by authorized bodies, in terms of providing more data for making socially significant decisions. It has already shown its effectiveness in many countries, which, in particular, include Finland, Belgium, Belarus, etc. Of course, there are information security risks in terms of data leakage, but risks can be found everywhere. Stopping technological progress because of these concerns is a dubious and short-sighted matter. If we behaved in this manner, people would still live in caves and eat raw food, since the invention of steam engines, electricity and other discoveries similarly carried risks to the safety of people's lives, but eventually they raised its quality to a completely new level**.**

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MECHANISMS OF TECHNOLOGY TRANSFER IN RUSSIA

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Abstract. The article is devoted to the study of modern infrastructure elements of technology transfer in Russia. In accordance with the stated aim, the article presents the key participants in the TT process in Russia, their main features compared to foreign organizations of similar profile and directions of cooperation. An analysis of the forms and strategies of transfer in Russian practice has been carried out. On the basis of the analysis, it is concluded that there is a need to improve the mechanisms of interaction of transferees**.**

Keywords: *technologies, technology transfer center, research centers, technology transfer***.**

INTRODUCTION

In Russian economic science and practice «TT» is defined as the «process of bringing technological innovations into the market relations» and is understood as the «technology transfer in the direction of application of knowledge» The process of transferring technologies from one sphere of activity to another or from one field of application to another, and the use of intellectual property developed and tested in some areas (in some enterprises) in other areas (enterprises).

The TT process is therefore implemented by key stakeholders, including: 1) technology authors (developers) (small and medium-sized innovation organizations, individual developers); 2) technology investors (investment funds, non-state investment funds, venture capital funds and «business angels», production organizations); 3) intermediaries (TT centres, science and technology parks, science and technology consulting organizations, innovation relay centres, etc.). Rights holders, i.e. owners (donors) or purchasers (recipients) of technologies, with corresponding rights to them, can only be representatives of the first of the three identified groups of participants in the TT process. The introduction of intellectual rights, particularly exclusive rights, is effected by the right holder's disposal of his or her exclusive right to IP.

MATERIALS AND METHODS

The Centre for Commercialization of Technology (CCT) is an organization that aims to generate income from research carried out in public research organizations and private companies. This income can be derived from any commercial agreement, including: use of intellectual property rights, creation of new technology-based companies, research contracts.

Community centres are an important element in meeting the challenges of commercializing new technologies. Their tasks include experiments, research, innovation projects, education in the development, production and operation of new technologies, etc.

Technology transfer centers (CTCs) are specialized organizations established in the form of a legal entity or as a unit of a major educational, research and production organization. Objective - To provide advice and other support to innovators of technologies and products in their further transfer, deployment and absorption processes, as well as to facilitate networking among scientists and scientists Research and production agents at the national and international levels. In the Russian Federation, the CPT has accumulated more experience of organization, evaluation, support, which is the basis for more attention to structures of this type. The reasons for this are repeated attempts to implement administrative support measures for the CTCs in the context of public programs; terminological certainty is also important here.

It is important to highlight the peculiarity of the Russian CTCs in comparison with foreign CTCs: in the «typical» Western CTCs a complete innovation chain is created allowing to lead the project from an idea to a small enterprise, while in Russian practice such a model has not taken hold; The reasons for this are the problems and barriers identified above in the implementation of TT as a whole.

As a rule, CTPs are created in the following forms: a) a structural unit; b) a legal entity - a commercial entity; c) a legal entity - a non-profit organization; d) a consortium - a simple partnership.

One of the activities of TT organizations is the promotion of small innovative enterprises (for example, with the participation of a university). The opportunity to be one of the founders of economic companies was given to universities in 2009. Federal Act N 217-F3 of 02.08.2009 «On the introduction of amendments to individual legislative acts of the Russian Federation on the creation of economic societies by budgetary scientific and educational institutions for the practical application (implementation) of the results of intellectual activity». Small Innovative Enterprise (hereinafter referred to as IPI) is the economic society whose activity is the practical application (introduction) of RID (programs for computers, databases, inventions, utility models, industrial models, breeding achievements, integrated chip topologies, production secrets (know-how) for which the university has exclusive rights.

Furthermore, techno-park structures - scientific and technical complexes of enterprises; provide conditions for acceleration of the process of commercialization of new technologies, there is created a base for realization of development up to the final product and production based on a techno-park.

In terms of increasing complexity, the technological park structures can be arranged as follows:

1) A technological (innovative) incubator is a technology-oriented variant of a business incubator that targets only high-tech firms, a multifunctional complex offering a variety of services to new innovative firms, emerging and emerging.

2) Technopolis is a form of free economic zone based on the integration of highly developed production, science and education. ... is a city in which «critical

mass» of education and culture, science and technology, knowledge-intensive business and venture capital generates «chain reaction» of scientific and business activities of international, global scale.

Technopolis generally has the status of a Special Economic Zone (HIZ) or Technical Implementation Zone (TVZ). Special Economic Zone (SEZ) - Territory with special legal status and preferential economic conditions; Technical-Introduction Zone (TEZ) - SEZ for the creation and sale of scientific and technical products; Transfer of science and technology products to industrial applications.

3) The Science Park is a proprietary organization that: a) has contacts with universities, other higher education institutions or leading research centres; b) is established to promote the development of knowledge-based enterprises, usually located in specific territories; b) Performs a management function, including the transfer of technology to enterprises located in the technological park

For example, the European Association for Transfer of Technology, Innovation and Industrial Information TII is an independent association of professionals in TT and Support for Innovative Development with the goal of developing a knowledge-based economy and promoting welfare processes, has about 220 members from 30 countries in all areas of innovation support. The Association of European Professionals for the Transfer of Science and Technology (ASTP) was established in 1999 on the initiative of a multinational group of TT professionals. ASTP has more than 500 members from 35 countries.

An example of the Russian association TT is the National Association of Technology Transfer (NATT), founded in May 2017 by the non-governmental development institute «Innofoor» and the Federal Service for Intellectual Property (Rospatent) to promote the implementation of the Strategy for Scientific and Technological Development of the Russian Federation.

RESULTS

The great diversity of TT support organizations seems to be a mixed factor in Russian practice.

On the one hand, this should increase the accessibility of support measures and increase the number of organizations that can benefit from them. In practice, the uniformity of the instruments offered by the organizations, the limited possibilities of «intermediaries» to form really interesting proposals (both for technology developers and investors) Together with the general TT issues discussed above make their work ineffective and the number of organizations able to use these measures is small (Percentage of total number of organizations that recognize the need to engage intermediaries to bring innovative development to the market - about 30% based on the results of expert survey of representatives of innovative regions of the Russian Federation (October 2020).

On the other, there is a duplication of functions, i.e. at the end of the innovation process, the technology developer can count on the support of almost all organizations in the market - «intermediaries» in the early stages, he received almost no support.

The third aspect is the «substitution of concepts»: organizations modelled on the CTT model in the context of, for example, the State Support Program - further,

in the absence of a clear strategy and business model, in 2-3 years either leave the market or start to have features (to perform works, to provide services) commercial consulting organizations, implementing relevant projects.

Finally, in the Russian TT market, the instruments of interaction (innovation networks) are extremely underdeveloped compared to those of foreign countries; the activities of associations (NATT, etc.) do not cover the whole spectrum of issues - as a result, a number of the most important problems of TT are not resolved, although recognized as relevant by various scientists and practitioners.

DISCUSSING

TT's strategies are most determined by its models, which, because of the fundamental differences within the organization, are implemented primarily at the levels of government.

For example, the three-tier model assumes synchronous implementation of the TT process at the regional/national/transnational level; it reduces the time taken to find technology partners/strategic investors by 30 to 40 per cent by increasing the number of science-related projectstechnology cooperation, expand the scope of the search for technological partners and strategic investors.

The simplest forms of interaction are realized at the regional level of TT ; this ensures speed of search of technological requests and offers.

A more constructive mechanism for TT is a national-level network, a network of regional-level nodes with a coordinating structure at the national level (national coordinating center).

Further, the national level of TT links regional brokers and regional TT entities with technology partners and strategic investors through a national coordinating structure.

At the transnational level, national levels are linked through a transnational focal point. The nodes at the transnational level of the model are the regional and national TT structures . The transnational level makes it possible to broaden the scope of the search for developers and implementers of high-technology projects .

With regard to the level of corporate, i.e. TT mechanisms in enterprises, TT strategies are being developed to ensure it. The Technology Management System is structured by assigning Technology Readiness Levels (TTCs). At each level, there is a definite system of performance evaluation against which the decision is made to move to the next stage of designing and implementing different types of TT strategies: the level of development of in-house research and development centers; Features of interaction with universities and sectoral research institutes, etc. Different combinations give five types of TT strategies :

1) Defensive - development of internal research and development with own financial means; the innovative solutions created are applied primarily within the organization and its subsidiaries.

2) Aggressive - active use of venture capital investments, development of necessary technologies by third-party companies, search of innovative solutions in the external environment.

3) Absorptive - acquisition-oriented, commercially ready-to-use technologies developed by third-party firms or research centres.

4) National - to achieve corporate and national goals - is a priority for organizations with a large share of State participation in the capital structure.

5) Mixed - a combination of the various mechanisms of intra-firm and inter-firm TT.

By using a particular type of strategy as a TT mechanism, the organization is able to select the necessary range of actions and practices that are needed at the current moment of life

The main indicator of the effectiveness of TT in relation to this provision will be the positive value of the net present value of all transactions. The net present value is an additive criterion (the developer and the user have their own economic goals in the TT process) and a positive investment result is important for each party, the positive value of net present value must be achieved by both parties participating in TT.

For the developer, the measure of net present value can be specified as follows: net cash flows generated by the developer over the years of the TT project should take into account the costs of technology creation, technology valuation, patenting, results (developer's cash receipts in the form of royalties or a lump-sum payment) when entering into a license contract, developer's costs at the post-license stage.

For a technology user, the net present value is the balance of costs at the technology acquisition stage, the cost of technology adoption, and is expressed as the net profit from the sale of products produced with new technology.

CONCLUSIONS

In conclusion, a number of conclusions are relevant to the infrastructure, strategies and evaluation criteria of TT discussed above.

First, a sufficient diversity of support institutions has been identified, and the high level of activity of innovative entrepreneurs is a good resource base for improving TT mechanisms. However, there are several conditions (both common to RF economic entities and specific to TT entities: lack of or imperfect IP legislation, low interest of TT participants in innovation results, low solvent demand for technologies, etc.) that determine the ineffectiveness of existing support institutions.

Second, it has become clear that the TT process can take place at various levels, from the international to the corporate level, which generally corresponds to the levels of formation and operation of regulations and can therefore be regulated at the appropriate level if necessary.

Thirdly, the lack of evaluation criteria noted above, which allow for the targeted selection of projects, the evaluation of their implementation and the evaluation of their results, is one of the most significant (albeit «tactical») barriers to more effective TT processes. An integrated approach to the development of such a system should aim at the immediate objective of improving / optimizing the organization's technological portfolio, introducing modern systems of innovation project management, Development of Key Performance Indicators (KPI), Balanced Scorecard (SBP / BSC), TT motivation, risk management, asset management, etc. (primarily) intangible assets.

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TAX INCENTIVES FOR INVESTMENT ACTIVITY ORGANIZATIONS

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Abstract. An algorithm of the mathematical model for calculating investment tax credit, which allows a taxpayer to determine the formation of an effectively credited business.

Keywords: *investment activities; investment tax credit; tax incentives; corporate income tax.*

TAX MECHANISMS OF STIMULATION OF INVESTMENT ACTIVITY

Since the end of the XX century a growing number of developed countries have actively used various mechanisms for tax incentives of innovation which proved to be a more effective way to support science and innovation than direct subsidies and provided significant private investment in research and development (Table 1).

Table 1.Tax mechanisms of stimulation of investment activity.

The mechanism of tax incentives	**Object of incentive**	**Countries using this measure of tax incentives**
Write-off of expenditure on research and development	Investment in research and development, the growth rate of investment in research and development	Austria, Australia, Belgium, Great Britain, Hungary, Germany, Denmark, etc.
Research Tax Credit	Investment in research and development, cooperation between business and research environment	United States, France, Norway, United Kingdom, Canada
Special modes of depreciation of fixed assets	Investing in expensive research equipment	Austria, Belgium, Denmark, Italy, Spain, Ireland, Portugal, United States, Sweden
Investment tax credit	Investment in technological upgrading companies	USA
Tax relief on foreign source income	Transfer of technologies	Countries - OECD
Tax relief on foreign source	Transfer of technologies	Countries - OECD

The mechanism of tax incentives	**Object of incentive**	**Countries using this measure of tax incentives**
income		
Tax relief on profits from the sale of shares	Investments in high-risk long-term projects, diffusion of innovations	USA
Tax salary credit	The volume of investments, investments in human capital	Netherlands

Let us consider in detail tax incentive mechanisms listed in Table 1.

Research Tax Credit (RTC) aims to increase total spending on research and development (R & D), as well as redistribute it between individual expenditure items and also allows deducting from the amount of tax on profits part of the costs of implementation of innovation, defined by interest rate of the tax credit.

Special modes of depreciation of fixed assets (capital expenditure) are aimed at encouraging the acquisition of capital assets. In the EU and the U.S. there are two variants of special modes of depreciation of fixed assets: free and accelerated depreciation. Free amortization means absence of any specific pattern of deduction and suggests the possibility of instantaneous complete deduction of all capital costs associated with carrying out R & D during the first year. Accelerated depreciation allows companies to write off significant amounts for using the equipment and in a shorter time than it was actually used. In contrast to free damping this method is less flexible.

Another tool of tax incentives for innovation is *investment tax credit*, which is essentially like accelerated depreciation and allows the company to write off most of the cost of equipment in the first years of its operation.

An effective tax incentive for the internationalization of the innovation process is introducing benefits on income from foreign sources. If the company opens a division in another country, it usually uses technology and patents, rights for which belong to the parent organization, for which it pays royalties. In such cases, one can avoid double taxation through the conclusion of bilateral agreements between the countries concerned. Absence of bilateral agreements eventually increases the tax burden, which has negative impact on technologies transfer between countries.

A similar tool to stimulate innovation are *tax breaks on profits from the sale of shares* related to the technological assets. To attract investors for highly risky innovation projects, many tax laws provide a special tax on income from the sale of securities, which were owned for more than one year, which reduces motivation of speculative investors and stimulates investment in long-term projects.

In the private sector innovation is driven by reduction in staff salary costs, which are part of obligatory insurance contributions, as well as reducing income and social taxes of scientists. This measure is a tax incentive called tax research salary credit (TRSC), which compensates for the cost incurred by the entrepreneur

on highly qualified and highly paid work and is a measure of dual stimulation, and both the entrepreneur and the research worker.

In world practice, as a rule, there are three schemes of computing funds allocated as tax research credit benefit from it:

- On the basis of total annual expenditure on R & D organization.
- On the basis of increased spending on R & D in the current year compared to the average costs for these purposes in previous years.
- A combined approach: one part of the appropriation is calculated based on total annual expenditure on R & D, the other - based on increased spending on R & D in the current year compared to the average cost for these purposes in previous years.

In Russia, tax credit investment refers to the ability of economic agents within a certain period to reduce the tax payable to the budget, followed by gradual payment of the principal and interest.

Investment tax credit is available for corporate income tax, as well as for regional and local taxes (approved by the authorities of the Russian Federation or by the local authorities), if the organization holds:

- Current research and experimental development (R & D).
- Implement modernization of its own production and innovation, including improvement of existing technologies.
- Creates new types of materials or supplies.
- Implements programs for socio-economic development of the region.

The essence of this mechanism is to change the deadline for tax payments. Organizations are given the opportunity for a certain period and within certain limits to reduce their tax payments with subsequent gradual payment of loan principal and accrued interest.

CALCULATION OF THE EFFICIENCY OF LEVERAGE

The decision on granting a loan to pay federal taxes is taken by FTS of Russia, and payment of state and local taxes – is regulated Federal Tax Service of Russia on the subject of the Russian Federation on the location of the organization.

Tax credit provision is based on the returning the borrowed amount of money through tax deduction rise principle. Tax credit, like a bank credit, has to meet three compulsory requirements: to be term, chargeable, recoverable. The only difference between the tax credit and the bank credit is that the tax credit interest rate must be lower than the bank credit one. Despite the fact that the text credit is quite similar to the bank credit it has some significant differences, among which economic interest of a lender in the borrowed money performance or so-called credit aftereffect. There is not the aftereffect in the bank credit case as the bank gets nothing from increased profitability provoked by the borrowing.[2]

In tax credit case there is an aftereffect of the governmental interest in increased profitability as therefore it will get more tax payments. Thus, both company and government benefit from the tax credit. The credits direction towards production modernization and expansion leads to the growth of production, income which in turn affects the growth of tax payments. In case the

efficiency of borrowed money use is that low so the credit is not recovered, the rest part will be financed from other sources. Thus, the borrower will get economic incentive for the best borrowed money use possible.

The maturity plays a role of desired value. To build the model to determine the required value, i.e. the time of repayment of the loan there were taken the following variables: D_i - taxable income of the enterprise in the i period; N_i - tax charge in the i period; Q - received amount of tax credit; α tax rate, t is the maturity of the tax credit; ΔD - increment taxable profit of the enterprise on development tax credit; γ - rate tax credit; τ - time of development tax credit (delay time).

Let us consider the dynamics of the growth of tax revenues without the tax credit and the possible dynamics of growth of tax deductions defined by the results of the use of the loan.

Mathematical model for determining the desired quantity includes the following considerations:

- as a base the dynamics of growth of tax revenues in the absence of additional funds is considered, leading to growth of tax payments, i.e. without tax credit

- as expected gain is considered possible dynamics of growth of tax deductions defined by the results of the use of the relevant loan.

We denote the function *Nл* as characterizing the dynamics of receipts of tax deductions in the budget f(.) together with fees for credit φ(..), excluding the after-tax credit. Function N_n shows the dynamic of similar revenues, taking into account the mentioned aftereffect. [2]

The equation of return of borrowed funds through increased tax revenues is written in the following form:

$$Nл = Nn, \quad (1)$$

where

$$Nл = f(Di, Q, \alpha, t) + \varphi(Q, \Delta D, \alpha, \gamma, \tau, t),$$
$$Nn = F(Di, \Delta D, Q, \gamma, \alpha, t, \tau).$$

Function *Nл* characterize the dynamics of receipts of tax deductions in the budget *f*(.) together with fees for credit φ(..), excluding the after-tax credit. Function *Nn* shows the dynamic of similar revenues, taking into account the mentioned aftereffect.

The left part of the initial equation:

$$N_л = \sum_{i=1}^{t} N_i + Qt\gamma \quad (2)$$

Tax deductions in the i period:

$$Ni = \alpha Di, \; i = 1, t. \quad (3)$$

Let *Di* = *D* and putting (3) in (2) will get:

$$Nл = \alpha Dt + Qt\gamma = t\,(\alpha D + Q\gamma).$$

For deriving the formula for calculating *Nn* from the right side of (1) let us consider a sequence of tax deductions in time:

$$\left.\begin{array}{c} N_1 = a(D - Q) \\ N_2 = aD \\ N_3 = aD \\ \dots \\ N_\tau = aD \\ N_{\tau+1} = a(D + \Delta D) \\ N_{\tau+2} = a(D + \Delta D) \\ \dots \\ N_{\tau+s} = a(D + \Delta D) \\ \tau + s = t \end{array}\right\} (4)$$

τ - time of development tax credit

s - time payment of tax credit

t - the period of repayment of the tax credit

N_i, i=1, t from (4) sum gives:

$$N_n = N_1 + \sum_{i=2}^{\tau} N_i + \sum_{i=\tau+1}^{t} N_i \text{ . (5)}$$

Given (4), (5) formula gets the following form:

$$N_n = \alpha(D - Q) + \sum_{i=2}^{\tau} \alpha D + \sum_{i=\tau+1}^{t} \alpha(D + \Delta D)$$

Or

$$N_n = \alpha(D - Q) + \alpha(\tau - 1)D + \alpha(t - \tau)(D + \Delta D).$$

By equating the first part Nл and Nn , we get:

$$t(aD + Q\gamma) = a(D - Q) + a(\tau - 1)D + a(t - \tau)(D + \Delta D).$$

The decision of the latter relative to t gives:

$$t = \frac{\frac{Q}{\Delta D} + \tau}{1 - \frac{Q\gamma}{\Delta D a}}$$

The analysis of the expression (6) shows that the tax credit on the principle of return of borrowed funds through increased tax revenues is possible at a certain ratio, included in the formula (6) units.

Indeed, the denominator of the formula (6) cannot be negative, because the time is strictly positive. Therefore, the restriction:

$$1 - \frac{Q}{\Delta D}\frac{\gamma}{\alpha} > 0 \text{ (7)}$$

must be strictly adhered to. This can be achieved by several ways of selecting values: Q - amount of the tax credit; ΔD growth of the taxable profit; rates of tax credit - γ.

Thus, in any case known (set) discusses three values, and the fourth is calculated from the condition (7).

The result of the following calculation is formula:

When selecting the rate of tax credit:

$$\gamma < \frac{\Delta D}{Q}\alpha \text{ . (8)}$$

When calculating ΔD:

$$\Delta D > Q\frac{\gamma}{\alpha} \text{ . (9)}$$

In case of a choice Q:

$$Q < \Delta D \frac{\alpha}{\gamma}. \quad (10)$$

The most important is the first inequality with using formula (8). For the estimate of the limit value of the effective using of tax credit through the increase of taxable base (ΔD), the information from formula (9) also will be very useful. During the assessment of a business plan's efficiency, you should use formula (10), which allows you to do it in the first approximation.

When a tax credit operates, a redistribution of tax burden often take place at the beginning of project's implementation burden on investor decreases because of the tax's preferential rates on an increase of organization. Further the burden will increase: an investor has to pay his taxes at current rates and the sum of his loan interest.

Let us consider the impact of the amount of profit's tax rate on Net Present Value or *NPV* of the company's investment project. We can make significant influence on increasing or decreasing of company's investment activity using the regulation of the rate.

The company should estimate the total discount value of *NPV* for making the economic decisions, whether it is worth to invest in a new project. The investor has to estimate the up-to-date value of money (net inflow from the operation), because he makes present decisions.

Net Present Value (*NPV*) – is the current value of future revenues excluding the costs of current period of time, which is defined as the sum of the current effects for whole calculated period, given to the first step, or as the excess of the integrated results over the integrated costs.

We can use this formula for the calculation of *NPV* including the company's income tax [4]:

$$NPV = -I_0 + \sum_{t=1}^{n} \frac{(CF_t(1-T) + T * A_t)}{(1+i_r)}, \quad (2.1)$$

I_0 – capital investments during the period $t = 0$;

CF_t – repayable flow of investments during the period t (amount of the balance sheet profit);

A_t – sum of the depreciation charges during the period t;

T – income tax rate

i_r – rate of the discounting;

n – period of the project.

According to this formula, the net profit and the depreciation charges are discounted to the present period of time, after that the amount of the capital investments excludes from them.

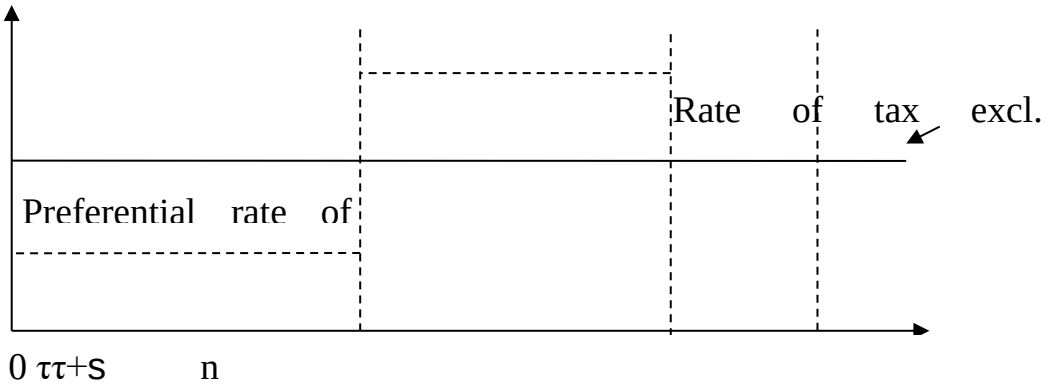
Let us consider the next model for solving the problem, which consists of investor (company) and the managerial body. Let us imagine, that the investor's behavior is rational and he can choose only two ways of further actions:

1) implementation of the investment project;

2) investment in securities [3].

The investor is provided the opportunity of the obtaining a credit on income tax. We will consider that he is obtained a credit and all the legal aspects are

observed. In this case we can underline three main periods of the project's implementation (pic.1):



Picture 1. Period of investment project's implementation

1. Period of credit's obtaining $(t - s)$ – is a period, during which the investor pays income tax of the company at preferential rates. In this case the formula for *PV* will look as follows:

$$PV_1 = \sum_{i=1}^{\tau} \frac{(CF_i(1 - T_л) + T_л * A_i)}{(1 + i_r)}, (2.2)$$

$T_л$ – preferential rate of income tax.

2. Period of returning the debt $[(\tau + 1)— (\tau + s)]$ – is a period, during which the investor pays back the main amount of the investment tax credit and the interest for using it. The investor also pays taxes at current rates and returns the rest interest for using the credit, according to credit agreement. The Net Present Value will be calculated in this period of time according to this formula:

$$PV_2 = \sum_{i=s+1}^{s+t} \frac{(CF_i(1 - T) + T * A_i) - N(1 + p)/t}{(1 + i_r)}, (2.3)$$

T-«ordinary» rate of income tax;

p – interest rate for using the privilege of income tax;

t – the time, during which the credit should be repaid;

N – general underpaid amount, because the interest rate was reduced:

$$N = \sum_{i=1}^{s} CF_i(T - T_л). (2.4)$$

3. Period $(\tau + s + 1) - n$– is a period, during which the investor pays back the main amount of debt and interest and also pays income tax at current interest rates:

$$PV_3 = \sum_{i=s+t+1}^{n} \frac{(CF_i(1 - T) + T * A_i)}{(1 + i_r)}. (2.5)$$

Thus, the investor's target function looks as follow:

$$NPV = -I_0 + PV_1 + PV_2 + PV_3 \rightarrow \max \quad (2.6)$$

It is very important to underline, that the investor will invest in Research and Development, if *NPV* of project is equal or higher than *NPV* of investment the same flows in securities:

$$\sum_{i=1}^{n} \frac{CF_{\text{п}}}{(1+i_r)} \geq \frac{CF_{\text{ЦБ}}}{(1+i_r)} \,. \quad (2.7)$$

According to above-mentioned, the extension of the income tax rate increases the investment appeals of the project. The greatest benefit for investor is observed when we use nonlinear depreciation. The most optimal tax rate, using both methods of depreciation is in the range from 60 to 70 percent. Further increasing of tax rate can reduce the investment appeal of the project.

Thus, we can conclude, that for appeal's promotion of the investment projects it is necessary to increase the income tax rate, of course, within the reasonable limit, which we can also calculate.

For the further investigation of the practical orientation of above-mentioned formulas, we can calculate the degree of an impact of income tax on net present value of the project. let us consider the following example:

Example.

For the implementation of the project «creation and introduction of the information and analytical system, which manages industrial and logistic costs» JSC «Croc Incorporated» makes an agreement with managerial bodies about the providing of an investment credit for the first four years of development.

The acquisition of company is supposed to finance from equity's capital of the *company. The initial investments are 12,0 mil. Rub. A period of the depreciation - 10 years. The depreciation charged by straight-line method at the rate of 0,83%. The discount rate is 6%, and the regulation of discount - 22%.*

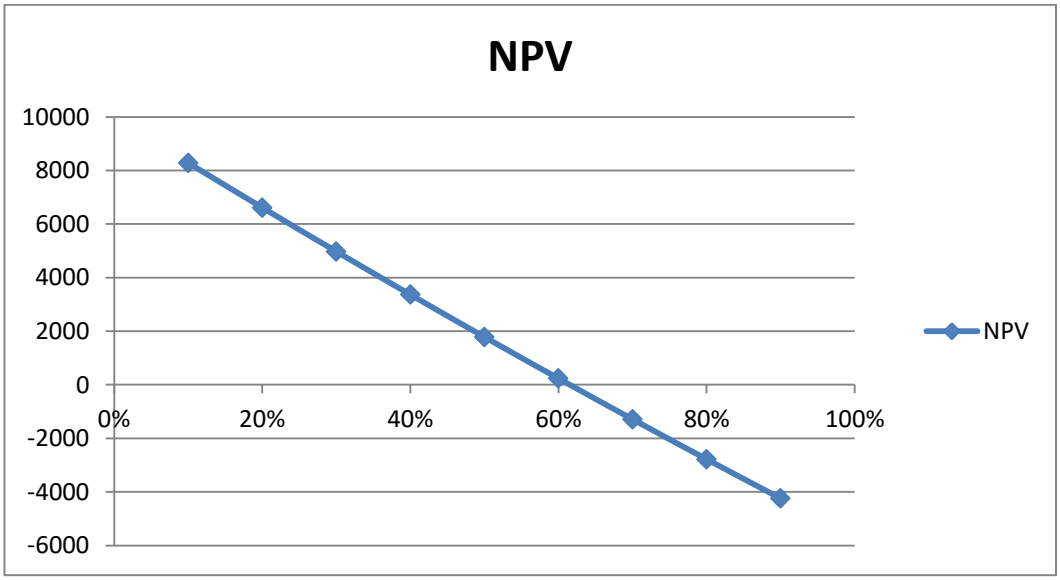
We will change the Net Present Value in the range from 10 to 90% for estimate of the income tax rate over it.

Using the above-mentioned formulas, we can calculate the amount of NPV for each rate and construct the graph of the NPV's dependence from income tax rate (tabl. 2):

Table 2. NPV of the project

T	*NPV*
90%	*-4241,46*
80%	*-2778,75*
70%	*-1286,69*
60%	*234,7161*
50%	*1785,481*
40%	*3365,6*

T	*NPV*
90%	*-4241,46*
80%	*-2778,75*
30%	*4975,073*
20%	*6613,899*
10%	*8282,08*



Picture 2. The graph of the NPV's dependence from income tax rate

We can notice on Pic. 2, that the reducing of income tax rate increases NPV and, in a consequence, the investment appeal of the project.

The investments in Research and Development differ by the increased risk. As soon as the opportunity of an incomplete feedback of investments in Research and Development appears, tax burdens become extremely high. First of all it reflects the fact, that the given value of investment income during the existence of an asset is considerably less for a partly fail than in case of successful project.

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POSSIBILITIES OF ASSESSING THE EFFECTIVENESS OF TECHNOLOGY TRANSFER IN RUSSIAN INDUSTRIES

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Abstract. The article presents the main stages of the innovation process, the specificity of innovation process and its two-stage nature (where the first stage is completed with the creation of «novation», the second - «innovation»). The authors present a business planning process and emphasize the peculiarities of its development in institutions scientific and educational organizations. On the basis of such analysis, the authors make recommendations for business plan developing for such types of organizations.

Keywords: *business plan, innovation, intellectual property rights, results of intellectual activity, mean of identifications.*

INTRODUCTION

This article will deal with the national transfer of technology, which involves joint interested activities of legal, managerial, economic, institutional and economic entities within the State. Such transfer shall be provided by a single legal field and uniform basic rules for the conduct of economic activities within the State.

A major challenge is to reconcile all the interests of actors involved in the national technology transfer process. The State should set the tasks of measuring technology transfer, collecting data and monitoring the implementation of national programmes for innovation and industrial development, scientific and technological development and product development for export.

The documents that need to be harmonized for innovative sectoral development are defined below.

Table 1. Regulatory support for innovative sectoral development

Level	Block Name	Description
State	**Official documents**	Key strategic documents defining long-term development. These may include a General Socio-Economic Development Strategy (strategic priority - industry, economic diversification), a sectoral Strategy and tactical documents. For example, a national programme, a strategic plan and others.
Business	**Official Documentation**	Key strategic documents defining long-term development. These may include a long-term development strategy and tactical documents. For example, a strategic plan and others.

Level	Block Name	Description
Scientific sector	**Official documentation**	Key strategic documents defining long-term development. Presidential Decrees, Government Decrees, FOIW and PRI Orders

Given the key influence of industries on the development of any object of strategy (country, region, city, large business, scientific sector), not only the economic but also the social efficiency of the branch should be measured.

MATERIALS AND METHODS

Industry assessment should be based on a chain of technology transfer:

1. Science sector. Who determines research topics? Are they related to strategic documents at different levels? How is a request for R&D made? Are the themes related to world-level assessment and trends: sectoral, regional, national, global?

2. Industrial Enterprise. Is the alignment of corporate strategic documents with national documents taken into account? Whether there is regular communication with FOIL and ROI.

3. State. Is there a monitoring system? Is it sufficiently objective?

Technology transfer is a process that connects the components of an innovation ecosystem, transforming the results of research, development and technology into benefits for society and the economy. The long-term effects of innovation are reflected in the diffusion of material knowledge and innovation in society. Complex and numerous feedback mechanisms allow the identification of the ultimate impact of innovation on socio-economic processes.

Technology transfer is a multidimensional and complex process. Indicators of innovation activity, both for individual innovators and for industries, are required to fully capture this process. It also requires the identification of indicators for measuring intellectual property objects, mechanisms for technology transfer, the functioning of innovation infrastructure actors, and public and business organizations involved in innovation.

Public administrative resources protect the interests of inventors, and extensive databases allow for systematic analysis of patents. Patent data provide unique and useful information about inventions, revealing in which areas of technology inventors protect their intellectual property through a patent.

Patenting inventions is not sufficient to transform knowledge into innovation, and it is the transfer of technology that is crucial to innovation.

The technology transfer mechanism is implemented through licensing agreements, support for start-up companies using these licenses, as well as joint activities of universities, laboratories, design bureaux, engineering centres, Individual researchers and industrial enterprises in knowledge-intensive development.

The licensing agreement is one of the key instruments for technology transfer. Licensing allows research organizations and innovative companies to transfer intellectual property to counterparties using the market mechanism. Income from

outside the country that innovators derive from the use of their intellectual property is a component of world services exports that plays an important role in the trade balance. Income from the export of intellectual property is an indicator of technology flows in the transnational economy and the value of intellectual property in the international knowledge-based market.

Technology patenting and licensing are key indicators of innovation in universities and research organizations in many countries. Universities in the United States have been actively collecting and sharing scientific and technological data since the adoption of the Bay Dole Act in 1980, according to which higher education institutions can control their research inventions, federally funded. The United States Association of University Technology Managers plays a special role in supporting the full spectrum of work, from corporate collaboration to intellectual property protection. The Association is a non-profit leader in training, retraining and inspiring professionals to develop academic research and promote innovation. The members of the Association of University Technology Managers work in close cooperation with business partners, building up dynamic, best professional practices in technology transfer.

Important indicators of the transfer of university knowledge are the transfer of developed technologies and inventions through licensing agreements, cooperation agreements and joint activities. Over the past decade, the number of inventions, licensing agreements, and technology startups in the US academic environment has grown rapidly. The total number of active university licenses was 45,657 in 2017.

The number of start-ups affiliated to universities under licence agreements has exceeded 1,000 (see table 2). Table 2.

Table 2. US University Intellectual Transfer Rates 2007, 2012 and 2017

Transfer of Results of Intellectual	**2007**	**2012**	**2017**
Invention disclosure and patenting:			
– *inventions*	14 398	19 827	24 998
– *patent applications filed*	11 797	14 192	15 335
– *issued patents*	3 622	5 153	7 459
Licensing:			
– *active license*	30 351	40 006	45 657
– *licenses issued*	4 354	5 130	6 283
Startup company:			
– *startup company*	555	705	1080
– *successful startups*	3 388	4 002	6 050

Source: Knowledge Transfer // Invention, Knowledge Transfer, and Innovation. – https://ncses.nsf.gov/pubs/nsb20204/knowledge-transfer; By the Numbers: Measure Your Impact // Association of University Technology Managers [Электронный ресурс]. – https://autm.net/surveys-and-tools.

Research results from universities and laboratories are more likely to be translated into peer-reviewed articles than into commercially oriented inventions.

The discrepancy between research and patenting is due to differences in the purposes of universities, laboratories and commercial organizations. Patenting the intellectual output of universities is also different from patenting the business sector in terms of research choices. Academic patenting in the United States is largely focused on pharmaceuticals, biotechnologies, and medical developments. In 2018, the share of patents in these areas granted by the United States Patent and Trademark Office to American universities was 41%, compared to 10% of patents granted to the commercial sector of the economy.

In addition to patenting and licensing intellectual property objects, scientific discoveries and inventions enter the economic sphere through the publication of scientific articles, the holding of scientific and practical conferences and the preparation of project documents, Exchange of laboratory staff with external organizations that need to carry out research work, conclude cooperation agreements and carry out activities in the search for dual-use technologies.

In innovation, several indicators measure the effectiveness of knowledge transfer. First, indicators based on the citation of peer-reviewed publications in patent documents. Second, the results of peer-reviewed collaborative publications between science and business. Both indicators point to the exchange of scientific knowledge between the real sector of the economy and research organizations. Statistics from technology agencies and academic institutions, including technology licensing, cooperation agreements and startup support, are also an indicator for assessing the effectiveness of knowledge transfer.

Patent applications to patent offices include references to a prior level of technology, which is reflected in published patents and patent applications, as well as in peer-reviewed scientific publications and other published materials. Citing articles from different fields of science and technology in patent documents is an important indicator of technology transfer as input to inventions, utility models and other knowledge-intensive developments.

Collaboration of academic researchers with business sector researchers through joint research and publication of results allows for increased innovation and innovation. Co-authorship in scientific publications shows the flow of knowledge between scientific organizations and the business sector of the economy. This form of cooperation involves a range of activities, from the exchange of data or research tools to the joint creation of intellectual property.

An analysis of university publications in the United States between 2012 and 2016 showed that the publication of the results of joint research with companies was the most cited. Publications in the commercial sector of the United States economy are classified and distributed according to the institutional affiliation of the institution to a particular sector of the economy. The vast majority of publications in the commercial sector of the US economy in 2018 were co-written with other sectors of the US economy (39,949). He has published 26,896 articles with academics in the United States. The number of publications with the cooperation of representatives of the State authorities amounted to 7,113. The importance of international flows of knowledge has led to the publication of 19,430 publications in the business sector, co-sponsored by representatives of academic institutions of various States. (Table 3).

Table 3. Publication Activity of the US Business Sector for 2008 and 2018

Publication of the business sector	**Number of publications (2008)**	**Number of publications (2018)**
Co-authored by another sector of the US economy (excluding the business sector) and/or a foreign organization	36 973	39 949
Co-authored by another agency in the US business sector	9 836	8 471
Co-authored by another sector of the US economy	28 874	30 276
Co-authored by the US academic sector	24 847	26 896
Co-authored with the US non-academic sector	9 306	10 596
Co-authored by the United States Government	3 248	7 113
Co-authored with private non-profit organizations in the United States	14 187	4 448
Co-authored with foreign academic institutions	6 625	19 430
Summary	**133 896**	**147 179**

Source: Reports // National Center for Science and Engineering Statistics. – https://www.nsf.gov/statistics/; Reports // National Science Foundation. – Режим доступа: https://www.nsf.gov/publications/; Reports // United States Patent and Trademark Office (USPTO). – https://www.uspto.gov/; Elsevier // https://www.elsevier.com/; Knowledge Transfer // Invention, Knowledge Transfer, and Innovation. –https://ncses.nsf.gov/pubs/nsb20204/knowledge-transfer.

Motivating innovators in the commercial sector of the economy to patent inventions can be quite different from motivating scientists to create knowledge. Researchers in the commercial sector of the economy are more likely to be experimenting with the creation/improvement of products or processes than universities and laboratories that obtain significantly fewer patents based on the results of their research, development and technological works. In 2017, US companies accounted for more than 70% of research, and universities and government laboratories for 13% and 10% respectively. American companies operating in the computer and electronics industries received the largest number of patents in 2017 (almost 30,000) compared to other business activities.

As an example, light industry is one of the fastest growing sectors of the economy. Because of the strategic priority of science in many countries, technology transfer issues are becoming a priority in an export-oriented industrial development strategy. Light industry has all the necessary conditions for transition to production that meets world technological standards and has significant scientific and technological potential.

The creation and development of a favourable innovation environment for accelerated transfer and technology adoption is of paramount importance for the modernization of production in the light industries. Training centres for light industry are being established in many countries to monitor new developments in the industry (industry, consumer, marketing, technology) and provide high-quality technical support and training services to domestic and foreign producers. Such

centres provide access to a wide range of design specialists, improve business processes to improve the competitiveness and position of the enterprise in national and international light industrial markets.

The improvement of the competitiveness of light industry enterprises through modernization of the material and technical base, transition to digital production and access to the market of finished products is ensured with the financial support of the State and business, as well as in partnership with innovative infrastructure actors that contribute to the renewal of technical capabilities in the area of innovative design of garments, facilitation of contacts between textile/garment manufacturers, designers of ready-made garments, and efficient exports of garments and textiles.

The creation of high-tech enterprises of light industry is a complex task requiring an integrated approach to the development of economic entities and the management of business processes. When designing a strategy for the development of such an enterprise, it is necessary to take into account its sectoral characteristics, namely intangible assets, specific competencies of the labour force (creativity). In an age of technological transformation, small and medium-sized businesses need to be prepared for future changes and constantly invest in promising scientific and technological developments and digital processes to develop their long-term competitive advantages. This is an effective way to guarantee connectivity and related competitiveness.

Table 4. Contribution of light industry and the fashion industry to the gross domestic product (GDP) of countries in 2018 (%)

Rating	**Country**	**Contribution of industry to GDP (%)**
1	China	21
2	Bangladesh	12,36
3	Italy	12
4	Vietnam	11
5	Turkey	6,8
6	Germany	6
7	India	5
8	Belarus	4,6
9	USA	4
10	Spain	3

Source: World Trade Statistical Review. – https://www.wto.org/english/res_e/statis_e/wts2018_e/wts2018_e.pdf..

Light industry is one of the key sectors of the national economy. According to WTO data, in 2018 the largest contribution of the industry to GDP was recorded in the countries presented in table 4.

Exports and imports of products from the industry are worldwide and are shown in the tables below (Table 5 and Table 6).

Table 5. World textile exports (US$ billion)

Country/year	**2000**	**2005**	**2010**	**2017**	**2019**
China	10,4	20,3	30,5	37,1	119,6
European union	36,7	34,9	27	23,4	66,3
India	3,6	4,1	5,1	5,8	17,2
USA	7,1	6,1	4,8	4,6	13,4
Turkey	2,4	3,5	3,6	3,9	11,8
South Korea	8,2	5,1	4,4	3,3	9,1
Taiwan	7,7	4,8	3,9	3,1	8,5
Pakistan	2,9	3,5	3,1	2,7	7,1
Vietnam	7	0,2	0,4	1,2	6,4

Source: WTO Reports World Textiles and Apparel Trade in 2019. https://shenglufashion.com/2020/08/03/wto-reports-world-textiles-and-apparel-trade-in-2019/.

Table 6. World textile import trends (US$ billion)

Country/year	**2000**	**2005**	**2010**	**2017**	**2019**
European union	35,2	33,6	27,9	23,3	67
USA	9,8	10,5	8,8	8,9	31
China	7,8	7,2	6,6	5,5	16
Vietnam	0,8	1,6	2,6	4,3	16
Bangladesh	0,8	1,1	1,7	3	10
Japan	3	2,7	2,7	2,6	9
Turkey	1,3	2,1	2,5	2,2	5
Mexico	3,6	2,8	1,9	2	6
Indonesia	0,8	0,4	1,6	1,9	9

Source: WTO Reports World Textiles and Apparel Trade in 2019. https://shenglufashion.com/2020/08/03/wto-reports-world-textiles-and-apparel-trade-in-2019/.

In the Russian Federation, the sector's contribution to GDP is only 1.9 per cent. It is worth mentioning the high rate of imports of the textile industry -70-90 per cent, and there is almost no export of these products from abroad. The Ministry of Industry and Trade of the Russian Federation estimates the loss from this high share of imports to be 1.1 per cent of GDP.

The light industry of the Russian Federation, which has 22,000 enterprises, is in a difficult position because of the high level of competition, the low purchasing power of Russians and the severance of pre-existing economic ties with a number of States.

In the period from 2009 to 2019, total industrial output increased by 329 billion rubles. In 2018, the production of clothing and footwear on the territory of the Russian Federation in monetary terms amounted to 430.9 billion rubles, while the import component amounted to 962 billion rubles. In addition, the volume of counterfeit goods on the Russian market is estimated at 700 billion rubles per year.

Despite the negative statistics, there are a number of areas in which the domestic sector is developing: increasing domestic demand, partial import substitution, increasing export potential and developing synthetic industries. It should be noted that the use of technology transfer tools can help to develop the industry dynamically.

The development of light industry in many countries is carried out through the transfer, adoption and assimilation of innovative technologies, as traditional modes of production are no longer sustainable in the current dynamics of industrial transformation. In an environment of intensive technological development, the industry needs to transform from within to be more receptive to organizational changes to improve business processes. Taking this into account, the technology transfer mechanism should be designed in such a way as to develop the culture, competence, resources and network capabilities in light industry in accordance with the specificities of the Russian Federation.

The technology transfer process is a key success factor in the transition to Industry 4.0 (The Fourth Industrial Revolution - Introducing Cyberphysical Systems into Production and Serving Social Needs) focused on technology transfer from science to science research organizations into the real economy. The purpose of technology transfer is to disseminate innovative technologies and business processes to companies in the real economy. Technology transfer involves a combination of exchange operations and production functions (start-up, individual testing, technology refinement) that reduce transaction costs and create value added.

The application of efficient technology transfer mechanisms makes it possible to increase the production of competitive products through the introduction and mastery of knowledge-intensive development. Over the past seven years, the German Innovation Support Programme has invested more than 450 million euros in research and development of knowledge-based technologies [27, pp. 5]. The results of research, development and technology acquired by German universities and research institutes are transferred to the real economy and contribute to the creation of successful products, services and business models.

According to a study of the real sector of the German economy, 86% of German companies rate the introduction of innovative technologies into production and non-production business processes positively. For example, 57 per cent of companies in the engineering and equipment sectors are most involved in the digitization process. The remaining 29 per cent are actively working on a strategy to digitize traditional business processes.

A key objective of technology transfer in the light industry and the fashion industry is to help enterprises achieve a higher level of technological maturity. Production enterprises prefer to implement projects with a minimum of formal obstacles and with the shortest repayment period [2, c. 50]. In this regard, multi-year research projects are not always endorsed by industry management, so the role of technology transfer for such enterprises cannot be overemphasized.

Technology transfer is a key lever that ensures technological excellence in light industry. Production companies are constantly striving to build efficient linkages between technology partners, strategic investors and research organizations, that

is, to form long-term cooperative chains. These initiatives have led to the emergence of various mechanisms for technology transfer that are being developed by innovators.

Technology transfer mechanisms involve the active interaction of technology suppliers - those who own the results of research, development and technology work - and the recipient partners - potential users of technology. Technology transfer in the light industry can be done directly and indirectly. Direct technology transfer involves cooperation between the supplier and the recipient of the innovation, and indirect transfer intermediaries, such as centres for transfer and commercialization of research [21, p. 1230-1233]. Technology transfer services are addressed to a number of target groups and can be divided into three categories:

1. Research orientation: Educational and research organizations provide their research services and/or results of research, development and technology work directly to interested partners.

2. Focus on diffusion of innovation: technology transfer intermediaries, such as transfer and commercialization centres, Networks, associations and non-commercial industry-wide technology transfer organizations actively support innovation actors - much of it information and communication.

3. Productive orientation: Industrial enterprises, associations of industrial organizations aim to implement efficient production processes through the development of revolutionary technological solutions.

The process of transferring the results of research, development and technological work from scientific and educational organizations to light industry enterprises can be carried out through various channels and instruments. The tasks to be performed through technology transfer channels range from organizing consultative meetings to direct cooperation related to the implementation of an innovative project.

One of the requirements for successful technology transfer to manufacturing is the use of flexible, light industry-oriented transfer instruments that can be synchronized with different channels. The light industry uses both horizontal and vertical technology transfer. In a horizontal technology transfer, the functions of creating and promoting knowledge-based development are shared among the innovators. Universal forms of horizontal technology transfer include: licensing, transfer of production experience, sale of patents, sale or leasing of production equipment. Vertical technology transfer means that the entire innovation cycle is concentrated in one organization where the transfer of S&T results takes place from unit to unit. The tools used in vertical technology transfer in light industry range from the complexity of the technology being developed and implemented to the direct absorption of the technology in the workplace.

The search for new strategic opportunities is a key condition for successful technology transfer in light industry. This requires an innovative development strategy that fully scans the external and internal environments of the strategist. First, to analyse opportunities and threats for innovative development, and second, to define strategic priorities supported by competitive advantages; Third, shaping goals with a clear vector of objectives, with assessed resources and time factors,

using innovation policy instruments at the macro and micro levels. Several different channels and tools should be used to implement technology transfer. The consolidation of all available measures is strategically important for full, systematic and meaningful interaction between technology providers and recipient partners.

Open online courses, interactive videos, technology and project portals, science and technology forums and virtual trade exhibitions are actively used to implement the technology transfer process in the light industry. Technology transfer can be achieved through the posting of scientific and technical information and research results on websites, as well as through newsletters. Given the impact of the coronavirus COVID-20 pandemic and the shift of most of its functionality to remote operation, it is necessary to develop online tools and digital business communications.

The innovative core of light industry manufacturing is a medium-sized organization that actively uses the opportunities offered by Industry 4.0 to maintain and expand its competitiveness in the long term. They need access to advanced technologies through the use of intelligent technology systems.

Transfer and introduction of innovative technologies, mastery of high-tech equipment and intelligent production systems enable light industry to respond flexibly to changing working conditions and to adapt business in a timely mannerprocesses to new challenges and opportunities. Innovative approaches to self-assertion, such as extended management, mathematical optimization and machine learning, enable enterprises to successfully restructure business processes. Numerical program control machines promote production optimization in light industry. Intelligent systems allow operators to be alerted and respond to a variety of production factors in a timely manner.

The growing use of information and communication technologies is leading to the complexity of products and production systems in light industry. This leads to new demands for modern logistics and requires new ways of interaction between the operator and the intelligent technical systems. The intensive development of innovative networking technologies opens up new horizons of productive opportunities. For example, human-machine interactions can help improve manual primary processing of raw material, which requires maximum accuracy in handling chemicals and dryers. This requires the development and application of high standards of quality and reliability.

Light industry and fashion industry enterprises actively use complex technological processes for the production of finished products. This peculiarity of the work of this branch makes the automation of the production process in the enterprises of light industry many and very complex. For example, the introduction of intelligent technical systems makes it possible to display all the components of the production process in the light industry using a graphical user interface. The touch screen is used to transmit images and videos that provide employees with information on how to properly perform a certain type of work in the workplace. The architecture of the intelligent technology support system is based on standardized process models and can be linked to other levels of enterprise information technology. It is also possible to update and dynamically

extend the intellectual technical system. The system makes it possible to find in a timely manner the necessary operating instructions displaying the correct sequence of working steps, to notify the production manager about failures and violations of the requirements of technical regulations.

The interconnection of intelligent technical systems until they are fully integrated with the IoT platform (Internet of things) is a key factor for many light industry manufacturing enterprises, increasing competitiveness. Smart networks accelerate technology transfer and optimize industrial production. Of particular importance is the adaptability and versatility of intelligent technical systems, which significantly reduces the cost of commissioning, configuring and maintaining, and simplifies not only the development processes, but also the execution of start-up and maintenance works.

Intelligent technical systems require a high level of detail and characterization of the innovative product, a comprehensive understanding of the implementation system and a full life cycle of knowledge-intensive development.

Of particular importance in implementing the process of diffusion of innovation is a number of technologies and methods combined in the so-called «technology platform». The world trend towards such platforms, the evolution of approaches to efficient services, aspects of fundraising, regulation, The role of such platforms in building communities of practice and developing development strategies. Because of the epidemiological situation in the world and the measures used to contain it, the main priority of scientific and technological development in many countries is the rapid creation of digital platforms for technology transfer with a wide range of services. The technology platform is a promising tool for the systematic consolidation of technological demands and the creation of a single information space in a remote working environment, which ensures efficient interaction of players in the innovation market. It allows for information sharing, searches for experts, technology partners and strategic investors, and includes several priorities technologies sectors: self-learning, human-machine interaction, intellectual networks, Energy efficiency and system engineering.

Educational, research and development organizations use technology platforms to provide technology offers to interested enterprises and meet technological demands from the real economy. The technology platform enables innovators to promote projects with the lowest transaction costs, in close coordination with technology transfer centres.

The mechanism for the interaction of entities with the technology platform consists of four phases. In the first phase, companies become familiar with the technology platform and receive basic information through conferences, seminars and partnership events at which the concept of the transfer of innovation is presented, raising awareness of the specificities of technology transfer.

The second phase involves developing a professional and practical understanding of the use of accessible content and making constructive decisions on how to innovate. At this stage, information transfer is focused on a specific technology area. The main tools for technology transfer are information events where representatives of educational, research and development organizations report successful use of technologies as examples of best practice, methods and

business models. The outreach programme is a key tool for the dissemination of innovation data and possible applications.

The third stage involves the search for technological proposals for production and/or non-production purposes. Expert discussions can take place between the technology provider and the potential recipient partner on the feasibility of introducing the required technology into the company's business processes. For example, as part of technology transfer, an independent panel could be established to discuss the refinement and upgrading of innovative technology. At this stage companies can test technological solutions with consulting support of developers of science-intensive products. Companies can identify important issues in the context of the use of intelligent technical systems that allow for continuous coordination of innovation actors and planning of the stages of transfer of scientific and technical information.

The fourth phase involves the implementation of technology transfer projects, the use and implantation of knowledge-intensive development in the production and/or non-production processes of a company, accompanied by project cooperation between the technology provider and the potential recipient partner.

Light industry enterprises have the possibility not only to promote innovative projects by their own efforts, but also to provide research organizations with the results of the project works for carrying out additional scientific research.

Technologies developed (refined) by research organizations are processed at technology transfer centres prior to implementation. Technology transfer centres provide the necessary support to enterprises to prepare them for the challenges of implementing innovation.

The Technology Transfer Centres take into account the current situation in the enterprise and perform constructive actions aimed at finding, transferring and implementing the knowledge-intensive developments necessary for improving key business indicators. Technology transfer centres enable light industry to effectively address high-risk production and non-production challenges that they would not be able to address on their own because of a lack of resources and/or skills.

Such centres facilitate the identification of suitable partners and the rapid establishment of business contacts. Successful implementation of technology transfer to initiate an innovative project requires individual meetings and agreements. Most meetings between the technology provider and the potential recipient partner involve representatives of technology transfer centres with detailed knowledge of the technology transfer mechanism, Consulting and contracting for commercialization.

The development of a technology application plan can be undertaken by research organizations with knowledge of all the technical components of knowledge-based development. The Technology Transfer Project describes the process of identifying stakeholders in the design and sets out the conditions for the transfer, adoption and absorption of innovation. This approach leads to a common understanding of the delivery mechanisms of a technology transfer. The Technology Transfer Centre contributes significantly to the success of knowledge-based transfer. It informs, advises and supports the enterprise throughout the

transfer process, from the development of a transfer plan to the identification of a suitable technology partner and strategic investor. If necessary, the technology transfer centre may also act as an intermediary between the partners involved in the project. As a central coordinating entity, it also organizes information events, seminars and innovation days.

Within the framework of the implementation of the Innovation Transfer Project, the Technology Transfer Centre models the prospects of the introduction and development of the industrial object of intellectual property and evaluates the advantages, The Working Party was informed of the progress made by the Working Party on the Transport of Dangerous Goods. Together with the Technology Transfer Centres, the light industry enterprises develop a road map of mechatronics, which informs the management of the advisability of forming the competences necessary for the introduction and mastery of the technology, Re-equipment of production lines and production of finished products. After an analysis of existing approaches to the management of production processes in an enterprise, it is advisable to explore the feasibility of applying proven functional and structural modelling techniques needed for development projects, transfer, introduction and mastery of innovation.

The key requirement for a technology transfer is a cooperation agreement between the technology provider and the potential recipient partner governing the rights and obligations of the parties, the intellectual property protection mechanism. The technology transfer project is always managed in close cooperation between the transfer partners. The transfer of technology to the light industry can involve project partners, technology transfer centre staff, government and business community representatives and other stakeholders.

The evaluation of the success of the transfer of technology in light industry is carried out after the completion of the innovative project. As part of the evaluation process, project partners are invited to respond to questions covering the terms of cooperation, the results of project activities and the impact of the project on the development of the enterprise and the economy as a whole. Final reports detailing the results of the project are also analysed. A correlation analysis is then performed which compares the data obtained by calculation with the quantitative results of the survey. This approach provides an objective measure of the impact of individual technology transfer projects and transfer instruments on socio-economic processes.

There is a difference between the direct impact and the medium-term impact of technology transfer on the development of light industry. Assessment of technology transfer includes short-, medium- and long-term effects of an innovative project (directly measured results of the project, such as developed industrial intellectual property, reduced production time, increased enterprise competitiveness).

The efficiency of technology transfer in light industry can be determined by the number of research projects, the number of innovation requests made by industrial enterprises, and the volume of innovation production. The technology transfer project is perceived as a common process and task for both the transmitting and the receiving parties. The basis for the successful implementation of a technology

transfer is an understanding between the technology provider and the potential recipient partner regarding the implementation of the project objectives.

In the light of the above, therefore, it appears that technology transfer is strategically important for the development of light industry and the fashion industry. Production enterprises particularly benefit from collaboration with technology transfer centers and technology partners in individual industry projects. This interaction for the real sector of the economy allows the most efficient use of advanced technologies and methods in the development of Industry 4.0. Technology transfer processes foster intra-enterprise innovation and/or in-depth research cooperation. Moreover, in the field of science, new research activities are being stimulated and a culture of strategic partnership at the national and international levels is being strengthened. Against this background, technology transfer projects serve as a catalyst for long-term cooperation and represent an important step towards the innovative development of light industry. A powerful technology transfer tool can be a digital platform that brings together representatives of science and business in the light industry and the fashion industry and promotes applied scientific ideas and innovation.

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PROBLEMS OF THE MARKET OF MILK PROCESSING ENTERPRISES IN KAZAKHSTAN

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Abstract. Entrepreneurship in today's Kazakhstan, although experiencing significant difficulties – is already a fait accompli. It is protected by law and will continue to develop. The relevance of the chosen topic is obvious, because there is no market economy without entrepreneurship. And although it is in its infancy, there is no doubt that business will be the leading sphere of social production. The transition to a market economy requires radical changes in the structure of production, aimed at overcoming monopolism and the development of competition. The solution of this problem is impossible, as the world experience confirms, without the development of entrepreneurship based on various forms of ownership. The scientific novelty of the study lies in the fact that it examines the process of intensive creation and development of entrepreneurial activity, in particular, a lot of work has been carried out on the privatization of property, thanks to which a solid economic basis is created for the development of entrepreneurship, and therefore society as a whole. The country thrives thanks to entrepreneurs, and entrepreneurs-thanks to support of their states. The practical significance of the research results lies in the possibility of using the findings and developments as recommendations for improving the economic aspects of the dairy industry. In this article, we will explore the dairy industry in Kazakhstan**.**

Keywords: *production, dairy industry, industry, Kazakhstan.*

INTRODUCTION

The modern financial system of Kazakhstan has not yet acquired the features inherent in the market in the economy, the disorganization of this system, which goes along with its criminalization, creates a significant threat to the country's financial security (Titova et al., 2018). Negative the imbalance affects the provision of national security. The state budget, which acts as the main destabilizing factor of the public finance crisis, and the vicious practice of its annual late adoption, the payment crisis leads to the formation of the so-called debt economy, in which the state is the main debtor; the formation and development of the banking system of Kazakhstan takes place in conditions of constant changes in the economic situation. market conditions and the lack of foresight of the future, which affects the instability of many banks, the inability of the national currency to perform the function of accumulation (Ongayev et al., 2019). State policy has chosen the tactics of crushing criticism of its predecessors and cajoling the population with social benefits and promises, rather than solving real problems that are threats to economic security in general and the financial security of dairy processing enterprises as a component of it (Sukoot et al., 2020).

This allows us to conclude that it is the domestic political aspects at the present stage have a decisive influence on the preservation of the threatening critical state of the economy, creating a constant threat to the entire system of national security and the very independence of the state of Kazakhstan and its territorial structure (Assemblayeva et al., 2019). The definition of the concept of financial security is quite complex and ambiguous. At the level of business entities, a comprehensive study of the essence of the concept of "financial security" as an independent object of management, in the modern economy. the literature has not yet been sufficiently studied and is generally identified only as one of the elements of economic security. Financial security characterizes security at all levels, starting with the state and ending with each of its citizens (Bektleeva et al., 2016). Therefore, it is important to note that the sources of negative impacts on the financial security of business entities may be conscious or unconscious actions of individual officials and business entities (state authorities, international organizations, and competing enterprises); the coincidence of objective circumstances (the state of the financial situation, scientific discoveries and technological developments, force majeure, etc.) (Meimankulova and Umirzakov, 2018). Modern conditions for accelerating the variability of the market environment are characterized by a variety of business entities and components of the financial infrastructure. This makes it necessary to quickly monitor and diagnose the state of financial activity, the compliance of financial resources with the needs of the economic system, internal and external threats. Important role to implement this task belongs to the organization that financial security business entities (Seitkhozhina, 2013; Seitkhozhina, 2014; Turovskaya et al.,2018).

Based on the above definitions, we can conclude that the nature of the financial security was primarily associated with the environment of business entity, that is the relations into which it enters into the process of the activity (Nurakhova, 2017).

Each author submits his own interpretation, but the overwhelming group of scientists considers the financial security of the enterprise as a component of economic security, but the most complete definition of a financial security is, in our opinion, led by the acting Blank: "the Financial security of the enterprise reflects the protection of its activities from the negative effects of the external environment, as well as the ability to quickly eliminate variety threats or adapt to conditions that do not affect the his activities" (Babich et al., 2016).

Financial security as a generalization of the concept is:

– degree of protection of the financial interests at all levels of financial relationships;

– the level of security of a citizen, household, population,

enterprise, organization, institution, region, industry, sector of the economy, market, state, society, interstate entities, the world community financial resources sufficient to meet their needs and meet existing obligations;

– the financial, monetary, foreign exchange, banking, budget, tax, settlement, investment, customs tariff, and the stock system, and the pricing system, which is characterized by the balance, resistance to internal and external negative influences, the ability to divert external financial expansion, to ensure financial

stability (stability), effective the functioning of the national economic system and economic growth;

- the quality of financial instruments and services, which prevents the negative impact of possible miscalculations and direct abuse on the financial condition of existing and potential customers, as well as guarantees the return of invested funds.

So, under the financial security of business entities, as an economic category, we can consider the totality of socio-economic and legal relations that ensure such a financial condition, in which the stability of the enterprise to external threats and risks is revealed with the rational use of its financial resources (Fadeev, 2012). Analyzing the international experience of ensuring the financial security of enterprises, we will consider the experience of ensuring the financial security of enterprises at the macro-and micro-levels in the most economically developed countries (Kazkenova et al., 2015).

Business entities in developed countries, due to their own national, religious, and cultural factors, have their own specific means of achieving the financial security of entrepreneurship. What is common is that they operate on the basis of postulates: scientific knowledge is the key to the future; technology is the engine development of the financial security of enterprises; the responsibility of managers is to promote the development of technology and science (Brunton, 2000).

In developed countries, the main focus is on the development of theoretical and applied foundations for improving the financial security of the enterprise and the formation of the foundations of a favorable business environment.

Companies from the United States, Japan, Germany, and France have achieved the greatest results in this area (Tekenov et al., 2019). Analyzing the world experience of developed countries in relation to the organization of financial security it can be argued that the most effective tools for ensuring the financial security of enterprises are the improvement of the legislative framework, the implementation of permanent measures to prevent threats, the implementation of a policy of effective use of personnel, the use of innovations in all areas of the economic activity of the enterprise. It is the technological revolution that is one of the factors that have provided these countries with stable development (Ospanov and Kulzhanova, 2020).

LITERATURE REVIEW

The financial security of an enterprise is the ability to counteract existing dangers and threats that seek to cause financial losses, change the capital structure or liquidate the enterprise. The economic security of an enterprise is a basic component of national security, which is an important condition for the further functioning and development of the sphere of entrepreneurship in the state economy and is able to protect the vital interests of an economic entity from actual and potential sources of danger or economic threats (Nagyzbekkyzy et al., 2016). Financial security of dairy processing enterprises in a narrow sense is their ability to function as economic entities at the existing level of resource provision

and the chosen specialization of production (Balapanova and Nurgabylov, 2012). The financial security of dairy processing enterprises in a broad sense is their ability to achieve an appropriate level of competitiveness with any degree of influence of possible risks and threats.

Ensuring financial security at the enterprise level depends on economic, organizational and other measures of the state to maintain it at the proper level (Kaliev and Akimbekova, 2014). There is a close connection between market transformations in the financial and credit sphere of the country and the growth of the level of financial security of enterprises.

The financial security of the enterprise stands out:

- how is the degree of integration of the enterprise's financial system into the national financial and credit sphere?

– as to a certain extent independent of the financial and credit sphere of the country.

This dual role of the financial system of the enterprise has the following manifestations:

- the ability to conduct its own financial policy within the framework of the current legislation;

- ability to implement financial measures for urgent financial situations in the enterprise related to local financial miscalculations at the central level;

- the ability to consistently maintain the compliance of the existing

financial standards at this enterprise with the generally accepted ones in the world practice;

- the ability to respond to crisis changes in the financial and credit sphere of the country.

Under the threat of financial security, we understand the potential or actual actions of individuals or legal entities that violate the state of security of the business entity and can lead to the termination of its activities or to financial and other losses (Elmira et al., 2020). Threats to financial security include components of the external and internal environment, as well as their interrelationships, and are determined by the amount of losses that lead to a decrease in the economic potential of the enterprise (Polyanskaya et al., 2019).

In General, the value of security is the state of the object (the company), which is able to maintain the level of development in terms of destructive internal or external influence is the state of protection from the negative influence of any factors internal and external character, the ability to fully counteract the factors the negative impact of the external environment without attraction of additional resources and the people (Nurtayeva et al., 2018). The threat to the financial security of the enterprise as a factor a destructive action is an existing or potentially possible phenomenon or factor that creates a danger to the realization of the financial interests of the enterprise and does not allow it to perform its work at the proper level.

MATERIALS AND METHODS

The management system of milk processing enterprises is a combination of various aspects of management: goals, functions, methods, principles, technologies, the action of which is directed at the enterprise in order to achieve the established quantitative and qualitative parameters.

The effectiveness of the management system of milk processing enterprises depends on the goals that are defined in the management process of the enterprise, so the structure of the management system should be changed so that the management process contributes to the maximum level of efficiency and a sufficient level of implementation of certain goals. In the process of financial security management, it is important to choose the necessary methodology for assessing its level, which first of all must meet the criteria of efficiency and reliability. This is due to the fact that, that the management of the enterprise at any time should have information that can characterize the current level of financial security, that it is the key to the successful functioning of the enterprise in the short term, as well as possible risks and threats that prevent the achievement of its financial interests in the long term. Accordingly, an enterprise that has an unsatisfactory financial condition and a low level of financial security is limited in terms of choosing business partners, attracting investments and loans, and so on similar.

One of the most controversial in scientific circles is the process of financial diagnostics and assessment of the level of security of the functioning of economic entities. In various areas of the company's activities, a comprehensive assessment of the level of financial security is quite complex from a methodological point of view and almost always raises controversial issues among scientists and practitioners. The resource-functional approach involves calculations using the means of economic and mathematical modeling, which allows you to predict the efficiency and effectiveness of the consequences of the influence of decisions of management bodies, to make the most optimal of possible decisions. The integrated approach provides methods of calculation using an integral indicator, expert assessment, cluster analysis and the theory of artificial neural networks, allows you to assess the state of financial security using various approaches that, combined, give the optimal assessment result.

The financial risk approach is used to analyze multi-party conflict situations, taking into account their mutual influence (Kodasheva et al., 2017). When using this estimation method the real expected processes and their development are modeled for the level of financial security of entrepreneurship. The risks of the enterprise are assessed on the basis of a statistical method, which involves comparing the losses of the enterprise with the levels of risk.

The maximum unacceptable level of risk appears when the company risks its own funds, that is, all its property.

After analyzing the literature sources, we can conclude that at first financial security was studied at the state level and the system of indicators, according to financial security at this level was investigated for their composition and quantity, was not sufficiently formed.

Domestic scientists assess the financial security of the state according to the following indicators:

-national production and income;
-the state of implementation of the state budget;
-the state of internal and external debt; independence from foreign capital;
-money supply;
-investment activity;
-volume of reserve and insurance funds;
-development of the banking sector, stock and insurance markets.

RESULTS AND DISCUSSION

Analysis of financial condition indicators.

The financial security of economic enterprises can also be assessed by indicators of financial condition, such as solvency, financial independence, sales volume, profitability, and others (Figure 1).

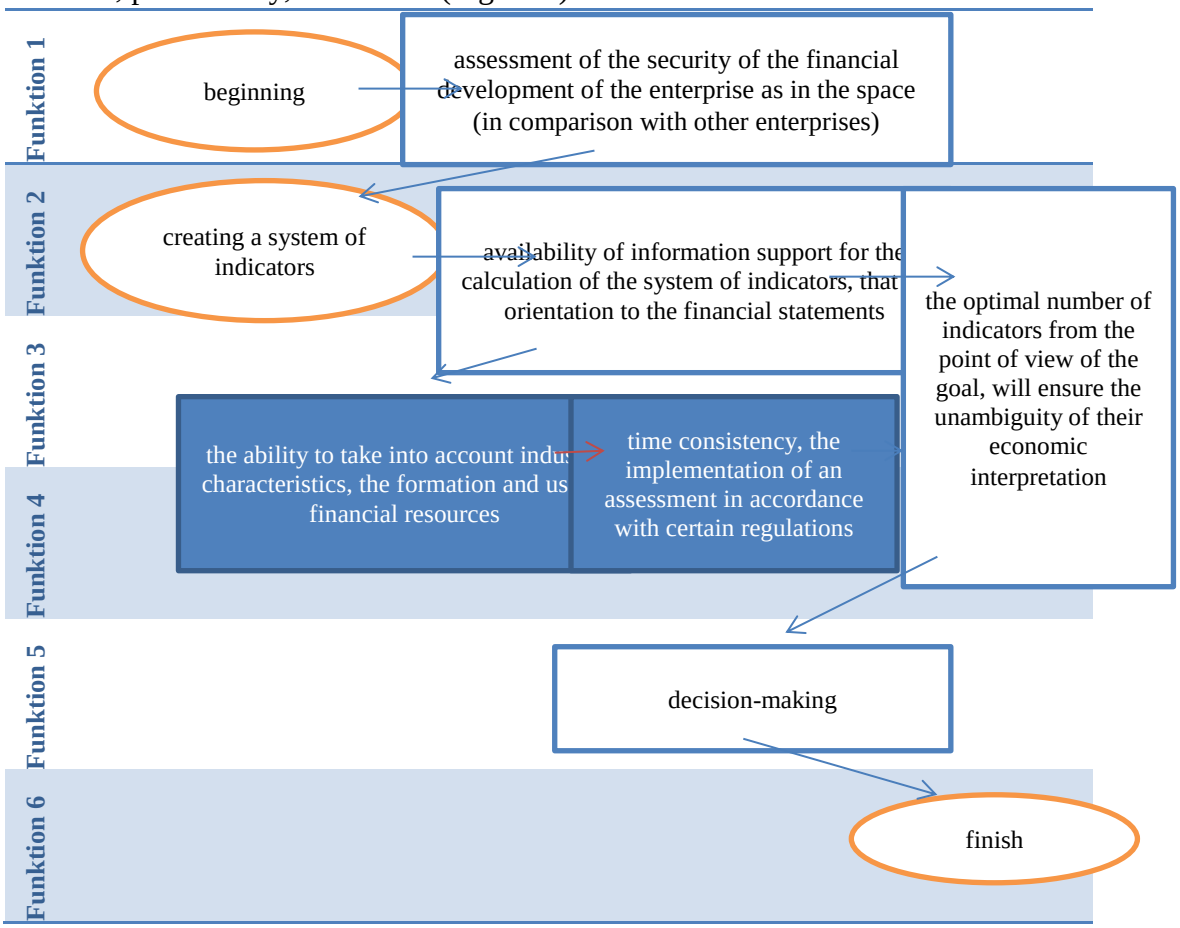

Figure 1. Methodological principles for the formation of a system of indicators for assessing financial security

Scientists from the United States were among the first to propose such indicators to determine the level of financial security of an enterprise.

Such indicators were: the volume index of production (at least 1);

-net income dynamics (vibrations);

-Size receivables and payables (to ensure the solvency);

-Share market (demand-driven, but without reduction); profitability (positive, 10-50%);

-investment (constant magnification);

-the share of loans.

Among these indicators, there are only two indicators that reflect its financial condition. This is the amount of debt for which it is possible to conclude about the solvency of the enterprise, and the share of long-term loans for which it is possible to conclude conclusion about the capital structure of the enterprise and its independence from short-term financing. Such financial indicators to fully assess the level of financial security of the enterprise, the level of its solvency, the capital structure, of course, are not enough. In our opinion, the reflection of such indicators as the index of production volume, the share of the enterprise in the market, investment activity as part of the indicators for determining the level of financial security is positive, since these indicators allow us to assess the potential that the enterprise has to implement financial security, future activities. If these indicators grow, the company's market share does not decrease, it means that the company has correctly defined its development goals and has every chance to increase the amount of profit received. To assess the state of development, we selected milk processing enterprises. To do this, it is necessary to analyze the external environment of dairy production. To analyze the external environment of dairy production by dairy processing enterprises in Kazakhstan, it is necessary to study the level and dynamics of the development of the industry under study. Main task industries – this is the provision of the population of the country with full-fledged food. In the system of agro-industrial production, the production of dairy products is tightly connected agriculture, as a producer of raw materials, which indicates that the situation in the agricultural sector significantly affects the activities of dairy processing enterprises.

The negative trends in the country's economy in recent years have particularly affected the processing industries, including the production of dairy products. Dairy production refers to the production of food processing industry products. The group of dairy products includes the processing of milk, the production of butter and cheese. Among the food products produced, the production of milk and dairy products in Kazakhstan occupies a leading place, since it is dairy products that are important sources of proteins, vitamins, minerals, micro – and microelements, are widely used in nutrition, especially by certain groups of the population (children, the elderly). A number of milk processing products are used in during the period 2013-2019, the activities of dairy processing enterprises were accompanied by various crisis phenomena, such as a shortage of raw materials, rising prices for dairy products, a decrease in public demand, and competition from foreign producers. In Kazakhstan, the production of dairy products is actually much lower than the volume of consumption that the population needs. This accordingly affects the quality of food for the citizens of the country. The

production of dairy products itself cannot to grow rapidly, since the profitability of animal husbandry is low and the country's own population is not able to buy the necessary amount of dairy products due to low purchasing power and high prices for dairy products.

Dairy production over the past decade is characterized by a slight increase in production, the lack of expansion of the product range, a high depreciation rate of fixed assets, and the lack of a favorable credit policy in the country. Priority task market research of dairy processing enterprises is the study of the demand for dairy products among the population, the study of the purchasing power of the population, the study of the possibility of reducing the cost of production, as well as the state regulation of prices for manufactured products as a strategically important product. Such research will make it possible to develop effective programs for the development of production, to carry out a prompt response to the market situation, and to effectively counteract competition. To make rational decisions, you need reliable information about the needs of the market, consumer groups, existing competitors, and their production volumes.

Depending on the demographic indicators, groups are distinguished by the choice of dairy products.

The analysis of milk production volumes in the Western region of Kazakhstan for the period from 2013 to 2019 allows us to draw the following conclusions:

– currently, milk production in the study region is not developed equally:

most of the milk is produced in Nursultan;

– during the analyzed period, milk production in the Western region of Kazakhstan decreased at a much lower rate than the average in Kazakhstan, as a result, here at the present time time produces almost a third of its volume, and, therefore, there is a significant raw material potential for milk processing enterprises;

– given that the share of the Western region in the volume of milk production is almost 33% and clearly exceeds the share in production of milk, which is barely up to 10%, then we can conclude that the local milk processing facility not enough uses its resources and raw materials (milk) exported of the region.

For the production of dairy products in Kazakhstan, the most urgent issue is it is the provision of dairy raw materials (Figure 2). In the field of supply of dairy raw materials to dairy processing enterprises, the following problems can be identified:

1. Changes in the structure of milk supply for industrial processing. At the moment, the largest suppliers are the farms of the population, which indicates the need to improve cooperation with them, since it is more profitable for the population to sell the products produced in local markets or in other regions.

2. With the decrease in milk production, the competition for the supplier of raw materials has increased, this indicates the need to improve the pricing policy of dairy processing enterprises and install more modern equipment for storing and processing raw materials.

3. A decrease in the number of cattle is a threat from the external environment to the financial security of enterprises, which indicates the need to create their own divisions for raising cattle or to combine such enterprises with farms that raise cattle in order to increase their number.

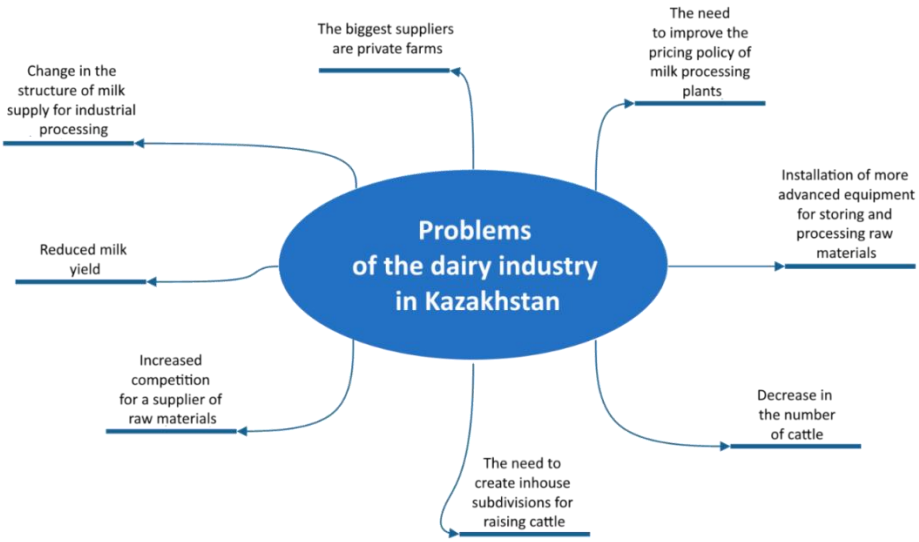

Figure 2. Problems in the dairy industry in Kazakhstan

Currently, more than 300 enterprises are engaged in milk processing in Kazakhstan, but about 80% of these enterprises are united in holdings. Today, the most influential in the market of milk and dairy products is the company "Terra Food" with total revenue in 2015 of $ 3.435 billion. the company includes 19 enterprises that produce whole-milk products, cheese, vegetable-cream mixes and butter. In 2016, the company accounted for a sixth of the processed cheese and cheese product produced in the country. Terra Food supplies its products to more than more than 40 countries, including the Middle East, North Africa, the Balkans, as well as China, the United States and North Korea. The company "Burnenskaya Dairy Company" is the leader in terms of milk sales in Russia. Kazakhstan (22% of the market). Six of the company's enterprises produce and export dairy products, cheeses, and whey powder. The company exports its products to 35 countries, including Arab-Muslim countries. In December 2015, it received certificates for the export of dairy products under the TRADEMARK "Merken Cheese Factory" in China, and from January 10, 2016, the right to export to the EU countries. In total, in 2016, Burnenskaya Group of Companies dairy company " exported 550 tons of butter, 140 of which to the EU, in Morocco and Egypt and 25 tons in the UAE. Total revenue in 2015 amounted to 3.3 billion tenge.

The company "Agrofirma-Tau" is a division of the French food group. In our country, the company processes 150 thousand tons of milk annually. It specializes in the production of yoghurts, cottage cheese and baby food. Capacities "Agrofirma-Tau" is located in Aktau. Now these products account for 5% of the

total production in Kazakhstan. Total revenue amounted to 2.1 billion tenge. JLC-SUT is one of the largest producers of cheese and cheese products in Kazakhstan. It occupies 23% of this market. The dairy holding includes seven enterprises located in Almaty with a total processing capacity of more than 620 thousand tons of milk per year. In addition, the company is a leader in the production of butter and spreads with a share of 16%. The company supplies its products to more than 50 countries, including markets in the CIS and Africa, the Middle East, the United States, Mexico, and Japan. Total revenue amounted to 1,986 billion tenge. The company "Sairam Sut" includes eight enterprises that produce whole- milk products and cheese under the brand name "Sairam". Total revenue was 1.780 billion tenge. In the production of dairy products, there is a tendency to displace smaller dairy processing enterprises and absorb them by larger enterprises. If this trend continues in the future, the market for milk processing can there will be a dozen companies that will belong to several holdings. To characterize the external environment of dairy processing enterprises, it is necessary to identify the key success factors, which are raw materials, technology, and the ability to sell. The successful operation of the company is based on the right and timely strategic decisions. These decisions have a decisive impact on the competitiveness of the products and the enterprise as a whole. The way to overcome the crisis at dairy processing enterprises can be to enter foreign economic markets and increase exports dairy products. When analyzing the external environment of enterprises, it is necessary to analyze the foreign economic market of dairy products.

The stability of the milk processing industry depends on the stability of the work of each business entity, in turn, the stability of the business entity depends on the effectiveness of the financial security management system. The functioning of the financial security management system of dairy processing enterprises should provide for the interrelation of goals and objectives each level, choosing the best ways to implement solutions. The main purpose of the functioning of the financial security management system is to ensure financial and economic balance, achieve a certain efficiency of activities and set goals and objectives for the further development of the enterprise, create and implement conditions that ensure the financial security of the enterprise. These conditions are determined based on the criteria for assessing financial security and its level.

As important conditions that are taken into account in the structure of the management system the financial security of the enterprise is: minimizing the costs of the enterprise and adapting to innovations. These conditions can have the greatest impact on the formation of the company's profit, thereby ensuring its financial security (Figure 3).

From the point of view of the process-functional approach, financial security management is defined as a step-by-step, continuous process of performing managerial functions that characterize its content. The main functions of managing the financial security of a dairy processing enterprise are the following: organization, analysis, planning, motivation, and control.

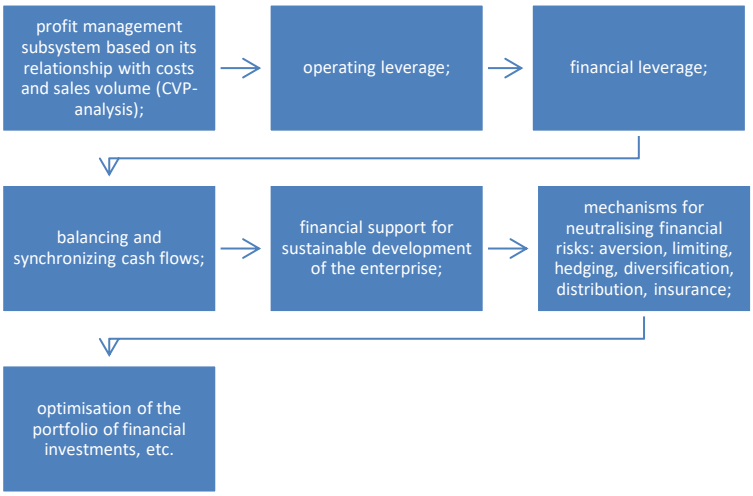

Figure 3. Financial security management system of a dairy processing enterprise with mandatory functions

In 2020, Kazakhstan was supposed to switch to a new regulation for evaluating the quality of milk. However, at the very end of last year, the decision of the EAEU Council postponed the transition for five years. This does not mean that Kazakhstan's milk is of poor quality – it meets all the standards of the Eurasian Economic Union, except for microbiological ones. But to solve these microbiological problems, the dairy industry needs to seriously restructure at the macroeconomic level.

Analysis of the dairy products market in kazakhstan

The end of 2019 was a nervous one for the country's dairy market. December 31 was the deadline after which dairies were supposed to start accepting raw milk for processing a single high-quality product. Such rules are dictated by the Technical Regulation of the Customs Union 033-2013, which regulates the safety of dairy products in the EAEU. According to this regulation, milk can not be divided into grades according to quality. Any milk that gets processed must be completely safe for humans. In order to achieve this high-quality goal, Kazakhstan has to adjust the content of microbes, bacteria and somatic cells in milk – traces of the animal's disease. To do this, you need to ensure a high the level of sanitary and hygienic control over all dairy farms, and this turned out to be difficult due to the peculiarities of the organization of the country's dairy production base.

The milk market, according to the Dairy Union of Kazakhstan, is 5 million tons. Of these, only 1 million tons is commercial milk, that is, suitable for processing. About 78% of this milk is produced by small farms, the rest is accounted for by specialized farms. According to the Ministry of Agriculture of the Republic of Kazakhstan, 164 enterprises are currently engaged in milk processing in the republic. 35 dairies have own dairy farms and do not depend on suppliers. The remaining 129 plants (which is 80%) buy raw materials on the open market.

The total processing capacity of the plants is about 2 million tons of raw materials per year, in fact, the plants are half loaded. In winter, due to a shortage of raw materials, the load drops to 20%, which is why some factories are even closed. The dominant position of small producers in the dairy market of Kazakhstan was the reason why the introduction of more serious quality regulations was postponed for five years. This is not the first one postponement: the EAEU commodity milk standard was introduced in 2013, when only Belarus could meet it – in this republic, the share of small farms in the dairy industry is only 5%. In Russia, the situation was similar – there organized farms did not provide even a fifth of the market, which affected the quality of the product. And only last year the Ministry of Agriculture

Russia noted a slight predominance of the products of large farms in the total volume of production. Further, according to forecasts, small Russian producers will lose 2.5% of the market annually. Small-scale milk production is uncompetitive for a simple reason: material the base of such farms is outdated, and the income does not allow for modernization. According to Isayeva, the average monthly income of a small family farm is 60 thousand tenge. Obviously, this level of income does not allow you to conduct full-fledged veterinary or breeding work, or even just invest in improving the diet of cows. But these are the very tasks on which the quality of milk depends.

Having carried out an analysis of the financial conditions of milk processing enterprises in 2013-2019, we concluded that the financial condition of enterprises in Kazakhstan is unsatisfactory, which can be considered critical. In the dairy processing enterprises we study, financial security management is carried out by organizational structural units: the financial and economic department (diagnostics of the financial condition, neutralization of financial risks, etc.).); marketing department (environmental monitoring, competitive intelligence, etc.) and legal department (legal protection), human resources department (recruitment), and others.

A special unit was not created under such management, which led to financial conditions that are approaching critical. These problems, as well as the growing number of threats, risks and dangers in economic activity, make it necessary to create a specialized division (department, service) of financial security at the enterprise.

The first stage determines the financial strategy of the dairy processing enterprise (the formation of long-term financial goals) and depends on features of the implementation of financial security management of the enterprise. Therefore, there is a need to classify enterprises according to the following characteristics:

-form of ownership (state, collective, private);

-organizational and legal form of activity (society, cooperative, municipal enterprise);

-industry attribute (sphere of material production, service, intermediary activity);

-size of the enterprise (large, medium, small);

-size of equity capital;

monopoly position in the market (specialized, multidisciplinary);

-production characteristics and structure of the enterprise, technological cycle; stage of the life cycle (creation, development, division into subsidiaries, bankruptcy).

The second stage of the implementation of financial policy consists in the formation of financial security management tactics, namely: in marketing research, making price decisions, orientation in financial market segments, managing fixed and working capital, providing financial resources, balancing the timing of cash receipts, ensuring profitability, and so on. On the third floor at this stage, a financial division is created, whose functions include determining the financial strategy of the enterprise and its implementation. In terms of size, such a division can be represented by a department, a department, or the functions of the division are assigned to a full-time a unit of the company (director, deputy, chief accountant). This general model of enterprise strategy and financial resource management strategy is actualized by the globalization of the economy and the internationalization of markets.

Financial security management of dairy processing enterprises it is defined as a purposeful activity that consists in the constant process of making and implementing management decisions aimed at reducing the negative impact of risks and threats and achieving the maximum level of economic security of dairy processing enterprises. The logical and structural scheme of financial security management of dairy processing enterprises will be divided into current and future management. In turn, the assessment of the level of financial security of the enterprise is divided into estimates of the actual level of financial security. Financial instability estimates of the forecast level and determination of the probability of establishing the forecast level of financial instability, which determines the optimal strategy for ensuring the financial security of dairy processing enterprises.

The proposed conceptual approach to the formation of a financial security management system for dairy processing enterprises provides for the implementation of a mechanism for ensuring and assessing the level of financial security, as well as a set of measures aimed at using opportunities and resources milk processing enterprises that provide system-synergetic effects of the implementation of the protection of its financial interests from identified real and potential threats of an external and internal nature, as well as the achievement of stable and effective functioning and the set goals and objectives for the further development of milk processing enterprises. The developed approach includes 5 consecutive stages. This is a justification of the purpose, goals and objectives of managing the financial security of dairy processing plants formation of the concept of financial security management, implementation of the mechanism for ensuring financial security management, assessment of the level of financial security of dairy processing enterprises and the formation of a set of measures to ensure the financial security of dairy processing enterprises. The organization of financial security management of the activities and development of dairy

processing enterprises should be carried out taking into account the influence of individual factors of the external and internal environment, as well as their synergistic effect activities and development, taking into account the influence of both individual factors of the external and internal environment, and their synergistic effect. Protection from the external environment, where there are factors of a macroeconomic nature, including the state and directions of development of the general economic interests of the state, the conjuncture of the financial and stock markets, the development of the financial and credit system of the state, the impact of international financial and economic institutions, the development of the infrastructure of financial institutions, etc., requires the creation of a monitoring system and the involvement of qualified specialists. Financial analysts for the purpose of objective analysis and assessment of trends and consequences of macroeconomic processes. Moreover, it is important to determine the issues that can be solved by the company's analytical specialists, and in which case it is worth attracting external experts.

The protection of financial security from internal environmental factors is dictated by the problems of interconnection and coordination of the overall strategy of activity and development of enterprises with the possibilities of ensuring their investment and financial potential. In order to ensure the achievement of strategic goals in the activities of enterprises, it is necessary to periodically compare the results of the analysis of the influence of external and internal factors and, if necessary, adjust both strategic and tactical intentions.

Given the multidimensional nature of the financial security category, the complexity of the interrelationships and interdependence of its various elements, it is impossible to immediately identify all the problematic issues and, moreover, to offer unambiguous measures to eliminate them. In this case, it is advisable to determine the system of indicative indicators that are of significant importance and influence on the support of the activities and sustainable development of the activities of ornamental systems.

In the economic literature, there are various approaches to the formation of a system of indicators of economic security, with the criteria of financial security least researched. In our opinion, these include, first of all, the key resource and performance indicators that characterize the stability of the economic system of the state (and even its system) as a whole and its individual regions – as characteristics of the development of socio-economic processes at the macro level. Such characteristics are of significant importance for business entities in the form of financial and credit institutions and business structures of the production direction, since they characterize the dynamism of the development of the financial sector.

The economic mechanism of the state, its adaptability and effectiveness of influence on inflationary processes, the stability of the national currency, the development of foreign economic relations in the legal and trade spheres.

The system of indicative indicators that are formed at the level of business entities should include those that are documented in the system of financial, managerial, statistical and operational accounting organized at the enterprise, as

well as the forecast values of private and integral indicators, obtained using economic and mathematical modeling and forecasting. At the same time, in the financial management system of enterprises, special attention should be paid to and monitor the dynamics of the financial condition of financial institutions, counterparties in the system of technical and technological relations, intermediaries, and the like.

The financial security strategy should clearly define the objects and the level of threats to them caused by the actions of the external and internal environment, and how to ensure the security of each object. However, keep in mind that not for all objects it is possible to establish quantitative characteristics of the threat level. This is due to the fact that the classification of threats has qualitative characteristics of the attribute.

These include the following pairs of threats:

-explicit – implicit;

-real – virtual;

-external – internal;

-objective – subjective;

-spontaneous (random) - those that are characterized by purposefulness;

-those that can be eliminated – those that cannot be eliminated for this time;

-one-dimensional (simple) - multidimensional (complex);

-such that they are based on symmetric or asymmetric information; temporary – active (that is, briefly - or a long-term period of action);

-progressive - degressive;

-those that require the development of measures and the organization of constant monitoring-those that require periodic diagnostics.

The complexity of determining the nature of threats lies in the fact that they are the result of the motives that cause their occurrence and the actions of various entities: the state, financial institutions, counterparties-business entities. The results of determining the nature of threats should be determined by the main consequences of their influence. At the same time, threats that have a promising and latent nature should be given qualitative and, if possible, predictive quantitative characteristics of the probability of their occurrence. For the characteristics of threats that may affect the level of financial condition and financial results in the current calendar period, you should define variable (within the coordinates: maximum-minimum) quantitative estimates.

Ensuring financial security of operations and development milk processing enterprises should not be considered as a problem of one functional division of the enterprise. The state of financial security is influenced by decisions made at all levels of the management system (according to the system of vertical-horizontal and functional-horizontal links). Therefore, when organizing an effective financial security organization system, it is necessary to take into account the peculiarities of the organizational and managerial management structure and promptly change it.

Taking into account the multiplicity and diversity of factors affecting the financial system the security of enterprises, as well as their situational nature, each organization should create its own bank of possible threats in the context of objects and a bank of possible options for measures to eliminate them. Especially effective in this case is the development of the bank measures of a proactive preventive nature. There is no doubt about the creation of such a central bank, taking into account the efficiency of decision-making in the system of current response to a certain financial or production and economic situation.

CONCLUSIONS

The problem of financial security, as an integral part of the economic security of the enterprise as a whole, should be considered and solved based on an interdisciplinary approach, which includes, first of all, aspects of legal, financial and economic, informational, and socio - psychological nature. All methods and organizational forms of protection should not go beyond the current legislation, since in the final case, non-compliance with this requirement leads to protracted judicial and arbitration processes that undermine not only the financial- economic, but also the moral and ethical positions of the enterprise in the business space. Especially it should be noted that the financial and economic security of the activities and development of economic entities is inextricably linked with the overall strategy and tactics of the activities and development of the enterprise, which is formed primarily by such components of their policies as marketing, investment and innovation, personnel, information, etc., the effectiveness of which is provided by their inherent methods and tools.

In the process of managing investment and financial resources, it is necessary to adhere to the policy of strategic consistency, which should be formed on the principles of Adaptive and aggressive behavior of the business entity. Such a sequence should take into account the aspects of the adaptability of enterprises to changes in the external economic conditions, while not excluding the introduction of innovative aggressive measures within the framework of compliance with legal legislation. The combination of these two approaches does not contradict the policy of forming a conservative and progressive financial management policy adopted in the world practice. The policy of managing the financial resources of market entities: the state, credit and financial institutions, individual enterprises and their associations.

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CREATIVE CLUSTERS IN RUSSIA: DEVELOPMENT AND PROSPECTS

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Abstract. The article is devoted to the assessment of trends of development of clusters of creative industries in Russia. The methodological and practical aspects of the organization of such territorial entities based on organizations active in creative industries were analyzed. On the basis of the analysis, the author concluded that possible solutions to the problems identified could be found**.**

Keywords: *creative clusters, creative industries, culture and creativity, intellectual output**.***

INTRODUCTION

Owing to the need to the assessment of trends in the analysis and forecasting of the formation and development of clusters of creative industries, it is necessary to identify a list of organizational, methodological, financial and economic problems, The Russian Federation is a party to the Convention on the Elimination of All Forms of Discrimination against Women.

First of all, it is necessary to note «sectoral» problems that are characteristic for the sphere of culture and creativity in general.

The cultural sector is a set of sub-sectors that differ significantly in their basic characteristics. For example, the activities of the theatre as a social institution, a subject of creative and economic activity will be fundamentally different from those of the library and the museum. The cultural and recreational sphere, with its shared drivers of development, is extremely heterogeneous, which entails the complexity of its legal regulation. As a result, documents are initiated, drafted, discussed and adopted without proper coordination by different departments from different sectors, use different terminology apparatus, and are differently organized, which, accordingly, causes numerous inconsistencies in their interpretation and enforcement.

The foundations of cultural legislation provide a general direction and form a basic framework, but they are general in nature and cannot detail specific features of the activities of cultural actors. However, they cannot serve as full-fledged legal regulators. There is also no list of industries and no definition of each individual industry in any State legal instrument.

MATERIALS AND METHODS

The absence of a clear conceptual apparatus has a negative impact on the regulation of creative industries in terms of economic indicators. Economic

entities in the sphere of creative industries are at the same time subjects of the cultural sphere of society. There are currently more than 5,000 organizations of all forms of ownership and ISPs in Russia that organize entertainment events. These organizations are also cultural enterprises, whose sphere of regulation requires a legislative definition and at the same time participation in the process of social and economic relations, which also requires regulation by State (including legal) institutions. For example, theatres and performances, as the main form of theatrical activity, represent not only the artistic and cultural sphere, but also the object of economic activity requiring a conceptual apparatus in terms of social and economic relations and indicators, and is the object of intellectual property and intellectual activity. Thus, as a result, the performance falls under the jurisdiction of Part 4 of the Civil Code of the Russian Federation and requires appropriate legal protection, which would ensure further possibility to dispose of pavements for commercialization of results of intellectual activity. Thus, as a result, the performance falls under the jurisdiction of Part 4 of the Civil Code of the Russian Federation and requires appropriate legal protection, which would ensure further possibility to dispose of pavements for commercialization of results of intellectual activity. In the early 2000s, attempts were made to draft and adopt a federal law on theatre, but it was withdrawn in 2006.

Creativity in Russia is also beginning to be viewed in terms of economic aspects, that is, in the context of innovation and promotion of creative goods and services. This approach is in line with the principles of the creative economy described in the monograph earlier. However, in the Russian economy this process is still in its infancy, unlike most developed countries, which have been developing this sector for several decades.

There is also an organizational and economic dimension. In Russia, culture and cultural organizations have traditionally not been regarded as a source of stable profit. This hinders the development of creative clusters because some organizations in the creative industries have always been publicly and regionally funded and many have not developed approaches to self-organization.

In addition to the fact that by the beginning of the 21st century the share of Russian creative product in world culture had fallen to minimal values (while, for example, the United States is actively expanding its control over a large part of the world's turnover of cultural industries) the Russian film market, Music and other creative industries are not in demand in the world and lose domestic audience, which further aggravates the problem.

The importance of mass support for creative industries for the development of the Russian economy is currently underestimated by the State. There is virtually no systematic promotion of private enterprise, which is the basis of creative industries. The involvement of leading producers, promoters, artists and authors in the reform of the cultural industries is necessary in order to stimulate the creation and growth of a domestic creative product and to facilitate access to it by a wide Russian audience, especially young people.

With regard to the organizational forms of creative clusters, the issues of attracting financing, developing innovative investment infrastructure and training personnel are also relevant, in addition to those mentioned above.

Activities related to support and investment in the development of creative clusters are carried out in accordance with the appropriate methodology - the way of defining the type of activity of the companies that make up the cluster. There should appear to be a clear criterion for defining «creative companies», «creative clusters», as well as a criterion for assigning activities to the «creative sector», «creative industries». The interaction of enterprises within the cluster is based on the principles of partnership, which allows achieving synergies between small and large enterprises; This aspect has not yet been developed in Russia due to the lack of a methodology for the organization and functioning of creative clusters.

RESULTS

The main shortcomings of the activity of creative clusters in Russia at present are:

– Methodological aspects of work of creative clusters are not defined: the concept of «creative cluster» is not defined, there are no criteria for attribution of clusters to creative processes, there are no regulations for the main business processes (by number of creative organizations and in general by reason of entry into creative cluster, etc.);

– Therefore, statistics on the activities of creative companies and creative clusters are fragmented and often unavailable, making it difficult both to analyse the activities of these economic agents and to regulate them;

– Weak State and sectoral regulation: there are no national or regional programmes and strategies for the development of creative industries and clusters

– Creative clusters are created at the will of entrepreneurs and creative people, on the model «bottom - top» in contrast to the European model «top - bottom» where regional governments are the initiators of cluster creation (for example, in Germany). Based on the German experience, cluster support is particularly relevant when participants seek closer cooperation and the policy is aimed at motivating regional participants to work towards shared goals.

– Low intensity of innovation in cluster development, low efficiency of RID commercialization;

– Problems of access to financial resources for the development of new directions and territories;

– Low availability of specialized services for the development of start-up creative companies; lack of support for the creation of new innovative creative enterprises; advisory services; Weak development and infrastructure of creative clusters;

Thus, it is clear that there have been isolated attempts at the State level to formulate policies in support of cultural industries and creative clusters (for the time being only in the context of the development of cultural policies), but they are still not systematic and effective.

DISCUSSING

In order to solve the identified problems of the activity of creative clusters in Russia, the authors consider it necessary to take the following actions: first, to

eliminate methodological shortcomings and contradictions, second, to develop business processes on the organization, management and operation of creative clusters, Third, identify state and regional support measures for creative clusters.

In part one of the recommendations, the authors propose to clarify the concept of the «creative cluster» and introduce a new concept concerning the results of the activities of enterprises and organizations that are part of the creative cluster - RITE (results of intellectual creative activity). The monograph gives a non-exhaustive list of such results, mainly copyrighted and related intellectual property objects (ITNs). These include, for example, musical works, architectural designs and designs, literary works, talk shows, films and film series, news issues, phonograms, drama works, journalistic articles, including their digital forms, etc.

In part two of the recommendations, on the structure and composition of the creative cluster:

– The need for mandatory attribution of participants to creative industries (the number of members in a cluster is at least 30 per cent and up to 70 per cent);

– The provision that cluster members should include enterprises that support the creative companies that form the core of the cluster and form the infrastructure of the cluster (no more than 30 per cent of the organizations);

– There is a need to develop a cluster strategy and implementation programme in national and regional governments.

– The author also offers a partial list of creative organizations and their number in relation to the networked companies that make up the creative cluster and justifies the need for at least 70% of the companies that would make up both the core of the cluster and its infrastructure. Such organizations include: film studios, production studios, publishing houses, record labels, photo studios, exhibition centres, art workshops, design offices and studios, media (TV channels, radio stations, magazines and newspapers), fashion houses, art galleries, Auction houses specializing in art objects, etc.

Finally, a system of State support for creative industries should now be established in the Russian economy. The main task is to define the strategy and policies of the State, regional authorities and city authorities with regard to the creative sector and creative industries. Only then will the implementation of cluster development projects allow to effectively overcome various kinds of barriers and «bottlenecks», hindering the development of enterprises and organizations that make up the cluster. Political and legislative solutions are needed to support creative industries. The development of creative industries is above all a political decision and a significant priority of cultural policy and public policy in general. It is necessary to recognize the important role of the creative sector and creative class in post-industrial development (as opposed to the concept of the «energy power», whose power is based on the export of natural resources).

A number of more concrete measures are needed to overcome Russia's isolation from international cultural markets. This requires, in general, the formulation of policies and programmes for the development of the creative sector of the economy. Now a number of countries have already made such a decision - suffice it to mention CreativeState programs in Australia or Creative UK strategy

An enabling environment for the development of creative firms and clusters is a key element to be ensured. It is about creating an environment and an atmosphere conducive to the generation of new ideas, creativity and creativity. State support in this area cannot be limited to administrative and material support to specific organizations. What is more important today is to ensure freedom of creativity to further shape the innovation environment. In this regard, it is necessary to establish interaction between the representatives of different creative companies, including through the creation of creative clusters not only in the major cities but also in the provincial cities of the country. This need arises from the fact that today creative entrepreneurs themselves do not consider themselves part of a single creative sector, which certainly slows its development.

Researchers have also drawn attention to other aspects that the authors of the monograph consider to be equally important. Support for creative clusters is needed, for example, through the establishment of a system of preferential taxation, simplification of bureaucratic procedures and access to finance for creative clusters and creative businesses;

In order to improve the efficiency of the management of the creative sector of the economy, it is necessary to introduce modern forms of statistical reporting and statistical accounting in the sphere of creative industries at all levels. The availability of statistical data will allow international comparisons and correct analysis of the state of development of creative industries and creative clusters in the Russian Federation.

To staff the creative sector of the economy, it is necessary to modernize education in the creative industries. For example, the development of such management education as the management of creative organizations, the management of cultural enterprises, as well as specialized education in the fields of design, advertising, fashion, cinema, etc.

It is also necessary to create business incubators and new clusters in creative industries. There are currently no business incubators for creative entrepreneurs in Russia.

Local authorities should take measures to support infrastructure and networking projects in the creative industries. This requires regular forums, meetings, specialized online resources and resource centres for young entrepreneurs.

Russia’s participation in international research and projects is necessary in order to be able to conduct a comparative analysis of programs supporting creative industries and creative clusters.

The authors of the monograph share the position of L.R.Zotova and other researchers that in order to achieve the goal of further formation and development of creative clusters it is necessary to carry out analysis of the most promising directions, Differentiate these directions and form a program and strategy for the development of creative industries in Russia; explore possible niches, create open information platforms, at which there would be communication with professional experts in the sphere of culture and creative industries; to supervise directions and educational programs in the sphere of management of creative industries in the Russian Federation, Special attention should be given to training programmes in

the commercialization of ITNs in creative companies; To stimulate the activity of small and medium-sized businesses in the creative sphere and to develop measures to legalize the self-employed in the creative sector and to involve them in work and cooperation within the framework of creative clusters, etc.

At the time of the monograph, a key event for the world economy occurred - the COVID-19 pandemic. In most countries of the world, measures have been consistently implemented to «stabilize the situation with the spread of the disease» and to prevent the recurrence of infections, which has led to the limitation of the work of enterprises of various branches, The introduction of self-isolation and the restructuring of the economy as a whole. A number of industries were identified where even absolute spending in April was close to zero - tourism, sports and other events, hotel business, beauty industry, entertainment industry. «Public expenditure on clothing and footwear has decreased in real terms by 94.2% year by year; on furniture and interior objects - by 81%; on goods for beauty and health - by 80%; on books, music, photos and videos - by 74.5%», - notes «Independent Newspaper».

Another consequence of this was a fall in solvent demand: for example, in Russia, according to RBC reports, «...almost 30% of companies forced employees to leave without pay, over 20% of enterprises reduced wages, and 16% went to layoffs».

Creative industries are indeed almost more vulnerable to economic crisis than other industries. First of all, these industries are designed to meet the needs of the highest level (pyramid A. Maslow - development and self-development), and in times of economic crisis, when consumer incomes fall, They seek to meet the needs of the first and second level (physiological and safety needs), while the needs of the highest level - aesthetic and cultural - are relegated to the background as something that can be discarded». With the onset of the crisis people are reoriented to «accumulate safety margins» - for example, to make savings due to the threat of losing a job. This results in consumers not only abandoning luxury items, branded items, but also going to theatre, museums, movies, concerts, and book purchases. Accordingly, the pace of development of creative industries in the context of the economic crisis is declining even more rapidly than in other sectors.

The President of the Russian Union of Industrialists and Entrepreneurs, A.N. Shokhin, stated this on April 9, 2020: according to his projections, «creative industries» are not counted in 2020 from RUB 120 to RUB 150 billion. In 2020 (excluding the Internet industry, which is projected to grow by 6.5 trillion rubles), the projections for 2021 and beyond are also far from clear. In this connection, an address to Prime Minister M.Mishustin outlined possible measures that might reduce the impact of the industry’s decline. These include, first of all, targeted grants for creators of creative products, the creation of a State guarantee fund that will subsidize interest rates on loans granted under the intellectual property guarantee, etc.

Indeed, musicians, actors, artists, and architects face a sharp reduction in the number of orders in times of crisis. However, in some cases, as evidenced by examples of world history, the crisis led to the appearance of original

masterpieces; this is told by D.Trosby (David Throsby) in the book «Economics and Culture» (Economics and Culture). The story of the architect Frank Lloyd Wright (Frank Lloyd Wright) suggests that the shift to a different creative concept in response to changing demand trends (for example, in this case, the Great Depression segment of low-cost housing) leads to the emergence of extremely interesting, new, up-to-date concepts.

The crisis also affects various aspects of fashion and, consequently, the development of design industries. The dependence of skirt length on the state of the economy is widely known: this factor first appeared after the Second World War, when women were forced to save, which resulted in the reduction of skirts size and invention «mini». The history of the 20th century shows that in times of economic difficulties short haircuts were included in fashion (in most cases, but not always) and in «fat years» long haircuts. Many well-known cosmetics companies emerged in times of economic recession.

Another consequence of the U.S. economic crisis has traditionally been the growing popularity of serious economic, historical and educational literature, which in 2008 showed sales ratings of the major U.S. book chain Barnes & Nobles: Among the bestsellers were books describing the Great Depression, the works of economists, textbooks: employees released from industries in crisis were betting on the acquisition of a new profession. Economic crises also affect the content of films: Mickey-Mouse (Mickey Mouse), whose role in «preserving the spirit of the American nation», has become known worldwide. then it turned out to be very high, and popularity persisted for decades.

These and other examples suggest that in times of crisis (and possibly thanks to them) new «memes, trends and meanings are formed, which is especially important for creative industries in terms of the production of creative products that make up the context of the life of generations. At the same time, the «capacity» of creative industries is growing, and the account of representatives of other industries which, due to the events that have occurred, have been driven out of the labor market.

CONCLUSIONS

Russia, with its cultural heritage, developed art and a large number of creative people, has rich creative potential. It is clear that at present the existing potential is not fully exploited and the conditions and modalities for further development are not found. Creative clusters as elements of the innovation infrastructure of an economy can significantly improve the performance of creative firms and creative industries through synergies in the cluster; This can increase the effectiveness of the actors in the creative clusters through synergistic effects.

The State plays a central role in the creative society. Its main functions are to create an institutional environment conducive to innovation and to support entrepreneurship. However, the current legislation of the Russian Federation does not currently divide the results of intellectual activity (REED) into creative, scientific, economic, etc. However, in order to analyse the activities of creative organizations, creative industries and creative clusters, it is necessary to identify REED that has a creative basis.

In this connection, the authors propose to introduce a new concept - «results of intellectual creative activity» (RITE) into scientific circulation, since the results of this nature are the real result of the activity of creative clusters. This is a significant difference from other innovation clusters, which also produce «creative product», but their output (REED) is not creative in a narrow sense (products of creative industries)and creative products as a result of creative (innovative) activities in a broad sense, new products, technologies or management innovations.

In order to ensure the stable functioning and development of creative industries, the authors consider it necessary, first, to eliminate methodological deficiencies and contradictions (clarify the concept of the «creative cluster» and introduce a new concept concerning the results of the activities of enterprises and organizations that are part of the creative cluster - RITE), second, develop business processes on the organization, management and functioning of creative clusters (The need to have participants tied to creative industries (the number of members in a cluster of at least 30 per cent and up to 70 per cent); the provision that cluster members should include enterprises providing support to creative companies, Core cluster and infrastructure cluster (no more than 30 per cent of organizations); National and regional governments develop a cluster strategy and implementation programme); Third, to define measures of state and regional support for creative clusters, to establish a system of state support for creative industries.

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SESSION "CARPE SCIENTIAM. THE WORLD AND THE COVID-19 CRISIS: LEGAL, FINANCIAL AND SOCIAL IMPLICATIONS"

COVID-19 AND ITALIAN CHOICES OF PUBLIC FINANCE

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Abstract. The main objective of this article is to provide an overview of the principle fiscal and financial measures set down by the Italian government for facing the crisis caused by COVID-19. The legislator has introduced new tools and has implemented some others that already existed in our legal system. The variety of the legislative interventions that emerged from this analysis, makes evident the difficulty to find proper solutions for this abnormal situation. Italian legislator has tried to offer to the taxpayers a system capable of absorbing the negative economic effects, but it is not immune from some criticisms. The continuous amendment of the measures is not enough. Even if the utmost urgency of this situation has justified extemporaneous legislative actions, now the time is ripe for switching the attitude of the legislator, moving from introducing several independent measures to revising the legal system**.**

Keywords*: Negative consequences of COVID-19, fiscal measures, financial measures, criticalities*

INTRODUCTION

The pandemic has obliged governments to reconsider their policies for focusing on supporting the inner economy, that has been overwhelmed by this unforeseeable event.

The Italian legislator has developed an incentive system, that keeps changing, for facing the emergency.

This paper tries to provide an overview of these measures through a description of the principal interventions, studying the discipline but also the effects and the efficiency in concrete terms of this kind of measures.

In particular, legal texts and the audition of the vice president of Confindustria for the credit, the finance and the taxation, Emanuele Orsini, have been used for delineating the current scenario that could be the first step for renovating the fiscal system.

1. COVID-19 AND THE ITALIAN REACTION

The Italian government decided to set different kinds of measures in order to face the economic crisis caused by the health crisis due COVID-19.

Italian economy, as the rest of the world, was heavily impacted by the pandemic.

The inner economy suffered a lot for the restrictions that were necessary for preventing the spread of the infection but that had very negative effects, as evidenced by the decrease of the gross domestic product that has fallen by 8.9% in 2020.

In response to this situation, the Italian government decided to set up measures of various kinds, above all fiscal and financial ones, in order to help the taxpayers alleviating the burden of the socioeconomic difficulties caused by the health crisis.

These measures have been introduced by emergency laws and, analyzing the period of time from March 2020 to March 2021, the legislator has put in place multiple legislative actions creating a system that is in a continuous evolution with constant additions and modifications.

2. FISCAL MEASURES

Fiscal measures were the first type of benefit that the legislator used for countering the economic consequences of COVID-19.

The fiscal system has been implemented throughout this period of emergency, introducing various kind of benefits and increasing incentives already present, creating in this way a very wide system that is able to intercept and satisfy different needs of the society.

It is important to underline that the final result is not an organic reform, that was not even the objective of the legislator, but it is just a set of independent measures that are linked to the same objective, that it is to provide taxpayers tools in order to face the economic difficulties.

2.1 AN OVERVIEW OF THE PRINCIPAL INTERVENTIONS

Among the principal fiscal measures, the temporary suspension of fiscal obligations and tax payment has had a key role.

It was the first measure that the legislator used at the very beginning of the pandemic for the red zones, that were limited areas in the northern of Italy where there were very heavy restrictions, that afterwards has been extended to the whole country and prolonged.

During the emergency, several hypotheses of suspension have been introduced, in fact there are numerous instances of suspensions provided for the restrains and for the payment of different taxes, even the local ones, other than for the payment of Social Security contributions and of the compulsory accident insurance premium.

It was also established the suspension of the payment of the payment folders, even if they were already taken charge by the fiscal authority, and of the notification of the new payment folders.

Although it is a measure with a general scope of application, the legislator has introduced some limitations for restricting it, for instance limiting the benefit depending on the billing or on the area where the activity was carried out.

Once taxpayer asked for the suspension, there was also the opportunity to split up the suspended payment into two tranches, the first half could be divided into four instalments and the second one up to twenty-four instalments, obviously without the application of penalties or default interests.

The suspension was just an option, taxpayers could also not take advantage of that refusing it and mentioning the refusal for commercial or advertising purposes.

It was not the only measure that fell on payment terms, for the emergency it was introduced also the deferral of the payment of the deposit of income taxes and of the payment of tax liabilities on which the tax authority and the taxpayer reached an agreement.

Besides, there was also the opportunity to consider as prompt payments that were expired between March 2022 and May 2020 if they were paid within September 2020.

During this critical time the legislator has employed also one of the most widely used fiscal benefit in the Italian fiscal system, that is the tax credit.

At the beginning this measure was introduced just for the cost of the sanitization of workplaces and work tools, that were mandatory for the economic activities.

Then the legislator disposed a tax credit for the rental income, pairs to 60% of the rent, of the buildings used for business activities, limiting the application of this incentive just for specific activities.

The list of the admitted businesses has been enlarged during these months, but still there has not been a general application yet.

However, the beneficiaries can use the tax credit as a way of payment to the landlord.

In addition, the Italian government introduced different kinds of tax credit for several fields, starting with the sport activities providing a tax credit for the investment expenditures in advertising campaign in favor of professional and amateur sports club.

Two different tax credits have been established for the tourism that has suffered heavy losses, in particular a decrease in revenues by 60% in comparison to 2019.

The first one up to 500 euros, in favor of families, that can use it for paying services provided by hospitality institutions, and the second one for the owners of these institutions, amounting to the 65% of the cost of the renovation of their structures.

The legislator has also introduced tax credits for helping cinematography and publishing, which are fields extremely pulled down by the crisis, providing, for example, a tax credit equal to 10% of the cost of the paper for publishers.

For the emergency, the government has used also measures that were already part of the legal system, but that have been increased and prolonged in this period.

For instance, the ecobonus, the sismabonus and the superbonus, that are deductions of the costs of interventions on buildings in order to ensure energy efficiency and to decrease the seismic risk even on the historic houses, have been implemented.

There are also other incentives that have different objective, like the deduction for the purchase of appliances aimed of restarting the consumption.

Regarding the consumption tax, the government has disposed the abolition of the safeguard clause, with the consequent block of the tax increase, and new hypothesis of exemptions closely linked to the pandemic, with the exclusion, for example, of the application of this tax on the medical devices.

Among the different fiscal measures that have been introduced during the pandemic, there are some interesting interventions like the postponement of entry into force of plastic tax and sugar tax, that have been postponed to the first of July, and the increase of the incentives for the donations bound to the emergency.

One of the latest fiscal measures, introduced in March 2021 and that for sure will have a great impact at least on the small taxpayers, is the remission of tax debts.

It concerns tax debts up to 5000,00 euros that were formed between 2000 and 2010, pointing out that this limit concerns each tax debts linked to a specific tax, while the total that can be condoned can go over this limit.

There is also the possibility for an agreed definition for tax debts of autonomous workers who have reached an agreement on the sum due with the fiscal authority after a verified violation.

3. FINANCIAL MEASURES

The Italian government has also introduced financial measures in order to support the economic activities, in particular the legislator has enforced no refundable aids, different kind of warranties in favor of economic activities and the renewal of guarantee funds.

One of the most efficient warranties is the one granted by the State in favor of businesses that can easily access to bank loans, as shown by the increase of bank loans that have risen by 7.6% in comparison to 2020.

RESULTS

TABLE 1: THE LATEST FORECAST FOR ITALY

		Real GDP growth (%)	Budget balance (% of GDP)	Public debt (% of GDP)
Actual	2019	0.3	-1.6	134.8
Government (April)	2020	-8.0	-10.4	155.7
	2021	+4.7	-5.7	152.7
EC (May)[1]	2020	-9.5	-11.1	158.9
	2021	+6.5	-5.6	153.6
OECD (June)	2020	-11.3	-11.2	158.2
	2021	+7.7	-6.8	152.2
IMF (June)	2020	-12.8	-12.7	166.1
	2021	+6.3	-7.0	161.9
UniCredit (June)	2020	-14.0	-12.9	166.8
	2021	+7.0	-6.3	159.6

Source: EC, IMF, Ministry of Economy and Finance, OECD, UniCredit Research

CONCLUSION

Analyzing the system that was set down throughout this period of emergency, the measures introduced can be divided into two different groups.

The first one includes the measures that have as main purpose the attempt of stopping the negative effects that were caused directly by the COVID-19, giving an immediate relief to the taxpayers through, for instance, the suspension or the deferral of the payments.

The second one is the group of the incentives that have also the objective to restart the Italian economy, for example making easier obtain bank loans for businesses or through incentives aimed at promoting consumption.

If for the first kind of incentives the beneficial effects are manifest, for assessing the efficiency of the second one it is necessary to wait a bit more.

Meanwhile is possible to focus on the criticalities that are evident since now.

First of all, it is interesting to study the compatibility of the Italian intervention with the European law, in particular with the state aids discipline.

Italy has not infringed any legal provisions, because the described measures fall within one of the hypotheses of exemption of this discipline, being an "aid to make good the damage caused by natural disasters or exceptional occurrences".

Nevertheless, this continuous evolution involves instability for the taxpayers, that are often disorientated regarding which is the discipline that they have to follow.

Ultimately, the most difficult issue to face for the legislator, that will have persistent negative effects, is the increase of the public debt, in a country where it is already a chronic problem.

In fact, these measures have inevitably forced up the public debt, that in the next years must be repaid somehow and that probably will fall on the taxpayers, already weakened for this crisis.

The EU must be ready for contrasting the economical emergency that will follow the one caused directly by the pandemic, proceeding with the support policy and leaving aside the rigor.

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THE OECD RECOMMENDATION ON TAX AND FISCAL POLICY IN RESPONSE TO THE CORONAVIRUS CRISIS: STRENGTHENING CONFIDENCE AND RESILIENCE

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Abstract. The COVID19 pandemic was unpredictable and unexpected. The world's nations were faced with the dual necessity of dealing with the health emergency on the one hand and sustaining the economy on the other. The measures needed to counter the dual effects of the pandemic were drastic and involved large increases in public debt. Far from being complete, the aim of the paper was to conduct a quick review of the main measures adopted within the OECD countries to combat the pandemic, and then to analyse the various suggestions offered by the Organisation to make up as quickly as possible for the gap created by the pandemic shock and to prevent the world – a suggestive and allusive notion which, however, immediately highlights the impact of the pandemic – from finding itself once again unprepared for a similar new crisis**.**

Keywords: *OECD, Tax, Pandemic.*

INTRODUCTION

Although words have their own meaning (on which etiological debates are often made up in official dictionaries), they should necessarily be analyzed by looking at the context in which they are used or re-elaborated.

The covid19 pandemic crisis has helped to enrich once again unusual terms with new nuances, or it has helped to rediscover institutions and functions that man, as a creature of habit, had almost taken for granted.

The first group (the new terminological nuances) includes the words "confidence" and "resilience": always associated with the world of self-branding, they are now, instead, at the center of the political debate which, at the oecd, dominates the discussions on how the so-called sovereign states are entities with increasingly blurred borders. In particular cases (as shown by the pandemic), in fact, the single defensive action of the state may not be sufficient, but a coordinated action between multiple institutions is required, with well-defined roles and functions - we will return to this point in the following paragraph.

In the second group (the rediscovered institutions) lurk, instead, the nation states themselves: indeed, the pandemic crisis has highlighted, with immediate clarity, the centrality of state intervention, the first barrier to prevent the spread of harmful effects, both health and economic, but above all social.

In the various analyses carried out by the oecd, in fact, it is surprising to note that even the so-called *liberal* states – where private initiative ruled supreme and state intervention was almost recessive, even in sectors that regulate the so-called common goods (i.e., health, defense) – were called upon to offer strong responses

to citizens, introducing benefits, concessions and subsidies of a typically continental europe.

The aim of the research was to provide an overview of the main recommendations offered by the oecd to combat the pandemic. Before reaching this examination, it was deemed necessary to analyze the situation existing at time "t_0" – that is, before the pandemic shock – and then observe how the facts and data, prompted by a destructive event, changed accordingly.

But let us proceed in a strict formal and logical order.

LITERATURE REVIEW

The first part of the research was mainly conducted on the studies carried out by the OECD in the period from the 2008 economic crisis to the first months of the pandemic, studying economic and fiscal trends.

The analysis showed that most nation states had already increased their public debt to cope with the increased spending resulting from the famous 2008 economic crisis.

However, in this scenario, some anglo-saxon nations – closer, therefore, to the world of common law –, still embracing a generic and favorable idea that the market would in any case heal and repair social differences (even more acute after the 2008 economic crisis), have left wide openings for the creativity and cunning of the private entrepreneur.

In this scenario (please refer to table 1 and table 2), the greatest efforts to contain the growth of the debt (already enormously increased), but at the same time to guarantee a lively economic recovery, concerned i) measures to contain the tax burden; ii) measures aimed at supporting consumption; iii) measures aimed at directing, with a gentle push (so-called nudge theory), the investments in certain sectors; iv) the analysis of the risks associated with new and possible economic shocks (among the latter, however, the epidemic pandemics were only hinted at, not being estimated as possible or with such destructive effects as they later manifested themselves).

The documents analyzed highlighted the need to estimate the risk in advance and classify the consequences of its effects into two macro categories: the acceptable risk – level of risk a society is prepared to accept without any specific risk management options – and the tolerable risk – level of risk a society is prepared to live with as long as that risk is monitored, and risk management options are taken to reduce it –.

As mentioned, although not foreseen, the tense fiscal and economic situation of the states has led the oecd to observe – with sharp frankness – that "in such tight fiscal environments disruptive shocks can become more challenging to absorb for public treasures, especially in countries that rely on state budgets for post-disaster loss financing and where insurance coverage remains relatively low**1**".

[1] OECD Reviews of Risk Management Policies – Boosting Resilience through Innovative Risk Governance, Studies from 2009 to 2014.

However, the unexpected pandemic brought a necessary and sudden change of perspective. The analysis of the documentation following this shock shows, in fact, that the concerns of the oecd regarding the types of acceptable or tolerable risk, as well as the possible problem of leverage and reduced room for maneuver connected to high state debts, take a second place.

The main task becomes coordinating the state actions based on the – hypothetical and idealized – division of the pandemic into four phases (please refer to figure 1), to which should correspond virtuous fiscal policies, economic policies and/or incentives of various kinds and types:

In phase 1) states need to focus on the liquidity and income support; in this scenario, tax systems play a key role in quickly delivering financial support to business and households. Among the most used measures, the oecd reports favorable effects of tax deferral and tax credits;

In phase 2) states need to broader their tax policy: it is vital tax policy to continue to focus on limiting hardship and maintaining the ability for rebound. At this stage it is emphasized that the liquidity problems deriving from the previous one could translate into solvency problems, with consequent default of many companies. Attention shall therefore shift to the tools that allow the cash flow to be kept constant and that allow the business to continue – in different ways;

In phase 3) – which is difficult to separate from the second – the oecd again recommends continuing to provide benefits to businesses, however remembering that they are not entities that can survive without an adequate return to consumption: it will therefore be up to the state to support investment and consumption. The precise choice of instrument with which to act, which is left to the individual state, cannot fail to consider the time and the way the aid is to be provided: the purely economic conception of aid therefore overlaps with the psychological one, to avoid aid being provided at the wrong time.

As anticipated, immediate surprise arouses the sudden change of course – but, in the mind of the writer, correct –: the oecd, in fact, recommends intervening in the most varied ways to contain the pandemic, suggesting not to focus – in the short term – solely on the health of the public budget; the debate on how to settle any debt incurred in the early stages of intervention is postponed to a later and eventual moment.

It is only in the final phase 4) taxation can become predominant again to restore public finances so that the sustainability of public debt is again guaranteed.

On the sidelines of this analysis, as anticipated in the introduction of the text, there are some notable surprises: it was noted that the measures adopted by the various oecd countries were similar, even among countries that had historically chosen to confine state intervention to the margins of society. Secondly, the centrality of the state as an entity that assists and supports the economy was reaffirmed, even in those countries that had most praised the superiority and the utterly efficiency of a free market.

RESULTS

Table 1. The pre-pandemic scenario: the synthetic results of the analysis conducted with reference to fiscal trends (OECD and Selected Partner Economies – Tax Policy Reforms 2020).

INDIVIDUALS	BUSINESSES
Taxes on labour: declined between 2013 -2019	Many countries have increased the generosity of their corporate tax incentives
PIT rate cuts have intensified	SME CIT rates have been lowered
Increase in personal tax allowances, tax credits and tax brackets	Special intellectual property regimes and different types of R&D tax incentives
Therefore, SSC reforms have slowed compared with recent years	Increased taxes on the financial sector

Table 2. The pre-pandemic scenario: other sources of taxable income (OECD and Selected Partner Economies – *Tax Policy Reforms 2020*).

Environment related tax revenues vary widely across countries and continue to be dominated by taxes on energy use
Consumption taxes, in particular VAT, are a major source of revenue in most countries. Excise duties have continued to be raised
Property taxes continue to be a small source of revenue
Specific taxes on specific goods and services have been introduced (i.e., *sugar* tax; *web* tax)

PANDEMIC AND CONTAINMENT

PHASES IN POLICY RESPONSE

FOCUS OF TAX POLICY RESPONSE

Figure 1. Schematic policy phases during and after the pandemic (OECD – *Tax and Fiscal policy in Response to the Coronavirus Crisis: strengthening Confidence and Resilience*)

CONCLUSION

As briefly mentioned, the main hope of the OECD – amply emphasized in the recommendations highlighted – as well as of the European Union (for matters within its competence) is to find and pursue shared solutions, so that existing inequalities are not further accentuated.

Shared solutions should also serve not to create new instruments – harbingers of further uncertainties – but to strengthen existing remedies.

However, the reality is quite different from expectations: in fact, despite declarations of principle giving rise to hope, many states have selfishly saved above all their own interests, not only their health interests, but above all their economic interests, favoring policies that are accommodating and attractive to foreign investment which, in a recovery phase, will have to find a new home.

On the contrary, the weaker part of the globe – among which there are nations with substantial state aid among their state-budgets – could be more disadvantaged and struggle more in their recovery: in fact, it is not uncommon that the accommodative policies mentioned above have been implemented precisely by reducing those aid, favoring the immediate domestic benefit of the already wealthiest nations.

This gap could widen further if the fiscal policies of historically more economically powerful states attracted more capital from economies that, due to various endemic and exogenous factors, have more difficulty in receiving financing.

Finally, the statement of principle that it would be necessary to strengthen existing remedies deserves several criticisms: in the documents analyzed, in fact, this phrase recurs several times[1], but the differences existing between the various national systems and the non-mandatory nature of the indications provided at international level make it difficult to coordinate interests that are currently as divergent as ever.

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TAX JUSTICE IN THE TIME OF COVID-19

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Abstract. This article discusses the inequalities that have always characterized the international tax systems and that the Covid-19 pandemic had definitively brought to light. The Tax Justice Network has very recently collected alarming data reporting the huge amount of taxes the world loses every year to international tax abuse committed by corporations and privates. Since this scenario has been enabled by international tax rules dictated to prioritise the desires of the wealthiest, the Tax Justice Network suggests reprogramming them to recapture all the money lost that is urgently needed by governments to fund healthcare, public services and provide support to businesses. The UN FACTI panel together with the proposal for minimum global taxation represent a possible turning point in the global struggle for tax justice. Ultimately, the suggestion of the Tax Justice Network is developing rules at the level of the United Nations as this could be the proper solution for everyone to be treated equally**.**

Keywords*: tax justice, tax losses, corporate tax abuse, profit shifting, minimum tax.*

INTRODUCTION

While the Covid-19 pandemic has undoubtedly shown that we are all equal before the virus and no one is immune from the possibility of being affected by it, it has also highlighted the underlying inequalities and injustices that have always characterized our international tax system. It has emerged how the laws and policies have been dictated by the wealthiest corporations and individuals that, in order to pursue their own interests, have urged governments to decades of tax cuts. Underfunded healthcare and public services left many countries around the world not prepared for this crisis.

In order to deal with these concerns, in the following, it will be discussed the data collected together with the proposals and reflections of the Tax Justice Network which is a non-governmental organization consisting of a coalition of researchers and activists whose mission is to repair injustices in our tax systems[1]. Their suggestion is to reprogramme international tax rules to prioritise equality over the desires of the wealthiest.

The main objective of the paper is therefore to report how alarming the situation is and that governments no longer can make the wrong decisions concerning the investments of public resources since the costs of the pandemic make recapturing the revenue lost to corporate tax avoidance and private tax

[1] The Tax Justice Network (or TJN) is an advocacy group that was officially launched in the British Houses of Parliament in March 2003 whose main concern relates to dealing with the harmful effects of tax evasion, tax avoidance, tax competition and tax havens. More information available at https://www.taxjustice.net/.

evasion an urgent priority. This is also the occasion to discuss some of the most relevant proposals that represent narrative shifts in favour of tax justice.

1. the DATA COLLECTED BY THE TAX JUSTICE NETWORK AT A GLANCE

In November 2020, the Tax Justice Network has released "the State of Tax Justice" which is a report that comprehensively presents the huge sums each country in the world loses every year to corporate and private tax abuse. The overall amount of losses is over $427 billion (USD) of which $245 billion is lost to multinational corporations shifting their profits into tax havens and $182 billion is lost to tax evasion of wealthy individuals that hide wealth offshore to escape from the rule of law.

From the report, it has emerged that global tax abuse has a harsher impact on lower income countries where tax revenue is more urgently needed[1]. Although in absolute numbers tax losses have been bigger in higher income countries ($382.7 billion), lower income countries lose more money in proportion to the amount of revenue they typically collect (see Table 1). When looking at tax losses of health budgets, the disparity is much sharper: lower income countries are on average losing the equivalent of more than triple the size of those lost by higher income countries.

Tax Justice Network publishes two very effective biennial indexes that evaluate each country's tax and financial systems to determine how big of a role the country plays in enabling global corporate tax abuse and global financial secrecy. The Corporate Tax Haven Index identifies which are the main enablers of corporate tax abuse while the Financial Secrecy Index ranks each country based on how intensely it serves as a tool for individuals to hide their finances from the rule of law[2].

The Corporate Tax Haven Index 2021 (see Table 2) reported that OECD countries and their dependencies are responsible for 68.3% of global corporate tax abuse risks. Among them, the major share of responsibility falls on the United Kingdom together with its network of Overseas Territories and Crown Dependencies, often referred to as the "UK spider's web". The network functions as a global web of tax havens laundering and shifting money into and outside the City of London. The UK spider's web is responsible for 29% of the $245 billion in tax the world loses to corporate tax abuse every year.

Then, after the UK, the other largest enablers of corporate tax abuse risks are the Netherlands, Switzerland and Luxembourg. These countries rank fourth, fifth and sixth in the index, respectively, immediately after the top three enablers of

[1] In accordance with the World Bank classification, a country is classified as low, lower -middle, upper-middle or high income country on the basis of the gross national income (GNI) per capita. In the State of Tax Justice 2020, the reference to "higher income" countries includes high income and upper middle income countries grouped together whereas, when the reference is made to "lower income" countries, this comprises lower middle income and low income countries grouped together.

[2] The indexes work similarly: they first give each country a score based on how intensely it has been programmed to enable tax abuse and then they combine it with the country's Global Scale Weight, which is an indicator of how heavily the country is used by corporations for the corporate activity or by individuals for financial services.

abuse that belongs to the British Overseas Territories (in descending order: the British Virgin Islands, Cayman Islands and Bermuda). The Netherlands, Switzerland and Luxembourg together with the UK spider's web constitute the "axis of tax avoidance" which was found to be responsible for 47% of the $245 billion the world loses to corporate tax abuse every year.

The Financial Secrecy Index 2020 revealed that countries are reducing their contribution to financial secrecy as a result of recent transparency reforms, especially in the three areas of automatic exchange of information, beneficial ownership registration and country by country reporting (also known as "ABCs" of tax justice). However, from the index have emerged escalations of financial secrecy from Cayman Islands, the US and the UK. Cayman, in particular, moved to first place in the index being therefore the world's greater enabler of private tax evasion (it causes alone a tax revenue loss of $47.6 billion).

2. THE TURNING POINT IN THE GLOBAL STRUGGLE FOR TAX JUSTICE

2.1.The FACTI Panel Final Report

According to the Tax Justice Network, a turning point in the global struggle for tax justice is the United Nations High-Level Panel on International Financial Accountability, Transparency and Integrity (the FACTI Panel) whose final report has been launched in February 2021 by a group of heads of state and ministers from around the world. If the panel's envisaged changes will follow, the estimated $427 billion lost in tax revenue each year may finally be addressed.

The report is demanding for effective and specific policies to be implemented with regard to both tax transparency and international tax rules. The very innovative proposal is to reform the global architecture by taking the power away from the OECD and shifting it instead to more inclusive institutions. The central element is the creation of a UN tax convention that would allow international rules to be determined through a more democratic process.

As to international corporate tax rules, two measures have been proposed to end profit shifting and the race to the bottom on tax rates. The first one is unitary taxation under which, going beyond the traditional "arm's length principle", the profit that a multinational corporation declares as a group is apportioned to each country where it operates based on how much of the group's real economic activity takes place in that country. Then, since the incentives for profit shifting mainly arise from different tax treatments across jurisdictions, the second proposal concerns the introduction of a global minimum tax rate. In case the company has shifted the profits to a foreign jurisdiction with an effective tax rate that falls below a minimum rate of tax, home governments could "top-up" their taxes to the agreed minimum rate.

Both of these ideas have been already developed by the OECD in 2019 with its Pillar One and Pillar Two proposals but the process has stalled in practice. Difficulties have emerged in particular in reaching a common ground on the Pillar One proposal because of its high complexity and the fact that it would require a global treaty change means that it could very easily be blocked by countries.

Furthermore, it is insisted that the two pillars are inseparable and must be delivered jointly but, considering the difficulties in getting an agreement on Pillar One, the block to the latter creates a block to both.

2.2.The US proposal for a global minimum corporate tax rate

Another turning point to be reported refers to the new President Biden's administration that, since its beginning in January, started to lead the charge for a new politics of tax justice.

With the Made in America tax plan, Biden is reclaiming tax justice in the area of US corporate taxation by providing a series of corporate tax reforms to eliminate incentives to offshore investment, to reduce profit shifting and addressing tax competition on corporate rates.

Then on April the 5th the proposal for a global minimum corporate tax rate on multinational corporations gained sudden traction as Treasury Secretary Janet Yellen reiterated the US's full support for the measure. Yellen urged the adoption of the measure to make sure that governments have stable tax systems that raise sufficient revenue to invest in essential public goods and, most importantly, the minimum tax would be a remedy to the race to the bottom concern. The latter may create particular risks especially for developing countries that tend to rely on corporate tax revenues more than developed countries, but, because of the inadequacy of their administrative resources and their small economies, offer inefficient tax incentives and are more likely to run the risks of base erosion. Defenders of the race to the bottom, by misusing the concept of "tax sovereignty", affirmed that every state must be free to set the tax rules and rates wished regardless of the damage it might create to their neighbours. This should be limited so that everyone could enjoy tax sovereignty and governments may have stable tax systems that raise sufficient revenue to invest in essential public goods.

Yellen affirmed the United States is working to agree to this minimum tax together with the G20 nations, and they have asserted their commitment to reach an international deal by mid-2021.

However, according to the Tax Justice Network, for the proposal to become concrete, the limitations imposed by the OECD process (see paragraph 3.1.) should be overcome. If the two pillars are allowed to be separate, by leaving behind Pillar One it would be quicker to reach an agreement on the global minimum tax of Pillar Two. Further, the OECD insistence on a very low minimum rate of 12.5% can be set aside. The Biden administration has indicated a rate of 21% and other countries have indicated higher rates, therefore leaving the possibility to negotiate upwards from 21% would create the possibility to effectively catch some money.

Some authors have also suggested the minimum tax should be paired with an exceptional contribution on behalf of the companies that are profiting most thanks to the crisis. While many businesses are suffering the economic damage caused by the pandemic, other corporations like Amazon are accruing their profits because most of their physical competitors have been closed by order of the state. Therefore, governments should implement an excess profits tax – like the one that

was developed during the first and second world war to help fund the war effort - on these extra profits not of the taxpayer's making.

3. A SPECIFIC RESPONSE TO MULTINATIONALS TAX ABUSE WITHIN THE EUROPEAN UNION CONTEXT

The fact that some multinationals that have been avoiding corporate taxes for years are about to be bailed out by national governments has been regarded as unacceptable and unfair by the general public. A further step in the direction of tax justice has been taken within the European Union context by pushing governments in limiting their support for businesses if companies are involved in tax avoidance practices.

With the recommendation of 14 July 2020, the European Commission urged Member States to make the granting of State aids conditional to the absence of links between the recipient undertaking and states included in the EU list of non-cooperative jurisdictions. The latter, frequently referred to as tax havens, have been blacklisted because they do not meet the requirements of transparency, fair competition or real economic activity.

At the same time, Member States should be careful not to inadvertently affect those economic activities that are genuinely carried out in the tax haven. To this purpose, the recommendation is to include appropriate exceptions not to prevent the concession of financial support where there is real economic activity.

However, relating the granting of state aid to the absence of links with tax havens has been criticized by some authors for the fact that it may be inconsistent with EU law fundamental freedoms, in specific the free movement of capital. Further, tying such measures to lists of tax havens may not be so effective since these lists are not so precise. The Tax Justice Network reported that the EU's tax haven blacklist failed to identify the majority of the enablers of global tax abuse. Cayman for example – that moved from third to second in the Corporate Tax Haven Index and from third to first in the Financial Secrecy Index – has been removed from the EU tax haven blacklist in 2020 and was not re-blacklisted in the new list of February 2021.

In conclusion, while denying assistance to companies that do not pay their fair share of tax is perfectly understandable in a time of economic crisis, this should be done through reforms of the tax system rather than by means ad hoc populist reform which may eventually fail to hit its target.

4. THE TAX JUSTICE NETWORK PIONEERING PROPOSAL

Since the international tax rules that led to the huge amount of revenue losses and inequalities described have been primarily predetermined by the OECD, an organization made up of high-income countries among which are most of the world's biggest enablers of tax abuse, the Tax Justice Network called for reprogramming our global tax rules to prioritise equality over the desires of the wealthiest by shifting the responsibility to the United Nations that could guarantee more globally inclusive solutions. In line with what has been proposed in the FACTI panel, it suggests the negotiation of a UN tax convention since it would allow international tax rules to be determined through a genuinely representative

process in order to reflect the needs of all countries around the world rather than the desires of a rich and powerful few.

CONCLUSION

At the end of this discussion, it is possible to affirm that we can no longer ignore the gravity of tax injustice, especially in the actual period of crisis due to the Covid-19 pandemic. The data coming from the Tax Justice Network have the purpose of calling on the global community to take quick action to finally make the changes needed to keep the promise of tax justice. The very recent proposals arriving from President Biden's Administration seem to be moving in the direction of tax justice and they will not only benefit people in the US but, considering the hegemonic power this country has, the reforms have the possibility to spread wider and significantly enhance the global action. In the end, the responsibility is of individual countries that should evaluate whether to achieve the desired purposes under the leadership of the OECD or rather follow the suggestions of the Tax Justice Network and deliver the power of setting global tax rules to a more democratic organization like the United Nations.

RESULTS

Table 1. Comparison of different income groups tax and health expenditure losses (Tax Justice Network, The State of Tax Justice 2020 at p. 27).

	Total revenue loss (USD million)	**Average tax revenue loss as share of total tax revenue**	**Average tax revenue loss as share of health expenditure**
Lower income	$45,021	5.78%	52.36%
Higher income	$382,745	2.45%	8.41%

Table 2. Corporate Tax Haven Index 2021- Top 10 greatest enablers of tax abuse (Available at https://cthi.taxjustice.net/en/).

Rank	**Jurisdiction**	**Haven**	**Global Scale**	**CTHI Value**	**CTHI Share**
1	British Virgin	100	2.3%	2854	6.4%
2	Cayman Islands	100	1.9%	2653	6.0%
3	Bermuda	100	1.6%	2508	5.7%
4	Netherlands	80	11%	2454	5.5%
5	Switzerland	89	3.4%	2261	5.1%
6	Luxembourg	74	9%	1815	4.1%
7	Hong Kong	78	5.5%	1805	4.1%
8	Jersey	100	0.51%	1724	3.9%
9	Singapore	85	2.3%	1714	3.9%
10	United Arab	98	0.54%	1665	3.8%

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THE IMPACT OF COVID-19 ON THE AUDIT ACTIVITY IN PUBLIC SECTOR

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Abstract Supreme audit institutions are respected oversight institutions and can play a key role to maintaining basic rules and regulations that must be adhered to, even during the crises. They contribute to effective government actions by provide advice or audit the implementation of new regulations and programs and help to prevent the cases of fraud and corruption. This paper will focus on the impact of COVID-19 pandemics on supreme audit institutions and they role in auditing of variety of measures adopted by governments to address the health and economic needs

Keywords*: supreme audit institutions; remote audit; audit work program; foresight*

INTRODUCTION

Audit activity in public administration is not an end in itself, its essence is not only to check a specified area, but to ensure the fulfillment of set objectives and tasks of public administration, identify deficiencies so that appropriate remedial action can be taken to address them, or provide assurance that the audited area meets legal requirements and set objectives. The main objective of audit activity in public administration can be has to be the provision of public goods and public services using public funds in an efficient, economical and effective manner.[1] The audit is both a source of information for decision-making in the management of public funds and an incentive for further improvement in the future. The role of audit activity defined in this way is all the more crucial at a time when the whole world is fighting against the consequences of the global COVID-19 pandemic and the related economic crisis.

Diverse responses of states on the crises, economic impacts or any implementation of fiscal measures should be subject to independent evaluation and assessment by internal and external auditors. Their findings, conclusions, recommendations, but also assurances, are one of the basic tools that can help the public administration in the difficult task it currently faces. This paper will focus on the impact of COVID-19 pandemics on audit in public administration, both in terms of the audit work itself and audit program changes.

[1] On role of supreme audit institutions see INTOSAI core principles, INTOSAI–P 12 – Value and Benefits of SAIs: „Public sector auditing, as championed by the Supreme Audit Institutions (SAIs), is an important factor in making a difference to the lives of citizens. The auditing of government and public sector entities by SAIs has a positive impact it focuses the minds of the custodians of public resources on how well the public resources have been used. Such awareness supports desirable values and underpins accountability mechanisms, which in turn leads to improved decisions. Once SAIs' audit results have been made public, citizens are able to hold the custodians of public resources accountable. In this way SAIs promote the efficiency, accountability, effectiveness and transparency of public administration."

The approach of individual states to the definition of audit in public administration differs fundamentally, in some places the term audit means mainly the audit of financial statements, in others the audit is confused with inspection activities. In this article, the audit is perceived primarily as a systematic activity of independent and objective persons aimed at increasing responsibility in the management of public funds, adding value, in the form of recommendations for improving the audited area. This activity is usually carried out by external auditors working in supreme audit institutions and external auditors of The European Court of Auditors ("ECA") at the level of the European Union ("EU"), which will be the focus of this paper.

1. Remote auditing

Since last spring, auditors have faced challenges related to restraint like most other professions. These challenges have their specifics in performing audit activities related to, for example, the need to ensure objectivity, obtain sufficient relevant evidence for their conclusions, maintain the quality of communication with the auditees, or anticipate potential risks. The auditor must maintain professional judgment in all circumstances, focus on public interest and to preserve the fundamental principles (especially integrity, objectivity, professional competence, confidentiality). With coming crisis, long-standing discussions about the use of new technologies and procedures in day-to-day audits have turned into everyday reality, and with little exaggeration can be this crisis considered as a major impulse that has shown us what is possible.

Restriction of personal contact is a fundamental, yet vincible, limitation for the performance of audit. Although the concept of remote auditing is by no means new, it is now gaining its full meaning and represents the only possible alternative for both auditors and auditees. Under the term remote audit, could be understood the performance of the audit completely off site. Such an audit performance is in principle no different from a "traditional" audit and brings at first sight visible benefits such as a reduction in travel costs, a reduction in the administrative burden on auditees or improvements in the use of IT technology.

On the other hand, the direct contact of the auditor with the auditee, which enables seeing processes first-hand and creating a rapport with him and passing on information, recommendations, observations for improvement or best practices, is lost "Auditors are expected to be present and visible, assuring their readiness to respond with timely audit products to enhance accountability."[1] An indisputable negative is also the risk that the auditee will present doctored documents or, conversely, conceal information that could be ascertained by performing an on-site audit.

As part of the audit engagement process itself, the need for remote work is particularly evident in documentation review, interviews, communication and meetings with the auditees. Although electronization in public administration is

[1] World Bank Group: Role of Supreme Audit Institutions (SAIs) in Governments'Response to COVID-19: Emergency and Post Emergency Phases, retrieved from: https://openknowledge.worldbank.org/bitstream/handle/10986/33901/COVID-19-Role-of-Supreme-Audit-Institutions-SAIs-in-Governments-Response-to-COVID-19-Emergency-and-Post-Emergency-Phases.pdf?sequence=5&isAllowed=y

already well advanced, many documents remain in analogue form and their transfer to electronic form can be a significant problem. After the conversion of analog documents into electronic form, of course, other questions arise regarding the format of documents, their size and how to move a large number of documents in digital form. The conduct of interviews and other communication with the auditee may be partially replaced by the use of accessible technology that enables online two-way communication. The use of various technologies in auditing is associated with the need to ensure the cyber security of all data and the risk of leakage of confidential information increases enormously.[1]

2. Audit work program modifications

Variety of measures adopted by governments to address the immediate health and economic needs arising from the pandemic change the risk environment, which is the basic guide for setting up activities of supreme audit institutions and directly impacts on the work to be undertaken across its performance audits, financial audits and also other assurance activities. Of course, it was necessary to make certain changes to the work program also in connection with the reduction of normal capacity due to the non-availability of staff in supreme audit institutions and in auditees. Supreme audit institutions had to/need to identify all changes and assess their impact on the risk assessment and implement the process to modify the audit work programs based on the updated risk assessment.

At this point, the author considers it appropriate to mention the complaints about the risk assessment methodology used by supreme audit institutions, and the ineffectively performance of the advisory function due to the audit methodology, are not tailored to the uncertainty conditions expressed by Professor Zbyslaw Dobrowolski in his study[2]. In addition to the assurance and control function, he draws attention to other functions that supreme audit institutions should perform, including preventive, investigative and advisory. Given that supreme audit institutions have significant amounts of information obtained during audits of a wide range of organizations, they may indicate not only the causes and effects of systemic shortcomings but also examples of best practices that can be applied more widely in the public sector. He does not consider only the risk-based audit approach to be sufficient and believes that it is now necessary to use foresight methods. *"SAIs should not only evaluate the correctness of data and methods used in foresight but also advise decision-makers through promoting and using foresight and how to use the foresight properly."* His study shows that supreme audit institutions, which were the subject of his analysis did not audit governments' foresight related to the pandemic and did not advise decision-makers how to use foresight in uncertainty conditions.

Examples of audit program modifications

The most comprehensive response to the crisis according to author is the response of the Australian National Audit Office ("ANAO"), which has reacted to this challenge with a strategy for auditing COVID-19 related measures, which

[1]Litzenberg R., Ramirez C. F.: Remote auditing for COVID-19 and beyond, retrieved from: https://intosaicovid19.org/

[2] Dobrowolski, Z. 2020. The Supreme Audit Institutions Readiness to Uncertainty, Entrepreneurship and Sustainability Issues, 8(1), 513-525.

"provide a balanced program of activity that is informed by risk, and that promotes accountability., transparency and improvements to public administration "[1]. ANAO's Multi-year strategy for performance audits divided into three phases includes the economic stimulus and social support packages as well as the management of related risks, such as system and technology changes, fraud, information management, privacy, compliance and regulatory effectiveness. In the first phase, 5 audits are planned, which will examine in particular how the audited entities manage and respond to rapid development and implementation of COVID-19 measures, the achievement of objectives, IT system development and data integrity, potential internal and external fraud the procurement and deployment of health personal protective equipment and medical devices. By the end of 2020, three of these audits had already been carried out. In the second phase, ANAO plans to focus on policy design, implementation and performance assessment, evaluation and dissemination of lessons learnt. The list of potential audit topics that will be conducted during the second phase of the COVID-19 performance audits has not yet been concretized. In the third, final, phase, the ANAO will review the outcomes of the COVID-19 response including post-pandemic assessment of the achievement of outcomes, recovery plans, dissemination of lessons learnt, the readiness of government systems and processes to respond to future crises. The ANAO strategy has clearly defined goals and can be an example of properly grasping the role of the supreme audit institution in overcoming the crisis.

Several audits on government procurement, measures aimed at protecting businesses and individuals from the economic impact of the coronavirus pandemic or government preparedness for the pandemic are also part of the broad work program of the National Audit Offce ("NAO") of Great Britain[2] on COVID-19 and of course in a number of other supreme audit institutions all over the world. The current reaction of the supreme audit office in the Czech Republic ("NKÚ"), which in the second half of 2020 carried out an audit of the purchase of personal protective equipment and extended the scope of the audit of the Business and Innovation Operational Program in connection with the Covid-19, is not entirely convincing. The work program of NKÚ for 2021 does not indicate any effort to contribute to the fight against the consequences of the global COVID-19 pandemic.[3]

Major role of supreme audit institutions in auditing COVID-19 is also emphasized by the International Organization Of Supreme Audit Institutions (INTOSAI), which operates as an umbrella organization for the external government audit community. INTOSAI launched an INTOSAI COVID-19 Initiative[4] that offers assistance to Supreme Audit Institutions by sharing best practices, training, remote work tools, and developing lessons learned. Similar

[1] ANAO COVID-19 multi-year audit stratégy, retrieved from: https://www.anao.gov.au/work-program/covid-19
[2] Davies, G.: Auditing the government's response to COVID-19, retrieved from: https://www.nao.org.uk/naoblog/auditing-the-governments-response-to-covid-19/
[3] Nejvyšší kontroln úřad: https://www.nku.cz/
[4] See https://intosaicovid19.org/

assistance is also provided in the project "Audit of Responses to COVID 19 Pandemic"[1], which is implemented within the European Organization of Supreme Audit Institutions.

3. Response of The European court of audiors

The European court of auditors also referred to as the Guardian of the EU finances, is the European Union's independent external auditor. The ECA's role consists of assessing the performance and added value of EU spending and regulatory action. According to the 2020 work program, the ECA was to focus on the concept of 'sustainability', in particular climate change consequences. Audit priorities also included the area *"Financing and administering the EU accountably and efficiently"*. The ECA responded to the COVID-19 pandemic by changing the work program, by a number of measures related to the actual performance of audit and consulting activities, or by focusing risk analysis in further planning.

Already at the beginning of April 2020, the ECA received a formal request for an opinion from the European Parliament on the European Commission's proposal to mobilize European Structural Investment (ESI) funding to mitigate the effects of COVID-19 on the health of citizens and the economies of the member states. This kind of proposal requires mandatory consultation with the ECA.[2]

The ECA's opinion[3], issued in early May 2020, stated that the measure was necessary in the short term, but also highlighted the risks associated with the design and implementation of these measures. These were mainly the impact of the proposed modification on payment appropriations to the EU budget, significant administrative burden due to the need to process a large number of modifications and the limiting the availability of reliable information about ESI fund spending, potentially affecting accountability.

At the end of May 2020, The ECA has published its updated and revised work program[4], which was a rapid response to the challenges posed by The COVID-19 pandemic. Due to changes in conditions and the way of work, ongoing tasks or the timeline were partially re-scoped. Four tasks have been interrupted. It is certainly not possible to say that there is a fundamental adjusting and reformulating audit priorities. The ECA has decided to add two new COVID-19 related reviews to the program in order to point out how the EU and its Member States have dealt with the effects of the pandemic. Specifically, it was Review No 06/2020 Risks, challenges and opportunities in the EU's economic policy response to the COVID-19 crisis and Review No 01/2021: The EU's initial contribution to the public health response to COVID-19.

The preparation of the work program for 2021+ has already been fundamentally affected by the identified or expected impacts of the COVID-19 pandemic and the risks related in particular to the measures applied. In the four

[1] See http://www.eurosaiop.org/news_detail/155/

[2] See Treaty on the Functioning of the European Union (TFEU), Article 322(1)(a)

[3] Opinion No 3/2020 on amending EU regulation for the European Structural and Investments Funds' use in response to the COVID-19 outbreak

[4] ECA: 2020 Work Programme, COVID-19 update and revision, retrieved from: https://www.eca.europa.eu/lists/ecadocuments/wp2020_revised/wp2020_revised_en.pdf

strategic areas of EU policies and programs on which The ECA plans to focus, there is, for example, a special audit focused on *"EU effectiveness in supporting the development of COVID19 vaccines and procuring adequate quantities of such vaccines to cover the identified needs"* or audit *"to examine whether the Coronavirus Response Investment Initiative rapidly mobilized ESI funds to address the COVID-19 challenges"* and other COVID-19 related audits in the field of free movement, resilience of the EU Institutions and bodies or passenger rights.

Given the current pressure on the auditees, the ECA with Work Program 2021+ also issued a statement that auditors will make every effort to reduce the administrative burden of audits and the promised work prudence and flexibility.[1]

From the point of view of the performance of The ECA's audit activities itself, it was a new challenge to ensure safety for employees and the related direct consequences - from 16 March 2020 onwards, all ECA's staff switched to distance work, which was no problem due to technological background. The transition to the distance form of work was related to the failure of publishing activities for only a few weeks.[2]

In connection with COVID-19 to this date, the ECA has not performed any audits only the above reviews, which provide a descriptive overview and help to identify specific issues requiring further, more detailed audit work. Both reviews are based mainly on public information and information enhanced by the results of a survey of Member States fiscal authorities. The review No 06/2020 Risks, challenges and opportunities in the EU economic policy response to the COVID-19 crisis provide *„an analytical description of the measures launched both at EU and Member States level and identify risks, challenges and opportunities for the future of EU economic coordination from the perspective of the EU external auditor."* The first part of the Review summarizes the ECA's findings on fiscal measures and policies from Member States and EU support instruments in response to the health and economic crisis. In the second part, ECA auditors identify new risks and challenges for EU economic coordination and integration, such as the risk of application of economic and fiscal divergence between Member States or falls in private investments. Finally, The ECA also mentions possible opportunities, in particular in the strengthened role for EU institutions in the management of the EU's economic recovery or the opportunity to promote sustainable development and digitization. The ECA has not provided any recommendations, since it was not a full-fledged audit activity, but rather an analytical activity.

Review No 01/2021: The EU's initial contribution to the public health response to COVID-19 cover actions taken in the first half of the year 2020, so it is an initial response to the pandemic. This review focuses on three areas:

- the use of the EU framework for dealing with cross-border threats to health;

[1] See https://www.eca.europa.eu/en/Pages/DocItem.aspx?did=57946

[2] Klaus-Heiner Lehne: Continuing our work as the EU's external auditor in times of crisis, European court of Auditors, Journal no 02/2020, retriever from: https://www.eca.europa.eu/lists/ecadocuments/journal20_02/journal20_02_en.pdf

- the additional actions taken by the Commission and EU agencies to support the provision of supplies of medical and personal protective equipment;
- EU support for the research and development of COVID-19 tests, treatments and vaccines.

The ECA only summarizes and evaluates the available information here, but at the same time does not draw any specific conclusions. The review serves in particular to highlight certain issues in the public health response to COVID-19.

Due to the short time since, the added value of the ECA has not yet been fully realized. Regarding the importance of The ECA's role in the further development of the current pandemic and economic crisis, author would like to quote Klaus-Heiner Lehne, ECA President: „When the immediate public health crisis subsides, its economic and social aftermath will continue to pose unprecedented challenges for the Union, and we will have to make our contribution to addressing these: by promoting greater accountability and transparency in the European Union, and, through this, enhancing citizens' trust in the EU institutions working on their behalf."[1]

CONCLUSION

The government resources to deal with the crisis are severely limited and COVID-19 pandemic may potentially have greater negative effects than any other economic crises we experienced in several decades. This can lead to a weakening of basic control systems and at the same time reduce accountability.

Supreme audit institutions are respected oversight institutions and can play a key role to maintaining basic rules and regulations that must be adhered to, even during the crises. The use of public funds must remain under the supervision of real-time audits, for example in the areas of procurements, income support payments, grants, loans and tax relief. Supreme audit institutions can contribute to effective government actions by provide advice or audit the implementation of new regulations and programs and help to prevent the cases of fraud and corruption.

This paper summarizes the author's observations from the current impacts of COVID-19 pandemic on the performance of audit activities of Supreme Audit Institutions and examples of their reactions that could contribute to reviewing and strengthening economic recovery efforts, financial management and governance systems. Author tries to avoid a generalized conclusion as to whether supreme audit institutions have taken on their key roles sufficiently or correctly because the evaluation is still premature.

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CHALLENGES ASSOCIATED WITH THE DIGITALIZATION OF THE TAX ADMINISTRATION DURING THE PANDEMIC COVID-19- CASE STUDY OF THE CZECH REPUBLIC

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Abstract. The digitalization of the public sphere was a challenge even before the Covid-19 pandemic, and the need for long-distance communication and the reduction of people-to-people contacts only deepened the need for digitalization. As the development of electronization and digitization in individual countries reached different levels before the pandemic, the pandemic caught both ready and unprepared countries. Although the Czech Republic has been digitizing the tax administration for two decades, only now can we see a comprehensive solution and imagine a digitized tax administration. In this respect, the year 2021 is really significant. An amendment to the Tax Code has been effective in the Czech Republic since January, which is to be the key to digitizing the tax administration. Hand in hand with the amendment to the Tax Code in 2021 comes the possibility of using the Bank-ID in communication with the tax administrator and especially as an identifier in the electronic filing of tax returns. The authors will focus on mapping changes in the digitization of tax administration in 2021. The authors will use methods of description and comparison, where they will focus mainly on the situation at the beginning of the Covid-19 pandemic and now**.**

Keywords*: Digitalization, Bank-ID, Covid-19, Tax Administration*

INTRODUCTION

The topic of digitalization is being nowadays actively discussed. The reason why the digitalization is so important topic is for sure also COVID-19 pandemic. The question brought by both political leaders and media is whether the current state administration processes may be more effective, efficient and flexible even in times of pandemic.

A year after start of the COVID-19 pandemic we may see some changes in many fields. In this article, we will focus on the field of taxation, especially to the amendment to the Tax Code and so called project SONIA. The SONIA project brings digital verification of a person's identity, which can work as a "universal key" for the state, which would make the services of private companies and the state accessible to many people. This could be very efficient way of verification of personal identity, especially in tax administration. In this article, the authors will present the biggest changes in the field of tax administration and the usage of Bank ID as an efficient tool in the tax administration.

The authors will use methods of description and comparison to present main changes in field of digitalization of tax administration in the Czech Republic in last months.

LITERATURE REVIEW

Digitalization of tax administration and Bank ID are new topics, but digitalization of public process as well as the digitalization of tax administration generally last for decades. Despite the fact that it is possible to say that the topic of digitalization of state administration (especially of tax administration) is not entirely new, the literature on this topic is very insufficient.

The authors of this article therefore use as sources mainly the texts of laws and decrees, opinions and recommendations of Czech authorities and various articles dedicated to this topic.

The authors of this article perceive the lack of literature that deals with digitalization of tax administration and Bank ID as a motivation to address this topic to academic sphere. The authors believe that digitalization of tax administration in the Czech Republic is an important issue with implications in other areas of law and will develop rapidly in the upcoming months.

RESULTS

The digitalization of the tax administration of the Czech Republic throughout its development is influenced by various factors. When we talk about digitalization, we will most often mean the electronic communication and documents. At the beginning of digitization, the problem of authentication and identification of individual persons during electronic submissions had to be solved.

An important institute in electronic authentication is the Guaranteed Electronic Signature ("the GES"). The GES is the equivalent of a verified signature on a paper document and is used to identify the person and verify the identity of the person who created it. The GES, also a recognized electronic signature, guarantees not only the identity of the person for the given document but also that the document thus signed has not been manipulated since the signature. Zarep marks the document with a qualified certificate identifier and the document can then be sent electronically. In order to prevent illegitimate issuance of qualified certificates, only selected companies are accredited to issue a qualified certificate. The certificate is valid for 12 months and must be renewed annually. Since 2014, the legal regulation of electronic signatures has also been regulated by the European Regulation (EU) No. 910/2014 of the European Parliament and of the Council (eIDAS Regulation). This has made it possible to simplify the recognition of electronic signatures also across borders. Another possibility of identification is the new Bank-ID from 2021, as will be explained below.

The first electronic filing with the tax administration in the Czech Republic could be filed in 2003 using the Tax Portal and the Electronic Filing (EPO) application. The electronic filing application still works today and is still widely used.

These were introduced into the Czech legal system by Act No. 300/2008 Coll., on electronic acts and authorized conversion of documents. The data box is mandatory for legal entities registered in the Commercial Register and state

administration bodies. Individuals can set up a data box on a voluntary basis. But, for example, lawyers and tax advisors have a duty to set up a data box and communicate within their profession through it. The tax and customs administration is obliged to send documents to entities via a data box if they have one.

Delivery to the data box occurs when the person logs in to the data box. In order to avoid obstructions during delivery, the so-called delivery fiction has been introduced. The fiction of delivery means that if the given entity does not register in the tax box within ten days from the date of delivery of the document in question to the addressee's data box, the legal fiction of delivery begins and the document in question is considered delivered after this period.

The introduction of the data box undoubtedly had a positive effect for the tax and customs administration, in particular the acceleration and thus the streamlining of administrative proceedings. Communication via the data box is simple, fast and more efficient than other possible delivery methods.

As for the legislative basis for the possible further development of digitalization of public administration, a relative novelty, and at the same time a complained law is the so-called digital constitution, effective from 1 February 2020. It regulates the right of natural and legal persons the exercise of their powers, the right of natural and legal persons to perform digital acts, the obligation of public authorities to provide digital services and to accept digital acts and certain other rights and obligations related to the provision of digital services.

The covid-19 pandemic has brought about a hitherto unknown situation. When contacts between persons had to be reduced, even between tax subjects and tax administrators. The authorities reduced office hours for much of the year, so it meant reduced communication. Communication with the tax administrator has been suppressed or transferred to the online environment. In the Czech Republic, the main official means of communication with EPO tax administrators are data protection and written submissions sent by postal service intermediaries. Unofficially, however, the tax administrator also communicates with the tax subject by means of email communication.

The way to modernize and digitize the tax administration is an amendment to the Tax Code, entered into force on 1 January 2021. The vision of the changes was clear, namely to make it easier for citizens to communicate with the tax administrator, to reduce the administrative complexity of this communication. In practice, this involves the introduction of a portal called the Online Tax Office (previously the name of the entire MoJe taxes portal was mentioned), which is an extension of the already available tax information box service. The old tax information box next to the new one, called DIS +, is now accessible. The portal was officially launched on February 28, 2021.

The new portal introduces old functionalities along with new ones. Further extensions are planned in the future, as well as other language versions of the portal. In the future, the portal should offer, in addition to information, the possibility of active and passive communication with the tax administrator, such as the possibility of filing tax returns through online forms, which will allow a

certain degree of pre-filling data of tax subjects. This is already possible to some extent now via the link to the EPO. However, communication should also work in the opposite direction, i.e. from the tax administrator to the tax subject, in the sense of delivering documents.

One of the available functionalities is also looking at the names of documents in the public part of the file. There is certainly room for future solutions to the whole view of the file in a distance form. However, now this variant is not on the agenda, before the implementation of such a large-scale solution, the entire files would have to be converted into electronic form and this entails a considerable administrative burden. Another potential problem may be the cyber security of such a solution.

It can therefore be expected that in the future we will communicate with the tax administration on a basis similar to electronic banking, through which we will not only be able to pay our tax obligations, but also handle all documents and communication with the tax administrator. This would mean a great simplification and a step towards clarity of tax processes and management. As always before the implementation of a new platform with such extended functionalities compared to the original DIS, it is especially important in the future how the authors of the work on the new system will do and how much it will manage to bring all functionalities to life to really make work easier. Another question is the time horizon in which the individual functionalities can be made available.

In addition to the introduction of the Online Tax Office platform, the amendment to the Tax Code also includes a new possibility to start a tax audit. By notification, delivery to the data box of the tax subject (§ 85 et seq. Of the Tax Code). In the same way, it is possible to tax control or narrow the control. This approach is not only intended to prevent obstruction in arranging the physical initiation of a tax audit, but in the current situation caused by the Covid-19 pandemic, it is a possible alternative to initiating a tax audit.

The last no less important change related to the digitization of financial administration is the advantage of tax entities that file tax returns in electronic form. In such a case, the amendment to the Tax Code extends the deadline for filing a return in a month. This step is motivating, but it is not yet possible to predict the number of tax entities that will use this option.

At the end of 2019, with effect from 1 January 2021, the Chamber of Deputies of the Czech Republic has unanimously approved the so-called "SONIA project" - a private law base for identification and authentication – in other name also the Bank ID. The aim of Bank ID is to simplify the form and access to the e-government services in the and online services in both, the private and public sectors. Bank ID is currently a commonly used solution in many foreign countries, especially in Norway, Denmark or Sweden.

The main idea of Bank ID is to be able to use the same banking data as we use for access to internet banking to access all the other online services. This aims to save time and money not only to clients of banks but also to public and private service providers. The banking identity should be provide for clients and state for free. Banks are from 2021 officially able to offer, provide or mediate identification services, which has not been possible before. This change has been

brought especially by amendment of AML act, Banking Act and Electronic Identification Act. The main use case of the Bank ID will be probably as a "universal key." The bank identity may be used not only as digital identification but also for signing transactions and documents. The bank identity meets the official binding requirements for an electronic signature. The client will be able to sign documents using the Bank ID.

The identification tools available in the Czech Republic until 2021 tools could not exist as commercial means of electronic identification, as they do not allow conditions for access to the Czech National Identification and Authentication Point (NIA). Only accredited providers of identification means are connected to the NIA. These means of identification include especially an ID card with a chip or logging in with a user NIA account. In practice, there are only few thousands of people which have electronic ID card or NIA account. Another shortcoming of NIA or ID card is fact, that these solutions were not available to the commercial sphere.

The Bank ID can be used in many ways. It should bring a big relieve for obliged entities under AML act. Under current AML regulations in the Czech Republic is no type of online identification permissible. The only way how the clients of obliged entities may be identified is through the first verification transaction. The other use cases of Bank ID could be for example as an identification by the check-in at the hotel, when renting a car from a rental company (to provide ID and driver´s license) or by e-commerce transactions.

One of the first real opportunities for using the Bank ID by this time is to file a tax return on the website of the online tax office mojedane.cz. The MoJe taxes portal allows to file a tax return via a data box, with an electronic ID card with a chip, or newly with the use of a Bank ID. The Minister of Finance of the Czech Republic promises that the number of users of the tax portal will due to this change at least double. The Bank ID is by this time actively provided by the largest banks in the country. The online verification through the Bank ID can be used by everyone who has a tax liability - employees, self-employed, entrepreneurs, property owners or small and large companies. If the tax payer will file its income tax return electronically, it can take the advantage of the time shift. While the paper return must be filed (according to the postponed deadline) by May 3, 2021, the last day to file an electronic tax return is June 1, 2021.

The authors of this article evaluate this change as a good step, because the registration for state (and also tax administration) services has so far only been possible after undergoing a complex process that is not easy for ordinary citizens. From the point of view of ensuring the security of the system, before a bank can provide banking identity services, it must go through an accreditation process, which determines whether the set requirements for the provision of reliable electronic identification are met. The authors of the articles think that the banks are a good option of type of institution which should provide these services to state. The banks ate robust internal systems and there are minimum institution which would be under such supervision of the Czech National Bank. Very important point is, that the banks will perform authentication based on access to basic registers, but will not have access to client data in the state's information

systems, which will prevent incorrect motivation of banks to provide banking identity.

CONCLUSION

The Covid-19 pandemic brought great uncertainty and presented the world with a completely new situation. In their own way, the individual branches of the state administration also had to react to this situation. The tax administration dealt with traffic restrictions and the number of tax audits was also significantly reduced for some time. The long-planned news for 2021 (amendment to the Tax Code and Bank-ID) comes at the best time because it greatly facilitates digitization and contactless access to offices.

The new possibility to initiate tax inspections without dynamic contact by mere notification will play a crucial role in the event of a worsening of the pandemic situation. The possibility of remote viewing of documents and easy access to communication with the tax administrator, including the status of payments to the tax office, facilitates the position of tax subjects in this complicated time.

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SUPPORT ACTIVITIES WITHIN THE INDUSTRY 4.0 IN THE EU

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Abstract. Digitalisation has had a significant impact on the business environment in recent years and this impact will increase in all sectors of the economy in the future. The authors assess the effectiveness of Horizon 2020 and present the Strategy for SMEs for a sustainable and digital Europe, they consider key disadvantages, predominately in the form of uneven implementation of activities in EU Member States and foresee future support activities developments in order to increase the EU's competitiveness in the development of ICT industry and the development of R&D activities**.**

Keywords: *Industry 4.0, Horizon, EU, ICT, R&D.*

INTRODUCTION

Digitalisation has had a significant impact on the business environment in recent years and this impact will deepen across all sectors in the economy in the future. Digitization represents such a significant change in the functioning of the economy that the term Industry 4.0 was introduced as a term that follows the most significant changes in the organization of the global economy in the history of mankind. The digitisation of industrial processes has, in the term's realm, become one of the technological changes that brought about the industrial revolution and fundamentally changed the functioning of the economy and whole human society. (Matt, 2020)

The Strategic Importance of these changes has also been realised by the Member States of the European Union ("EU") and has adopted a number of support programmes within the EU institutions in order to increase the competitiveness of EU countries in the development of Industry 4.0. The programme with the importance of a financial framework for financing projects focusing directly on the development of innovative projects is titled Horizon 2020.

CONCEPT OF THE INDUSTRY 4.0

The European Commission has defined Industry 4.0 as the development of industry in the following key technologies:

1. Information and communication technologies (ICT) for digitisation of information and integration of systems at all stages of product creation and use (including logistics and deliveries).

2. Cybersecurity systems that use ICT to monitor and manage physical processes and systems. These can be built-in sensors, smart robots or additive manufacturing (3D printing) devices.

3. Network communication, including wireless and Internet technologies, which are used to connect machines, work products, systems and people in the production plant with suppliers and distributors.

4. Simulation, modelling and virtualization in product design and production process creation.

5. Analysis and use of big data, either immediately in the factory or through online computing capacity (cloud-computing).

6. Digital assistance systems for human workers, including robots, augmented reality and intelligent auxiliary systems. (European Commission, 2015)

As part of the advent of Industry 4.0, there are changes in the functioning of current industries as well as the emergence of completely new industries and services. Many business processes and services are gradually being translated into the online environment while being built at a global level. Many employees currently oversee business processes on the other side of the planet.

Traditional sectors such as truck transport are also affected by the transformation. For example, there are companies that test remotely controlled trucks that are remotely controlled by a driver who does not have to spend a significant part of the year away from his residence. The most significant change in the structure of the labour market lies in the need for employees with knowledge of information technology and the gradual replacement of a significant number of administrative and manufacturing workers without these skills by ICT deployment. (Susskind, 2017)

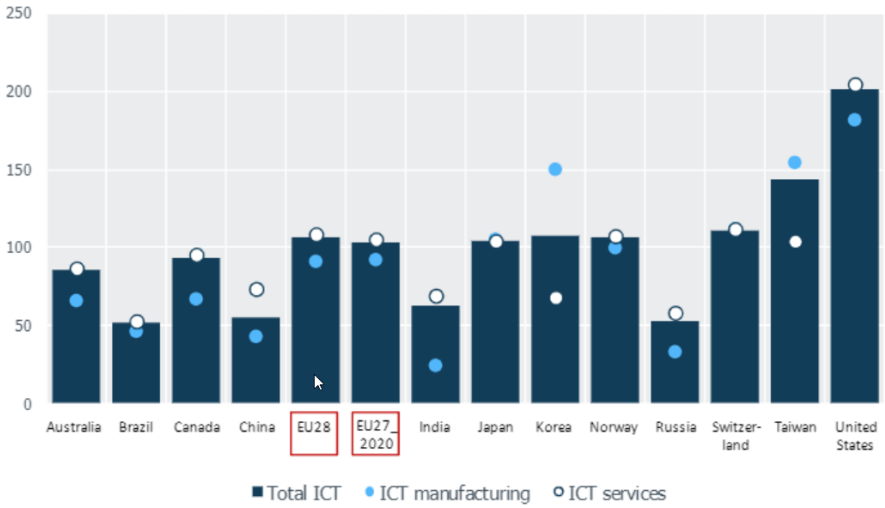

Figure 1Labor productivity in the ICT sector. The 2020 PREDICT

INDUSTRY 4.0 AND THE ENVIRONMENT OF THE EUROPEAN UNION

The development of Industry 4.0 also poses a risk in the form of a relative weakening of the EU's competitiveness at global level. Many countries have significantly developed their economies precisely thanks to the development of enterprises operating within Industry 4.0, furthermore, achieving this development on a higher scale compared to the EU environment. The lead of other countries in digital technologies is illustrated by a comparison of labour productivity in the ICT sector, measured as the total income of enterprises operating in the ICT sector divided by the total number of employees, as shown below in the chart created by the European Commission. (THE PREDICT, 2020)

Horizon 2020, implemented by the EU institutions, was adopted to increase the EU's competitiveness in the development of ICT industry and the development of R&D activities. Over the seven-year horizon 2020 period from 2014 to 2020, €80 billion has been allocated to projects to support innovative activities within the EU. Horizon 2020 activities were continuously evaluated in an annual overview compiled by the European Commission comparing the development of activities in the current year with the first year of implementation of Horizon 2020, i.e. 2014. The evaluation reports showed a diverse dynamism in the development of the ICT industry and R&D activities in individual EU countries.

The low growth dynamics in the countries with the lowest rates of IKA and R&D development activities are particularly problematic. This inequality should also be mitigated within the prolonged Horizon 2020.

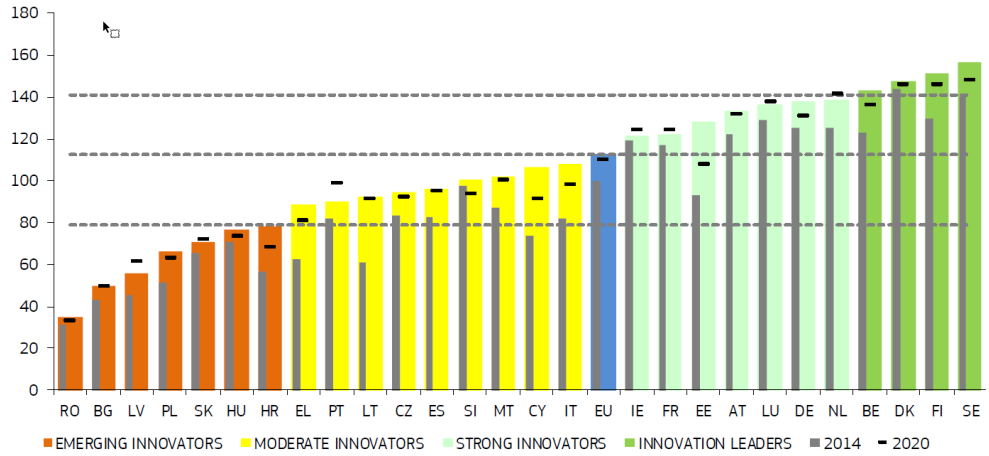

Figure 2 Performance of EU Member States' innovation systems - European Innovation Scoreboards (EIS) project 2020

PROLONGATION OF THE HORIZON 2020

In 2021, EU Member States agreed to extend Horizon 2020 until 2027. €95.5 billion is allocated under the new programme. A modified version of the short-naming programme - Horizon aims to support activities in line with the UN-17 Sustainable Development Goals programme.

The programme sets out 5 key areas that identify the focus of priority supported projects, namely climate change adaptation activities, cancer treatment research activities, marine ecosystem support activities, climate-free urban development activities and soil health activities. Information technology is thus intended to play a key role in responding to the global impacts of climate change, so the EU is responding comprehensively to the current major global challenges with this programme. (European Commission, 2021)

Under Horizon, resources have been allocated to the European Innovation Council (EIC), which has so far only been in the trial phase. Under this initiative, up to 70% of the EIC budget will be allocated to support innovation within the SMEs environment. . The EIC also aims to support those activities that carry a high risk of unsuccessful implementation, although those projects could potentially bring about fundamentally paradigmatic changes. SMEs have been identified as key carriers of innovation within the EU under Horizon. (European Commission, 2021) At the same time, resources allocated to mitigate the effects of the COVID-19 pandemic will also be added to the programme.

STRATEGY FOR SMES FOR A SUSTAINABLE AND DIGITAL EUROPE

The European Commission has presented a Strategy for SMEs for a Sustainable and Digital Europe in response to the impacts of the pandemic and the climate crisis, which it considers to be the most striking attributes threatening economic security on the territory of the European Union. This strategy identifies SMEs as a key sector for economic transformation in the environment of digital revolution and environmental transformation. (European Commission, 2020)

The strategy contains the supporting areas for supporting and transforming SMEs:

- Capacity building and support for business transformation with an emphasis on sustainability and digitalisation
- Reducing regulatory burdens and improving market access
- Improving access to finance

The general objective is to significantly increase the number of SMEs, especially in the area of the knowledge economy and green entrepreneurship, within the European Union and to create an attractive environment for innovative firms at the global level. The strategy followed previous initiatives in the field of SME support, namely the Small Business Act for Europe, implemented through the Programme for the Competitiveness of Enterprises and Small and Medium-sized Enterprises (COSME).

In Under Building Capacity and support Transformation Business with Emphasis on sustainability and Capture there is Key Ambition Strategy support SMEs in Area Activities Research and Development. Report Points on Lack Activity Businesses in Area Activities R&D, taking into account the report Stresses, that only 9% Businesses Uses Institutes Protection rights Mental Ownership. Individual enterprises SMEs are presented with the opportunity of utilizing the Support Enterprise Europe Network, network Organization on Support SMEs in Under the EU and Digital Innovation Hubs, centres for testing

new ideas and technologies. At the same time, under this point, the strategy identifies the lack of human capital as a significant factor limiting the growth of SMEs. To address this problem, the strategy proposes support for collaborative and educational activities also available online.

The area of reducing regulatory burdens and improving market access aims to support SMEs' activities in the EU common market. According to the strategy, up to 70% of the value of EXPORTS to SMEs is made up of transactions in the internal market, facing many costs due to national and European regulations. The strategy foresees that the removal of regulatory barriers will significantly increase the activity of SMEs in the internal market and improve its attractiveness to the entry of new entrants overall. The European Commission has set up a regulatory fitness and performance programme (REFIT) to reduce inconsistencies between European and national legislation and avoid excess regulatory burdens. Within this area, the focus is on businesses in the initial phase of the so-called start-ups and in the growth phase of scale-ups. In support of this SME Group, an information portal - the Startup Nations Standard - has been set up, presenting key initiatives and examples of successful measures implemented in individual Member States across the EU, in order to better inform politicians, experts and individual SME actors. This area also includes adapting legislatively to new trends and business models and supporting SMEs' activities in non-EU markets.

Improving access to finance is a key support initiative for SMEs. Global multinationals are using precisely the predominance of capital endowment to expand their shareholding and stifle their competition precisely from the SME sector. At the same time, the unavailability of funding hampers the development of SME activities and, according to data in the strategy, up to 18% of SMEs did not have access to external financing. Furthermore, the report highlights the low use of capital markets in SME financing, which is used by only 10% of SMEs in the EU, with 25% of SMEs using the capital market in the US. To improve SMEs' access to finance, a European Investment Fund programme called The European Scale-up Action for Risk capital (ESCALAR) has been established. This fund is used to finance young firms already with a proven working business model and stabilised cash flow, but with a relatively higher risk profile that prevents them from obtaining external financing or allows them to obtain such funds only on unfavourable terms. (Davila, 2015)

Under this programme, EUR 300 million is allocated and the method of financing will be through the purchase of a shareholding. The strategy also envisages modifying state aid rules for SMEs from strategically recognised sectors and supporting blockchain-based technologies. (European Commission, 2020)

The strategy is currently being implemented and all the above-mentioned mechanisms have already been launched, partially through the implementation of prolonged Horizon 2020.

CONCLUSION

The development of broader Strategy for SMEs for a sustainable and digital Europe and prolongation of Horizon indicates a change in approach to change as a result of the digital transformation within the EU.

Initially, the emerging Industry 4.0 was mainly viewed in terms of increasing production efficiency and the impact of this transformation on employment. In the current view, the development of Industry 4.0 is seen as a key factor for the sustainable development of economies and post-pandemic economics recovery. Industry 4.0 should enable the development of industry without negative impacts on the environment and the health of the population. Countries that are not sufficiently prepared for changes in the development of Industrial 4.0 activities are likely to stagnate and gradually weaken their competitiveness.

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LEGAL STATUS OF ROBOTS AND AI FOR TAX PURPOSES

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Abstract. Rapid advances in automated technologies have begun to dramatically transform our society and economics. Although the emergence of these new technologies provides many benefits to society, it also presents substantial challenges. How should public policy response to the impact of automation on the demand for labour? Shall we tax machines? This article is going to give an overview of where a robot tax stands as a policy**.**

Keywords: *Legal status of robots, artificial intelligence, taxation of robots, robot tax and labour market*.

LEGAL STATUS OF ARTIFITIAL INTELLIGENCE

In February of 2017, Bill Gates proposed the introduction of a robot tax (Delaney 2017). Later on, in October 2017, Saudi Arabia granted citizenship to a humanoid robot named Sofia. However, although robots have a physical form, they are currently just a shell for artificial intelligence [5].

Thus, to date, it makes no sense to single out a "robot" as such, since it represents any value exclusively in conjunction with AI and cloud equipment. Today, the comprehensive definition of the term “artificial intelligence” is set up in the U.S. the “FUTURE of Artificial Intelligence Act of 2017”:

ROBOT TAX – FOR AND AGAINST

Taxation of robots has several obvious benefits.

Firstly, robot tax can improve the economic situation:

- Mechanization and robotization of production threaten jobs. Robots increase labour productivity and hence profits, and one way to equalize labour costs and profits can only be done by taxing robots.
- The taxation of robots can also counteract tax evasion by large transnational corporations, which usually works by transferring taxable profits offshore.

Secondly, robot taxation can slow down job destruction:

- A tax on robots can reduce the rate of job losses due to robotization and automation of production, allowing more people to keep longer-term jobs.

But proponents of robot taxation ignore important aspects.

For example, there can be no negative impact on employment:

Many studies at the industry level have shown that productivity gains due to widespread automation and robotization of production do not have a negative

impact on employment, at least in a moderate way. Moreover, it is in countries with low levels of automation of production - that we have experienced the highest rates of job losses in the last two decades.

When companies invest in robots, they typically reduce costs and transfer a large part of those savings to consumers in the form of lower prices:

These savings are not buried, but rather reused - and this added purchasing power by lower prices, higher wages, or higher profits is spent or invested, creating more jobs. That's why, as ITIF found out, from 1850 to 2015, despite several decades of a significant loss of skills due to automation technologies employment grew at the same rate, as this labour force.

For the same reason, OECD stated that «Historically, the income effects of new technologies have been more powerful than the effects of labour displacement: technological progress has been accompanied not only by higher output and productivity, but also by higher overall employment.

THE MAIN QUESTION: IF WE TAX ROBOTS, HOW SHOULD WE DO IT?

There are two important aspects:

- First, the authorities want to encourage the younger generation to invest in skills and become universal, unique workers.
- Second, the authorities want to redistribute income in favor of ordinary workers, as their Robot Tax should reduce wage supplements and help redistribute income to ordinary workers.

On the basis of the arguments and their comparison, it can be concluded that the tax system most suitable for robots should be chosen, in view of the contradictory nature of the object of the tax and the socio-economic consequences of this type of tax.

First of all, since labour income bears a substantial majority of the employment taxes, reductions in the number of employees as a result of automation will significantly reduce funding for these social security programs. The current tax system requires employers to pay a large percentage of a payroll tax levied on the earnings of their employees, which increases the cost of human workers over capital equipment. To avoid these additional costs and administrative burdens, employers can be encouraged to use robots or other basic equipment instead of humans. One solution to the problem is to completely repeal the payroll tax system and replace it with a less labour-centered tax system that could better fund social security programs.

Another option is to remove the obligation to pay personal income tax from employers. Even if the growth of robotization does not reduce the number of vacancies in the labour market, it will certainly limit human access to some areas of this market.

Taking into account all mentioned above, there is a need for a factor that would allow equalizing the conditions of people and automatization, which is gaining traction every day. As such factor, we propose the introduction of a robot tax, which will ensure the proper capitalization of the Social Security and

Medicare Funds and will also be an incentive for employers to maintain a balance between human workers and artificial ones.

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THE IMPACT OF ROBOTIZATION AND AI ON SOCIAL POLICY AND TAXATION: A COMPARATIVE STUDY

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Abstract. The article is devoted to the development of artificial intelligence and robotics in sphere of taxation. The authors analyze the introduction of robot tax and its influence on economies of several countries. Advances in technology play important role in modern regulation of social policy. Despite the limited implementation of robotics taxation, modern studies show the increasing impact of artificial intelligence and overall modern technologies on taxation**.**

Keywords*: robotization, AL, taxation, robot tax*

In the last couple of decades, the Digital Revolution has unleashed rapid progress in many advanced technologies such as artificial intelligence and robotics. Especially in the aftermath of the Great Recession, this has sparked an intense debate on the future of work and taxation, both in academic circles and amongst the general public.

First essential element which should be considered is a robot tax. A robot tax is essentially the concept that companies replacing employees with automated workers should be required to pay a tax. There is still a moment of uncertainty about the implementation of robot tax in terms of international perspectives.

At this moment South Korea is the only country to have any kind of robot tax. On 6 August 2017, South Korea introduced the first robot tax. South Korea reducing the tax incentives for investing in automation is called a robot tax. It is possible to imagine the “robot tax” taking the form of higher taxes certain types of productively enhancing developments and/or the form of big tax breaks for companies that keep the size of their workforce stable each year.

However, initiatives for a robot tax are starting to emerge in the UK, US, Japan, Canada and other countries. The Green Party in Canada have argued for a robot tax in order to reduce anxieties for individual workers, and UK Labour Party wants individuals to get the benefit from “greedy” global corporations that make money out of advanced technology. Many consider that if the UK doesn’t invest in robotics and improve productivity, or if a tax is placed on firms who invest in robots, it could discourage investment restrict wage growth.

In 2017, the European Parliament called for EU-wide legislation to regulate automation, which would include a framework for their development and deployment, and the establishment of liability for their actions. In 2017, Mady Delvaux, Member of the European Parliament from Luxembourg, prepared a report with recommendations to the European Parliament for the regulation of robotics [1].The majority of European leaders agreed that the rise of automation should be controlled. However, it is important to note that none of these reforms

included a tax. The EU was concerned about a robot tax that may stunt innovation and competition. Some experts believe that trying to define what is or is not a "robot" for the purposes of taxation would be an extremely difficult task and would turn regulations over the issue into a never-ending legal battle.

Another essential element of this report which should be considered is an estimation of AL and robotics influence on a current system of employment. New World Robotics 2020 Industrial Robots report shows a record of 2.7 million industrial robots operating in factories around the world – an increase of 12%.

Artificial intelligence (AI), robotics and other forms of 'smart automation' are advancing at a rapid pace and have the potential to bring great benefits to the economy, by boosting productivity and creating new and better products and services. Some experts estimated that these technologies could contribute up to 14% to global GDP by 2030, equivalent to around $15 trillion at today's values.

There is worldwide debate on the use of robots for work and possible consequent unemployment issues. First of all, robots can do repetitive jobs faster and quicker, leading to less waste, cheaper products and greater profits. Despite widespread public concern over the threat of massive unemployment, there is disagreement regarding whether widespread unemployment due to technological advances is a valid concern [2]. There is no evidence that industrial robots have destroyed jobs or reduced the employment share of low-skill workers in Europe or other parts of world in recent years. In fact, robot adoption tends to be positively associated with aggregate employment, although the relationship is small compared to other factors affecting global employment in recent years.

The research by the International Federation of Robotics points out that, although automation displaces people in manufacturing, it almost always increases output. In some cases, this allows such an increase in production and related decrease in unit price, that creates a whole new market and generates the need for downstream jobs to get the product to the consumer. This releases employees for other, often new jobs outside manufacturing.

In total it should be noted that both artificial intelligence and robotics have been improving over the past few years. For businesses, the idea of a robot tax is new and mostly unformed, so there is little threat of it happening in the next few months or even years. But it is starting to gain the attention of policy makers in Europe and the United States. Advances in technology may displace certain types of work, but historically they have been a net creator of jobs.

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INFORMATION SECURITY IN E-BANKING OPERATIONS

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Abstract. Nowadays e-banking has become popular in Russia. As the technologies are highly demanded, some issues have been raised such as fraudulent actions. Mandatory regulation on e-banking lags and is not keeping up with the technology development: there are some useful recommendations on the issue, however, not binding. As for the internal credit organizations' rules, they are not user-friendly in fraud cases. One of the innovations in a fraud-fighting sphere is Antifraud IT platforms. Those unique platforms are presented by Russian banks. Special attention is drawn to Tinkoff Bank's platform launched in collaboration with mobile operators. Other measures of fighting the matter are the e-token application and cryptographic algorithms development. The flaws of the measures are distinguished and some reasonable advice is given. As far as fraud cases are common in Russia the whole issue is disclosed on the particular example - phishing. The paper aims to analyze the legal reasons for the raised issue, examine the means of resolving the problem, consider cryptographic algorithms behind e-banking in Russia, work out ways of developing remote banking and study the concrete type of fraud common in Russia.

Keywords: *mandatory banking regulation, internal banking regulation, e-banking, anti-fraud IT-platform, real-time data exchange, cryptographic algorithms, electronic token, password generator, phishing*

MANDATORY AND INTERNAL BANKING RULES APPLICABLE TO E-BANKING OPERATIONS

Banking is a competitive sphere that demands its members to keep up with all new technologies. The Internet provided banks with an easy and convenient way to manage operations with money. E-banking is rather popular in Russia as far as the territory of the country is big and people prefer to save their time by not visiting bank's office but using gadgets to access their bank account.

According to the statistics of financial affordability presented by the Central Bank of the Russian Federation total amount of bank accounts with remote access has increased from 24,5% to 26,3% in 2019. Other research results show that the amount of operations without the consent of banks' clients has raised too: from 163310 to 180352.

Nevertheless, mandatory regulation of e-banking lags. There are no direct legal rules concerning banking operations on the Internet. The Central Bank of Russia provides certain recommendations to credit organizations to prevent fraudulent operations. In the information letter of the Bank of Russia of March 31, 2008 № 36-T are enumerated legal risks of e-banking application. One of them is «imperfection of the legal system».

The legislator hasn't yet included the term «e-banking» into key federal laws on banking: Federal Law «On the national payment system» of June 27, 2011 № 161-FZ and Federal Law «On Banks and Banking Activity» of December 2, 1990 No. 395-1. In the information letter of the Bank of Russia of March 31, 2008 № 36-T the term «e-banking» is stated: «e-banking - remote banking service method practiced by credit organizations on the Internet (as well as websites on the Internet) and including informative and operating interaction with them». However, the information letters of the Bank of Russia are not binding. This gap in law results in maladministration of remote banking and, therefore, fraudulent operations with bank accounts.

Internal bank regulation applicable to e-banking includes user agreements. In such documents banks state that they are not responsible for any wrongful operations with clients' bank accounts. For example, an extract from Sber Bank's user agreement: «Under no circumstances will the Bank be liable to the User for losses, including any direct, indirect, intentional, accidental or subsequent losses of any nature arising from this Agreement or from the use or inability to use the Bank's Application (including, but not limited to, losses incurred as a result of loss of business reputation, termination of work, technical failure, accident or malfunction or any commercial losses, costs or losses, as well as loss of profits or unjust enrichment) even if the Bank knew or should have known about the possibility of such damage or the User was warned about the possibility of such damage».

VTB Bank: «The Bank is not responsible for all Operations using the Card and/or its details (or several Cards) using the Mobile app, performed by other (third) parties with or without the knowledge of the Client».

Alfa-Bank: «The user is responsible for all operations carried out in the Mobile Bank».

Notwithstanding, there are certain measures taken by banks to prevent fraud. The Bank of Russia issues statistics, information letters, reviews concerning e-banking. There is also a website run by the Bank of Russia called «Financial culture» which includes the «Caution: frauds!» column. In this subdivision can be found many articles such as «Steps to be taken if money is stolen from your bank account», «Credit cards fraud online», «Social engineering: why people themselves give money to the frauds», etc. Fraud-warning short videos created by the Bank of Russia can be found not only on Youtube but in the metro as well: in modern trains, there are tv screens that transmit news, educational videos, and entertaining programs.

In 2019 was issued a new regulation «On the establishment of mandatory requirements for credit institutions to ensure the protection of information in the implementation of banking activities to oppose the implementation of money

transfers without the consent of the client» (the Bank of Russia, April 17, 2019 г. N 683-П). According to this document have been established requirements for ensuring the protection of information in the course of banking activities. The goal is to prevent transfers of customer funds without their consent. The Bank of Russia has introduced in February 2021 some methodological recommendations as well («Methodological recommendations for reinforcing information work with clients by credit organizations to counteract unauthorized transactions» of February 19, 2021). These recommendations suggest credit organizations to:

1. Use methods that provide for the most effective client informing;
2. Check on what was done regularly (no less than once half a year), etc.
3. Inform clients about risks of unauthorized transactions by

- presenting information in the app, on the screens of ATM machines, on websites, in social media, in the offices and during phone calls;
- SMS
- mention the topic in the advertising of a credit organization.

Credit organizations are quick to follow the Bank of Russia's instructions. Sber Bank's «Caution: frauds!» blog provides articles and some videos to help people avoid being caught by frauds' lies. Raiffeisen, Alfa, VTB banks have informative instructions on financial security.

ANTIFRAUD IT-PLATFORM AS UNIQUE RUSSIAN SOLUTION FOR SECURITY OF E-BANKING OPERATIONS

In the absence of legal regulation, mobile operators and banks independently tried to create a system that would counteract fraudulent actions through e-banking and ensure the safety of funds in the accounts of bank's clients. Several major Russian banks and mobile operators tested the so-called anti-fraud platform in the first quarter of 2020. According to the results of testing, Tinkoff Bank and mobile operators Tele2, Megafon, MTS and Tinkoff Mobile launched the Tinkoff Call Defender platform.

How does the platform work? The anti-fraud platform provides for real-time data exchange between the bank and mobile operators. Prior to the launch of the platform, the bank transmits a database with the numbers of bank employees and a database of fraudulent numbers that is generated by the bank itself and the bank's clients through its website or mobile app to the mobile operator. With the launch of the platform by using special software at the time of the call there is automatic data synchronization during which the mobile operator can see whether a call is made with a number substitution.

What is number substitution? As the head of the Information Security Department of Serchinform Alexey Drozd explained when A person calls B person, B can see the phone number that appears on his smartphone screen. This is called the Caller ID. It can be changed. Moreover, although it is not easy to do this, it is possible. This is what frauds use, replacing their Caller ID with a short bank number, for example, 900. Therefore, a bank clients, seeing a call whose Caller ID is the same as the bank's one, they believes that they are actually being called by a bank employee.

Now let's return to the role of the mobile operator in the working of the platform. The operator either sees the substitution of the number and reports it to the bank, or sees a suspicious call and then the platform determines whether the call was initiated by the bank. If no confirmation of authenticity is received, the platform registers the number as suspicious and sends a message about it to the bank. This signal can serve as a marker to protect the client's funds from unauthorized debiting. For example, Tinkoff Bank may suspend atypical bank card transactions after a suspicious call to a customer until the circumstances are clarified.

According to Tinkoff Bank, Tinkoff Call Defender allows you to determine the nature of various types and scenarios of fraudulent calls, including number substitution, in 8 out of 10 cases.

As we learned from the interview with the representative from Serchinform company, another solution to the problem is possible if the platform could automatically search the first minute of a phone conversation for the presence of standard necessary phrases that are used by frauds such as "I am a bank employee", "there is suspicious activity on your account", "someone is trying to issue a loan to you" and so on. The platform could search for a set of words and, if there are enough of them, identify the call as fraudulent and suspend it. Such a solution would be effective for older people who despite of the bank warnings still believe frauds and call them their personal data. But this raises the question of security of personal data that may be violating by such an interference in conversations. Therefore, the anti-fraud platform remains the most developed solution to the problem.

It should be noted that the working of Tinkoff Call Defender applies only to clients of Tinkoff Bank, who at the same time are clients of mobile operators involved in the project. A number of other major banks also announced the launch of their own anti-fraud platforms in the third and fourth quarters of 2020, but did not disclose the content of it. As the representative of the mobile operator Tele2 correctly noted “the value of the anti-fraud platform increases due to the consolidation of the subscriber bases of all major mobile operators”. The same applies to banks. The effectiveness of the whole system can be significantly increased if it is extended to the entire territory of the country by creating a single anti-fraud platform.

USING CRYPTOGRAPHIC ALGORITHMS IN E-BANKING

Today, you will no longer surprise anyone with the ability to instantly perform banking operations remotely. Paying bills, money transfers - all this can be done while sitting at a computer thanks to E-banking systems. But along with the convenience came problems. First of all, they relate to the security of payment transactions.

When providing financial services to individuals and legal entities, banks have to take care not only of competitive interest rates, favorable lending terms and efficient customer service, but also of security. Cryptographic modules are built into banking information systems and ensure the security of data of commercial interest to cybercriminals. However, without the appropriate licenses, financial companies are not entitled to use cryptoalgorithms.

1. Algorithm-level cryptographic systems and E-banking

Crypto algorithms are used in "client-bank" thick clients, with which legal entities work today, and in "thin" clients, for example, in Internet banking solutions. In addition, cryptoalgorithms allow you to check the authorship and integrity of electronic documents by EDS (electronic digital signature) and can be used to organize a secure electronic document flow in a bank. Banking services related to the use and distribution of encryption algorithms and tools require the receipt of appropriate licenses - this is determined by the Resolution of the Government of the Russian Federation of September 23, 2002 No. 691 "On Approval of the Regulations on Licensing Certain Activities Related to Encryption (Cryptographic) Means" ... In other words, all systems that implement algorithms for cryptographic transformation of information and encryption of data during transmission over communication channels, as well as digital signature software that provide verification of documents and verification of their authenticity based on cryptographic transformations, need licensing.

In the solutions provided to the client, information protection methods are established by the owners of information systems. The bank has the right, if not to dictate, then to suggest that the data exchange be carried out using certain means that have already been tested in practice and have become, as they say, a corporate standard. In practice, however, the Central Bank influences the policy of choosing solutions for secure systems - not being a state institution, it nevertheless obliges supervised banks to use funds that are certified in Russia. To some extent, this limits the field of activity and capabilities of banks. After all, software tools are not always flexible, universal and, in addition, they are prohibited from exporting to other countries.

Russian cryptographic systems at the level of algorithms are quite cryptographically strong and reliable, but their implementation in the form of a final product is sometimes lame. For example, some cryptographic programs still work under DOS - they appeared 15 years ago and have not been ported to new platforms since then. In fairness, it should be noted that, unlike other products, the Russian market for cryptographic protection is small and rather monopolized - this, in fact, slows down the growth of investments in the development of cryptography modules with modern capabilities, interfaces, flexibility and functionality.

2. The problem of incompatibility of crypto algorithms in E-banking

There is a problem of incompatibility of crypto algorithms created by Russian developers based on GOST standards. So, if two different companies have developed cryptographic products based on the same standard, then ultimately they will not "understand" each other. They are also incompatible with Western products.

This problem also complicates the conduct of banking activities (primarily related to the provision of a large number of retail services). Of course, today this problem is somehow solved in each specific bank. But formal law (as well as regulations on how to use safety standards outside the country) would have helped more. So, here too, banks and financial companies are faced with a typical Russian misfortune: first, a certain law is adopted that prohibits everything that is

possible, and then, instead of preparing the necessary regulations that take into account a variety of problems in the field of financial security, they are looking for ways to get around the bans.

Meanwhile, a very simple solution to this problem can be proposed: a distinction must be made between "commercial" or general and government cryptography. Commercial cryptography should be based on the same standards all over the world, since modern business, and even more so banking, often goes beyond the framework of a single country. State standards for cryptography cannot be distributed anywhere, they will be used within government agencies and, as is done in the United States, will be updated every five years (at the algorithm level). Commercial structures should not have access to this very algorithm. Thus, it will be possible to simultaneously apply publicly available "commercial" algorithms and ensure the safety of state secrets.

CONCLUSIONS

So, we can draw some conclusions:

- the use of Internet technologies and cellular communication capabilities is the most priority area of activity in the banking business, since in addition to a significant reduction in the cost of performing banking operations (in the context of electronic banking), they provide an opportunity to gain competitive advantages over credit institutions focused on traditional banking (service clients through offices);
- given the active use of Internet technologies and cellular communications by our compatriots (for communication and transmission of various information), it is highly likely that remote banking technologies (including electronic banking systems) will be the most demanded banking services;
- the previous conclusion suggests that commercial banks will have to compete with various enterprises providing similar services due to the constant decrease in transaction fees;
- regulators need to promptly adopt the necessary regulatory and legislative acts in the field of protection of remote banking services, as well as organize effective supervision of safe use electronic banking systems;
- it is necessary to take into account the need to estimate the budget expenditures for information protection means and compare with the estimated cost of losses from its violation;
- in view of the fact that information security can be assessed economically (by the way, this is why perfect protection does not exist so far, because the economy is inextricably linked with changes), the client should be able to independently choose the method of protection that he prefers.

After all, the choice of tools and methods for protecting electronic banking is constantly growing along with the number of threats, and the client's needs may vary - after all, the client is always right.

“Possible ways of development of e-banking in Russian Federation on the example of e-token application”

In Russia, there are many opinions on the interpretation of the concept of electronic banking, one of which is: Electronic banking is the general name for

technologies of remote banking (RBS), in which access to accounts and transactions (on them) is provided at any time and from any computer that has access to the Internet.

In turn, remote banking is a general term for technologies for providing banking services on the basis of orders transmitted remotely by the client (that is, without his visit to the bank), most often using computer and telephone networks.

Both concepts are not legislated in Russia, which is one of the major problems of implementing electronic banking in Russia. Besides, another major problem is a high risk of losing money of the users of banking services (both individuals and legal entities) due to: the criminogenic factor in Russia, and the low level of IT technologies and solutions in the field of electronic banking and Internet payments. It is this problem I would like to analyze in details, taking Luxembourg experience as a base. In my opinion autonomous password generator (electronic token) can be a solution.

What is an electronic token? Password generator is a device which is necessary to get special keys which are entered to confirm transactions using cards online. Such a device helps to save a lot of time when carrying out transactions. There is no need to wait for the arrival of an SMS message with a confirmation code, it can be simply generated using this device.

What are the advantages of using electronic token instead of 3-D Secure system? For example: Increased limit on transactions, Generation of a new password every 10 seconds, Compact form factor, Reliable data protection system, Quick and easy to use, and most importantly, the electronic token does not require the Internet or other devices (tablet, computer, phone).

Thus, we can conclude that such a system will significantly help to reduce the risks of unauthorized write-offs of funds of bank customers and reduce the increased criminogenic factor in the banking sphere.

“Phishing as a tool of financial fraud in remote banking system”

Online banking is designed mainly to achieve two objectives. First increased convenience for the consumer and second reducing the cost of operations to the banks. Numerous benefits such as lower fee to go online, higher interest rates, online viewing of account details and statement information, pay bills, transfer money between accounts, scheduling automatic periodic payments such as rent or loan payments, applying for accounts or loans and managing loyalty points to achieve first objective. In the process banks are able to reduce cost of operations to some extent. But steep rise in online banking crimes had undermined its success as few bank customers want to return to boring bank queues for secure transactions. Opponents of online banking say that online banking involved heavy risk to the consumers and industry has rushed to get online without appropriately confronting issues that could compromise its integrity.

The common online banking frauds are:

1. Hoax emails (A hoax1 is an attempt to trick an audience into believing that something false is real),
2. Computer viruses (A computer virus is a computer program that can copy itself and infect a computer without permission or knowledge of the user),

3. spyware2 (a computer software that is installed surreptitiously on user computer to intercept or take partial control over the user's interaction with the computer, without the user's informed consent),

4. Email employment scams / Internet Job Scams (people are lured by the scammers to visit some websites such as social security statement website3 with a view to steal your information with respect to social security number etc),

5. Identity theft (Identity theft4 is a crime in which an imposter obtains key pieces of personal information, such as Social Security or driver's license numbers, in order to impersonate someone else),

6. Phishing (explained in the next sections),

7. Vishing (a variant of phishing), Vishing is a cybercrime that uses the phone to steal personal confidential information from victims. Often referred to as voice phishing, cybercriminals use savvy social engineering tactics to convince victims to act, giving up private information and access to bank accounts.

8. Eavesdropping (Unauthorized, real-time access to intelligence) when using a wireless connection.

What is phishing?

It is derived from fishing. Phishing (also called brand spoofing) is a term used for a short of fraud where phishers send out spoof email to a random database to fool the recipient in to divulging personal information like credit cards details, usernames and passwords, that can be used for identity theft. Phishing is one of the most well known and fastest growing scams on the Internet today. The typical phishing scam involves an e-mail that appears as though it came from a reputable and known service

institutions or company. The e-mail appears to be legitimate and the actual one. The message generally indicates that, due to problems in the institution (bank in this case) such a database updates, problem occurred in server, security/identity theft concerns, the recipient is required to update personal data such as passwords, bank account information, driver's license numbers, social security numbers, Personal Identification Numbers (PIN), and so forth. The e-mails include warning to the users that failure to immediately provide the updated information will result in suspension or termination of the account etc.

Almost a third of Russian bank card holders encountered fraud through attempts to find out confidential information or phishing mailings, according to a study by the NAFI Analytical Center. "A third of cardholders in Russia (31%) experienced fraud: these were attempts to find out confidential card details by phone or requests for data for a money transfer (for example, under a false pretext of helping friends or receiving a non-existing winning). Also, cardholders received messages or letters with viruses or malicious links, messages confirming or canceling card transactions that they didn’t perform," the study said.

According to the study, every fourth Russian is at risk, because he or she is ready to give confidential payment information to outsiders. "A quarter of Russians (27%) are at risk: they may become victims of fraud, because they are ready to inform a bank employee by phone about card data that cannot be reported (validity period, three-digit security code on the back, code from SMS message)," NAFI notes.

The study also showed that residents of Moscow and St. Petersburg became victims of malefactors more often (37% versus 31% on average in the country).

At the same time, the vast majority of cardholders (96%) noted that as a result of fraud attempts in relation to their bank cards, they did not incur financial losses. The NAFI Analytical Center conducted a nationwide survey in July 2020 1,600 people over 18 years of age were interviewed in 136 settlements in 50 regions of Russia.

Russia - Citibank Case: The financial losses of Russian businesses caused by “carder” reached $20’000’000. Carders specialized on counterfeiting plastic cards use Internet for receiving information on card holders and card’s numbers. Phishing Messages are received by customers of Citibank. The Russian message reads as “Your personal account has accepted wire transfer in foreign currency more than $2’000. According to the agreement of CitibankR Online you have to confirm you data for successful accepting money to the account. To confirm this operation it is necessary to run program of account management and fallow proposed instruction. In case of un-confirmation wire transfer will be returned to sender”.

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RISK IDENTIFICATION AN INFORMATION LEAKAGE INVESTIGATION IN FINANCIAL ORGANIZATIONS

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Abstract. For a company, information leakage is the cause of serious financial losses, so it is necessary not only to adjust the work of the protection system, but also to think through all possible risks and ways of data leakage, as well as ways to promptly identify and eliminate the fact of disclosure or theft of information. The objective of this study is to identify the factors that form the picture of data leaks from financial segment organizations, to clearly show the established cause-and-effect relationships between individual indicators, and to describe in general such a phenomenon as data leaks in the financial sector**.**

Keywords: *IT, Risk, Leakage*

INTRODUCTION

Security plays a big role today. Each of us, when making a choice, always tends to the safer option, so that there are as few risks as possible. Information leakage is a big problem these days. Since today all our data is stored in digital format, there are risks of leakage.

Information leakage means the illegal receipt or transfer of protected information (such as personal data, commercial, state secrets, etc.). Information leakage can be either intentional or unintentional (accidental), which does not negate the guilt of the person or group of persons involved in this. Since this offense is quite generalized, it can concern the most different types of information, have different subjective and objective sides.

In today's world, banking information, its price and value have increased a lot. It is for this reason that criminal interest arises in her.

An integral part of the work of any financial organization is to ensure the security of data storage, the availability of regular password changes and verification. The probability of information leakage is also monitored.

To commit theft and hacking of the banking system, an attacker does not necessarily have to break into a financial organization. Hacking by a network user can be carried out using his personal computer. Thus, the issue of information banking security has become quite acute.

Leakage of classified information in favour of third parties.

State regulation of information protection relations is carried out by establishing requirements for the protection of information, as well as liability for violations of the Russian Federation's legislation on information, information technology, and information protection.

Consider the formation of limited access, which is information for which, by the legislation of the Russian Federation, including the regulations of the Bank of Russia, and internal documents of the organization of the banking system of the Russian Federation (the FS of the Russian Federation), ensures the preservation of the properties of confidentiality.

In the future, we will cite the algorithm of leaking information with classified information and the mechanism regulating the prevention of this phenomenon. If the protection of information is provided - the most vulnerable channel will be involved. The article considers only cases of information leakage, implemented as a result of the actions of employees of the organization BS of the Russian Federation and/or other persons who have legal access to information or legal access to the premises where the information is processed.

We propose to study the features of preventing the leakage of restricted classified information on the example of banking activities. For this we will take as a basis the Regulation of the Bank of Russia N 242 "About the organization of internal control in credit organizations and banking groups" from 16.12.2003. and we use the basic provisions applicable to banks as a form of the credit organization. Referring to the Bank of Russia's Position of April 8, 2020, N 716 "About the requirements for the system of operating risk management in the credit organization and the banking group" it is important to understand that the organization defines in internal documents the procedure for managing the risk of information security. In internal documents, the way the information security system operates is governed by information security policy, which defines the functions and responsibilities of the collegiate executive body and employees of the credit organization, the principles of the organization of monitoring the functioning of the information security system.

One of the most striking examples of information leakage is limited classified information: personal data of customers (payment data) of a credit organization.

Let's turn to the internal documents regulating the activities of Sberbank. Chapter 7 of the Sberbank Charter states that the bank guarantees the secrecy of the information of its clients and correspondents. All employees of the bank are obliged to strictly observe the secrecy about transactions, accounts, deposits of bank customers, and its correspondents. Each employee signs a non-proliferation agreement (confidentiality agreement). Sberbank, by the law, operates an internal control service, which in terms of the functions of identifying conflicts of interest in the activities of the bank and its employees refers to the provisions of internal documents: information policy of Sberbank - paragraph 7 "confidentiality" and The Conflict of Interest Regulation - paragraph 8 "conflict of interest"

The theft of restricted information is associated with a significant proportion of incidents where data theft is a stage for the preparation of embezzlement. Leaks of personal and credentials make it much easier to access payment card data. Possessing personal data, the attackers easily simulate dialogue with a bank employee. On the assumption that the data may only be known to them, the victim is deceived by eventually reporting control words, confirmation codes, and other information that allows fraudsters to withdraw money from the accounts controlled by the client.

The effectiveness and scope of the consequences of these crimes will depend on how faithfully the organizations of the credit and financial sector will comply with the laws

and regulations of the Bank of Russia, including the regulatory procedures for access, use, and transmission of data, as well as the rules for their placement in cloud storage. In this regard, at the same time as the fight against leaks, it is necessary to carry out preventive work both with the employees of the credit organization and with the clients of the credit organization.

Internal investigation of classified information leakage and legal responsibility for leakage.

As punishment for accidental leakage of information to the employee is most often used only reprimand. According to the data. According to the study, 34% of Russian companies practice such a measure. The most common form of punishment for data leakage is the dismissal of the person responsible for the incident, as 47% of companies do.

Working on remotes creates new risks for information security. These risks are associated not only with technical aspects but also with mental threats due to reduced employee loyalty in the face of economic turbulence. According to the analytical agencies - the number of leaks increased by 2-2.5 times against the background of remote work during the pandemic.

In this regard, on March 27, 2021, new penalties for personal data breaches came into force by the Federal Law of February 24, 2021, No. 19. The amount of fines has been increased by 2 times or more. Also, some articles imposed increased penalties for repeated violations. Administrative liability under article 13.11 provides for differentiation depending on the consequences of the violation. Thus, the liability for the legal entity provides for the imposition of a fine of 30,000 to 6 million rubles, and in case of repeated violation - up to 18 million rubles. The maximum cumulative fine for an official is 336,000 rubles, and if the repeated violation can exceed 1 million rubles.

Where to start an internal investigation into information leakage?

1. Even the idea of what relates to personal data and what does not may be different among the company's employees. A single-center of competence needs to be created. This doesn't have to be a department or a dedicated working group. One experienced person is enough for a small organization. The main thing is that it has the authority necessary to ensure a unified approach to the protection of personal data.

2. After, you should structure information about the processes of personal data processing: who owns it, in what business processes are processed, for what purpose, in what composition, etc.

3. Internal and external stakeholders will be of good interest when compiling the registry. Within the company, it can be, for example, business owners of data, lawyers and marketers, external - clients, counterparties, supervisory bodies. This will be useful in building response procedures.

4. It is important to identify events that indicate a possible leak. Without well-established identification procedures, effective responses are out of the question. You can't react to an event you don't know about.

How do I identify events that signal a leak?

- Technology

If you can use technology, use them. DLP systems, information system log analysis tools, and other monitoring tools can be useful. At the same time, it is important to remember that the determining factor is not the availability of software, but up-to-date information about the processes of processing personal data, events pointing to a leak, and their regular analysis.

- Dealing with cases

Employees, customers, and others can talk about the leak. They should be given that opportunity. The communication channel should be anonymous and as simple as possible. It is important that external channels can be easily found, the internal should be known to all employees. We should not forget about the counterparties. Requirements for timely information of your company's representatives about personal data security breaches should be included in the contract.

- Monitoring the information space

There are programs that, according to keywords, collect publications in the media. It is not only internet media but also offline periodicals, radio, and TV, as well as social networks. Such monitoring allows you to identify leaks that have not yet been identified in other ways and to respond to them on time.

- Control purchase

Representatives of your company may act as individuals who buy the personal data of your customers. Knowing exactly what data is being bought and the systems where it is processed, you can track who accessed that information and thus go out to the attackers. This method is not always applicable, but in some cases can be very effective.

How to deal with a leak within the company?

- It is right to classify incidents

All previously identified methods are aimed at identifying signs of leakage. But not every incident involving information security will involve privacy breaches and real leakage of personal data. If you respond to everything, in the same way, there may simply not be enough time for truly critical cases.

- Form a cross-functional group

To clarify the information about the event may require the involvement of related units, primarily the center of competence on personal data. The composition of the response team and the criteria for the involvement of individuals should be determined in advance. And the word "in advance" is key when we talk about an effective response.

- Determine how to respond in advance

It should be as detailed as possible. This would reduce the time it takes to take the necessary measures. The modus operandi should be tested both directly and later in the exercise format. Especially if these procedures are rarely used.

- Control the interim

At each stage of the response, a responsible officer must be identified to monitor the interim deadlines. Timely identification of hitches will allow timely compensating measures and reduce the total reaction time.

- Total reporting and compensatory measures

It is recommended that you report on the incident and, more importantly, take action to prevent similar events in the future, whether it is a real leak or a false trigger.

IT solutions to secure and limit access to classified information.

There are many different IT solutions to secure and limit access to classified information in the modern world. In this part, I will tell you about the most popular methods of protection.

The first method is connected with special systems.

DLP systems: "Data Leak Prevention" literally "prevents data leakage" respectively serve to prevent leakage, reformat information, and redirect information flows. Among the advantages of this system are:

- Automatic interception and processing of information
- Integration with the domain system
- Delineation of access rights

Despite the advantages of this system, there are still some limitations:

- The need for organizational and technical measures to bring the DLP system to comply with the requirements of the Federal Personal Data Act of 27.07.2006 N 152 Russian Government Decree of November 1, 2012, N 1119 "On the approval of requirements for the protection of personal data when processing it in the information systems of personal data".
- The need to allocate large amounts of storage.
- Long-term rollout

An example of how it works is the Zecurion system. Any user who does not even have special skills to work with a personal computer can carry out the installation and installation procedure. Also, in the case of this system, there is no difference in whether components are placed on one operating system or different ones. There are a large number of working models here, including full data interception, protection, auditing, and blocking.

The next method is SIEM-systems. (Security information and event management).

The system can quickly detect external and internal attacks, analyze incidents and events, assess the level of protection of the information system, form reports, and other analytics.

SIEM systems simultaneously collect and analyze a large amount of data, so they can detect attacks very quickly. However, the software is demanding the power of hardware devices, and when installing it is necessary to provide additional reserves.

An example is a system such as MaxPatrol SIEM. This is a popular Russian development with Russian-language technical support and documentation. There is also a certification of FSTEK (Federal Service for Technical and Export Control) and the Russian Defense Ministry. It's also easy to use. MaxPatrol can collect data from more than 300 sources, including Kaspersky Lab, 1C, and many others. Another example, LogRhythm. This is an American solution developed by a company of the same name. The feature of the system is that it uses a lot of smart solutions to analyze the situation in the corporate network. For example, behavioral analysis and logarithmic correlation. LogRhytm also regularly ranks in the industry rankings of SIEM solutions.

Moreover, mathematical (cryptographic) methods of information protection are actively used today. They protect not access to information, but the information itself through cryptography. That is, all of it is transmitted encrypted, and decoded using cryptographic keys. Without them, the attacker will not be able to understand the meaning of the data, even if it intercepts it. This method has several limitations:

- Difficult encrypted, authentic and digitally signed information can be difficult to access even for a legitimate user at a critical time of decision. The network or computer system can be attacked and disabled by the intruder.
- High accessibility, one of the fundamental aspects of information security, cannot be achieved through cryptography. Other methods are needed to protect against threats such as denial of service or complete failure of the information system.

The main example that is in demand among Russian companies is VPN - Virtual Private Network. It allows you to create private access and encodes all the information being processed.

Another example is The CryptoPro CSP. Cryptography algorithms here meet the requirements of GOST 28147-89 "Information Processing Systems. The protection is cryptographic." (State Standard of Russia is one of the main categories of standards in the Russian Federation). This standard 28147-89 establishes a single cryptographic conversion algorithm for information processing systems in electronic computing networks (computers), individual computing complexes, and computers, which defines the rules for data encryption and identity development.

The cryptographic conversion algorithm is designed for hardware or software implementation, meets cryptographic requirements, and does not impose restrictions on the degree of secrecy of protected information.

The standard is mandatory for organizations, businesses, and institutions that use cryptographic protection for data stored and transmitted in networks in separate computing complexes. There are certificates of compliance of the FSB of Russia.

With the advent of a large number of free Internet access points, the means of protecting information from unauthorized access are actively developing. To protect the network and data from outsiders, they identify and authenticate devices and users, record processes and programs, manage information flows between devices, scan media, and do a lot of other things.

An example of such a program is OpenID Connect, which was fixed in the Bank of Russia Standard. This system allows Internet resources to verify the identity of the user based on the authentication performed by the authoritarian server. OpenID Connect also identifies additional mechanisms for secure encryption and digital signature. The standard allows you to take advantage of additional features such as session management and detection of OpenID providers.

Most organizations in Russia prefer to use information protection hardware. These are different types of devices (mechanical, electromechanical, electronic, etc.) that are equipped to solve the problems of information protection. They prevent access to information, including by disguise it. Examples include noise generators, network filters, and radios scanning.

There are also other ways and methods to protect the information, such as antiviruses that can be installed on any device. This article provides examples of serious software solutions to protect against information leakage.

Each organization can make its own decisions about how to protect information. This decision is made by the security department. Many financial institutions use multiple information protections: some are used to protect employees, others to protect customers' data.

Financial and reputational aspects, negative effects for all participants and impact on the investment climate in the country.

Information leaks from financial segment organizations in 2019 have been registered all over the world. Reports of leaks included the names of organizations such as Allianz, Citigroup, Deutsche Bank, UniCredit, Wells Fargo, and the Canadian credit history bureau Desjardins; and also, incidents involving alleged leaks at a number of major Russian banks were widely reported. The leaks have affected clients of financial institutions from different continents and countries, including India, Pakistan, Brazil, and Nigeria. The pattern of leaks in the regions is generally attributable to technological features and developed countries do not always widely use modern technologies in the financial sector. Sometimes developing countries demonstrate enviable success in the development of IT and information security.

Financial market participants are well aware that the problem of information leaks has the status of an emergency event. The highest managers, usually, comment cases of leaks from their companies. C-suite executives, such a chairman of management and the board of directors usually provide comments on the cases of leaks in their companies. At the slightest suspicion, banks are forced to reissue plastic cards, pay for audit and financial monitoring of the accounts of affected customers, and this is a significant amount of money — for example, Equifax spent about $300 million for financial monitoring, which was the result of the data leak of 147 million Americans in 2017.

If the legislation of the country where the bank is registered requires mandatory written notification of customers affected by the leak, such mailings require huge expenditures.

Information leaks from financial sector organizations are also expensive due to the close attention of individual states to the topic of information security — for example, the compromise of customer data cost the French Active Assurance 180 thousand euros (a fine from the CNIL-the French data protection authority). At the same time, it was not established whether someone used the compromised information for an illegal purpose — companies are only responsible for the fact of improper data security.

In Russia, in 2019, the share of leaks from financial segment organizations accounted for 13.2% of the total number of recorded leaks. At the same time, in our country, the number of leaks from organizations in the financial segment increased by 57.6% in comparison to 2018. The obvious difference between the dynamics of Russian and global leaks from financial segment organizations is explained, on the one hand, by the relatively low "base" from which the number of leaks in Russia is "growing" — leaks from banks and insurance companies were recorded and published infrequently until recently.

However, there is another aspect-probably, in our country, the public interest in data leaks in the financial sphere is extremely high (even compared to the American and Western European society, which is traditionally concerned about data security). Reports about real or alleged (later unconfirmed) data leaks from banks and insurance companies are widely replicated in the Russian media and appear on the front pages of business newspapers.

The reasons are easily to explain — the financial sector processes data that is commonly called "particularly critical" - this is information about debts, the availability of funds in current accounts. At the same time, citizens ' concerns about data leaks in the financial sector are supported by real examples of illegal actions of employees of banks and insurance companies, as a result of which citizens lose their savings, become debtors on credit obligations against their will.

So, risk identification is the process of taking stock of an organization’s risks and vulnerabilities and raising awareness of these risks in the organization. It is the starting point for understanding and managing risks – activities central to effective management of financial institutions. However, many legacy risk identification processes have not fully served institutions’ risk management needs, particularly those related to firm-specific stress testing and identification of the firm’s largest vulnerabilities. These processes were not sufficiently comprehensive and deep enough – failing to highlight key underlying drivers of risks. This, in turn, led to critical gaps in risk management. US regulators have taken note and have been pushing institutions to expand and enhance their risk identification processes, and clearly link risk identification to stress testing and broader risk management activities.

Overarching the categories of financial, operational and policy risk is a reputational risk. Reputational risk can be considered as secondary, in that reputational damage usually is caused by a loss or failure in the areas of policy, operations or finance. However, given the importance of credibility to central banks, reputational damage can be their greatest concern. In a 2003, BIS survey (BIS (2003b)), the vast majority of respondents reflected the view that continued reliance on the central bank as an independent authority with the necessary financial resources ultimately depends on trust in the institution.

Reputational risks can occur when there is a mismatch between public perceptions and the actual objectives and resources of the central bank. Serious misconduct, human or

system failures or major difficulties in meeting objectives are not frequent among central banks, but they can seriously damage credibility when they do occur. Questions concerning ethical behavior and core principles such as honesty and integrity can pose a more ordeal test than pure legal issues, such as litigation against the organization. Goes without saying, the low confidence of citizens in the central bank generates a drop in the investment attractiveness of the country. Otherwise, the high reputation of the regulator, the digital environment of trust, the protection of investors and consumers significantly increases the investment attractiveness of the state.

Financial organizations information security risks, risks of information leakage in transactions made by agents.

Banks and other credit institutions may cooperate with payment agents engaged in the acceptance of payments by individuals to carry out transactions. These agents can be any legal entities and even individual entrepreneurs, and it is important that the paying agent has the right to identify clients.

These entities are not specialized financial organizations, the responsibility of banks is expanded: they are obliged to exercise control over the activities of agents. This condition is formalized in contracts concluded between banks and engaged agents under the current legislation on the payment system. This control is necessary to ensure state supervision of transactions performed in order to protect of clients' rights, their payment, personal data, as well as information on transactions performed by them.

Thus, the issue of preventing information leakage through the involved agents is becoming increasingly urgent. Supervision of compliance with information protection requirements by payment agents is carried out by the Bank of Russia as part of the exercise of its control and supervision powers over the national payment system. The Bank of Russia maintains a list of payment agents and aggregators.

According to the Instruction of the Bank of Russia dated 23.12.2019 N 5365-U "On the Procedure for Carrying Out Control by the Operator on the Transfer of Funds for the Activities of Bank Payment Agents," credit institutions are obliged to keep records of control, to inform about the violations committed within 30 days from the moment of detection of the violation to agents, as well as to monitor their elimination. In addition, credit institutions are obliged to develop internal documents to monitor the activities of bank payment agents engaged by them.

The requirements for information protection are contained, in particular, in the Decree of the Government of the Russian Federation dated 13.06.2012 N 584 "On Approval of the Regulation on Information Protection in the Payment System" and the Regulation of the Bank of Russia dated 09.06.2012 N 382-P "On Requirements to Ensuring Information Protection in the Course of Money Transfers and on the Procedure for the Bank of Russia to Monitor Compliance with the Requirements to Ensuring Information Protection in the Course of Money Transfers" (hereinafter referred to as Regulation 382-P). In addition, a new Regulation of the Bank of Russia dated 04.06.2020 N 719-P "On Requirements for Ensuring Information Protection in Money Transfers and on the Procedure for the Bank of Russia to Monitor Compliance with Requirements for Ensuring Information Protection in Money Transfers" (hereinafter referred to as Regulation 719-P) was prepared, which will enter into force 01.01.2022.

According to Regulation of the Bank of Russia 382-P, the Bank of Russia shall publish on its official website a list of types of incidents - events that may lead to the implementation of money transfers without the consent of the client.

Let us consider the practice of applying the current regulation in contractual relations with attracted agents on the example of such credit institutions as JSC AB "Russia," NKO

(Non-Banking Credit Institution) Krasnoyarsk Krai Settlement Center LLC, JSC Bank Russian Standard.

JSC AB "Russia", when concluding an agreement on attracting a payment aggregator, regulates the requirements for the payment aggregator to ensure information security, pointing out the need to appoint a special employee for information security in the payment aggregator. In addition, it is prohibited to combine the functions of administration of automated workplaces and participation in the transfer of funds with the same person, indicate the need to control and record the composition of the software used, establish the obligations of employees to not disclose their identifier (USERNAME) and password (PASSWORD) in any circumstances not to trust other persons etc.

NKO (Non-Banking Credit Institution) Krasnoyarsk Krai Settlement Center LLC in the rules for attracting bank payment agents to carry out transactions of payment aggregators in terms of ensuring information protection refers to the obligation to comply with the provisions of the Bank of Russia 382-P, as well as the requirements of 161-ФЗ "On National Payment System." In addition, it is prohibited to transfer information on any transaction to the territory of a foreign State, as well as to provide access to information from the territory of a foreign State, except in the case of cross-border translation. No additional protection measures are foreseen.

JSC Bank Russian Standard also does not provide for additional protection measures.

Nevertheless, all specified credit institutions comply with Clause 2.6.3 of Bank of Russia Regulation 382-P in terms of the obligation of such organizations to determine requirements to the procedure, form and timing of transfer to it of information on actions of clients performed using automated systems, software registered by bank payment agents (subagents).

Thus, it is important that the concretization and adaptation of general provisions, the detailing of them in a particular treaty always regulates relations between subjects in more detail and reliably, at least from the point of view of their own activities. Unfortunately, among the three organizations studied, only one clearly regulates measures to protect information, specify and clarify general provisions. For consumers of financial services, it is important to take into account the recommendation that the availability of such clauses in contracts ensures a more reliable storage of their data.

However, it is necessary to note a positive trend in the development of regulation of the activities of payment aggregators, suppliers of payment applications (development organizations providing clients of Russian partner banks with software for translation). The new Regulation 719-P establishes mandatory requirements for information protection by payment agents that were not regulated in the regulation 382-P, in addition, a period of 5 years has been established for storage of the report on the results of assessment of compliance with information protection levels in accordance with GOST (State standards), starting from the date of issuance by the inspection organization. The new 719-P also tightens a number of other requirements, including the introduction of a requirement to inform the Bank of Russia, not the operator of the payment system (credit institution, for example), of incidents (events); introduction of the obligation of the credit institution on the basis of risk system management to define criteria for the need to carry out testing for penetration and analysis of vulnerabilities of information infrastructure, carrying out assessment of compliance of information protection, certification or assessment of compliance of application software of automated systems and applications, etc.

Thus, trends in the development and tightening requirements for payment agents can be assessed only in a positive aspect. In addition, it is important to note the need for credit

institutions themselves to develop information protection through clear and detailed regulation of contracts with agents involved, as well as through, for example, familiarization of the organization involved with the information security policy of the bank or non-bank organization. The proposed measures are intended to prevent information leakage due to the involvement of third-party organizations to carry out payment transactions.

CONCLUSION

As a result of this work, the following conclusions were made:

1) The effectiveness and scale of the consequences of information leakage will depend on how conscientiously the organizations of the credit and financial sector will comply with the laws and regulations of the Bank of Russia, including those governing access, use and transfer of data, as well as the rules for their placement in cloud storage facilities.

2) It is recommended that incidents of information leakage be reported and, more importantly, that measures be taken to prevent similar events in the future, regardless of whether it was an actual leak or a false event.

3) Each organization can make its own decisions about how to protect information. This decision is made by the security department. Many financial institutions use several ways to protect information: some are used to protect employees, others to protect customer data.

4) Reputational risks can occur when there is a mismatch between public perceptions and the actual objectives and resources of the central bank. Serious misconduct, human or system failures or major difficulties in meeting objectives are not frequent among central banks, but they can seriously damage credibility when they do occur. Questions concerning ethical behavior and core principles such as honesty and integrity can pose a more ordeal test than pure legal issues, such as litigation against the organization.

5) It is important to note the need for credit institutions themselves to develop information protection through clear and detailed regulation of contracts with agents involved, as well as familiarization of the organization involved with the information security policy of the bank or non-bank organization.

The proposed measures are intended to prevent information leakage due to the involvement of third-party organizations to carry out payment transactions.

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LEGAL STATUS OF PERSONS SERVING SENTENCES IN THE EVENT OF A PUBLIC HEALTH EMERGENCY

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Abstract. The article discusses the preventive measures taken in penitentiary institutions of foreign countries that prevent the penetration and spread of coronavirus infection. Persons serving sentences in places of forced detention are at an increased risk of infection in the event of an outbreak of the disease. Their situation requires separate consideration when planning and responding to crisis situations. Measures to ensure social distance are implemented through a special legal regime, the introduction of which restricts the subjective rights of prisoners. The introduced legal restrictions in some States provoked the emergence of criminal emergencies, which required the optimization of criminal and penitentiary legal relations. The application is not peculiar institutions of the criminal law (exemption from punishment, exemptions from punishment, replacement of the unsaved part of punishment by softer kind of punishment due to extraordinary situation) and to develop alternative ways to maintain community ties. These methods include: increasing the length of calls in correctional facilities, conducting meetings via video conferencing, organizing rapid exchange of information about the health status of relatives and prisoners using a hotline, as well as using secure mobile devices**.**

Keywords*: social distancing, corona virus (COVID-19), emergency situation, restriction of the subjective rights of convicts, release from serving a sentence, postponement from serving a sentence.*

The modern world community is faced with an unprecedented public health crisis, and in these difficult circumstances, exceptional measures to ensure the life and health of the population are of particular importance. In conditions of isolation and overcrowding, the main problem of the spread of infectious diseases (for example, COVID-19) in penitentiary institutions is the provision of social distancing. The restriction of social ties is necessary to maintain a stable sanitary and epidemiological situation and exclude the scenario of what happened in the People's Republic of China[1] and the Italian Republic[2]. Meanwhile, the application of legal restrictions in accordance with international recommendations [3], requires consolidation in national legislation. While many countries impose a state of

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emergency on their territory, placing citizens in the so-called Lockdown mode, applying legal restrictions on subjective rights, including in relation to convicts. Persons authorized to impose a state of emergency on the territory of the Russian Federation and its individual localities do not rush to apply exceptional preventive measures. Prevention of an emergency situation in the field of health care is left to the subjects.

The regulation of the relations under consideration is carried out with the help of by-laws that do not have sufficient legal force, which creates prerequisites for reducing the level of civil consciousness and ignoring the significance of the growing threat. The legal restrictions used by the federal executive authorities of the subjects are not entirely legitimate, which cannot but create a certain resentment in society. The order of functioning of the institutions of the penal system (then – PS) In modern conditions, it is characterized by the lack of clear instructions in the activities of the administration and the legislative consolidation of the scope of legal restrictions necessary to prevent the spread of an emergency in the health sector. It should be noted that the circumstances under consideration fall under the application of a special legal regime of the penal enforcement legislation-the Regime of special conditions (then – RSC). As a legal basis for the introduction of RSC due to the spread of the epidemic, it is provided only by Article 48 of Federal Law No. 103-FZ of July 15, 1995 «On the detention of suspects and Accused of committing crimes» [1]. However, according to some authors, the specified basis (epidemic), unnecessarily overloads the rule of law, due to the fact that it meets the signs of a natural disaster [3].

The resolution of the Chief Sanitary Doctor of the Federal Penitentiary Service of Russia provides for a set of measures aimed at preventing the spread of coronavirus infection [7]. So, since March 16, 2020, in correctional institutions of the penal system, visits of convicts have been suspended until special instructions are given. It is important to note that the actions of the administration, taking into account the specifics of the situation that has arisen, have a diametrically opposite procedural content in comparison with earlier emergencies in the penal system.

The high degree of the threat of proliferation in conditions of overcrowding in penitentiary institutions encourages us to study the experience of preventive measures aimed at preventing it. Let us consider the legal status of persons held in penitentiary institutions of foreign countries in the event of a health emergency, using social distancing as the main criterion.

Among the States with the highest number of patients infected with coronavirus as of March 31, 2020, are the People's Republic of China, the Islamic Republic of Iran, the Republic of Italy, the United States of America, the United Kingdom and the Kingdom of Spain [10]. In order to prevent the spread of infection, the United Nations issued a statement that people in prisons, pre-trial detention centers, immigration centers, institutions and other places of detention are at increased risk of infection in the event of an outbreak of the disease. Their situation should be considered separately when planning and responding to crisis situations [8].

The penitentiary legislation of the People's Republic of China does not provide for the introduction of a special legal regime in institutions that execute

criminal penalties. A gap in legal regulation has led to the penetration and large-scale spread of infection in institutions. Number of convicted persons infected

(COVID-19) exceeded five hundred people. In order to prevent such a situation and taking into account the recommendations of the UN, the representative of the Iranian judiciary took unprecedented measures – about one hundred and fifty thousand prisoners were released [9]. Due to the peculiarities of the national policy (lack of information) of the States under consideration, it is impossible to fully trace the changes in the legal status of convicts. The most detailed information that allows us to assess changes in the legal status of convicts aimed at preventing the penetration and spread of coronavirus infection is reflected in the Italian Republic, the United States of America, the United Kingdom and the Kingdom Spanish.

Hastily adopted restrictions on social ties in the Italian Republic, as well as the lack of guarantees from the administration in ensuring the safety of convicts (the provision of personal hygiene products: surgical masks, antiseptics, disposable gloves) led to large-scale riots, exacerbating the situation with the spread of infection. The difficult situation in the institutions due to criminogenic factors and the emergency situation in the health sector required prompt actions from the management. In order to reduce the concentration of convicts, the government decided to implement remote monitoring (house arrest) over persons who are sentenced to a term not exceeding six months. The exception in the application of alternative punishment were persons who took part in mass riots in early March, who have disciplinary penalties for a year, who are serving sentences for bribery and violent crimes. The Italian Penitentiary Department, having an urgent need to provide personal hygiene products (surgical masks) for convicts and employees, appealed to the convicts to show solidarity in the fight against the upcoming threat [12]. As a result, the daily routine was changed, and many of the production facilities of the penitentiary service were repurposed for the production of necessary products.

The Federal Bureau of Prisons of the United States of America has officially banned prison visits for a period of thirty days. To ensure the maintenance of useful social connections, convicts are allowed additional phone calls lasting 500 minutes per month, previously the number of phone calls was 300 minutes.

Access to a lawyer remains a priority, but, like social visits, this creates a risk of spreading infection, and therefore, visits to lawyers are also suspended for thirty days, and permission to visit is granted in exceptional cases. Confidential telephone calls are organized to implement the right of convicts to legal assistance.

Visits to religious and public organizations and the movement of prisoners within the institution are suspended for a period of thirty days. Movement is allowed only for the purpose of undergoing forensic medical examinations, medical and psychiatric treatment, and release under pre-trial detention. Prisoners who wish to speak privately with a religious mentor can use alternative means of communication (such as telephone calls). Religious and public figures who have been granted access are subject to the same screening procedures as staff members who enter a prison facility. Over the next thirty days, nationwide modified

operations will be implemented to maximize social distancing and limit group gatherings. For example, depending on the fullness of the institution, phased meals, work, rest, etc. are carried out [13].

Instructions from the UK Department of Health

"On social distancing", visits to prisons are suspended indefinitely. The Prison Service, recognizing the priority of stable functioning of institutions and the importance of continuing useful social ties, has taken measures to maintain contacts between prisoners and their family members. Special mobile devices will be issued to prisoners in 55 prisons. It is planned to use about 900 secure SIM cards, with a limited number of pre-agreed contacts. Strict control measures can ensure that mobile devices are not used to make calls to contacts that are not approved by the administration. In addition, the phones have measures to prevent the use of third-party SIM cards.

More than 50 prisons across England and Wales are now equipped with in-cell mobile communications that allow prisoners to keep in touch with their relatives. The new phones will balance the possibility of telephone conversations in all prisons. In addition to these measures, the prison service is working on the use of video communication at six pilot sites, so that prisoners can exercise the right to meet via video conferencing. The measures taken by the penitentiary department to maintain useful communications with convicts are an exceptional (temporary) measure applied during the period of social distancing [11].

The Kingdom of Spain in prisons and in the juvenile justice system has taken strong measures to protect the health of prisoners and officials. Such as: postponing the transfer of prisoners, except for security, judicial or medical assistance; restricting the access of religious and public figures to institutions; canceling planned cultural and sports events; banning access to work and visits.

The main measures aimed at preventing the penetration of COVID-19 should be considered the placement of incoming convicts in quarantine for 14 days. In addition, there is a social distancing rule within prisons and juvenile justice schools. To compensate for the suspension of visits, the Ministry of Justice is testing a pilot project. At the Quatro Camins Penitentiary in La Roca del Valles, inmate visits are conducted via video conferencing. It is noteworthy that special equipment for exchanging video calls is not required. A free application (JITSI meet), allows you to communicate with prisoners from the phones, tablets and computers of family members.

In order to preserve useful communications, the Ministry of Justice has distributed about 230 mobile phones in all penitentiary and juvenile justice institutions. With the help of the transferred devices, the convicts have the right to make video calls using the "What's up"messenger. In order to coordinate with family members the time of establishing video calls, a hotline is provided in the penitentiary department. The specialists of the hotline deal with issues related to health protection measures, delivery of parcels, ways to deposit money to the personal account of convicts, which are used to purchase essential goods. As part of the implementation of social distancing, the Ministry of Justice commits to spending on international and local outgoing calls, thereby ensuring maximum communication regardless of the availability of funds in the personal account [14].

The introduction of a «discipline-blockade» [5] on the territory of penitentiary institutions is an effective barrier to the spread of coronavirus infection. In the current situation, it is necessary to involve only those employees whose presence at the workplace requires mandatory presence in the performance of official tasks. It is necessary to suspend the movement of convicts inside institutions, visits with relatives, meetings with a lawyer, as well as other persons entitled to provide such assistance, while the question of whether the ban on the transfer of parcels remains open. Communication with lawyers and representatives of religious organizations should be transferred to the mode of protected phone calls, at the expense of the Federal Penitentiary Service.

Based on the UN recommendations on reducing the level of population concentration in places of detention, it is necessary to proceed from the guarantees of safety (preservation of life and health) of the released persons. It is possible to apply the institution of release from serving a sentence, postponement from serving a sentence, replacement, not served part of the sentence, a milder type of punishment, as well as conditional early release due to an emergency situation in the health sector as an exceptional measure. However, the appeal to the listed institutions of criminal law should fit into the legal framework, taking into account the following characteristics:

- the identity of the criminal and the category of the crime committed;
- the possibility of a person to whom one of the above institutions is applied, to be in complete isolation (the presence of residential premises);
- the presence of chronic diseases that place these individuals at risk, providing them with medicines for 14 days, taking into account the specifics of the disease;
- provision of personal hygiene products for 14 days (surgical masks, gloves, antiseptic).

The use of these legal institutions, taking into account the above characteristics, is permissible in relation to persons serving sentences in correctional institutions and correctional centers for committing crimes of negligence and intentional crimes of small and medium gravity. Those who have compensated for the damage (partially or completely) caused by the crime in the amount determined by a court decision, who do not have disciplinary penalties within a year, as well as persons over seventy years of age and pregnant women.

Thus, the legal status of convicts, taking into account the public health crisis, is subject to a certain legal change. The main element of the transformation in the legal status is the restriction of subjective rights. When introducing restrictions aimed at ensuring social distancing, it is necessary to introduce alternative ways to maintain useful connections. Such methods may include: increasing the duration of calls in correctional institutions, conducting visits via video conferencing, organizing rapid exchange of information about the health status of relatives and convicts using a hotline, as well as providing secure mobile devices.

It should be noted that within the framework of social distancing, the execution of punishments not related to isolation from society in the context of a health emergency is also subject to review. In order to control the spread of an emergency situation and ensure the safety of persons serving such sentences, it is

possible to restrict the conduct of preventive and educational actions carried out by the penal enforcement inspections. However, in conditions of self-isolation, it is very likely that the level of domestic violence will begin to increase in connection with which sufficient efforts should be made to control persons under the supervision of penal enforcement inspections. The potential possibility of implementing these measures should be carried out point-by-point with the help of rapid response, as well as with the use of applied innovative technologies.

The practice of responding to emergencies in the health sector has suspended the activities of most organizations, which requires the development of measures aimed at protecting convicts serving sentences related to mandatory labor activity. In order to protect citizens in connection with the deterioration of the economic situation in the context of the spread of coronavirus infection, it is possible to consider the issue of exemption from serving mandatory work and reducing or suspending deductions to the state income. Release from serving a sentence should be carried out in the case of the transfer of the organization to a special order of functioning focused on the production of products and the provision of services necessary in an emergency situation. A reduction in the amount or suspension of deductions in the event of an emergency is made on the basis of the suspension of the work of the organization in which the convicted person is serving correctional labor. If this circumstance is recognized by the decision of the Government of the Russian Federation or the state authority of the relevant subject of the Russian Federation. At the same time, the period declared non-working in our opinion should be counted as the term of serving correctional labor, since it does not depend on the will of the convicted person, due to the force majeure.

The considered legal consequences of an emergency situation will allow optimizing the criminal-executive legal relations. However, their use is not possible, due to the lack of legal grounds in the text of the criminal law. The development of alternative ways of maintaining communication becomes an important factor for the stable functioning of penitentiary institutions. Meanwhile, the use of discipline-blockade is an effective means of preventing and spreading infection. The legal restrictions imposed on convicted persons must be precise and legally formalized. Their introduction must comply with the principle of legality and cannot be applied on the basis of subordinate legal acts. Within the framework of criminal-executive legal relations, their introduction is regulated by articles 85 of the Criminal-Executive Code of the Russian Federation [2] and 48 of the Federal Law of the Russian Federation of July 15, 1995 No. 103-FZ «On the detention of suspects and accused of committing crimes», but do not extend their effect to other institutions that execute criminal penalties.

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IMPLEMENTATION OF A MIGRATION STRATEGY IN THE RUSSIAN FEDERATION IN THE CONTEXT OF ACHIEVING NATIONAL GOALS

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Abstract/ The impact of the coronavirus pandemic and the economic crisis on migration processes is being assessed and the negative forecasts caused by these events are studied. Analyzed the positive impact of labor migration on the Russian labor market. A forecast of the size of the working-age population was carried out, taking into account migration growth, and the need to amend the concept of state migration policy was noted. Recommendations for the implementation of an optimized migration strategy are proposed**.**

Keywords**:** *migration, national goals, labor market***.**

The negative trend of population decline that has developed in the Russian Federation over the past 30 years was partially offset by the influx of foreign labor from the near abroad.

The numerous events that you can see on the screen have become a serious obstacle to the management of migration processes.

Without migrants, Russia will not be able to improve its image as a democratic country. Production will decline, there will be a shortage of qualified specialists, and the intellectual environment will become scarce.

Earlier studies have shown that the inflow of foreign workers in recent years does not exceed 250-300 thousand people per year, while the expected decline in the population in the period from 2017 to 2030. according to Rosstat, it can reach 5 million people.

In the period from January to June 2020, the number of people living in Russia increased due to the influx of migrants from other countries, however, the migration increase decreased 2.7 times compared to the same period of the previous year and, as a result, began to be only 20 % of natural loss (Fig. 2). For many foreigners**,** Russia has ceased to be a place of interest for them to work, which is explained by the development of crisis manifestations in the economy.

Based on the above, I propose to take the following measures to ensure the restoration and increase of the migration flow:

1. The target program must contain a number of the following requirements: the foreign candidate must be in the most able-bodied age group (20-45 years old), and his profession must correspond to the list of the most demanded professions.

It is also necessary to allow the passing of the exam giving a patent for work, for knowledge of the Russian language by 50% instead of 60% and history by 40% instead of 50%, with the condition that the applicant passes additional tests developed by the program based on unsatisfactory answers during the next 6 months of stay in the country.

2. To overcome the main problem of migrants – insufficient knowledge of the Russian language - Russian universities need to create a network of multilingual sites (not only in English) aimed at applicants from the CIS countries.

3. The accelerated process of adaptation of a migrant directly depends on his work activity, because the intensity of interaction with society necessary for finding a job contributes to the greater development of numerous personal and professional qualities. The creation of special centers offering part-time work to foreign students, in parallel with the simplification of the legislative system in this direction, would contribute to solving this problem.

4. After the end of the pandemic and the opening of borders, the problem of attracting labor migrants will become even more urgent. In this regard, it will be necessary to provide employers with preferences, which will create additional jobs for the employment of foreign citizens. The formula for the subsidy provided to the employer is shown on the screen. It will be paid to employers within six months. The subsidy funds will be intended to pay for the labor of foreign citizens employed in newly created jobs.

5. Ensure influence on public opinion by attracting well-known public figures who, appearing in the media and at various public events, will explain the importance of the role of the migration resource for the economic and demographic development of the Russian Federation, thereby preventing the formation and spread of negative myths about to migrants.

In conclusion, I will say that the demographic failure in the near future can smooth out the influx of migrants, making up for the lack of labor resources in the country. At the same time, the state is obliged to provide and provide measures for their adaptation to living and working conditions in our country.

IMPACT OF THE COVID-19 CRISIS ON PUBLIC FINANCES

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Abstract. The article analyzes the first phase of the 2020 economic crisis in Russia associated with the COVID-19 pandemic. The relatively limited role of external factors in the development of this crisis is noted. The main negative impact on the Russian economy so far has been caused by falling oil prices, a reduction in production in the oil and gas sector due to the OPEC+ agreements, as well as a drop in production of a number of goods and services due to the introduction of a self-isolation regime. At the same time, there is a relatively positive trend in a number of sectors (in the food, chemical industry, agriculture), as well as in the banking sector, in which, however, the accumulating risks associated with "bad debts" have not fully manifested themselves**.**

Keywords: *pandemic impact, global economy, public finance, crisis***.**

The Russian economy in the twenty years of the 21st century is already facing the third economic crisis. In all these crises - the global economic and financial 2008-2009, the Russian economic 2014-2016. and associated with the spread of the COVID-19 pandemic in 2020 - external factors played the main role, but the degree of their impact on the Russian economy varied significantly. If the crisis of 2008-2009. was caused only exclusively by external reasons, then the roots of the crisis of 2014-2016. were inside the national economy, while external shocks only significantly increased its depth.

The COVID-19 pandemic can be viewed precisely as an external shock to the Russian economy. Initially, the virus entered the territory of Russia, presumably from Western Europe. The increase in the number of daily detected infections with coronavirus occurred in Russia from the beginning of April to the beginning of May 2020. If as of April 1, 2020, there were only 440 cases of the disease, then on May 11, their number reached 116,562. Further, the number of new cases gradually decreased to end of August 2020. Then, judging by the available information, the so-called "second wave" of the epidemic began in Russia (the number of daily diseases increased from 4729 on September 1 to 8232 on September 29) [1].

The impact of the pandemic directly on the Russian economy came from both external and internal influences. One of the main external channels was a sharp drop in demand, and, accordingly, in oil prices, which was caused by a decrease in population activity under the influence of the rapid spread of the pandemic (primarily in China), as well as the failure of negotiations to extend the OPEC + deal in early March 2020 (the deal expired on April 1, 2020). As a result of all this, the oil price fell at its lowest point (early April 2020) to almost $ 10 per barrel of the North Sea URALS crude. The agreement between Russia and Saudi Arabia, subsequently reached with the mediation of the United States, on reducing

world oil production from May 1, 2020, in fact, within the framework of OPEC +, led to an increase in oil prices and their subsequent stabilization from June 2020 in the range of $ 40-50. per barrel URALS.

The policy aimed at limiting the spread of the pandemic through self-isolation of citizens has caused in Russia and not only, but throughout the rest of the world, a sharp restriction of the aggregate supply (both at the national level and due to the disruption of global production chains - at the global level). The well-known Russian economist, academician of the Russian Academy of Sciences A.D. Nekipelov highlights another shock to the aggregate supply associated with the current crisis - the shock from the reallocation of resources (for example, in favor of health care) [2, p. 43].

From the second half of February to the end of March 2020, there was a sharp depreciation of the ruble against the leading world currencies. Thus, in March 2020, compared to the previous month, the ruble fell 12.7% against the dollar and 13.9% against the euro. Until the beginning of June, the ruble was strengthening, but then its decline continued again. As a result, in January-August 2020, compared to the same period last year, the ruble in nominal terms depreciated against the dollar by 7%, and against the euro - by 6.1% [3].

An analysis of the sectoral dynamics of the Russian economy (see table) shows that the sectors related to the provision of services to the population, especially transport, mechanical engineering (in terms of the production of vehicles, trailers and semi-trailers), as well as the mining industry (in terms of production crude oil, natural gas and coal). A specific feature of this crisis was the outstripping decline in the mining industry as compared to the manufacturing industry (starting from May 2020), which was mainly due to the implementation of the OPEC + agreement on oil production. At the same time, the positive growth of some sectors of the national economy contributed to the support of industrial production in this period: throughout the indicated period, the chemical and food (except for July) industry and agriculture showed positive growth.

Another shock from the side of aggregate demand may come from a decrease in demand from households and from investor investment. Household demand as determined mostly by changes in real incomes and real wages in the absence of self-restrictions on the purchase of goods and services (in force during the period of self-isolation). The current available income of the population (according to the latest Rosstat methodology) decreased by 8% in the 2nd quarter of 2020 after a slight increase in the 1st quarter by 1.2%. Moreover, for 2014-2019. real incomes of the population have already decreased by 7.3% [5], which limits the assumed possibility of supporting aggregate demand without a more or less significant income growth at the present time. At the same time, the movement of real wages in 2020 is still maintained at a positive level. Compared to the same period of the last year, it decreased only in April (by 2%), while the rest of the time it was growing, and in January-July 2020, real wages increased by 3% compared to the same time in 2019 of the year. Investments in the economy also failed to take the path of positive growth during the previous crisis in 2020, and in the second quarter of this year, according to the Economic Expert Group, also decreased by 7.6% [3].

An important current source of the decline in domestic demand is the growth in the level of the unemployed population. It grew significantly in April 2020 (up to 5.8% compared to an average of 4.6% in Q1 2020) and then continued its progressive growth, reaching a peak of 6.4% in August 2020 [4, p. 212].

Credit inflows during the 2020 crisis remained generally positive, although the allocation of loans to non-financial organizations and the population showed largely negative trends (see Fig. 3). If the movement of lending to non-financial organizations revived, especially at the edge of the crisis in March 2020 (in the first chapter, under the influence of spurring economic policy measures), then lending to the population, it seems, remained quite high, but nevertheless inevitably decreased. Taking into account the revaluation of world currencies against the ruble, in April-May 2020 there was a decrease in demand for loans, but already in late May-early June, although small, signs of its recovery appeared.

Despite the growing crisis in the sector of the real economy, an increase in the share of overdue debt on loans is not yet visible - it jumps within 5.2-5.4% and is comparable to the indicators of the beginning of 2020 [6]. This situation is mainly explained by the measures taken by the Government, the Central Bank and commercial banks to reduce the burden of debts, and so far it is transferring this problem to a more distant time.

Investments of non-legal entities and non-financial institutions in banks continued to grow in annual terms, although they decreased in some months compared to the previous period.

The government and the Central Bank of the Russian Federation have implemented a number of necessary measures to mitigate the impact on the economic situation of the current crisis. But it should be noted right away that the very spread of the crisis was the result of measures taken by public authorities to limit the spread of the COVID-19 pandemic (restrictions on social interaction and the associated temporary closure or significant restriction of the activities of entire sectors of the economy). However, the defining difference between the current pandemic and the numerous previous pandemics is that government authorities around the world, for humanitarian purposes (saving human lives), have gone to significant costs in economies.

In Russia, not all sectors of the economy were closed during self-isolation, as evidenced by the data in the table (Dynamics of individual industry indicators in January-August 2020). In addition to the industries already mentioned above, it is necessary to pay attention to the ongoing work in construction, to some extractive industries and, of course, the activities of the military-industrial complex, which created, if not positive growth rates, then the absence of a sharp decline in these industries.

Thus, the first phase of the development of the current economic crisis associated with the COVID-19 pandemic still shows a relatively low role of external influences in the fall of the Russian economy. The main damage to the economy was caused by the sharp collapse in hydrocarbon prices in February-March 2020. The main damaging blow to the economy was a temporary halt or a sharp reduction in the production of a number of goods and services due to the inclusion of a self-isolation regime. Meanwhile, some branches of industry and

agriculture are still successfully passing through this crisis. The same can be said about the banking system. However, the possibilities for the growth of "toxic debts" have not yet been fully realized due to the fact that in the absence of the necessary measures of economic policy in the near future, a decrease in real incomes of the population is very likely. In addition, signals from the state to increase investment demand are simply important. One of the main threats is the still high level of uncertainty, which requires the state to be ready for stable and long-term support of economic dynamics.

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THE INTEGRATION OF ARTIFICIAL INTELLIGENCE AND ROBOTICS INTO LEGAL SPHERE IN ORDER TO SIMPLIFY THE COMPLEXITY OF TAX ADMINISTRATION

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Abstract. In the modern world artificial intelligence can be defined as the ability of digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. AI and robotics are being used across different industries including education, healthcare and taxation, especially the sphere of tax administration. The society has found a great potential for using AI and robotics in order to automate manual and repetitive tasks, to identify possible deductions and tax credits, to increase the transparency of tax data. The implementation of AI in tax administration is commonly practiced among developed economies. For instance, Russia, the USA, the UK and China have already made attempts to introduce robotics in the regulation of the tax system. While there is plenty of advantages in applying such a modern innovation, we should not forget about the obstacles which could be revealed during the test period of such robotics**.**

Keywords**:** *robotics, artificial intelligence, tax administration*.

INTRODUCTION

In the era of increased demand for advanced technologies artificial intelligence (AI) and robotics have become one of the most promising and powerful tools that have already had a great influence on the modern society as a whole.

The historical background of artificial intelligence (AI) and robotics has been studied by scientists worldwide since the latter half of the 20th century. The period between 1940 and 1960 was highly marked by the development of different types of technologies connected with a strong effort to figure out how to integrate machines and human beings[1].

At the beginning of 1950, Alan Turing for the first time raised the question of machine intelligence in his article «Computing machinery and intelligence»[2], where he claimed that machines could transmit different types of information, communicate and have intellectual capabilities similar to human ones.

The term «artificial intelligence» was first coined in 1956 by John McCarthy of MIT (Massachusetts Institute of Technology), when he invited a group of researchers from variety of disciplines that came together to clarify and develop

[1] Council of Europe and Artificial intelligence. Council of Europe portal. Digital source. URL: https://www.coe.int/en/web/artificial-intelligence/history-of-ai
[2] A. M. Turing (1950) Computing Machinery and Intelligence. Mind 49: 433-460.

the concepts around «thinking machines». Since then, AI and robotics have become the focus of considerable attention in various fields and the sphere of tax administration is no exception.

According to the report of the OECD Tax Administrations 2019 «Comparative Information on OECD and other Advanced and Emerging Economies»[1], more than 40 tax Administrations are making use of AI, or plan to do so.

THE ADVANTAGES OF AI IMPLEMENTATION

Today AI is considered as the ability of digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. AI and robotics have a great potential in the legal sphere since they help to simplify the complexity of tax administration. Particularly, the application of AI and robotics help:

1. to automate manual and repetitive tasks that used to be performed by tax professionals;
2. to increase the transparency of tax data;
3. to accelerate the process of analyzing tax documentation;
4. to identify possible tax credits and deductions in order to save taxpayers money;
5. to make tax forecasting more accurate;
6. to identify potential tax fraud cases;
7. to accelerate the identification and analysis of tax problems (like tax evasion).

In addition, AI and robotics also contributes to the enhancement of efficiency as they have the potential to solve many problems faced by revenue agencies. By optimizing different processes, they would make tax administration and public finance management (PFM) more efficient[2]. In other words, to meet a constant demand to do more with less. For instance, AI makes it possible to reduce accounting errors, identify risks, calculate taxes, monitor tax collections, verify tax returns and address tax queries. To improve compliance, tax agencies of some jurisdictions have been using AI systems in conjunction with analytical methods to predict those at higher risk of not paying their taxes. The consequence is higher revenue collection and lower rates of tax evasion.

In the Russian Federation the AI and robotics are gradually starting being used in the tax administration as well. The Federal Tax Service of Russia has also emphasized the fact that in the near future the considerable part of tax administrative work will be assigned to the AI. For instance, in Russia **Chatbot «Robot Taxic»** has started its work on a trial mode. Due to it individuals have an opportunity to ask questions connected with all kind of taxes they could be

[1] Tax Administration 2019. Comparative Information on OECD and other Advanced and Emerging Economies. Digital source. URL: https://read.oecd-ilibrary.org/taxation/tax-administration-2019_74d162b6-en#page1

[2] George Atalla, Mark MacDonald. How AI can help governments manage their money better. Digital source. URL: https://www.ey.com/en_gl/consulting/how-ai-can-help-governments-manage-their-money-better

imposed on and questions about the electronic services too. In addition, using this robot, individuals also can easily make an appointment at tax offices.

INTERNATIONAL PRACTICE OF AI AND ROBOTICS APPLICATION

An American cloud-based software company Salesforce has created **an Artificial Intelligence Economist neural network** that tests and develops the ideal tax system in a simulated environment. The purpose of this experiment is to help governments around the world create a more equitable tax system. At first it seems like a simple computer game but due to this virtual model the company concluded that the US optimal tax system would be a higher rate for the rich and poor and a lower tax for the middle class.

Recently International Business Machines Corporation (IBM) and H&R Block, an American tax preparation company, have introduced **Watson artificial intelligence system**[1] which they are going to use in the sphere of tax administration in order to help people get their tax deductions, determine where they are missing opportunities for savings and make the whole tax system more precise.

According to the information contained in Tax Administrations 2019, by 2017, 10 countries already have chatbots, 7 are implementing them and 23 are planning to do so.

In 2019 Chinese scientists have figured out how to use artificial intelligence to detect tax crimes and claimed that their system was able to detect about 95% of all known tax frauds. The experts have not yet announced when the system will be launched, but this system has already been tested in several regions of the country and became successful. Furthermore, the Taxation Bureau Office of Guangdong Province has introduced **China's first intelligent robot** that can collect taxpayer`s information such as their face photo, ID card, contact number and so on. In Beijing taxpayers can consult robot that listens to their questions, processes the information and responds to their questions, making judgments on the problems they present[2].

The practice of introducing the similar chatbots took place in Sweden, when in 2019 the Swedish Tax Agency started using **chatbot «Skatti»**[3] that handles around 15,000 citizen`s queries about tax returns per month. As it works essentially round the clock, it makes services more accessible and efficient. Nowadays Skatti is being trained in new areas and in several languages that let him answer more questions.

[1] DeAnn Gould-Lancaster. How Tax Pros are Transforming the Customer Experience with Watson. Digital source. URL: https://www.ibm.com/blogs/watson/2017/02/watsontax/?mhsrc=ibmsearch_a&mhq=watson%20tax

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[3] Artificial Intelligence improves the Swedish Tax Agency's customer service. Digital source. URL: https://www.ai.se/en/news/artificial-intelligence-improves-swedish-tax-agencys-customer-service-0

LIABILITY OF AI AND ROBOTICS

Despite a great number of advantages of applying AI and robotics in tax administration, there are still some unsolved issues related to the legal sphere. One of the serious problems in the area of taxation is liability of AI and robotics.

Currently there are some scientific views on the liability of AI and robotics. It can be the liability of:

1. the person who programmed the robot
2. the person who used this robot as a tool
3. the robot itself

Russian Law doesn't provide liability for robotics activities, so if a company will underpay taxes due to the violation in the calculation made by robotics, this company will be held liable. Thus, there is a problem of the legal personality of artificial intelligence.

In Draft Report with Recommendations to the Commission on Civil Law Rules on Robotics[1] the EU Parliament raised the question of granting a robot with the status of an "electronic person" and proposed to introduce objective liability in robotics (which means liability without fault) or to give preference to risk management, where liability was imposed on the person who was obligated to minimize the risks.

THE OBSTACLES AND POSSIBLE SOLUTIONS

The main obstacles which countries have had to deal with during the application of AI and robotics can be divided into several groups.

1. The implementation of AI and related technologies is not covering all possible cases and scenarios. Most of the taxpayer`s cases usually need unique solution and actions while the AI could only give common reaction on it.

A solution to this problem might be an offer to apply robots in thematic blocks that would be trained in specific subjects to meet the needs much more people.

2. The creation of wrong expectations by taxpayers as to what the robotics are able to do. Sometimes the users think that chatbots must give responses to all their questions and if taxpayers do not get answers, they may react against such tool. Moreover, logical solutions made by robotics can differ to human's one.

To solve such problem, taxpayers should be warned that they are talking not with a human kind and robot`s responses are not legally binding.

3. Certain questions addressed by taxpayers to the robots in some cases are unclear and complicated. In this regard, robots do not have an opportunity to give them definite answers.

The solution to this issue would be creation of the supplementary tools due to which taxpayers will have a choice to select different variables in drop-down menu to get specific response.

[1] Report with recommendations to the Commission on Civil Law Rules on Robotics (2015/2103(INL)) Digital source. URL: https://www.europarl.europa.eu/doceo/document/A-8-2017-0005_EN.html

CONCLUSION

In the modern world despite the presence of some unsolved issues people cannot deny the opportunities and advantages in the field of tax administration brought by AI. An increasing number of countries are applying AI and robotics and some of them have already had a beneficial effect in this sphere.

Nowadays due to the increased digitalization and the development of new software tools AI opens a new horizon both for tax agencies and taxpayers by improving efficiency and effectiveness of tax administration[1].

While these innovations have highly benefited society, the challenges they faced remain unresolved and there is still a long way to go.

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DIGITAL ECONOMY WITHIN THE FRAMEWORK OF THE EURASIAN ECONOMIC UNION

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Abstract. This article examines the possibilities of digital technologies to transform the economy within the EAEU functioning framework. The digital technologies implementation opens up new opportunities for the Union economic, social and cultural development, as well as for the growth of regional and global competitiveness. In this regard, issues related to digital traceability of goods and services, digital trade, digital transport corridors are considered. Considering these data, it is possible to assess how effectively the digital economy, which bases on the principles of openness, transparency, reliability and security, is implemented.

Keywords: *digital economy, digitalization, EAEU, blockchain.*

RESEARCH METHODS

The theoretical and methodological basis was the main legislative and regulatory acts regulating the tax policy of Kazakhstan Republic, as well as the works of domestic scientists and economists engaged in the study of customs policy and EAEU integration.

Research process involves various methods of scientific knowledge: methods of case study; comparison method; statistical methods - methods of relative indicators, dynamic methods.

The informative base was founded on monographs, labors of Kazakhstani scientists, current reported data from the official Internet resource of the Eurasian Economic Commission, directly connected to the EAEU.

RESEARCH OBJECTIVES

The aim of the study is to analyze the possibilities of digital technology in the implementation of digital projects within the framework of the functioning of the EAEU, as well as to consider the prospects and problems continuously associated with the digital economy.

The achievement of the objectives of this study required the following tasks:

-consideration of the Main Directions for the Implementation of the EAEU Digital Agenda until 2025

- analysis of the possibilities of using digital technology, specifically blockchain.

INTRODUCTION

At the present stage, the world economy is undergoing various changes and enters a new niche of transformation under the influence of various processes, the most significant of which is the process of digitalization of the economy.

The relevance of considering this issue is the result of the adoption of a number of fundamental decisions at the level of individual states and the EAEU. According to the priorities that were determined by the international community within the digital agenda in the framework of the EAEU 2025, it was determined that "the digital economy is a part of the economy in which the processes of production, distribution, exchange and consumption have undergone digital transformations using information and communication technologies."

Consequently, the digital economy is integrated into all spheres of the economy. This integration is a necessary and main factor of the Economics growth in modern conditions . Digitalization involves the use and development of basic technologies, which primarily include distributed ledger technology, mainly blockchain.

It should be noted that mass digitalization is not a panacea for solving all business issues, so it is important to focus on solving the ones that really require new approaches based on digitalization and have very specific goals for optimizing existing business models. In our opinion, the implementation of key directions of the EAEU 2025 digital agenda broadens the prospects for the economic development of the Union.

RESULTS OF THE RESEARCH

During the study, it was noted that it is necessary to focus on strengthening the so-called "analog" platforms for digital transformation. It should be noted that the successful implementation and promotion of digital technologies will be carried out only if technical compatibility, scalability of digital infrastructures, platforms and solutions are ensured at the appropriate level. These are important components for effective implementation of digital economy, which is based on the principles of openness, transparency, reliability and security.

World Bank experts outlined key recommendations and factors for the development of the Digital Space and ways to implement the EAEU digital agenda until 2025, the implementation of which entails high acceleration of economic growth, creation of new job places, improving the quality of public services and enhancing the competitiveness of the Union.

First of all, legal framework for the Digital Agenda needs to be established. At the same time, it is necessary to consider the question about the distribution of responsibility and authority between the governing bodies at the union and national levels.

Secondly, it is important to identify sufficient financial resources for the implementation of the Digital Agenda taking into account the fact of the long-term and complex nature of the transformation.

Thirdly, it is necessary to ensure the availability of educational programs for the development of digital literacy of the population accessible to society.

Digital technologies have a fundamental impact on all factors of the economic and the social sphere, through which publicity and transparency and social welfare are ensured.

According to experts of the World Bank and the Eurasian Economic Commission, the introduction of digitalization in the EAEU region will significantly increase the GDP growth of the region due to the next factors which are: the growth of Internet bandwidth by 0.66%, the growth of fixed broadband Internet access by 2.6%, and the growth of E-commerce by 0.69%.

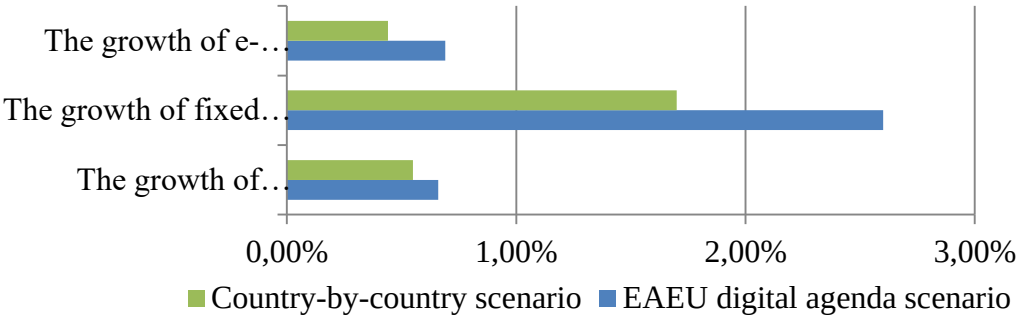

Figure 2. Comparative analysis of GDP growth due to the development of digitalization [1]

According to this schedule, it can be observed that the economic effect of the implementation of the Digital Agenda will increase the GDP of the EAEU by 2025 by a total of 10.6% of the total expected GDP growth of all member states by 2025. This is an indicator that this potential effect is almost twice as large as the possible GDP growth of the EAEU countries as a result of digital development without the implementation of a common digital agenda.

The main priorities of the implementation of the digital agenda of the EAEU are the digitalization of various projects in the field of logistics, trade, transport, cooperation, document management, projects (Fig. 2).The scale and complexity of trading leads to high transaction costs, errors in documentation and losses, which requires the use of new technologies, decentralized distributed ledger databases-blockchain registers (DLT).For example, in global trade alone, about 16 trillion euros annually pass through the logistics and supply chain sector. This fact determines the practical significance of optimizing these processes for all participants [8].

The development of the above-mentioned projects is based on the principles of openness, trust, decentralization, and security. The fact that these principles precisely correspond to the blockchain technology (DLT), makes its use a necessary condition for the implementation of the planned projects. There are many definitions for blockchain (DLT) that reveal it from different sides, but all definitions are based on three main properties. These properties characterize it as a technology, combination of mathematics, encryption, and the economics of

behavior; as a unique platform for the use of various resources: digital currencies, smart contracts, and non-economic resources.

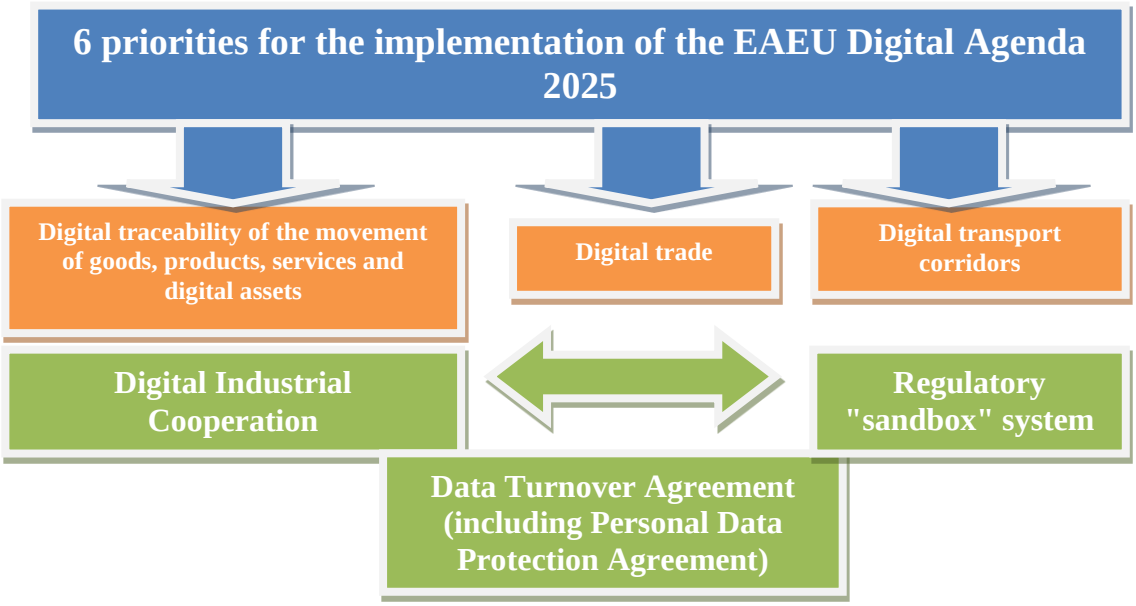

Figure 2. Main priorities for implementation of the EAEU Digital Agenda
Source: Main directions of implementation of the digital agenda of the Eurasian Economic Union until 2025 [3].

Table 1. Overview of the definitions for “blockchain”

№	Definition	Citation sourse
1	The blockchain is considered as a mathematical algorithm that combines transactions into a chain of blocks.	[8]
2	Blockchain is data security, which is provided by a technology based on mathematical rules that allows the safe storage of data rights and obligations.	[1]
3	Blockchain is a cryptographically secured, decentralized database formed from a sequence of data blocks, where decentralization is implemented using a peer-to-peer network, whose participants store copies of the blockchain file, synchronized using a consensus algorithm and creating new block.	[9]
4	Blockchain is a technological protocol (in fact, it is a register of transactions) that allows user to exchange data between participants of the same network directly, without the involvement of intermediaries. This makes transactions transparent, secure, and efficient.	[6]
5	Blockchain is a chain of blocks where information is stored in a strict sequence. In essence, the blockchain is an ordered database with no storage devices connected to a shared server.	[5]

Source: [7].

Within high number of definitions for “blockchain” (DLT) we have chosen one (the World Economic Forum review), which according to our opinion, expresses the entity of the distributed registry most accurately [3]. If we consider the blockchain (DLT) in the historical aspect, its implementation can be considered the second breakthrough stage in the digitalization of society after the emergence of the Internet. Its distinctive features from the Internet are the following: the distribution of records in the form of separate blocks, openness, immutability and security [6]. The revolutionary nature of blockchain technology is largely determined by the use and combinatorics of various scientific fields: mathematical science, data encryption science, behavior economics, which gives a synergistic effect in combination. With regard to the goals set out in the digital agenda of the EAEU, blockchain primarily allows you to optimize the traceability of the movement of products, goods, services and digital assets in the EAEU, also the system of time and transaction accounting can be built on its technology. Experts note that the BL blockchain technology allows to replace the sequential flow of movement of products, goods, services and digital assets to a “peer-to-peer” one. At the same time, it is important that the control is carried out by the participants of the process themselves, so the need for intermediaries is excluded, which ensures transparency of transactions and reducing the cost of conducting them [5].

Digital traceability of goods is aimed at transforming and optimizing the turnover of goods by identification of objects, subjects, processes and obtaining information at all stages of the product life cycle, as a result of which the consumer will be able to determine the history of ownership of the product and protect themselves from counterfeits, surrogate products. According to experts, the time savings on export processing based on the results of pilot transactions according to GSI standards amounted to 30 % [8].

CONCLUSION

Modern trade is the most important element of the world economy and represents not only an exchange between the two sides (the traditional view of trade), but also an expanded cooperation between all participants involved in trade at the borders of the adjacent states and communities [8]. As an example, we can cite the project "One Green Belt – One Road", which is implemented by the PRC and the countries that are members of the EAEU and the EU. The project links Rotterdam and Hong Kong by rail and requires cooperation at the levels of governments, companies and other entities. In order to coordinate settlement operations, the Hong Kong Monetary Authority (NCMA) has proposed to develop a platform with a distributed ledger – blockchain. This will significantly increase efficiency and productivity through transparency and reliability of information.

Thus, the implementation of digital projects within the EAEU based on blockchain technology will help to the such factors as, increase the efficiency of procurement, logistics and payment processes; reduce manual processing of import and export documentation; ensure compliance and delivery of goods; prevent losses and fraud cases.

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THE LEGAL STATUS OF THE ROBOT IN THE LEGAL FRAME AND THE POSSIBILITY OF DEVELOPING LEGISLATION TO CONTROL ROBOTICS

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Abstract. The article considers the legal features of the legal control of artificial intelligence. The aspects of the introduction of certain norms into labour legislation through the reception of international norms are also mentioned. The problems addressed in the article are the granting rights to a robot and recognizing it as a law would-be subject. The authors of the article reviewed the issues of creating uniform legal norms for the control of robotics. The article examines the controversial issues of the emergence of unemployment against the background of digitalization.

Keywords: *Legal status of robots, artificial intelligence, taxation of robots, legal regulation of robotics.*

INTRODUCTION

Robots are intelligent machines that are capable of performing human functions when interacting with the environment.

Their goal is to make our life more comfortable.

With the development of artificial intelligence, research is focused on one part aimed at the safest physical interaction, but also is concentrated on socially correct interaction, depending on cultural criteria.

Considering this issue, it is worth paying attention to the presence or absence of intelligence, consciousness or will, and depending on what it will be possible to recognize a robot as a law would-be subject.

The question of a would-be subject in law is controversial against the background of socio-legal values and depends on the morality of society, attitude to robotics.

A prime example is the adoption of the World Declaration of Animal Rights in 1990, recognizing the natural rights of animals. They are also identified as would-be subjects in the scientific community.

Would-be subjects do not have all the necessary attributes of subjects of law, so they do not have legal capacity, the ability to bear legal responsibility, to develop a unified legal will, and they are not personalized in law. A would-be subject does not have the opportunity to enter into legal communication, and there is no ability to carry not only rights, but also duties. We believe that the formation of primary signs of artificial intelligence in a robot employee made it possible to recognize them as law would-be subjects.

Taking into account the peculiarity of various legal systems and considering foreign experience, the Argentine court granted the robot the rights of orangutans,

calling them inhuman personalities. In such a case, the legal conflict is based on the question of whether the robot is a "thing" or a «person».

Lawyers from the Argentine Association of Professional Lawyers have proved that in philosophically highly developed artificial intelligence is a person, even though it is not a human-being.

Meanwhile, among the leaders in establishing legal regulation of robotics in the world can be mentioned South Korea, where there is the law on the development and distribution of intelligent robots (Intelligent robots development and distribution promotion, 2008).

Most of the current European legal acts are aimed at creating the most favourable conditions for innovation and research.

RESULTS

Russia needs to focus on the following:

Develop a common strategy for the development of robotics and AI technologies.

Develop a federal law with the basics of legislation on robotics and AI technologies.

To put in place normative acts aimed at regulating the sector of highly automated wheeled transport.

Russia cannot directly borrow existing legal solutions to specific problems or copy the norms of the law of other governments in such a connection. However, our nation can borrow existing positive experience in the development and implementation of tools for the support and the progress in robotics.

The issue of legal regulation in the field of civil, criminal and administrative responsibility for the actions of artificial intelligence is asked. Since the robot is a would-be subject, responsibility for Artificial Intelligence errors is assigned to the person who adjusts the technology and receives any benefits from its use. Artificial Intelligence cannot be held responsible on its own, even if it has AI, except that it will be subjected to recycling for defects.

The introduction of a controlling robot-employer relationship into this labour legislation should be based on international standards. According to the International Standard ISO 8373:2012, service robots are divided into two types: those intended for personal use, i.e. those that are purchased for use in a daily life, and those intended for professional use — those that are purchased in order to use them in order to benefit from the provision of various services.

DISCUSSION

With the appearance of a robot as an object of labour relations, even if it is a would-be subject, we are considering the idea of creating a state robot control service. The work and principles of the robotics control service will be based on the international experience of the introduction of legislative acts in the form of ISO, as well as the unification of judicial practice. The task of the legislation will be mainly to form the state standards of robotics "create the GOST standard of software" and "laws of control".

For such reasons, the control over the activities of robotics should be provided for by local acts of a legal entity providing services or providing goods in the form of technology including intellectual property technologies, as well as at the level of federal and regional acts.

The main aims of the legislator are to introduce work into the legislation as a participant in labor relations, that is, to endow him with the status of a would-be subject, describe the moment of the emergence of an employment relationship between the robot and the employer, that is, the robot initially does not have the right to sign. However, the owner will have the right to sign, and the legal entity will be the official guarantor.

The development of legislation should be based on the reception of international norms of law and the adoption of the legal experience of South Korea and other countries.

CONCLUSIONS

Experts in the field of laws should actively optimize legislation.

When such a resource as a "robot worker" appears, which does not need technical breaks or a lunch break, a significant difference in increasing the rate of efficiency will be noticeable.

The main aim of the legislator is reduced to the issue of forecasting legal events and opportunities.

A controversial question should be considered: after the occurrence of certain norms in law, how exactly will the rule of law affect competitiveness in the labour space and whether the introduction of a robot as a subject of law will affect the increase in the unemployment rate.

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RUSSIA'S CORPORATE VENTURE CAPITAL MARKET: CURRENT ISSUES

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Abstract. This article will be devoted to the problems of the market of corporate venture capital funds taking place in Russian Federation. To identify problems, the very role of the CVF in the domestic market will be initially considered, as well as why it is financed by the state, while the market remains insufficiently successful. The purpose of the article is to determine the characteristics of the market that are sufficient not only to successfully identify problems, but also to provide recommendations for overcoming them. The relevance of venture funding research is that: firstly, this type of funding has not received due attention to it and has not received sufficient development in Russia, and at the moment it can be stated that it is still in its genesis. Secondly, the tendency of modern economically successful countries to move away from the classical approach to R&D execution is becoming more and more clearly visible: an increasing share of innovations is given to the CVF and firms of the corresponding orientation**.**

Keywords *innovation, investment, scientific and technological progress, technological growth, corporate venture capital funds*

INTRODUCTION

Today, every company faces the question of its own development and expansion with particular urgency. After all, in today's economic conditions, it is virtually impossible to work exclusively within the framework of classical reproduction. Hyperdynamic external environment in the form of scientific and technical progress, globalization, information flow openness and so on, dictate to the enterprises to change their development strategies cardinally. It becomes more and more clear that the basis of competitive advantages is the innovations introduced by these companies.

The word innovation, as it is customary to designate the introduced innovations, which, mainly, are able to have an economic effect: to reduce costs, to increase in some way the income of the company at its expense. Of course, the importance of innovation is difficult to overestimate in addition to economic effect, it has many others, among which: technological, social, scientific and many others. But traditionally they are discussed in the light of economic because they are applied, as a rule, in entrepreneurial activities, the purpose of which is to systematically make a profit.

Innovations are consistently referred to as natural drivers of development, the basis for intensive economic growth. This effect attracts companies, is reflected in their approaches to corporate governance and thus there is a demand for advanced developments and the latest scientific knowledge.

Problems of Innovative Development and Venture Capital Investment in Russia

Let's start with a problem that has become classic and with which all their research starts: the amount of funds allocated for fundamental and applied research, R&D.

Spending on R&D in modern economically successful countries is at least one and a half percent of GDP, while in the USA this figure is around 3%, and in China - 2%. But in Russia the figure is only less than 1% (or 422 billion rubles) [9].

And of course, innovations which give an absolute advantage on the market are at the same time a barrier for other companies, and a patent for a unique invention is an acknowledged artificial monopoly. And then, for these very newcomers to the market, the issue of coming out with a product that has at least the ability to compete with an established innovation is a very acute one.

For this reason, venture capital firms are emerging, as practice shows - one of the most successful ways to find funding and opportunities for commercialization of potential innovations. But at the same time, the same practice suggests that companies in the domestic market have little interest in innovative development due to various reasons: lack of awareness of the opportunities, and high costs, which have the possibility of not paying off.

Startups have become significantly more popular and entrenched in the business space during these twenty years. This is due to the general growth of high-tech manufacturing, as well as the increase in information availability and the build-up of computing power. But also as startups grew in popularity, the problem of financing such activities became increasingly clear. Extremely conservative financial organizations and institutions, such as banks, for example, were not willing to lend funds for such risky activities, even if they had the potential to pay off many times over. That is why venture capital funds appeared, which by their very nature seemed to be supposed to solve this problem.

In theory, such funds, managing their investors' money, create diversified portfolios, looking for projects with a potential to pay off. Thus, investors take a great risk by betting funds on an innovative project, but if it is successfully commercialized, i.e., brought to market, such investment may not have analogues on the market, because the income will exceed many times any alternatives on the market.

In addition to venture capital firms and innovative enterprises, the sources of funding for start-ups include: crowdfunding, investments from business angels, large direct investments from corporations and so on. International openness of both venture entrepreneurs and investors (investors) themselves is clearly one of the greatest strengths of the venture capital market. This includes Russia: whole systems aimed at establishing business angel communities are actively growing: such initiatives are already reflected in Sberbank's development programme. One of the strengths of the domestic market: increased attempts at digitalization.

When speaking directly about corporate venture capital investment, it is worthwhile to specify exactly what a corporation is. It is either one large company or a group of companies that is managed as a single organization. And these

corporations are almost the main element in the innovation infrastructure, their producers. These corporations accumulate large financial resources, thus they are capable of being both a sponsor and a direct customer of R&D. Over the past 7 years, the expenditure on research and development has been steadily growing, and thus in 2017 the figure exceeded 1 trillion rubles [11], and in 2018 the figure underwent a slight correction and no longer reached the record values.

In today's economically successful countries, there is a growing trend to displace the classical approach to R&D, giving an increasing share of innovation to venture capital firms. The question may arise as to the ways in which these same corporations can participate in creating innovation and conducting venture capital financing. Basically, there are 5 ways: limited or general participation in a private equity fund, limited or general participation in a venture capital fund, and direct participation in startups and innovation ventures. All these ways have their pros and cons. And it is the definition of their policies that is the most important part of corporate venture funds, since they make decisions such as takeovers, mergers, or buyouts. And each such decision has its own possible benefits from the innovative company's activity.

The next problem of the domestic market of corporate venture capital funds is that from 2013 to 2019, the dynamics of the number of venture capital funds looked quite stable and fluctuated around 3-5%. But with the increase in the number of funds, the volume of capital itself even showed negative dynamics from 2013 to 2016 [10].

With the continued positive dynamics of increase in the number of funds, their aggregate capital for 2018 and 2019 remained practically at the same level. If we consider the figures in real prices, from 2013 to 2019, there was a cumulative decrease in capital of 16.48%, taking into account that in 2018 there was an increase in the form of 0.58%. For 2018, 26 new venture capital funds were established, a 23.8% increase[11] compared to 2017. And their cumulative capital exceeded the cumulative values for 2015-2017. This growth can be explained by the revival of the Russian market and increased interest in the domestic venture capital market, in general.

Peculiarities of implementation of the CVF in the economy of the Russian Federation

It would seem that everyone was living peacefully: each company was minding its own business, keeping an eye on profits. But at one point, every news outlet started broadcasting about innovation, startups, and the digital economy. Why?

In many respects, this is the influence of trends in the growth of the value of technology companies, the emergence of new competitors that previously did not develop beyond their social network, and now for some reason began to take on a more global scale. So why do we need venture capital funds?

Thanks to them, investment decisions have become transparent, which, in many ways, has helped reduce the corruption component. Moreover, venture capital funds help individuals and legal entities to understand that their free funds can not just lie in some account, but work and bring profit. These funds are able to

effectively allocate funds to priority areas, which is not unimportant for the government, as it opens up new opportunities for the development of high-tech industry.

The Russian market is much more modest than, for example, the American market with its Google Ventures, Intel Capital, etc., but nevertheless, our Rostelecom, Kaspersky Lab and many other companies are increasingly interested in the venture market and have already started investing.

However, the term "corporate venture fund" is very often used in Russia - and, of course, a lot of controversy in the understanding of this concept has emerged. This combination is not used in foreign practice. All sources use other terms, for example, corporate venture capital (CVC), or corporate venture capital.

Corporate venture funds can perform very meaningful roles, such as technology scouting or blocking the development of future competitors. But today it is more important to understand that a corporate venture fund is not "just another source of profit", but an instrument of competition important in the long-term prospects of a corporation.

What organizations do they cooperate with? The priority, of course, is IT-technology, industrial enterprises and healthcare. The project to be sponsored is carefully selected, as further profits depend on it. In this case, the fund manages the money "coming" from the state, FIU, banking institutions and investors. The investor, in turn, can become both a legal entity and an individual by obtaining a share in the company.

In Russia, the companies listed above manage sums of up to $30 million. Most venture capital funds prefer to invest for the long term.

Scientific articles have noted that corporate venture capital funds through investments help to add value to the company through achieving strategic objectives, one such tool is diversification of core business activities.

In the Russian Federation, the main conditions for participation in the EFC are:

-Takeover of a legal entity - contribution to LLC, OJSC, joint-stock investment fund, acquisition of shares, participatory interest.

-No legal entity has been formed - combining the contributions of persons within the framework of an investment partnership, acquisition of units of particularly risky venture capital investments.

The choice of how to participate in the international venture capital fund should preferably be based on the jurisdiction in which the fund is established.

METHODOLOGY

Based on the above data and information about the state of the domestic market, general scientific methods will be used: analysis and synthesis, because only by combining initially disparate data can we see the whole picture in order to make recommendations. Based on the current data, the opinion on the problems and possible options to overcome these problems will be described below.

RESULTS

Guided by the information above, it is possible to form the basic requirements for the organization:

-Presence of sanctions controls over the company (manager) in cases where commitments and opportunities for early termination of the venture fund or termination of the flow of investments are breached

-Having (and fulfilling) responsibilities for facilitating access on favourable market conditions to technology of project companies financed by the venture fund

-Operation for representatives of the organization to have access to information and practices of the company and portfolio companies for transfer of their competencies (managerial and technological)

And touching upon the problem of innovative development globally, it is worth saying that it is necessary to create a state body providing consulting and technical services, as well as promoting the practice of healthy invention and implementation of technical innovations, along with participation/formation of corporate venture capital funds. After all, the data show that only 1-3% of the patentable R&D results in commercialization in the civilian sector, while in the military-industrial complex the figure reaches 70% and in the space industry it exceeds 90% [12]. There is a clear disproportion between the civilian and military industries. The industries should actively cooperate and try to use the developments by both of them and create the objects for dual use. Of course, the creation of such a body implies high costs, while only 1% of GDP is allocated for all R&D activities. This is a problem of orientation of our economy, which should also be corrected.

Thus, the presented article considered the issues related to corporate venture capital funds in the Russian Federation, mainly the requirements for achieving stable operation of corporate funds, where the continuity of the fund's operation is of crucial importance.

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CORPORATE VENTURE CAPITAL INVESTMENT AS A TOOL FOR INNOVATION DEVELOPMENT IN THE RUSSIAN FEDERATION

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Abstract. The review of domestic and foreign publications presents successful practices of corporate venture capital investment. The article shows that the coordination of the fund's objectives with those of the parent company, consistency of functioning, continuity in terms of strategy, investment focus and core team, as well as economic stability, which allows the fund to be a stable partner for portfolio companies throughout their life cycle. It is emphasized, that corporate venture investments are not an instrument of financial speculation, and the established venture capital fund is needed by the parent company, primarily as a tool for search, development, and technology transfer. The article considers the features of corporate venture capital funds, as well as the global practice of development of innovation activities of corporations of the Russian Federation**.**

Keywords: *corporate venture investment, venture capital, innovation economy, innovation activity, venture fund, corporate venture fund, startups, mergers and acquisitions, trends***.**

INTRODUCTION

In modern times, the development of corporations act as one of the leading actors of innovation, science and technology, production processes and influence the economy of the host country, affecting its markets mainly by promoting innovation. However, the classical internal process of developing new products and services is often costly and cumbersome. Hence, other forms of exploring innovation through external investment commitments are gradually emerging which may prove successful, if managed by a qualified corporation, to eventually become the basis of short- or long-term opportunities for its development. Such strategic technology alliances with small and medium-sized companies with strong growth potential help to guarantee access to new development opportunities for the corporation.

This is the reason why venture capital funds as subsidiaries of corporations, the so-called corporate venture capital funds, are increasingly being established. They make it possible to carry out technological development They make it possible to achieve technological development not only through intracorporate research and development and development works**,** but also by mastering of ready innovations received from outside.

Venture capital investment originated in the middle of the last century in the USA and has already become an object of research in the works of many famous researchers, such as V.L. Aksenov [1], Y.P. Ammosov [2], P.G. Gulkin [3], L.P.

Dana [4], F. Deville [5], A.T. Karzhauv [8], A.I. Kashirin [9], L.N. Nehorosheva [10]. International venture investment became widespread in the last quarter of the 20th century, when the owners of funds of one country began to invest them in high-risk projects in other countries. This form of investment was used by many companies, someone succeeded in it, and for someone this model was unacceptable. The corporate giants that started to use corporate giants such as Micrsoft and General Motors, as well as IBM. Initially, these investments were very successful, but then there was a period of decline. Researchers argue that the reason for the failures was that many corporations, when setting up corporate venture capital funds, did not understand the specifics of their activities. In the early 2000s investment activity of corporations dropped drastically, by almost 80%. The economic crises had a significant impact on the corporate venture investment market.

According to the Global CVC Report, an annual report analyzing corporate venture capital investments, CVC funding in 2018 increased by about 47% compared to 2017, and deal volume increased by 32% over the same period. The topic of the need to develop corporate venture investments in our country was first raised in 2011 in the instructions of the President of the Russian Federation, issued following a meeting of the Commission on Modernization and Technological Development of the Russian Economy. A new impetus to the process of formation of the domestic corporate venture investment market was given by the Orders of the President of the Russian Federation published in August 2014. "Instructions on the results of the meeting with members of the Expert Council under the Government and representatives of the expert community on the issue of development of innovations". They provide for elaboration of proposals "on development of the system of corporate venture funds, implementation of investments into industry funds or development institutions, as well as on issues of acquisition of innovative companies, leading innovative developments, as part of implementation of programs of innovative development of state corporations and companies with state participation". In 2018, the willingness of major Russian companies to develop through venture capital investment in startups has become noticeable. The RVC study showed that corporate participation was the main event in the Russian venture capital industry last year. Despite the fact that corporate venture capital investments in 2018 amounted to only RUB 8,570.7 million. (32% of the total Russian venture capital market), over the year, the corporate venture capital sector grew sevenfold.

Problems in venture capital investment in the Russian Federation

There are a number of problems in the functioning of the venture capital market in the Russian Federation:

- there is no demand on the part of large businesses for innovative technological products;
- problems in attracting private investment, as private investors prefer to invest mainly in the expansion phases;
- difficulties in attracting foreign investment (as there is a lack of a significant number of success stories, the Russian market is perceived as more risky, the

significant role of public funds in ecosystem development discourages foreign investors);

- non-transparency and unpredictability of the situation in the venture capital market.

Features of corporate venture capital funds

The motivation for the creation of corporate venture funds most often appears to be the application of another innovation tool aimed at finding effective business ideas and technologies. Small innovative companies that develop such technologies acquire a stake in the equity capital, apply the management and marketing experience of an investing parent company which leads to The growth of competitive advantage and stimulation of mutual growth.

One of the key characteristics of corporate venture capital financing is that financial capital when investing in an innovative startup is enhanced by diverse industrial experience. Five groups of incentives for participation in corporate venture transactions are distinguished:

- Technological interest: investing in innovative companies In the case of corporations, the main focus is on the direction in which the parent company is operating, enabling traceability of innovations and cost savings on internal R&D activities. Corporations can achieve technological breakthroughs by signing agreements. In this case, corporations can achieve technological breakthroughs by signing agreements on the development of collaborative projects, transferring and receiving licenses, or acquiring a startup at a later stage of development and promotion of the innovation on the market. The goals of the investing The aims of the investee and the invested companies are integrated, and may even be combined.

- Increasing the value of in-house R&D: supporting the creation of emerging startups allows the corporation to improve their patent portfolios. At the same time, the dominant part of developed intellectual property objects is often not used by startups, and corporations are able to conclude licensing agreements for these objects on a priority basis, if necessary.

- Tracking the market and gaining experience in new markets: subsidizing start-ups gives traders information on customer behavior towards new products and services that can be used to launch similar products and service delivery.

- Introduction of new practices: invested start-ups are used as a tool to introduce new practices in external communications (interaction with customers and suppliers) and internal relations between employees, management and staff, structural subdivisions, which can later be used by the company in case of success.

- Financial interest: Like other venture capitalists, organizations should exaggerate their investments, getting a boost at the time of exit through dividend payments, if the raised startup is not of interest for the parent company. For these reasons, corporate venture investments are often defined as the contribution of financial, technical resources and strategic expertise in the early stage of entrepreneurship. This highlights the interdependence that occurs between the invested startup and the corporation. Thus, the analysis of foreign publications shows that the dominant strategic approach that is primarily characteristic of a

corporate venture fund is to select and fund projects that have synergies with the corporation's own business.

METHODOLOGY

The following general scientific methods were used in the research process: tools of deductive and inductive analysis, which made it possible to combine the conclusions of individual authors and formulate their vision of the problem, the method of analysis. Modern literature, as well as conference materials and statistical data were studied. Based on the collected and analyzed data, an opinion on the problem and probable ways of its solution was formed.

RESULTS

In the context of globalization, internationalization of innovation attracts much attention, emphasizing the importance of transnational corporations (which locate research centers in different countries and invest in research and development (R&D) in the creation and diffusion of innovation. Various forms of internationalization affect the technological and innovation capacity of countries, producing synergistic effects of research to generate new knowledge.

Existing instability and uncertainty of economic development in recent years, the drivers of innovative activity in the Russian economy were international corporations with a high degree of capacity of material and technical base. In order to identify the degree of influence of international corporations on innovation activity and innovation activity in the national economy of the Russian Federation, let us consider the volume of investment in innovation of the top 10 most innovation-active international corporations in the Russian Federation, as well as their share in the total volume of investment in innovation activity.

The diagram of the dynamics of innovation financing by the top 10 international corporations in the Russian Federation in the sphere of innovation activity of the Russian economy is shown in Figure 1.

Figure 1 - Dynamics of Innovation Financing by Top-10 International Corporations in the Russian Federation in the Area of Innovative Activity in the Russian Economy

The above chart shows that over the analyzed time period, the volume of financing of innovation activities by major international companies in the Russian Federation increased from 298.9 billion rubles, in 2017, to 370.4 billion rubles by the end of 2019, inclusive.

However, it should be noted that despite the stable growth of this indicator, the share of these companies in the total volume of investment in innovation in the Russian economy decreased from 34.89% in 2017 to 18.95% by the end of 2019.

These trends are conditioned by activation of small and medium-sized enterprises in the framework of innovative activity in the given period. Let us consider the dynamics of spending on innovation activities by the top 10 international corporations in the Russian Federation in the field of innovation activity (Table 2).

Table 2 - Dynamics of spending on innovation activities by the top 10 international corporations in the Russian Federation in the field of innovation activity

№	Корпорация	Сектор	2017	2018	2019	Изменение, млрд рублей	Изменение, %
1	Газпром	Нефтегазовый	8,2	9	12,1	47,56	3,90
2	Лукойл	Нефтегазовый	5,8	6,2	5,7	-1,72	-0,10
3	Роснефть	Нефтегазовый	29,9	32,1	30	0,33	0,10
4	Сбербанк	Финансы	31,7	34,1	33,1	4,42	1,40
5	РЖД	Транспорт	13,7	12,5	11	-19,71	-2,70
6	Ростех	Технологии	112,8	113,3	171,8	52,30	59,00
7	Сургутнефтегаз	Нефтегазовый	11	11,4	11,6	5,45	0,60
8	ВТБ	Финансы	12,1	10,1	14,7	21,49	2,60
9	Росатом	Энергетика	33,9	32,1	33,4	-1,47	-0,50
10	Роснано	Технологии	39,8	42,5	46,9	17,84	7,10

The data in the table above shows that the most active companies in the field of innovation activity in the Russian Federation for the period from 2017 to 2019 inclusive were the companies of oil and gas sector and financial sector of the national economy.

It should be noted that all corporations except Russian Railways, Lukoil and Rosatom increased their investment in innovations over the analyzed time period, which indicates a high level of participation of innovative products in formation of revenues and net profit of these companies.

CONCLUSION

The main differences between corporate funds and so-called independent venture capital funds established by free-standing investors reflect different objectives, areas of activity, sources of funding, legal status, management remuneration systems and accountability. The unique features of corporate funds versus independent funds include longer investment horizons, industry and technology support from parent companies, which allows them to provide relatively better technology support and be more resilient to the startups they fund. At the same time, the corporate venture fund needs to obtain resources from the corporate founders, which causes them to focus more on improving the

performance of the parent organization The analysis shows that the corporate venture capital funds need to obtain resources from their corporate founders. The analysis shows that corporate venture capital investments are better able to develop innovation when there is a technological match between the specialization of the parent company and the invested company. In such cases, the investment becomes a controlling, stimulating The startup company which received the technology investment is able to develop its innovations better.

The startup company receives technological and commercial resources of a large company together with venture capital investments, the advantage of greater resilience compared with in comparison with independent funds. In the absence of technological compliance with the parent company, the interaction between the two becomes disadvantageous due to the potential conflict of interest, which may make the independent venture capital fund a preferred source of funding.

In general, it can be determined that, despite the steady growth of innovation financing, the share of the top 10 most active international corporations in the structure of innovation financing by business entities in Russia has largely decreased, which is due to increased innovation activities of small and medium businesses. From which we can determine, the trend in the medium term is a relatively stable decline in the role of international corporations in the system of innovative development of the Russian economy.

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CONTENT

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