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Issue Article

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THE HISTORY OF TUPROKKALA AND ITS PLACE IN HUMAN CIVILIZATION

Abstract: *This article talks about the urgent tasks of our time in preserving historical and cultural monuments on the example of Tuprokkala, about the scientific research of the employees of Khorezm archeology and ethnography, and also about the beginning of the Khorezm era.*

Key words: *Monument, Tuprokkala, civilization, culture, ancient Khorezmians, temple, Afrigid dynasty.*

Language: *Russian*

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ИСТОРИЯ ТУПРОККАЛЫ И ЕГО МЕСТО В ЧЕЛОВЕЧЕСКОЙ ЦИВИЛИЗАЦИИ

Аннотация: *В данной статье говорится об актуальных задачах современности по сохранению памятников истории и культуры на примере Тупроккалы, о научных исследованиях сотрудников Хорезмской археологии и этнографии, также о начале Хорезмской эпохи.*

Ключевые слова: *Памятник, Тупроккала, цивилизация, культура, древние хорезмийцы, храм, династия Афригидов.*

Введение

В области археологии Узбекистана проведена ряд научно-исследовательских работ, и по найденным и изученным источникам на территории страны обнаруживается ряд археологических находок, отражающих историю нашей национальной государственности.

Сохранение таких бесценных монументов, памятников истории и культуры является одной из актуальных задач современности.

Основная часть

В последние годы на территории современного Каракалпакстана обнаружен ряд археологических находок, подтверждающих, что он является одной из колыбелей человеческой цивилизации. Элликкалинский район Каракалпакстана находится в центре внимания мировой общественности как место веками скрывавшее тайны истории благодаря своему благоприятному климату.

Этот район является самым посещаемым туристическим районом Каракалпакстана, где можно найти древние крепости и множество памятников, привлекающих туристов. В районе находится 21 объектов археологии, 1 памятник архитектуры, 10 памятников монументального

искусства, 5 достопримечательностей и 2 объекта паломнического туризма.

Памятник Тупроккала был столицей Хорезмского государства, получившего независимость. Побывавшие здесь могут увидеть особые комнаты для огнепоклонников, характерные для зороастрийского периода, и просторный и величественный зал, где царь Хорезма принимал иностранных послов. Тупроккала (I-VI вв.) расположен в нескольких километрах к югу от горы Султан-Увайс. Он служил резиденцией правителей древнего Хорезмского государства до прихода к власти династии Афригидов.

Название памятника происходит от его нынешнего уровня, который представляет собой большую (земляную) насыпь.

Архитектурное строительство города

Тупроккала расположен на территории сельской махалли «Шарк Юлдузи» Элликкалинского района, относится к I-IV векам нашей эры, VI веку. Этот памятник был открыт в 1938 году С.П. Толстовым. Строение Тупроккалы прямоугольное (500 х 350 м) и занимает площадь 17,5 га. В замке проживало 2000-2500 человек.

Город окружен оборонительной стеной с и купольной башней. В город входили через ворота с южной стороны стены. От городских ворот, по его средней линии, по главной улице проходили к храму. По обеим сторонам улицы расположены 8 дачных домов. Между домами проходит узкие улицы. При определении характеристик общин, проживавших в каждом из этих домов, отметки на кирпичах являются признаками того, к какому роду они принадлежали.

Кирпичный дворец был построен на платформе высотой 14 м и размерами 80х80 м в северо-западной части города. Рядом с дворцом сохранилась арка размером 40х40 метров с тремя башнями и высотой 25 метров.

В арку входили с восточной стороны через приподнятый проход. При раскопках города было выявлено около 100 жилых домов, хозяйственных построек, 8 дворцовых залов. Залы украшены барельефами и рельефной и (цветной) скульптурой.

За пределами дворца расположены хозяйственные постройки и жилища людей, которые также украшены узорами и изображениями. В восточной части Тупроккалы располагалась мастерская по изготовлению военного снаряжения, где были найдены железные копья и трехлопастные стрелы, на втором этаже дворца, находился царский архив. В нем было найдено более ста древнехорезмских документов, написанных на коже и деревянных досках и датированных III веком нашей эры.

Сотрудники Хорезмской археологии и этнографии проводят научные исследования, а вопросы, связанные с историей города, изучаются и по сей день. Тупраккала своей структурой, стенами и башнями, устройством комнат и системой обороны напоминает великие города древности. Но она занимает особое место своим удивительным художественным богатством.

Этот великолепный исторический памятник, первая столица великих хорезмшахов, расположен в районе древних крепостей, к югу от горы Султан-Увайс. Руины этого волшебного замка занимают площадь 17,5 га (500 х 350 метров). Тупоккала, имеющий прямоугольную форму, вытянут с севера на юг и окружен толстой и высокой стеной из крупных сырцовых кирпичей. Вдоль стен стоит множество квадратных созвездий. На северо-западе замка видны руины двухэтажного роскошного дворца шириной 180 м и длиной 180 м.

Дворец был построен в короткие сроки вместе со всеми оборонительными сооружениями вокруг него. Для защиты дворца от врага были построены три башни по 25 метров каждая. Окраина города окружена двухкилометровой стеной с квадратными башнями через каждые 30-40 метров. Также были построены специальные большие укрепления высотой 10-12 метров для защиты главных ворот города.

Как только вы войдете через главные ворота на южной стороне города, вы наткнетесь на прямоугольный дом. Кажется, здесь стояли городская стража. От этого дома начинается центральная улица. Эта улица шириной десять метров ведет прямо к воротам, ведущим во дворец правителя и городской храм. От конца этой улицы другая улица с правой стороны ведущая к рынку. По обеим сторонам главной улицы на узких улочках, пересекающихся друг с другом, выстроено по 9-10 рядов больших многокомнатных домов. Внутренняя архитектура замка похожа на Джанбаскалу.

Дворы между такими узкими улицами соединены друг с другом, и кажется, что между ними нет стены. Количество комнат в примыкающих дворах достигает 200. Это показывает, что люди, жившие в Тупроккале, были кланами, жили из поколения в поколение и принадлежали к древней форме общественной жизни.

В конце длинного коридора, который начинается от южных ворот дворца правителя, находится храм огня. Храм состоит из нескольких сооружений. Посреди зданий стоит прямоугольное здание, окруженное двойными стенами и с круглым коридором внутри. Древние хорезмийцы поклонялись негасимому огню, хранившийся в этом сооружении.

Примыкающее к храму огня величественное треугольное двухэтажное здание поражает своим роскошным видом. Стена наверху здания украшена красивыми скульптурами из ганча. Здания дворца и храма с южной и восточной сторон окружены толстыми и высокими стенами из кирпича. Перед дворцом 12 хозяйственных комнат, в которых нет никаких украшений. Вход во дворец с башнями и воротами вдоль стены осуществляется с пандуса с восточной стороны. Конец пандуса заканчивается узким коридором, украшенным изящными узорами, напоминающими различные растения. Дворец построен так высоко, что дворы, где живут люди, кажутся очень маленькими.

Начало Хорезмской эпохи

Дворец Тупроккала, который был самой роскошной резиденцией царей в Хорезме, по неизвестным причинам стал заброшенным в IV веке. Разрыв в городе длится до 6 века. В то же время ирригационные сооружения правого и левого берегов Амударьи находятся в кризисном состоянии. Нижние сети крупных магистральных каналов будут полностью разрушены. Старая водопроводная система Кальтаминор, наконец, сжимается. Большая часть орошаемых земель на левом берегу реки превратится в бесплодную пустынь, а многие города опустеют.

Династия Афригидов совпадает с периодом таких великих исторических перемен. С IV века нашей эры произошли такие мощные события, что в результате этого весь экономический и социальный строй, бытовое и политическое положение Хорезма стали резко меняться. Эти изменения проявляются в появлении новых типов укреплений и дворов.

Вместо плохо построенных укреплений в тени могучих замков посреди полей появляются произвольное укрепления крестьян. Вместе с этими крепостями возвышаются и новые замки, где живут дворяне. Роскошные древние города в оазисе впадают в упадок, и жизнь общества начинает перемещаться из города в деревню.

Несомненно, этот важный социально-экономический процесс, происходивший в Хорезмском оазисе, был непосредственно связан с политическими событиями, происходившими в Средней Азии. Восстановление замечательного исторического памятника Тупроккала за короткий промежуток времени, т.е. за несколько столетий, а затем его разрушение явилось ярким выражением серьезных изменений в регионе.

По мнению С. П. Толстова, строительство города Тупроккала и дворца в нем является важным политическим событием. Ведь это сооружение высоко ценится как событие, в истории положившее начало «хорезмской эре». Причина в том, что в результате нашествия степных племен во II веке до н.э. рухнуло могучее греко-бактрийское государство, Парфия впала в кризис и начала разрушаться. Распад культуры «Кангюй», восстановление и укрепление единого Хорезмского государства в предгорьях Амударьи связано с появлением новой династии.

Возможно, не случайно в нижнем Амударьинском оазисе появилась афригидская династия, и именно с этого периода начинается исчисление нового года, связанное с хорезмшахами, как показывает Беруни. Потому что создание этого города-крепости может олицетворять силу афригидского престола и его связь с древними историческими и идеологическими традициями как символ восстановления и независимости Хорезмского государства.

Была ли Тупроккала столицей страны?

Среди исследователей до сих пор ведутся споры о том, была ли Тупроккала столицей страны или столицей считался другой город. Тупроккала была столицей Хорезмского государства с начала I века до начала IV века нашей эры (305 г.). Многие ученые, в том числе и сам С.П. Толстов, считают этот памятник резиденцией царей, правивших государством, связанной со столицей. По стилю застройки площадь, занимаемая роскошным дворцом и городскими кварталами, примерно одинакова (13 и 10 га). Вероятно, обитателями здесь были в основном дворяне, слуги и гвардейские солдаты. Отсутствие в городе рынков и лавок ремесленников также подтверждает это мнение. Первоначально дворцовое сооружение, о чем свидетельствуют найденные в нем письменные документы, Тупроккала, несомненно, представляет собой сакральный и уникальный памятник, олицетворяющий общественный строй и государственность древнего Хорезма, воплощающий в себе трудолюбие рабов, превосходное мастерство зодчих, изящную искусство творцов. Тупроккала не был главным городом страны, то есть столицей, но считался крепостью, дворцом и центром поклонения соседних парфянских царей, что подтверждает, что он служил центральной резиденцией правителей династии. Ее можно сравнить со старой Нисой. Однако резиденция хорезмшахов отличается от Нисы своей структурой, стилем строительства и значимостью. По мнению С. П. Толстова [9], архитектура Тупроккалы во многом похожа на сооружения Месопотамии. В замке дворцовые постройки, построенные намного выше уровня домов, напоминают древние восточные сооружения, изображающие святую гору. Примером тому служит общность некоторых архитектурных форм Хорезма с древним Вавилоном и Ассирией в строительном стиле.

Судя по историческим и археологическим данным, Хорезм переживал серьезное напряжение накануне арабского нашествия. В это время города вокруг Тупроккалы были в упадке, и жизнь угасла. Резко сократилась орошаемая пашня, пострадали ремесла и производство. Государство Хорезм, ослабленное внутренним кризисом, не могло противостоять наплыву полукочевых и кочевых племен, проникших на его территорию и осевших в оазисе. Все эти факторы оказали влияние на социальный и этнический облик хорезмийцев. Жизнь в Тупраккалы и окружающих его оборонительных стенах продолжалась до конца 6 века.

Заключение

Посетители Элликкалинского района, независимо от того, каким путем они прибывают, могут увидеть древнюю историю крепостей Тупроккала, Аязкала, Койкирилганкала, Бургуткала, Жанбаскала, Гулдурсункала, Каваткала, культуру далекого прошлого, ставшую местом для истории.

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Issue Article

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INNOVATIVE INFRASTRUCTURE IS THE BASIS OF THE COUNTRY'S DEVELOPMENT

Abstract: *The article discusses the innovative developments of youth to prevent environmental problems, the creation of a technology park with a single space for the development of "start-up" - youth projects and their implementation, support is provided to increase their innovative potential.*

Key words: *Society, ecological culture, innovative developments, innovative connections, problem, start-up, youth.*

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ИННОВАЦИОННАЯ ИНФРАСТРУКТУРА – ОСНОВА РАЗВИТИЯ СТРАНЫ

Аннотация: *В статье рассматривается инновационные разработки молодёжи для предотвращения экологических проблем, о создание технопарка с единым пространством для развития «старт-ап» - проектов молодежи и их реализации, оказывается поддержка для повышения их инновационного потенциала.*

Ключевые слова: *Общество, экологическая культура, инновационные разработки, инновационные связи, проблема, старт-ап, молодежь.*

Введение

В последние годы проведен ряд мероприятий по предотвращению экологических проблем в Узбекистане. Из них особого признания достойна практическая работа по изобретению нового оборудования для посева семян саксоула на сухое дно Аральского моря. Недавно студент Нукусского филиала Ташкентского государственного аграрного университета Рустамжон Мадраимов разработал прототип оборудования, работающего на возобновляемых источниках энергии. Сегодня обнаружена масштабная модель этого оборудования.

Основная часть

Изобретатель также учредил общество с ограниченной ответственностью «Нукусский молодежный технопарк», и данное общество основано на постановлении Кабинета Министров Республики Узбекистан от 22 мая 2020 года «О мерах по созданию молодежных технопарков на территориях Республики» был организован в целях подготовки молодых талантливых молодых людей и дальнейшего развития основных направлений области науки и научной деятельности**.**

Безусловно, эти работы являются одним из 4-х направлений территориального управления Республики Каракалпакстан Министерства инновационного развития Республики Узбекистан. Отдел занимается развитием научной деятельности, инновационными стартапами и коммерциализацией бизнес-проектов, развитием инновационной инфраструктуры и сотрудничеством с международными организациями.

Нукусский молодежный технопарк в основном помогает талантливой молодежи повышать квалификацию в престижных научных центрах, университетах, технопарках и производственных организациях развитых зарубежных стран. Организует тренинги и мастер-классы с участием представителей ведущих компаний, квалифицированных специалистов и экспертов, а также научно-технические конференции, семинары, курсы повышения квалификации и тренинги с целью формирования у молодежи практических навыков и установления инновационных связей с производителями.

- Технопарк во взаимодействии с местными органами исполнительной власти, образовательными учреждениями, научными организациями и центрами поддержки технологий и инноваций нашего региона позволит повысить интеллектуальный, научный и творческий потенциал молодежи, а также широко вовлечь ее в аналитическое мышление, научные исследования и инновационной деятельности, талантливый, выполняет задачи по созданию необходимых условий для проявления интеллектуального потенциала и социальной адаптации предприимчивой молодежи, - говорит Рустамжон Мадраимов, руководитель общества с ограниченной ответственностью «Нукусский молодежный технопарк», молодой изобретатель. - В нашем технопарке создано единое пространство для развития «старт-ап»-проектов молодежи и их реализации, оказывается поддержка для повышения их инновационного потенциала. В частности, организованы образовательные курсы для молодежи по направлениям робототехники и мехатроники, 3D-дизайна. При этом для создания юным изобретателям необходимых условий мастерская оснащена необходимым современным оборудованием. В этом месте у молодежи есть возможность изготовить модели своих изобретений.

Также в августе 2022 года в городе Нукус была организована выставка инновационных идей «InnoWeek-2022», в рамках выставки проведен марафон технологических разработок «TechnoWays» для поддержки талантливой молодежи.

На выставке данного мероприятия 102 участника представили инновационные разработки и продукцию в сферах текстиля, продуктов питания, строительных материалов, электротехники, сельского хозяйства, энергетики, робототехники. 9 видов продукции представили 9 участников из 9 вузов. Всего 40 талантливых молодых людей со своими инновационными идеями и разработками приняли участие в технологическом марафоне развития «TechnoWays», организованном для поддержки талантливой молодежи в рамках выставки.

- В этом конкурсе технологических разработок «TechnoWays» я участвовала со своим проектом «Мини-кран для инвалидов», - говорит Хамида Ажимбаева. - Мой проект был хорошо признан со стороны оценочной комиссий, и в результате я заняла первое место. Я продолжу работать над собой. Мы благодарны за такую возможность.

Высоко оценены и отмечены ценными подарками проекты Асадбека Когамбиева «Орфо-Карекен» и Шингиза Ниетбаева «Умная аптечка».

В соответствии с указом Президента Республики Узбекистан от 1 апреля 2021 года «О совершенствовании системы государственного управления развитием научной и инновационной деятельности» конкретная цель инновационного развития отраслей экономики и социальной сферы Республики Каракалпакстан, реализуются адресные меры всесторонней поддержки науки и научной деятельности и повышения их эффективности.

В частности, в Республике Каракалпакстан имеется 9 высших учебных заведений и 5 научно-исследовательских учреждений, в которых работают 2235 профессорско-преподавательских и научных сотрудников.

На сегодняшний день со счёт финансов общая стоимость средств Министерства инновационного развития Республики Узбекистан в рамках государственных программ, связанных с научной деятельностью ученых и специалистов реализуются 40 практических и инновационных проектов на сумму 45,5 млрд сумов.

18 на общую сумму 20,5 млрд сумов по результатам конкурсов, объявленных в рамках государственных программ, связанных с научной деятельностью, 5 на общую сумму 9,3 млрд сумов в рамках совместного конкурса Министерства инновационного развития и «SATREPS-2020» (Япония), а осушенное дно Аральского моря и 17 проектов общей стоимостью 15,7 млрд сумов включены в отбор проектов, направленных на научное решение проблем в районе Приаралья.

Кроме того, в целях развития материально-технической базы научно-исследовательских учреждений, в соответствии с постановлением Президента Республики Узбекистан от 1 ноября 2017 года «О мерах по дальнейшему укреплению инфраструктуры научно-исследовательских учреждений и развитию инновационной деятельности», Каракалпакский институт естественных наук закупил лабораторное оборудование за 4,2 миллиарда сумов.

На сегодняшний день в Республике Каракалпакстан реализуется 4 проекта коммерциализации и 15 start-up проектов общей стоимостью 30,4 млрд сумов.

- Из них 13,9 млрд сумов профинансировано за счет средств Министерства инновационного развития Республики Узбекистан и 16,5 млрд сумов за счет средств предприимчивых предпринимателей, - говорит главный эксперт по вопросам развития науки Эркин Абдуганиев. - В результате всего создано 285 новых рабочих мест, а до конца текущего года в результате полноценного запуска этих проектов планируется создать 500 новых рабочих мест.

В частности, в 2021 году за счет средств Министерства инновационного развития Республики Узбекистан на сумму 1 350,0 млн. сум реализован start-up проект «Организация выращивания инновационных зеленых гидропонных кормов для повышения эффективности молочной продукции» на фермерское хозяйство «Панаев фарм» Караузякского района Республики Каракалпакстан. В рамках проекта ферма была оснащена оборудованием, которое производит 5 тонн зеленого гидропонного корма в сутки, а также создано 25 новых рабочих мест. В результате запуска данного проекта появилась возможность круглогодичного обеспечения скота зелеными гидропонными кормами вне зависимости от внешних климатических условий.

Также в инновационном районе г. Нукус Республики Каракалпакстан реализуется start-up проект «Расширение и модернизация производства экологически [4] чистых (органических) вяленых томатов» фермерским хозяйством «Биогумус».

- Основная цель проекта – выращивать, собирать, мыть, перерабатывать, сушить, упаковывать, хранить и экспортировать органические помидоры в страны Европы. На сегодняшний день заключены экспортные контракты на сумму 200 тысяч долларов США со странами Европы, - говорит Шерзод Ниязимбетов, глава фермерского хозяйства «Биогумус», предприниматель. - Семена томатов привозят из зарубежных стран, в том числе из Италии, мы их выращиваем и экспортируем. Мы отправляем нашу экспортную продукцию в Италию, Францию, Израиль и Японию.

У нас 90 вакансий. В основном это женщины. Эти работники заняты в течение всего года посадкой, выращиванием, сортировкой и упаковкой семян. С 2021 года наша компания производит 80 тонн вяленой томатной продукции в год в результате выполнения работ по модернизации в рамках стартап-проекта Министерства инновационного развития Республики Узбекистан с областной администрацией Каракалпакстана.

Министерство инновационного развития Республики Узбекистан, Территориальное управление Каракалпакстана наладили сотрудничество с международными организациями. В рамках проекта «Инвестиции в устойчивое будущее Каракалпакстана путем улучшения здоровья, питания, водоснабжения, санитарии, гигиены и условий жизни подростков во время и после COVID-19», финансируемого Многосторонним трастовым фондом по безопасности человека под эгидой ООН, 400 молодых людей из Бозатауского, Муйнакского, Кунградского и Нукусского районов приняли участие в конкурсе UPSHIFT-IMKONLAB по своим предпринимательским навыкам, социальным инновациям и программе социального предпринимательства.

По итогам конкурса 20 командам-победителям были выделены гранты по 1000 долларов США каждая в размере 20 000 долларов США для реализации своих инновационных идей.

- Налажено сотрудничество с Синьцзянским институтом экологии и географии Китайской академии наук для проведения научных экспериментов и исследований на площадке «Саманбай» Нукусского района международного инновационного центра, было проведена установка мини-метостанции, - говорит Нурсултан Каюпов, начальник Регионального управления инновационного развития Республики Каракалпакстан [11].

- В рамках заключенного с данным институтом меморандума о сотрудничестве достигнута договоренность о создании лаборатории, специализирующейся на проведении научно-исследовательских работ по адаптации к дефициту воды в Приаралье, создании лесов, состоящих из пустынных растений на сухом дне моря.

Кроме того, совместно с учеными компании Chahbani Technologies (CHAHTECH SA, Тунис) в сотрудничестве с международными организациями разрабатывается проект внедрения новой инновационной системы подпочвенного орошения. В рамках проекта проводятся опытно-промышленные работы в центре Приаралья с помощью 3600 единиц диффузионных устройств подпочвенного орошения.

- Кроме того, подписан меморандум о сотрудничестве между Департаментом регионального инновационного развития Республики Каракалпакстан, Международным инновационным центром «Приаралья» и некоммерческой организацией «Заксен-Ляйнен» Германского государства. – 3 годичный практический проект на тему «Рекультивация сельскохозяйственных культур на засоленных землях с использованием адаптированного сырья (растение апоцинум/кутра) и создание текстильной ценности в качестве альтернативы хлопку», - говорит Эркин Абдиганиев, главный специалист по развитию научной деятельности

регионального управления инновационного развития Республики Каракалпакстан.

Одним из самых влиятельных проектов текущего года является проект «Современные инновационные центры – 2022» Министерства инновационного развития Республики Узбекистан в сотрудничестве с Германским обществом международного сотрудничества (GIZ).

Заключение

Основной целью данного проекта является развитие инновационной инфраструктуры в регионах Узбекистана на основе опыта немецких инновационных центров, укрепление связей между частным сектором и областями науки, а также организация и совершенствование деятельности инновационные центры. Также развивать инновационную инфраструктуру в Республике Каракалпакстан на основе опыта инновационных центров Германии, помогать талантливой молодежи повышать квалификацию в престижных научных центрах, университетах, технопарках и производственных передовых организациях Германии, и одновременно проводить тренинги и мастер-классы с участием представителей ведущих компаний, квалифицированных специалистов и экспертов, а также планируется организовать научно-техническую конференцию, семинары, обучающие курсы и тренинги с целью формирования практических навыков у молодежи, установить инновационно-корпоративные отношения с производителями.

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ANALYSIS OF THE ADVERTISING INDUSTRY'S COMPETITION IN PEKANBARU CITY

Abstract: *This study aims to determine the competition in the advertising industry in Pekanbaru City. The data used are primary data and secondary data. The population and sample in this study were the advertising industry in Pekanbaru City, which amounted to 15 business units. This study uses quantitative descriptive analysis to determine the conditions of business competition in the advertising industry in Pekanbaru City. The analytical test tools used in this study are the market structure of CR4, IHH and Porter's Analysis. The results of the market structure research show that CR4 30.05% is a monopolistic market with a value approach of 0 < CR4 < 40 and a Herfindahl-Hirscman index value of 712.1 This means that competition in this industry is included in the monopolistic category with an IHH value approach of < 1,500. The results of Porter's analysis research can be seen that the competition in the advertising industry in Pekanbaru City is quite high, because the number of advertising industries is large, both licensed and unlicensed. From the supplier variable, it is quite strong coming from inside and outside the region. From the variables of new entrants, there are not too many obstacles to entering the business such as the amount of capital, the same type of business that has lasted a long time, as well as price competition and product quality. From the substitute product substitution variables that threaten the existence of advertising businesses in Pekanbaru City, namely the presence of posters, brochures and calendars with materials, sizes, designs at relatively low prices and good product quality.*

Key words: *industry competition, advertising, CR4, IHH, porter.*

Language: *English*

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Introduction

In order to reap the greatest rewards from the development's outcomes, the entire community is still encouraged to participate in the economic sector growth, which is a priority in national development. Development in the industrial sector is a key factor when focusing on the goal of encouraging economic sector development. Small and large industries are one of Indonesia's strengths in attaining this development, when seen from a socioeconomic standpoint.

The industrial sector is one factor that aids in national growth. The relationship between this sector and a nation's growth and development is crucial. The industrial sector is Indonesia's most competitive industry, and it is characterized by the growth of numerous small and medium-sized businesses across the country.

The community-use industry, which can employ as many people as possible, such as small industries, needs to be established in order to improve the industry. The growth of employment options for the workforce, which is always growing, as well as raising people's earnings to a more equitable and comprehensive level are two difficulties in development that the small industrial business sector is crucial in addressing.

One of the biggest economic hubs in the east of Sumatra Island is Pekanbaru City, the capital of Riau Province. The city recognized for its commercial and industrial sectors is Pekanbaru City.

As a result of the existence of SMEs, the issue of labor absorption can be solved, making it possible for it to become a source of income. Small and medium-sized industries (IKM) play a very important role in making a big contribution to the country's economy, both in developed countries and in developing countries, including Indonesia. essential to society. The information that follows shows how many small and medium-sized business developments there were in Pekanbaru City between 2017 and 2020.

Table1. Data on the Development of Small and Medium Industries in Pekanbaru City in 2017 – 2020

No	Subdistrict	Number of Companies (Units)			
		2017	2018	2019	2020
1	Tampan	15	10	11	21
2	PayungSekaki	29	17	12	22
3	Bukit Raya	5	5	3	3
4	MarpoyanDamai	19	3	4	9
5	TenayanRaya	6	9	3	8
6	LimaPuluh	3	3	1	1
7	Sail	-	1	-	-
8	PekanbaruKota	7	-	4	-
9	Sukajadi	15	5	6	4
10	Senapelan	7	2	3	5
11	Rumbai	6	-	4	6
12	RumbaiPesisir	5	-	1	1
Total		117	54	52	80

Source: Dinas Perindustrian dan Perdagangan Kota Pekanbaru, 2021.

Advertising, which includes the process of creating, producing, and disseminating the resulting advertisements, such as market research, advertising planning, outdoor advertising, and material production, is one of the creative industries that is now growing significantly in Pekanbaru City. advertising, public relations initiatives, promotions, the placement of different posters and images, the distribution of flyers, booklets, circulars, brochures, and similar billboards, as well as the delivery of promotional items or samples.

The process of creating, producing, and disseminating the resulting advertisements, for instance, includes market research, advertising communication planning, outdoor advertising, the production of advertising materials, promotions, public relations campaigns, and the display of advertisements in print (newspapers, magazines), electronic media (television), and other forms of media.

Billboards, banners, and other types of advertising signage are frequently employed. The present social order and society cannot exist without banners, billboards, and promotions. Today's billboards, banners, and banners have evolved into a communication system that is crucial for both customers and companies that create goods and services. advertise its goods and services. Advertising

and promotion are used by many different types of businesses, from retail to global corporations, to support the marketing of their goods and services to the general public.

The growth of printing and publishing companies in Pekanbaru City is evidence of the expansion of this advertising service. It is made simpler for business owners in Pekanbaru City to advertise and market the products and services they offer. In order to keep customers interested, advertisements must be made exciting and occasionally even dramatic. This is due to the increasing dynamics of the people of Pekanbaru City who use advertising services, such as billboard covers and banners, as a requirement to have fun in a business. However, no particular target receives the advertisement (direct).Through mass media, advertisements are spread to a large audience, and everyone will embrace these communications, regardless of their age, group affiliation, ethnicity, etc. The graphs below illustrate how advertising changed in Pekanbaru City between 2016 and 2020.

Table 2. Data on the Development of the Licensed Advertising Industry in Pekanbaru City in 2016 – 2020

No	Year	Business Unit	Produced Product
1	2016	4	*Cover*Baliho, Spanduk
2	2017	2	Spanduk,*Banner*, *Cover*Baliho,
3	2018	4	*Cover*Baliho,*Banner*, Spanduk
4	2019	3	Spanduk, *Cover*Baliho
5	2020	2	Spanduk, *Cover*Baliho

Source:Dinas Perindustrian dan Perdagangan Kota Pekanbaru,2021.

One industry that is quite common in Pekanbaru City is business advertising. The advertisement has the potential to significantly improve the local economy. Its presence has increased the number of jobs available to the neighborhood. Banners, covers, and other advertising materials are generated. Although the growth of billboard advertising in Pekanbaru City has been positive, there are still many issues to be resolved. The weak areas of capital and management are the barriers or hurdles that lead to weakness for the management of the advertisement.

Intense rivalry, which accounts for 45% of all problems in Pekanbaru City's advertising, is a typical occurrence. The issue of falling sales comes in second with a 30% percentage. Entrepreneurs in the advertising sector also struggle with the 15% problem of advertising with personal cash. Because there are still not enough machines for production with a percentage of 10%, the issue with the smallest percentage is on those machines.

Due to this phenomenon's tight business competition and sales that don't match production, every business owner needs to be aware of competitive strategies. Porter (1980) argues that competitiveness isn't just judged by a company's ability to turn a profit, but also by how it uses its assets and potential to compete in the market it now occupies while maintaining a level playing field with developing new products.

Intense rivalry, a lack of funding for raw materials purchases, and a lack of consumers owing to the volume of advertising make up some of the primary issues in the field of advertising. As a result, advertising is reduced. Due to the phenomena of fiercer and fiercer competition, business owners and managers must continue to work to sell their products, compete in advertising, promote product loyalty, and make a positive first impression on customers. Due to the fact that consumers have a wide range of preferences to satisfy their own levels of satisfaction, the number of buyers is increasing rather than decreasing.

The writers are interested in doing study under the title: ***"Analysis of The Advertising Industry's Competition In Pekanbaru City"*** in light of the background information provided above.

Formulation of The Problem

In light of the backdrop previously mentioned, the problem as studied by the research is formulated as follows:

1. What is the advertising market structure in Pekanbaru City?
2. How does the Porter's Forces Model study describe the advertising competition in Pekanbaru City?

Research Purposes

1. To determine the market structure of advertising in Pekanbaru City.
2. To determine the competition in advertising in Pekanbaru City using the Porter's Forces Model.

Benefits of The Research

The following advantages will result from this research:

1. Donations for research interests to enhance the advertising's insight and understanding so that it can later be used as a reference for future researchers.
2. Industry players advertising in Pekanbaru City to help their businesses grow.

Literature Review

Industrial Theory

According to the Central Statistics Agency (2022), a company or industrial business is a business unit that engages in economic activities, aims to produce goods or services, is housed in a specific building or location, has its own administrative record regarding production and cost structure, and is managed by one or more people. A micro industry is a group of businesses that produce similar goods (homogeneous) or goods that can be substituted for other goods. Meanwhile, macroindustry is an economic activity that generates value that can be used, or has added value. So the industry limits on a micro are a group of companies that produce goods and macroeconomic activities that generate income.

Production

Production includes the processes of creating, producing, and making. Production activities will be halted if there are insufficient materials to complete the manufacturing process. People require human labor, natural resources, capital in all forms, and skills to carry out production. All of these elements are referred to as production factors (factors of production). As a result, all of the elements that contribute to the effort to create or increase the value of goods are referred to as factors of production.

Sale

According to Thamrin Abdullah and Francis Tantri (2016), sales are a component of promotion, which is a component of the overall marketing system. According to the experts' definitions, selling is an activity in which a buyer and seller meet to conduct transactions, influence each other, and consider the exchange of goods or services for money.

Advertising Industry

According to the Creative Economy Blueprint 2025, the creative economy is a value creation (economic, social, cultural, and environmental) based on ideas born from the creativity of human resources (creative people) and based on the application of science, including cultural heritage and technology. Creativity does not have to be limited to works of art and culture; it can also be based on science and technology, engineering, and telecommunications. The creative economy is built on three main components: creativity, innovation, and invention.

Industrial Market Structure

According to Nikensari (2018), market structure refers to the number and relative strength of buyers and sellers, the level and form of competition, the level of product differentiation, and the ease of entering and exiting the market.

Porter's Five Forces Competition Theory

According to Porter (1980), the foundation of a strategic analysis theory is to emphasize and clarify the ultimate goal of an industry or business that will affect the marketing of a business product. The number of products sold and how a company survives in an industry are indicators of competitive value. In the theory of industrial competition, we know from Michael Porter's famous theory when analyzing competition (competitive analysis). The Porter Five Force Model is the name given to this theory. Porter's five forces model is used to analyze the industry's competitive environment. The bottom line is that the porter determines that the company is not only competing with existing companies in the industry.(Arismunandar, 2013).

Defining competitive advantage, according to Porter (1980), is at the heart of a company's performance in a competitive market. Furthermore, competitive advantage has an impact on the company's strategy, structure, and existing competitors. Alternatively, at the regional and national levels. The presence of local competitors has a significant impact on the growth of innovation. Local competitors have more incentives to improve their business than foreign competitors.

Research Framework

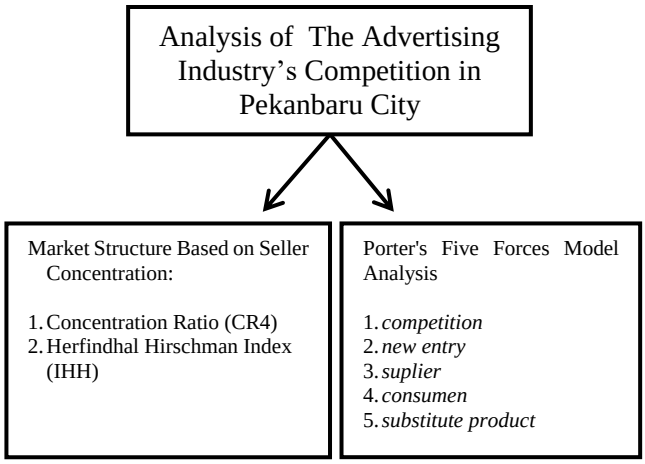

Figure 1. Schematic Research Framework

Research Methods

This study was conducted in Pekanbaru City. The city was chosen as the research location because it has significant potential to develop its economic sectors, including advertising. This study will take place between March and August of 2022.

The population is a generalization area composed of objects/subjects with specific qualities and characteristics that researchers have determined to be studied and then drawn conclusions from (Sugiyono, 2016). The sample is a subset of the population in terms of size and characteristics, and the sampling technique is known as sampling. According to the explanation above, the population in this study consists of actors and business owners in as many as 15 advertising industries in Pekanbaru City.

The data used in this study is a combination of primary and secondary data, which is then processed as needed.

The following techniques are used to collect the necessary data: questionnaires and interviews (questionnaires).

Research variables are concepts or constructs that can be measured with various values to provide a true picture of industry phenomena. According to the market structure (CR4, and IHH) and Porter's Five Forces Model Analysis, Porter's five competitive forces are business competition variables, supplier variables, buyer variables, new entrants, and substitution variables, all of which are related to theories about the problems discussed. In addition, supporting variables such as economic aspects, resource aspects, and financial aspects were presented. The table below shows an operational table for advertising in Pekanbaru City.

The researchers used quantitative descriptive analysis to analyze the advertising in this study. Descriptive analysis was conducted by examining the market structure of CR4, IHH, and Porter's five forces model. A quantitative analysis is one that uses a mathematical model to determine the value and percentage of variables to be studied.

Research Results And Discussion

Market Structure in the Advertising Industry in Pekanbaru City

Market Share

Table 3. Calculation of Market Share in Advertising Industry Business in Pekanbaru City

No	Business Name	Sales/month (Rp.000)	Market Share (%)
1	Sinar Jaya Offset	125.000	7,30
2	Karya Anugerah	130.000	7,59
3	Dot Art	110.000	6,42
4	Mitra Berkah Hasanah	115.000	6,71
5	Zuhvan Sukses Abadi	90.000	5,25
6	Wahyu Zahra	125.500	7,32
7	Oke Printing	130.400	7,61
8	Sumatera Era Solusindo	120.200	7,01
9	Citra Media	105.500	6,16
10	Asia Grafika	127.000	7,41
11	Gravis Cipta Rizky	122.000	7,12
12	Mitra Utama Sejahtera	100.000	5,84

13	Matiinu Berdikari	120.000	7,03
14	Berhati	65.000	3,79
15	Karya Pratama	127.500	7,44
	Total	**1.713.100**	**100**

Source:Data Olahan, 2022.

According to the results of the calculation of the market share of advertising in Pekanbaru City in the table above, there are three companies with the largest market share based on sales concentration, with OK Printing having the highest market share at 7.61%. Be cautious has a market share of 3.79%, which is the lowest market share or amount of sales concentration. The disparity in production capacity, price competitiveness, and the volume of sales from each kind of advertising are the root causes of this competition.

Calculation of the Concentration Ratio of the 4 Largest Companies (CR4)

Table 4. Calculation of CR4 Concentration Ratio in Advertising Industry Business in Pekanbaru City

No	Business Name	MS (%)
1	Oke Printing	7,61
2	Karya Anugerah	7,59
3	Karya Pratama	7,44
4	Asia Grafika	7,41
Total		30,05

Source:Data Olahan, 2022.

CR4 = Oke Printing + Karya Anugerah + Karya Pratama + Asia Grafika

= 7,61% +7,59 % + 7,44 % + 7,41 %= 30,05 %

The concentration ratio of the CR4 value in the advertising in Pekanbaru City is calculated to be 30.05%. This suggests that Pekanbaru City's advertising market structure is monopolistic, with a value approach of 0< CR4< 40. (Jaya, 2001). In this industry, there is a lot of rivalry for customers in terms of both price and service. so that entrepreneurs with insufficient resources and experience will leave the market swiftly.

Calculation of IHH(*Indeks Herfindhal Hirschman*)

Table 5. Calculation of IHH in the Advertising Industry Business in Pekanbaru City

No	Business Name	Sales/month (Rp.000)	Market Share (%)	IHH
1	Sinar Jaya Offset	125.000	7,30	53,29
2	Karya Anugerah	130.000	7,59	57,61
3	Dot Art	110.000	6,42	41,22
4	Mitra Berkah Hasanah	115.000	6,71	45,02
5	Zuhvan Sukses Abadi	90.000	5,25	57,56
6	Wahyu Zahra	125.500	7,32	53,58
7	Oke Printing	130.400	7,61	57,91
8	Sumatera Era Solusindo	120.200	7,01	49,14
9	Citra Media	105.500	6,16	37,94
10	Asia Grafika	127.000	7,41	54,91
11	Gravis Cipta Rizky	122.000	7,12	50,69
12	Mitra Utama Sejahtera	100.000	5,84	34,10
13	Matiinu Berdikari	120.000	7,03	49,42
14	Berhati	65.000	3,79	14,36
15	Karya Pratama	127.500	7,44	55,35
	Total	**1.713.100**	**100**	**712,1**

Source:*Data Olahan, 2022.*

The IHH value is 712.1 according to the figure used in the Pekanbaru City advertising. This indicates that the rivalry in this sector falls under the definition of monopolistic competition, with an IHH value approach of between 100 and 1000, or around 1,500. Oke Printing, the company that holds the top position with the highest IHH level at 57.91%, is the business

actor that has the greatest market power over advertising in Pekanbaru City.

Porter's Five Forces Model Analysis

Competition Variables

Based on investigation carried out by academics who advertised in Pekanbaru City. We can get the conclusion that the advertising is quite expensive when combined with the advertising that is unregistered and unlicensed. These companies are advertising in Pekanbaru City.

Additionally, the cost of advertising, including that of banners, banners, and billboard covers, is a competitive component. In Pekanbaru City, price is a crucial component in the advertising rivalry. Entrepreneurs in advertising sell their goods for prices that range depending on the components and components used. The degree of consumer interest in a product is greatly influenced by the price at which it is offered. According to the materials and materials utilized, the selling price of banner items, banners, and covers used in billboard advertising in Pekanbaru City varies.

One of the competitive variables is the volume of output, specifically how much production is done by an advertisement in Pekanbaru City. Based on the study's findings, it can be said that each firm in Pekanbaru City produces advertising in a unique way. Where OK Printing produces the most items, specifically banner products costing Rp. 25,000, banner 19,000, and cover billboard Additionally, the advertising sector produces the least quantity of goods, such as banner products for Rp. 15,000 and covers for Rp. 13,000 every month.

Supplier Variable

When starting a business, a business owner must take into account a number of important factors, including the supplier variable. The availability of sufficient raw materials allows business owners to improve their production capacity and expand their target market. This is a key supplier variable. Less availability of raw materials suggests that suppliers have great negotiating leverage. Some of the raw materials are relatively simple to obtain, according to research done through questionnaires that company owners who were advertising in Pekanbaru City were asked to complete.According to the findings of a study done on the sources of the raw materials used in Pekanbaru City's advertising, the majority of these resources originate there, with some also coming from Medan, Jambi, Padang, and Jakarta.

Buyer Variable

A number of indicators, such as product selling prices, promotions, and industrial sites, can be used to identify buyer factors. One of the elements influencing a buyer's or consumer's decision to purchase a product is the product's selling price. One technique to expose things to customers is through promotion. This indicator can be noticed in how commercial actors advertise their goods. Furthermore, location plays a crucial role in running a business because it can either be easily accessible to customers or out of their reach. Additionally, customers take into account a company's travel time and strategic position.

Advertising Product Price

Every business in Pekanbaru City offers advertising at a reasonable price. Due to the relatively intense rivalry in the advertising industry, prices for banners, banners, and covers per m2 are sold by business owners at roughly the same prices.

According to the study's findings, Pekanbaru City business owners set the rates for banners, banners, and covers based on the quality of the paper and the volume of orders. High-quality paper costs more to order for banners, covers, and other items than regular paper does. The price will be considerably less expensive than purchasing the unit if the buyer orders an advertisement.

Promotion/Marketing

According to research findings, word-of-mouth is the primary method used by business owners inPekanbaru City to promote their products and increase sales.

Location

The location of industry advertising in Pekanbaru City is fairly strategic, being adjacent to workplaces and educational institutions, making it simpler for customers to purchase goods through advertising. Every business actor in the advertising in Pekanbaru City choose their business location for a variety of reasons, including strategic position, proximity to offices or campuses, accessibility to roadways, and so on.

Product

Each advertisement in Pekanbaru City advertises its goods in one of three ways: through banners, covers, and billboards. where consumer preferences determine the purchase. Depending on the size and design of each item, billboards, banners, and other advertising media have varying prices.

Newcomer Variable

According to the study's findings, similar businesses that are not registered with the Pekanbaru City Industry and Trade Office, pricing and product quality rivalry, and capital competition are competitors for newcomers to the advertising in Pekanbaru City.

Substitution Variable

Posters, brochures, and calendars are just a few of the alternative goods used by businesses to

advertise in Pekanbaru City. Whereas 13 (86.67%) business actors who were asked if there were any substitute products said that there were no posters, brochures, or calendars to replace business advertising. This poses a significant challenge to advertising in Pekanbaru City since consumers have other options with better quality, more appealing designs, and more cheap rates.

The quality of the materials, designs, and pricing of the advertising products determine the odds of winning substitute products in Pekanbaru City. because compared to existing substitute products, banners, banners, and covers have distinct materials and sizes. Consumers choose banners, banners, and covers with more diverse designs and sizes, such as billboard covers, which stand out due to their strategic design, size, and placement and can be seen by a lot of people. So that business people whose products can still thrive in the market can take advantage of this.

Discussion

Analysis of the Business Market Structure of the Advertising Industry in Pekanbaru City

Based on the findings of the study, Pekanbaru City's advertising utilizes a market structure analysis tool to measure the concentration ratio of the four largest enterprises, CR4, IHH, and (Hirschman Herfindahl Index). The market structure is calculated using the market concentration ratio CR4, which yields a result of 30.05%. This demonstrates that the level of advertising concentration in Pekanbaru City is monopolistic with a value approach of 0 < CR4 < 40. Because there are numerous sellers and no one has a sizable enough market share, the market circumstances in this monopolistic rivalry market are characterized by a large number of businesses that manufacture differentiated items.This demonstrates the fierce competition in the Pekanbaru City advertising market.

In the meantime, Oke Printing, with an IHH value of 57.91, is the company facing the most competitive business environment in Pekanbaru City's advertising. The Berhati business actors have the lowest IHH value at 14.36. The IHH of the advertisement in Pekanbaru City is worth a total of 712.1. As a result, the IHH value for the advertisement based on the IHH technique is between 100 and 1,000, or about 1500, indicating that the advertising is in a market with monopolistic competition.

Analysis of Advertising Industry Business Competition in Pekanbaru City According to Porter's Five Forces Model

Based on the processed primary data that was collected from respondents to the Pekanbaru City advertising. The results of the processed data show a number of variables that illustrate the level of competitiveness among the Pekanbaru City advertising respondents.

1. Competition Between Businesses in Industry

The research findings indicate that there are quite a few rivals or businesses in Pekanbaru, specifically 15 advertisements, based on the data that has been acquired based on primary data that is then processed. This demonstrates that there is significant rivalry, as evidenced by the selling price and advertising costs, which are nearly identical across all industries. This suggests that there is "very significant" rivalry in advertising.

2. Bargaining Power of Suppliers

The findings of research by researchers are recognized to be sources of raw materials for advertising from both inside and outside the city based on the data that has been gathered based on primary data, which is then processed. Raw ingredients are readily available and generally simple to procure. Due to the abundance of the raw materials received and the respondents' reports that there are many suppliers, it is clear that suppliers' ability to influence prices is limited. According to theory, the supplier's power can therefore be described as "weak."

3. Bargaining Power of Buyers

The selling price of advertising in each business is almost the same, according to data that has been gathered based on primary data that is then processed, research findings. This suggests that the advertising is very price competitive. Entrepreneurs in the industry advertise through word-of-mouth, social media, and partnerships with other parties. Customers may easily choose the things they wish to buy because all business locations are accessible.

According to the findings of interviews with respondents, consumers continue to purchase things at a set price. This shows that consumers have little power over pricing, which means that advertising's effectiveness and profitability are unaffected.

4. Newcomer Threat

Using secondary data that has been processed after being collected based on main data According to the findings of the researchers' research, establishing an advertisement requires relatively little/low investment capital due to a variety of manufacturing characteristics. Potential new entrants who have substantial cash have the chance to enter this market, conduct out product development, and then penetrate it. This makes it simpler for new entrants to enter the market, especially if new entrants innovate on existing items. Existing businesses in the market will be threatened by this, and they will need to come up with solutions to keep their clients afloat.

According to the data, the industry has relatively low entrance requirements. This idea contends that new competitors will pose a danger to Pekanbaru

City's advertising industry, increasing the level of competition.

5. Threat of Substitute Products

From the information that has been gathered using primary data that has been processed, it is known that a number of service items, specifically in the form of posters, brochures, and calendars, serve as substitutes for advertising. Although they vary depending on the quality supplied, the costs for posters, brochures, and calendars are comparable to those for banners, covers, and banners. As a result, buyers may want to switch to other items. The degree of profitability and competitiveness of businesses in the sector may be at risk as a result. Enhancements are required, such as higher quality, more promotions, and product innovation to keep customers, in order to mitigate these risks.

Conclusion, Limitations And Suggestions

Conclusion

The authors make the following conclusions from their investigation of the business competition in advertising in Pekanbaru City.

1. Advertising in Pekanbaru City uses a market structure based on business competition by measuring the concentration level of the four largest companies, or CR4, which is worth 30.05%, indicating that the advertising industry business there is concentrated in a monopolistic market condition with a value approach of $0 < CR4 < 40$. The IHH computation comes out to 712.1. As a result, the IHH value in Pekanbaru City's advertising is based on the IHH method between 100 and 1000 or 1500, indicating that the city's advertising is in a market with monopolistic competition.
2. An analysis of Porter's Five Forces Model as follows:

a) Variable Competition, the advertising industry business competition in Pekanbaru City is quite tight because there are 15 businesses that already have business licenses and are registered with the Pekanbaru City Industry and Trade Office.

b) Supplier Variable, advertising industry entrepreneurs in Pekanbaru City have several suppliers who come from both within the city and from outside the city. Sources of raw materials originating from within the city such as Pekanbaru City, and raw materials originating from outside the city such as Medan, Jambi, Padang, Jakarta.

c) Buyer Variable, in terms of buyers of advertising products in Pekanbaru City, many come from within the region but there are also some who come from outside the city. How to increase sales of the advertising industry business in Pekanbaru City is to optimally utilize social media such as Facebook, WhatshApp Instagram and e-commerce. So that the product is known by entrepreneurs. Another thing that needs to be considered is improving product quality but at a price that is still affordable by consumers.

d) New Entrants Variable, for the variable newcomers to the advertising industry in Pekanbaru City, there are not too many barriers to entering the business such as the amount of capital, types of businesses that have lasted a long time, as well as price competition and product quality.

e) Substitution Variables, substitute products that threaten the existence of advertising businesses in Pekanbaru City, namely the existence of posters, brochures and calendars with attractive designs and relatively low prices and good product quality.

Research Limitations

Based on the researcher's firsthand experience with the research process, there are a number of restrictions encountered and possibly a number of factors that future researchers can pay more attention to in further perfecting their research because the research itself undoubtedly has flaws that need to be continually improved in upcoming research. The following are some of the study's drawbacks, among others:

1. In the process of gathering data, information provided by respondents via questionnaires occasionally does not reflect the true opinion of respondents. This occurs because there are occasionally differences in the thoughts, presumptions, and understandings of each respondent, as well as other factors like the respondents' level of honesty when providing their opinions.

Suggestion

Based on the conclusions above, the following suggestions can be given:

1. For business entrepreneurs in the *advertising industry in Pekanbaru* City, it is better to innovate by increasing marketing, promotion and production quality in order to provide satisfaction for consumers. Promotion can be done using social media such as Facebook, Instagram and other e-commerce so that sales results are in accordance with production results and sales increase. Because this can increase market share, concentration ratio, and to add greater profits for the *advertising*.
2. The Government and related agencies are expected to pay attention to the business growth of the advertising industry *in*Pekanbaru City and provide capital and training to entrepreneurs and sufficient workforce so that the *advertising* can develop better and be able to compete and survive in the market.
3. Recommendations for further research, related to the analysis of business competition in advertising using M. Porter's five strengths and deepening the discussion of the strategies used to face competition between the advertising industry and *another*.

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Issue Article

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AN ANALYSIS OF FISHERMAN ECONOMY DEVELOPMENT AND FINANCIAL INSTITUTIONS IN SMALL MEDIUM SHIPYARDING INDUSTRY IN BENGKALIS DISTRICT AS A SUSTAINABLE ECONOMY DEVELOPMENT STRATEGY (STUDY ON CV. BENGKALIS MARINE FIBER)

Abstract: *This study aims to; a. Analyze the correlation between fish production, number of Fishman ships, and number of ships b. Analyze the feasibility of setting up the small and medium-sized enterprises (SMEs) of shipbuilding*

The research is a case study, the method used in this research is quantitative and qualitative quantitative. The sampling technique used in this research is purposive sampling. In the year 2014-2022 in Bengkalis Regency, Indonesia

There are correlations between fish production and the number of ships and fishermen. the financial and institutional research of CV Bengkalis Marine Fiber has great potential to be developed and followed up by business actors with a positive NPV, IRR, and PP

The scope of the research does not cover social aspects.

The research implications emphasize standardization, a strategy for cooperation with business actors consisting of supporting industries, supplying industries, and user industries.

The finding gives insight into government policies and business actors in action

Key words: *small and medium-sized enterprises (SMEs); analyses the feasibility; shipbuilding, fishermen, ship, and fish production.*

Language: *English*

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Introduction

The concept of economic development is to increase people's income which will result in the improvement of a pattern. In this improvement effort, collaboration from the government, the community, and all elements are needed to participate. Regional development is carried out to achieve important goals, one of which is sustainability then, it needs to be aligned with sectoral development that runs in areas that are focused on potential regional priorities. The location of the island of Bengkalis is very strategically facing the Strait of Melaka. The number of fishermen on Bengkalis Island is quite large, but it continues to decline from year to year. The fisherman's economy is very dependent on the income he earns. The source of fishermen's income comes from the amount of fish production (catch).

According to Samsudin (2021), the amount of fish production is closely related to the number of fish boats owned by fishermen. the availability of shipbuilding companies in the area will make it easier for fishermen to order fish boats that suit their needs (size, shape, function, and price). During the 2014-2022 period, it showed that the production of capture fisheries in Bengkalis Regency decreased, namely in 2014 by 8,926 tons then decreased in 2022 to 4,210 tons. Furthermore, the number of fishermen is also decreasing, namely, in 2014 it amounted to 3,091 fishermen and in 2022 there were 2,843 fishermen. The decrease in the number of fish catches and the number of fishermen is also accompanied by a decrease in the number of fishing fleets/vessels in the Bengkalis Regency from 2014-2022. In 2022 the fleet of fishing vessels in Bengkalis Regency amounted to 603 units, much reduced from 2014 which amounted to 1,090 units.

Table 1. Fish Catch Data, Number of Fishermen and Number of Fisheries Fleets of Bengkalis Regency 2014-2022

Year	Fish Catch (Ton)	number of fishermen	Number of Fishing Fleet
	8,050	3,091	1,090
2014	7,580	2,986	1,159
2015	7,085	2,972	822
2016	6,567	2,945	817
2017	6,045	2,923	750
2018	5,587	2,891	712
2019	5,033	2,882	684
2020	4,780	2,870	630
2021	4,210	2,843	603
2022			

Source: Marine and Fisheries Service of Bengkalis Regency

Fisheries production has a very important role in social and economic development. Marine products are increasing in demand day by day which results in a greater trade to meet the needs of the market. The high need for the market requires an increase in the number of arrest operations (Sangadji, Mustaruddin, & Wisudo, 2013).

The success of fishing operations can be influenced by many factors including the number of fishermen and the number of ships so it is necessary to develop the shipbuilding industry. The shipbuilding industry is globally competitive and is macro-influenced, therefore the government has an important role. All institutions, both government and private, with changes in technology and industry hope that there will be a change in business behavior to be more rational, efficient and of course more profitable. Many studies have been conducted on the influence of various aspects on changes in a business.

One of the interesting things is to test how the development of a business is incentivized to the achievement of business results. Ship Companies (fishing boat shipyard industry) there is only one on the island of Bengkalis. While the small industries are five (5 SMIs). the existence of these SMEs is very little to the needs of fishermen. As a result, it is difficult for fishermen to get catch boats that match the specifications of the area they want. In addition, ordering from outside the area makes it difficult for fishermen, namely long production times, high prices

offered, and the quality of boats that do not meet the specifications desired by fishermen. The purchase of ships is more based on availability in the market and consideration of low prices, not on the suitability of shipping routes. This study aims to; (1) analyze the effect of the number of fishermen and the number of vessels on fishery production in Bengkalis Regency, and (2) analyze the establishment of the shipbuilding industry in the CV Bengkalis Marine company.

The target in this study is a shipyard owned by CV Bengkalis Marine Fiber because this company has been established, but does not yet have a shipyard to mass-produce fishing boats. This study can help the development and improvement of business in shipbuilding and at the same time improve the economy of the community in the research area, cooperation institutions, partners, ship owners, and ship crews (ABK).

Literatur Review

Economic development is determined by the number of human resources and capital in producing goods and services (Todaro, 2016). the availability of capital in fish production in the waters is indicated by the presence of fishing boats. Therefore, the samsudin study (2021) explained that there is a relationship between the influence of the number of fishing boats and the number of fishermen producing fish production. While the number of ships available is determined by the number of providers (IKM shipyards) in an area. The existence of shipyard SMEs is certainly influenced by the business feasibility of establishing the shipping industry. (Jahrizal, 2020)

A feasibility study is an activity that studies in-depth an activity or business or business to be carried out, to determine whether or not the business is feasible to run. (Kashmir & Jakfar, 2003). Studying in-depth means seriously researching the existing information data and then measuring, calculating, and analyzing the results of the research using certain methods. Research conducted on businesses that will be carried out with a certain size so that maximum results are obtained from the research.

Feasibility means that the research carried out in-depth is carried out to determine whether the business to be run will provide greater benefits compared to the costs that will be incurred. In other words, feasibility can be interpreted to mean that the business run will provide financial and non-financial benefits following its desired goals. Feasible here can be interpreted as also providing benefits not only for the company that runs it but also for investors, creditors, the government, and the wider community in general.

In general, there are two types of definitions of institutions, the first is institutions as organizations and the second is institutions as rules of the game or "rules of the game". Institutions as an organization usually refer to formal institutions such as departments in government, cooperatives, banks, hospitals, and the like. Institutions as "rules of the game" are the rules of the game, norms, prohibitions, contracts, and so on in regulating and controlling the behavior of individuals in society or organizations North 1990; Rodgers 1994.

Bromley (1992) likens organizations to hardware and institutions are Software. An institution consists of three main elements, namely jurisdictional boundaries, Property Rights, and rules of representation. One institution is different from another if one or more of these elements are different. To understand the institution more deeply and be able to see the impact of changing institutional alternatives on performance we need to first study the elements of the institution itself Schmid and Allan 1987. The foundation of the institution's analytical framework is to study the impact of alternative institutional changes on changes in human behavior that will eventually result in different performances.

Institutional changes will only result in different performances if they can control sources of interdependence between individuals such as compatibility, high exclusion costs, transaction costs, economies of scale, (joint impact good), and so on.

Methodology

The research method used in this study is a quantitative descriptive method that is descriptive which is a case study. According to Nasir (2005), a case study is a research method that aims to provide a detailed picture of the background, traits, as well as character typical of the case or the status of the individual. The subject studied, in this case, was a shipyard business unit in Bengkalis Regency, by looking at the marketing aspects and technical aspects of the shipyard business.

The sampling method used in this study is the purposive sampling method or intentional. According to Umar (2003), purposive sampling is sampling based on certain characteristics that are considered to have a relationship with previously known population characteristics.ini using the purposive sampling method in determining the location of the sample were to take the location based on the type of shipyard business The sample used in this study is a fiber shipyard entrepreneur in Bengkalis Regency, namely CV Bengkalis Marine Fiber.

CV Bengkalis Marine Fiber is rightly chosen because it is a shipyard business that is more active in the production process and involvement with activities held by related stakeholders so that CV Bengkalis Marine Fiber can represent a sample of shipyard business in Bengkalis Regency, besides that samples are taken from consumers, namely fishermen, related agencies. Institutional Analysis deals with the institutions involved in the process from the input to the output of the shipyard. The economic aspects that will be studied include capital, income, and profits from the fishing boatyard business.

Regression Analysis

In this study, regression analysis was used. Regression analysis can show or determine free variables that have a dominant effect on bound variables. The multiple linear regression equation is as follows:

Y' = a + b1X1 + b2X2 + …. + bnXn

Keterangan:

Y	= Dependen variable (predicted values)
X1 dan X2	= Independent variables
a	= Konstanta (value Y' if X1, X2, … Xn = 0)
b	= Regression coefficient (value increase or decrease)

A. Correlation test:

Table 2. Results of Regression Analysis of Number of Fishermen and Number of Fishery Fleet on Fish Catch

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-27.881	10.265		-2.716	.035
number of fishermen (X1)	.011	.004	.627	2.826	.030
Number of Fleet (X2)	.002	.001	.367	1.657	.149

a. Dependent Variable: Fish Catch (Y)

Based on the results in table 1. below, shows that the regression equation is as follows:

$Y = -27.881 + 0.011\ X_1 + (0.002)\ X_2$

T-Test (Number of Fishermen and Fish Catches)

Fishermen are people who make fishing at sea and in places that are still affected by tides. People who catch fish in fish farming places such as ponds, fish ponds, rivers, and lakes do not include fishermen (Tarigan 2000 in Indara 2017).

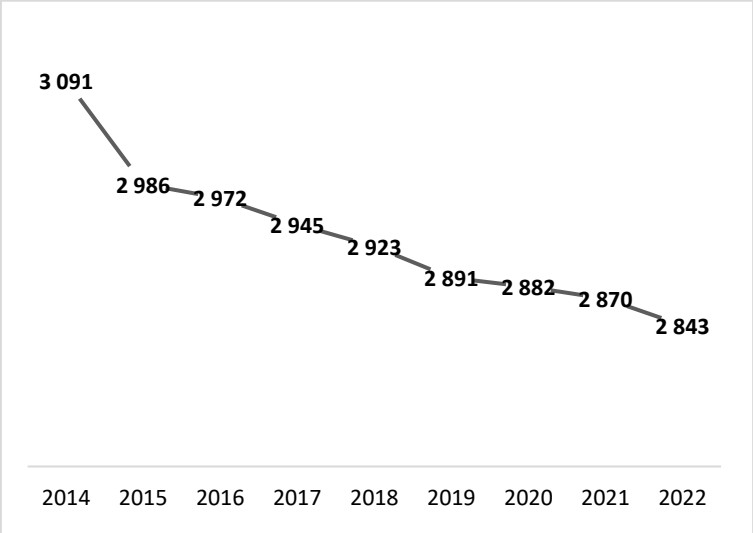

Figure 1. Data on the Number of Fishermen in Bengkalis Regency in 2014-2022

Source: Marine and Fisheries Service of Bengkalis Regency

The number of fishermen in Bengkalis Regency every year continues to decline Based on the results of the study, show that the calculated t value for the regression coefficient of the number of fishermen is 2,826. In addition, when viewed from the significant probability value, the significant value of the number of fishermen (0.030) < (0.05), then partially the number of fishermen has a significant positive effect on fish catches in Bengkalis Regency.

Test t (Number of Fisheries Fleets and Fish Catches)

Fishing vessels or also known as fishing fleets are ships or boats or other floating devices used to carry out survey or fishery exploration activities. Fishing vessels are an important capital in fisheries and marine affairs, besides being able to be used to catch fish, ships are used to maintain fisheries in Indonesia (Fauzi 2010 in Tawakal 2015). The following is data on the number of ships in Bengkalis Regency starting from 2014-2022:

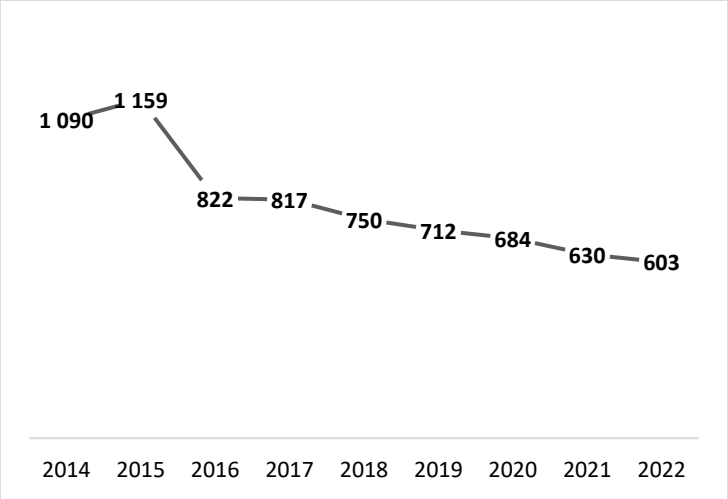

Figure 2. Data on the Number of Fishing Vessels in Bengkalis Regency in 2014-2022
Source: Marine and Fisheries Service of Bengkalis Regency

From the results of the comparison between the t_{count} and the t_{table}, it can be seen that t_{counts} (1.657). In addition, when viewed from the significant probability value, the significant value of the number of ships (0.149) > (0.05), then partially the number of fishery fleets do not have a significant positive effect on fish catches in Bengkalis Regency.

Test F (Variable Number of Fishermen, Number of Fishery Fleets, and Fish Catches)

Table 3. Test Results F Number of Fishermen, Vessels, and Fisheries Production

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.991	2	6.496	42.875	.000[b]
	Residual	.909	6	.152		
	Total	13.900	8			
a. Dependent Variable: Fish Catch (Y)						
b. Predictors: (Constant), Number of Fleet (X2), Number of Fishermen (X1)						

The table above shows the value of the sig. obtained .000 < 0.05 then the correlation between the variable number of fishermen (X1) and the number of fleets (X2) together affects the variable number of fish catches (Y).

Koefisien Determinasi (R^2)

Table 4. Coefficient of Determination Results (R^2)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. An error in the Estimate
1	.967[a]	.935	.913	.38923
a. Predictors: (Constant), Number of Fleet (X2), Number of Fishermen (X1)				

From the results of the analysis of the coefficient of determination based on the results above, an R2 value of 93.5% can be obtained, it can be stated that all free variables can explain the diversity of values in the Fish Catch variable by 93.5% and the rest are explained by other variables that are outside the research model.

Financial Feasibility Analysis

Financial analysis of a business is a very important thing to do to determine whether a business is feasible or not to run. Financial analysis can be presented through financial statements obtained from the recorded figures. Financial ratios become the basis for answering important questions regarding the state of financial flows of a business.

Based on the results of the projected net cash flow from the financial statements, a financial analysis is carried out using the following indicators:

a. NPV (*Net Present Value*)

The NPV valuation aims to look at the net present value that the company receives as long as the net cash flow running is deducted from the value of the investment. A business is considered feasible if the value of NPV>0. NPV is calculated by the following formula:

$$NPV = = \Sigma_{t=1}^{n} \frac{CFt}{(1+K)t} \text{Io}$$

Notes:
CFt = aliran kas pertahun pada periode t
Io = investasi awal pada tahun 0
K = suku bunga (discount rate)
Kriteria penilaian NPV adalah:
Jika NPV > 0, maka investasi diterima.
Jika NPV < 0, maka investasi ditolak.

Table 5. Net Present Value (NPV)

Tahun	FC	VC	TC	TR	Future Value	Diskon Faktor	Present Value
1	1,525,327,600	5,479,927,200	7,005,254,800	11,550,665,984	4,545,411,184	1	3,952,531,464
2	1,525,327,600	5,479,927,200	7,005,254,800	11,550,665,984	4,545,411,184	1	3,436,983,882
3	1,525,327,600	5,479,927,200	7,005,254,800	11,550,665,984	4,545,411,184	1	2,988,681,636
4	1,525,327,600	5,479,927,200	7,005,254,800	11,550,665,984	4,545,411,184	1	2,598,853,597
5	1,525,327,600	5,479,927,200	7,005,254,800	11,550,665,984	4,545,411,184	0	2,259,872,693
6	1,525,327,600	5,479,927,200	7,005,254,800	11,550,665,984	4,545,411,184	0	1,965,106,689
7	1,525,327,600	5,479,927,200	7,005,254,800	11,550,665,984	4,545,411,184	0	1,708,788,426
8	1,525,327,600	5,479,927,200	7,005,254,800	11,550,665,984	4,545,411,184	0	1,485,902,979
9	1,525,327,600	5,479,927,200	7,005,254,800	11,550,665,984	4,545,411,184	0	1,292,089,547
10	1,525,327,600	5,479,927,200	7,005,254,800	11,550,665,984	4,545,411,184	0	1,123,556,128
Total Present Value							22,812,367,040

Source: Research, 2022

NVP = 22,812,367,040 - 20,821,203,200
NVP = 1,991,163,839.67

The results of the financial analysis of ship production show that the Net Present Value (NPV) value is positive, meaning that the Ship Production is profitable. Net Present Value (NPV) is IDR 1,991,163,839.67, the value is more than 0, it can be said that ship production is worth cultivating

b. PP (*Payback Period*)

The PP assessment shows the size or scale of the business so that the company reaches breakeven. The Value of PP is expressed in months or years.

Payback Period = n + (a-b): (c-b) x 1 tahun

Notes:

N = return on investment,

a = reinvestment amount,

b = cumulative total of cash flows in the period to (n).

c = is the cumulative total at one period to (n+1).

=9(20.821.203.200-2.039.672.136/
(21.134.885.599 - 2.039.672.136) x 1(year)
= 9 + (424.481.834. / 1.292.089.546) x 1 (tyear)
= 9 + 0,328 x 12 (year)
= 9year + 3 month + 28 hari

Based on the results of the financial analysis, a PP value of 9,328 was obtained. This illustrates that the return on investment in Ship Production takes 9 years 3 months 28 days. The length of business carried out is for 10 years so that the production of the ship is financially feasible to be cultivated because the period of return-on-investment capital is less than the economic life.

c. IRR (*Internal Rate of Return*)

The IRR assessment aims to determine the internal rate of return (profit rate) of the established business. IRR is an interest rate that equates the initial investment (i) with the cash value (PV) of future cash flows. A business is considered worthy of acceptance if the value of the IRR> interest rate or opportunity cost of capital (IRR>df).

$$\text{IRR} = P1 - C1\frac{P2-P1}{C2-C1}$$

Information:
P1 = Interest rate 1
P2 = Interest rate 2
C1 = NPV 1
C2 = NPV 2
The IRR assessment criteria are:

a. If the IRR >from the predetermined interest rate, then the investment is accepted.

b. If the IRR < from the predetermined interest rate, then the investment is rejected.

Table 6. Internal Rate Return (IRR) Of Ships with a Discount Factor of 15%

Year	Cash Flow	Diskon Faktor	PV
1	4,545,411,184	0.870	3,952,531,464
2	4,545,411,184	0.756	3,436,983,882
3	4,545,411,184	0.658	2,988,681,636
4	4,545,411,184	0.572	2,598,853,597
5	4,545,411,184	0.497	2,259,872,693
6	4,545,411,184	0.432	1,965,106,689
7	4,545,411,184	0.376	1,708,788,426
8	4,545,411,184	0.327	1,485,902,979
9	4,545,411,184	0.284	1,292,089,547
10	4,545,411,184	0.247	1,123,556,128

Source: Research, 2022

Total PV	22,812,367,040
Initial Investment Amount	20,821,203,200
NPV 1	**1,991,163,840**

Table 7. Internal Rate Return (IRR) Of Ships with a Discount Factor of 18%

Tahun	Cash Flow	Diskon Faktor	PV
1	4,545,411,184	0.847	3,852,043,376
2	4,545,411,184	0.718	3,264,443,539
3	4,545,411,184	0.609	2,766,477,575
4	4,545,411,184	0.516	2,344,472,521
5	4,545,411,184	0.437	1,986,841,120
6	4,545,411,184	0.370	1,683,763,661
7	4,545,411,184	0.314	1,426,918,357
8	4,545,411,184	0.266	1,209,252,845
9	4,545,411,184	0.225	1,024,790,546
10	4,545,411,184	0.191	868,466,565

Source: Research, 2022

Total PV	20,427,470,105
Initial Investment Amount	20,821,203,200
NPV 2	-393,733,095

IRR = ir + NPV1/NPV2-NPV1(i2 -i1)
= 15% +1.991.163.839/-393.733.095 - 1.991.163.839. (18%-15%)
= 0,15 +1.991.163.839 /2.384.896.934. (0.03)
= 0,15 +(0.834) x (0,03)
= 0,15 + 0,025
= 0,175
= 17,5%

The results of the analysis show that the IRR value of ship production is 17.5% with NPV at a 15% interest rate of Rp 1,991,163,840 and the NPV value at an interest rate of 18% of Rp - 393,733,095 is negative or does not provide profit. The interest rate on return on investment (IRR) of ship production over the past ten years shows a figure of 17.5% so ship production is worth working on. If the interest rate is more than 17.5% then ship production) will experience at the Break-Even Point (BEP).

Empirical Results

Financial Feasibility Analysis

The target for the analysis of financial aspects in a business feasibility study can be seen from two very general sides, namely profit and sustainability. If a business does not make a profit, then it should not be feasible to run (Unfeasibile), and also if the profit is

short-term, then this can also be considered bad because a good profit is a sustainable one. Analysis from the financial side is necessary to find out the profitability of a business from a financial point of view, especially from the ability of the entrepreneur to return the capital issued.In this discussion, a financial analysis was carried out for ship production for a production period of 10 years. To analyze the feasibility of the business it is necessary to make some assumptions about the service process parameters and operating costs of the project every year in the past 10 years based on the investment in equipment to be used by CV Bengkalis Marine Fiber (BMF) Marine, and the minimum life other than buildings and vehicles is 10 years, so the equipment may need to be added or upgraded until the project is completed.

Net Present Value (NPV)

Ship production requires considerable costs, especially for raw materials. This is because Ship Production is raw material is the main component in carrying out the production process. In addition, the raw materials are only concentrated and there is no alternative raw material. Therefore, the costs incurred during production are quite large. Although the total costs incurred for Ship Production are quite large but the net profit or income earned by the factory is greater so that Ship Production can be said to be profitable and worthy of the effort. However, if there is an increase in interest rates (discount factor) of up to 18% per year, the NPV generated in Ship Production will be negative, amounting to Rp. 393,733,095.

Payback Period (PP)

The return of capital is quite fast because ship production has been producing in the 0th year so that at the beginning of the business it has obtained revenue that is used for the return of capital. In addition, Ship Production remains so that the income earned will remain stable. Considerable Ship Production Costs can still be covered by the receipts received by investors. The production of the vessels obtained is high enough that the acceptance received by investors is quite large. In addition, the marketing of Ship Production has the support of government policies. Investors do not need to spend money on marketing because the use of ship production products already has an advisory policy from the government so that it will be helped in the field of marketing locally, but for marketing up to the national level, several marketing methods are needed, both direct and online. After a feasibility analysis, ship production is declared profitable so that it states that ship production is financially feasible to be pursued.

Internal Rate Return (IRR)

The IRR value is much higher than the prevailing interest rate of 17.5%. This means that ship production is still profitable because it is greater than the credit interest rate but is only able to achieve profits until the interest rate is below 17.5%.

Conclusion and Policy Recommendation

Conclusion.

Based on the discussion and analysis that has been carried out, it can be concluded that various things are as follows:

1. There is a positive correlation between the production of caught fish and the number of fishing boats and the number of fishermen. This means that the availability of fishing boats encourages people to actively become fishermen. So that the desire to catch fish affects the catch of fish.
2. The opportunity to sell boats in Bengkalis is very large considering that it is located in a water center area with community livelihoods as shrimp and fish fishermen so that boats, especially for fishermen,
3. CV Bengkalis Marine Fiber was chosen as the central business for the development of the shipping industry by considering aspects of conditions, potential support, and good financial and institutional analysis and has great potential to be developed to be even greater
4. CV Bengkalis Marine Fiber shipyard business from the aspect of employment and regulation is feasible in terms of labor supply and the absence of regulatory obstacles.
5. Financial and institutional analysis of CV Bengkalis Marine Fiber shows great potential to be developed and followed up by business actors with a positive NPV (net present value), IRR (internal rate of return) > bank interest, and a promising PP (Payback period).

Policy Recommendation

Recommendations that can be given by researchers to be followed up by both stakeholders and business owners and related industries and supporting agencies are as follows:

1. The seriousness of the government to coordinate and facilitate the main industrial elements (CV Bengkalis Marine Fiber) and the hook industry, the ability, and seriousness of members in the shipping industry and related, the ability to maintain the commitment of the industries involved, the establishment of ship IKM centers, then the existence of regulations and local government policies must support the existence of the people's ship industry.
2. The commitment to support of the members of the industry involved should be made based on common awareness and will so that there is no coercion according to common abilities and interests. Every element of the industry must be aware of the same interests, namely increasing the added value of the business involved.
3. Coordination is routinely necessary for the smooth implementation of the duties of each

industry and agency involved. Implementation needs to be done with the PDCA (Plan Do Check Act) cycle. This cycle includes Plan (planning for improvement), Do (Implementation of repairs), Check (monitoring repairs), and Act (evaluating improvements).

4. The need to increase support from the government to continue to trust ship procurement projects so that the shipyard business can continue to run, in addition, the shipyard entrepreneur's association can be formed as a group of shipyard entrepreneurs together with related industries so that in the process the business can run smoothly and be mutually beneficial.

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Issue Article

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THE UTILIZATION OF DIGITAL TECHNOLOGY IN IMPROVING SMES PERFORMANCE IN THE NEW NORMAL ERA

Abstract: *The Covid-19 pandemic has been a global disaster. Because many countries choose lockdown policies, this pandemic causes job losses and increases poverty rates. The impact of COVID-19 is becoming more apparent in Indonesia, particularly in the MSME sector, which has long been the backbone of the economy. As a result of the economic downturn, several countries, including Indonesia, are gradually implementing the "new normal" in order to boost the economy's wheels. It is hoped that the new normal policy will re-energize the business sector, particularly micro, small, and medium enterprises (SMEs). By considering the social dynamics towards the new normal following the COVID19 pandemic, SMEs need to strengthen their business. This requires a strategy so that SMEs can survive and improve performance in the new normal era.*

The purpose of this research is to analyze the advantages of digital technology and innovation in improving MSME performance in the New Normal Era. The research focuses on SMEs in Pelalawan Regency. The population is 13,824 SMEs registered at the Department of Cooperatives and SMEs in Pelalawan Regency. The data used is primary data, in which respondents are given a written questionnaire/question. The data were analyzed using multiple linear regression. The results of testing on 50 questionnaires show that all instruments used in this research are valid and reliable. The results of testing the research hypothesis show that digital technology has a positive and significant effect on the performance of SMEs. The use of digital technology, such as online media, will make it easier for SMEs to market their products, expanding the reach of product marketing, particularly during this New Normal period. Meanwhile, the results of innovation testing show that innovation has no effect on SMEs' performance. This shows that during the New Normal period, SMEs did not innovate much due to the limitation, a lack of capital and lack of knowledge of resources to implement this innovation.

Key words: *digital technology, innovation, performance, new normal*
Language: *English*
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Introduction

Background

The coronavirus pandemic (Covid-19) has been a global disaster.This pandemic has made millions of people unemployed and poverty rates have risen since many countries have implemented lockdown policies. The impact of Covid-19 is becoming more apparent in Indonesia, particularly in the MSME sectorwhich has been the backbone of the economy. In order to boost the economy's wheels, a number of countries, including Indonesia, are gradually implementing the "new normal".

In the new normal era, SMEs can use a number of strategies, including digital technology, to overcome difficulties. Digital technology enables SMEs to conduct online transactions. In 2020, data from the Ministry of Communications and Information (Kominfo) shows that 9.4 million SMEs have joined and benefited from the use of digital technologies for cross-border transactions.The online MSME business actors can expand their market not only within Indonesia, but also internationally. Digital technology enables MSME to offer their products in the same way as large company.This is due to the fact that they will be on the same platform, such as an e-commerce marketplace, and will have the same opportunity to promote and sell products(Aprilianti, 2020) [1].

Innovating is another strategy that SMEs can implement. When the new normal era begins, competition will undoubtedly become more difficult due to unstable economic market conditions. Because purchasing power has not returned to normal, the value of assets decreases automatically.In this condition, simply working hard isn't enough; SMEs must innovate as a way to go back to normal. It will be impossible to develop products that can create markets and make breakthroughs that benefit businesses without innovation.Innovation can be in the form of creating quality products at low cost, or creating a simple but effective marketing or sales strategy. Innovation extends beyond business strategy included the physical form of the product itself. (Jurnal Entrepreneur, June 12th 2020). [2].

The purpose of this research is to analyze SMEs actors' readiness to use digital technology and its impact on MSME performance in the New Normal Era. This research is a continuation of previous research conducted in the Riau Region on the use of technology and innovation in SMEs in Rohil Regency[3]. In 2021 the research will focus on SMEs in Pelalawan Regency.

Problem Statement

Based on the background of the problem, the research problem is stated as follows: Does digital technology and innovation affect the performance of SMEs in the new normal era?

Literature Review

Relevant Theory

SMEs Performance

Performance is the result of a process that refers to and is measured over a certain period of time based on pre-determined provisions, standards or agreements (Yusniar Lubis, Bambang Hermanto & Emron Edison (2019: 26)[4]. Company performance can be classified into two categories, financial performance and non-financial performance. Financial performance is an analysis performed to determine the extent to which the company has implemented financial rules properly and correctly. (Fahmi, 2012:2) [5]. Non-financial performance is a performance that shows the growth of a company. Companies can find out the level of success of their companies by using non-financial performance analysis (Supit dkk, 2014)[6]. Non-financial performance is measured by the level of employee growth, social responsibility, organizational learning ability, and the potential for growth. (Cho dan Lee, 2018)[7].

Digital Technology

Digital technology is a technology that operates with the computerized system automatically. Digital technology is now widely used in everyday life. With the advancement of technology and information that is increasingly accessible via laptops, smartphones, and other electronic devices, many people discover the online transaction process to be more convenient and appealing. Nowadays, many tools may be utilized to help a business in marketing, such as Whatsapp, Facebook, Google, Instagram, and other tools that help reach a large number of people through a single platform. The use of technology simplifies a company's operational processes by providing various benefits, including operational cost reductions, increased productivity, and a reduction in overall strain.This allows for a more efficient and effective division of time and work. Technology can be used for a variety of purposes, such as financial management, labor division, product marketing, and so on(Nugraha, 2020). [8].

Innovation

Innovation is development of new products and services that are valuable to customers and are supported by a sustainable and profitable business model(Prayogo, 2020). [9]. An innovative person will always strive to improve, to present something new/unique that is different from the existent.Innovativeness becomes the distinctive characteristics between entrepreneurs and ordinary people, as well as businessmen (dosenpendidikan.co.id, December 9th2020) [10].

Previous Research

The results of a review of previous research on the use of technology and innovation are shown in Table 1.Table 1 shows how the implementation of digital technology and innovation improves SMEs' performance.

Tabel 1. Summary of Previous Research

Author	Research Title	Result	Journal Name	Reference
Cuevas et al. (2016)	The effects of ICTs as innovation facilitators for a greater business performance. Evidence from Mexico	Innovation and information technology have an influence on business performance.	Procedia Computer Science 91	[11]
Mamun dan Fazal (2017)	Effect of Entrepreneurial Orientation on Competency and micro-entreprise performance	Innovative has effect on company performance.	A Asia Pacific Journal and Entrepreneurship, Vol. 12 Issue:3, pp.379-390	[12]
Cho dan Lee (2018)	Entrepreneurial Orientation, Entrepreneurial Education and Performance, *Asia Pacific Journal and Entrepreneurship*	Innovative has effect on performance.	Asia Pacific Journal and Entrepreneurship, Vol. 12 Issue:3, pp.124-134	[7]
Rezaei dan Ortt (2018)	Entrepreneurial orientation and firm performance: the mediating role of functional performances	Innovative has positive effect on R & D performance	Journal of Management Research Review, Vol.41 Issue: 7, pp.878-900	[13]
Tanjung, et al (2019)	Analysis of Entrepreneurial Orientation and Education Level of the SMEs Actors in Improving SMEs Performance in Bengkalis Regency	Innovative has effect on MSME performance	Research Journal of Finance and Accounting, Vol.10, No.13	[14]
Mudiantono, Alif Khaidir Ali Fahmi (2019)	Analisis Pengaruh Jaringan, TIK, Serta Inovasi Terhadap Keunggulan Bersaing dan Kinerja usaha (Studi Pada UMKM di Purwokerto),	Information and communication technology and innovation affect the MSME performance.	Diponegoro Of Journal Management, Vol 8 No 4	[15]
Susdiani, Laela, 2020	Analisis Pengaruh Inovasi Terhadap Kinerja Umkm Pada Industri Kreatif Di Kota Padang	Organizational innovation affects financial performance, consumers, internal business processes & growth,	Procuratio: Jurnal Ilmiah manajemen, Vol 8, No. 4	[16]

Endang Siti Astuti, Brillyanes Sanawiri, Mohammad Iqbal, 2020	Attributes Of Innovation, Digital Technology And Their Impact On Sme Performance In Indonesia	Digital technology for innovation adoption affects MSME performance	International Journal of Entrepreneurship Volume 24, Issue 1, 2020	[17]
• M. F. Mubarak, F. A. Shaikh • M. Mubarik • K. A. Samo & • S. Mastoi	The Impact of Digital Transformation on Business Performance: A Study of Pakistani SMEs	Big data, cyber physical systems, and interoperability have a positive effect on performance	Engineering, Technology & Applied Science Research, 1. Vol. 9 No. 6 (2019)	[18]

Framework and Research Hypothesis

Digital Technology and SMEs Performance

Data from the Ministry of Cooperatives and SMEs shows that there are at least 163,713 SMEs affected by Covid-19. On the other hand, the role of SMEs in the global economy is very strategic, more than half of the world's gross domestic product (GDP) is a contribution from MSME actors and 7 out of 10 available jobs are in the MSME sector.In the era of the digital economy, it is necessary for traditional SMEs to transform into digital. The digital economy is expected to be able to restore the performance of SMEs in the new normal eraby utilizing digital technology(Sugiarto, 2020) [19].

Several research results show that digital technology affects the performance of MSME, such as Cuevas et al. (2016) [11], Mudiantono dkk (2019) [15], and Astuti dkk (2020) [17] prove that technology has an effect on the performance of SMEs. Based on this research, a hypothesis is formulated:

H1: Digital Technology Affects the Performance of SMEs in Pelalawan Regency in the New Normal Era

Innovation and MSME Performance

Innovativeness refers to an entrepreneurial orientation of being creatively involved in the process of experimenting with new ideas that allow for the development of new production methods in order to create new products or services for both current and new markets. Research of Mamun and Fazal (2017) [12], Rezaei and Ortt (2018) [13], Cho and Lee (2018) [7] also Tanjung et al (2019) [14] prove that innovation affects the MSME performance. Based on this explanation, the hypothesis is:

H2: Innovation Affects the Performance of SMEs in Pelalawan Regency in the New Normal Era

Based on the explanation above, the research model is made as follows:

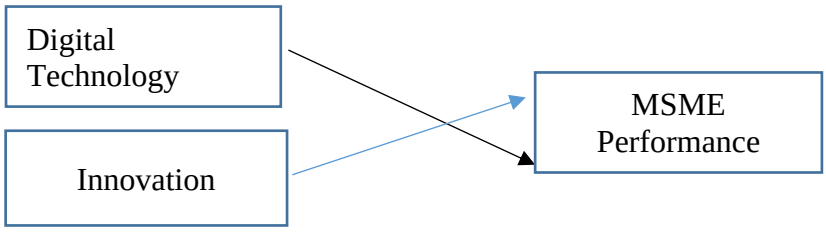

Figure 1. Research Model

Research Method

Research Site and Time

The research site is in Pelalawan Regency and conducted in 2021.

Research population and sample

The population is 13,824 SMEs registered at the Department of Cooperatives and SMEs in Pelalawan Regency. The sample criteria used were purposive sampling with the following criteria:

a. SMEs registered with the Department of Cooperatives and SMEs in Pelalawan Regency.
b. Age of MSME > 3 years
c. Using sales technology applications like WA, Facebook, Instagram, etc.

The number of samples obtained and processed were 50 samples.

Data Type and Source

This research uses primary and secondary data. Sources of research data obtained through filling out questionnaires and interview results.

Data Collection Technique

Techniques used to collect primary data include observation, distribution of questionnaires and interviews

Operational Definition and Variable Measurement

Table 2. Operational Definition and Variable Measurement

No.	Variable	Definition	Measurement
1	SMEs Performance	An optimal result of an individual, group or business' work performance.	The indicators are: 1. Revenue/sales growth 2. Loyalty 3. Competitiveness, 4. Stability 5. Customer satisfaction.
2	Digital Technology	Digital technology is a technology that automatically operates using a computerized system (computer/laptop/hp and others)	The indicators consist of: 1. Hardware Technology used such as computers/laptops, smart phones, internet, etc 2. Software used in technology such as E-commerce (shoppee, open stalls, etc.), Whatsapp, Facebook, Google, Instagram.
3	Innovation	It is defined as the embodiment, combination, or synthesis of original, relevant knowledge, a new product of value, a process, or a service. Innovation involves creative actions or ideas to make some specific and apparent difference in the domain in which the innovation is made (Ofori, et al, 2015) [20]	The indicators used were adopted from the research of Lucas & Farrel, 2000 [21]: 1. Product Line Expansion 2. Imitation Products 3. New Products

Data Analysis Method

Descriptive Statistics

Descriptive statistics are statistics used to analyze data by describing the data that has been collected as it is without intending to make conclusions that apply to the public (Sugiyono, 2017:147) [22].

Multiple Regression Analysis

In this research, multiple regression was used to determine the accuracy of the relationship between digital technology and innovation on the performance of SMEs. Acceptance or assessment of the hypothesis is determined $\alpha < 0.05$. In order to test the hypothesis, the following equation is used:

Performance = a + b1.TI + b2 Inov + e

Hypothesis Testing

a. Significance Test (t statistical test)

The way to do the t-test is:

1. If t count > t table and significance level < 0.05, then partially the independent variable has a significant effect on the dependent variable.
2. If t count < t table and significance level >0.05, then partially the independent variable has no significant effect on the dependent variable.

The results of the t-statistical test will be the basis for making hypotheses in this research.

b. Coefficient of Determination

The coefficient of determination (R2) essentially measures how far the model's ability to explain the dependent variation. The value of the coefficient of determination is between zero and one. A small value of R2 means that the ability of the independent variables in explaining the variation of the dependent variable is very limited.

Result And Discussion

Characteristics of Respondents

This research aims to examine the effect of the utilization of Digital Technology and Innovation on the performance of SMEs in Pelalawan Regency. This

research used a questionnaire for data collection.The data collection process was conducted from June 2021 to July 2021 which was distributed directly by researchers to each SMEs actor in Pelalawan Regency.The population in this research were 13,824 SMEs in Pelalawan Regency.In order to determine the number of samples, the criteria for SMEs registered at the Department of Cooperatives and SMEs in Pelalawan Regency are used, the business has been running for > 3 years and uses digital technology applications.Due to the PPKM, researchers are limited in the amount of samples that may gather, hence the total number of samples obtained is 50 SMEs.A total of 50 questionnaires were distributed, with 50 being returned and filled out. The questionnaire has a 100% return rate, enabling the data to be analyzed. The level of questionnaire collection can be seen in table 4.1 below :

Table 3. Questionnaire Return Rate

Information	Number of Questionnaires	Percentage (%)
Questionnaire sent	50	100 %
Returned Questionnaire	50	100%
Unreturned questionnaire	0	0 %

Source: Processed Data, 2021

Based on table 3, it can be explained that the researcher distributed 50 questionnaires and the rate of return was 100%.The characteristics examined include gender, age, length of business, last education and types of SMEs in Pelalawan Regency. The overview of the demographics of the respondents can be seen in table 4.2 as follows:

Table 4. Demographic of Respondents

Information	Frequency	Percentage
Sex :		
a. Male	30	60%
b. Female	20	40%
Total	**50**	**100%**
Age :		
a. 21-30 years old	7	14%
b. 31-40 years old	20	40%
c. >40 years old	23	46%
Total	**50**	**100%**
Last education :		
a. Elementary School		0%
b. Junior High School	7	14%
c. Senior High School	35	70%
d. Bachelor	8	16%
e. Others		0%
Total	**50**	**100%**
Length of Business:		
a. 1-2 years old	12	24%
b. 3-5 years old	28	56%
c. >5 years old	10	20%
Total	**50**	**100%**
SMEs Type :		
a. Trader	20	40%
b. Industry	18	36%
c. Service	12	24%
Total	**50**	**100%**

Source : Processed Data, 2021

Based on the table above, it can be seen that the respondents were dominated by male as many as 30 respondents (60%) while the rest were female as many as 20 respondents (40%), it shows that men are majorMSME actors in Pelalawan Regency. The majority of respondents (46%) are over the age of 40,

while 14 percent are between the ages of 21 and 30. The education level of most respondents is high school graduates, with 35 respondents (70%), followed by undergraduate graduates as many as 8 respondents (16%). It shows that the majority of respondents have a high school education.The majority length of business is around 3-5 years with a percentage of 56% and 1-2 years with a percentage of 24% and the minimum length of business is around >5 years with a percentage of 20%.

Result of Descriptive Statistics

Descriptive statistics are intended to analyze data based on the results obtained from respondents' answers to each variable measuring indicator. Descriptive statistics consist of mean, minimum, maximum, and standard deviation. The descriptive analysis of research variables can be seen in the table below :

Table 5. Descriptive Statistics Result

Variable	N	Min	Max	Mean	Std. Dev.
SMEs Performance	50	28	60	45,40	8,288
Digital Technology	50	18	40	32,52	5,120
Innovation	50	20	43	32,38	5,424

Source: *Output Data of SPSS 25.0*

Based on the descriptive statistics table preceding, it can be seen that the MSME Performance variable (Y) has the smallest (minimum) value of 28 with the highest (maximum) value of 60, while the average value (mean) of 45.40 indicates that the average respondents filled out the options agree and strongly agree on the MSME Performance questionnaire. The standard deviation of 8.288 indicates that the data distribution is not too large because the standard deviation is smaller than the average value.

Digital Technology as an independent variable has a minimum value of 18 and a maximum value of 40. The average value (mean) of 32.52 indicates that the average respondent fills out the choices agree and strongly agree on the questionnaire, and the standard deviation of 5,120 indicates that the data distribution is not too large because the standard deviation is smaller than the mean value.

Innovation as an independent variable has a minimum value of 28 and a maximum value of 43. The average value (mean) of 32.38 also shows that the average respondent fills out the agreeable choices on the innovation questionnaire with a standard deviation of 5,424 which means that the data distribution is not too large because the standard deviation value is smaller than the mean value.

Result of Data Quality Test

Result of Data Validity Test

Validity testing shows the precision and accuracy of the questionnaires distributed to respondents. In order to determine the validity of the statement of each variable, then rcount is compared with r table, r table can be calculated by df = N – 2. The number of respondents in this researchis 50, so df = 50 – 2 = 48, r (0.05;48) = 0.2878. If $r_{count} > r_{table}$then the statement is valid. The results of the validity test show that all statements for each variable in the questionnaire are valid. It is proven by the value of Corrected Item-Total Correlation > 0.2878.

Result of Data Reliability Test

Reliability testing shows how much an instrument can be trusted and used as a data collection tool. The method used is the Alpha Cronbach method. A research instrument is considered to be reliable if the alpha value > 0.60. The results of the reliability test show that all variables are used as reliable instruments, this is proven by the performance alpha coefficient value of 0.905, digital technology 0.826 and innovation 0.822.

Result of Data Normality Test

In this research, data normality testing can be seen from the *normal probability plot.* Decision making in the normality test using the graph analysis is based on (Ghozali,2013):

1. If the data spreads around the diagonal line and follows the diagonal line, then the regression model meets the normality assumption.
2. If the data spreads far from the diagonal and or does not follow the diagonal line, then the regression model does not meet the normality assumption.

Based on the test results, it can be seen that the data spreads around and follows a diagonal line. So, it can be interpreted that the regression model meets the normality assumption.

Result of Classical Assumption Test

Result of Multicollinearity Test

Multicollinearity is a condition in which independent variables in a regression model have a linear connection with one another. One of the method to test for the presence of multicollinearity can be seen in the Variance Inflation Factor (VIF). If the tolerance value ≥ 0,10 and if VIF value ≤ 10 then there is no multicollinearity symptom.

Based on the table above, it can be concluded that the regression model for the independent variables proposed is free from multicollinearity. It can be shown from the tolerance value of each independent variable is 0.967 (> 0.10) and the VIF value of each independent variable is 1.034 (< 10).

Result of Heteroscedasticity Test

In order to detect the presence of heteroscedasticity, the method used is the chart method (scatterplot diagram). If:

1. There is a certain pattern or the existing dots form a certain regular photo (wavy, widened, then narrowed), then heteroscedasticity occurs.
2. There is no clear pattern, and the points spread above and below 0 on the Y axis, so there is no heteroscedasticity.

The test results show that there is no heteroscedasticity because the points spread above and below 0 on the Y axis and there is no clear pattern.

Result of Multiple Regression Test

Multiple linear regression test is conducted to determine the effect of the relationship between the independent variables on the dependent variable. A multiple regression equation can be used to calculate the magnitude of the influence of the independent variables on the dependent variable. The results of multiple linear regression are shown below:

Table 6. Multiple Regression Test Result

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	21,031	9,075		2.317	.025
	DT	.461	.223	.285	2,064	.045
	INNOVATION	.290	.211	.190	1.377	.175

Based on the results of the analysis using the SPSS 25.0 program, it can be seen that the regression equation formed. The multiple linear regression equation is as follows:

$Y = 21{,}031 + 0{,}461X_1 + 0{,}290X_2 + e$

In the regression equation above, the constant (β0) is21,031, it means:

1. If the variables of Digital Technology (X1) and Innovation (X2) remain unchanged, the performance of SMEsthat occurs is 21,031.
2. The value of regression coefficient for $\beta_1$is0,461. In this research, it can be stated that digital technology (X_1) affects the SMEs performance (Y).This indicates that for every one unit increase in Digital Technology, MSME Performance (Y) increases by 0.461 units.
3. The regression coefficient value for β_2 is 0.290. In this study, it can be stated that innovation (X2) affects the performance of SMEs (Y). It shows that when innovation increases by one unit, MSME Performance (Y) will increase by 0.290 unit.

Discussion

First Hypothesis Testing Results

The first hypothesis of this research is that Digital Technology affects the Performance of Micro, Small and Medium Enterprises (SMEs).In orderdetermine whether there is a significant effect of each independent variable, compare the value of t count with t table and compare the significant value of t with the level of significant (α). The level of significance used in this study is 5%. If sig t is less than 0.05, then H_0 is rejected. If H_0 is rejected, it means that there is a significant relationship between the independent variable and the dependent variable.

Based on the table 4.7, it can be seen that the t_{count} value is 2.064 with a significant value of 0.045 and the t_{table} has a 2.021 value. Because the value of $t_{count} > t_{table}$(2.064> 2.021) with a significance (0.045 <0.05) it can be concluded that H_{o1} is rejected and H_{a1} is accepted.This shows that Digital Technology has a significant effect on the performance of SMEs. Thus the first hypothesis is supported which shows that Digital Technology has a significant effect on the performance of SMEs.

Digital Technology is technology that utilizes computer technology, internet, any telecommunication technology that can provide added value to the activities and operations of an organization or company(Ali & Wangdra, 2010: 3). In the globalization era with the rapid development of Digital Technology, it is necessary to develop entrepreneurial marketing that is able to reach all consumers in all around the world, particularly through internet marketing or E-Commerce (Harini dan Handayani, 2019). The result of this research is in line with the research by Cuevas et al. (2016), Mudiantono dkk (2019), and Astuti dkk (2020) which proves that Digital Technology has an effect on the performance of SMEs.

Second Hypothesis Testing Results

The second hypothesis of this research is that innovation affects the performance of Micro, Small and Medium Enterprises (SMEs). Based on the table 4.7, it can be seen that the t_{count} value is 1.377 with a significant value of 0.175 and the t_{table} which has a value of 2.021. Because the value of $t_{count}<t_{table}$(1,377 <2,021) with a significance (0.175 > 0.05) it can be concluded that H_{o1} is accepted and H_{a1} is rejected.This shows that innovation does not significantly affect the performance of SMEs. Thus the second hypothesis is supported which shows that innovation has a significant effect on the performance of SMEs.

Innovation refers to an entrepreneurial behavior to creatively engage in new ideas experiments.Innovative orientation can help individuals achieve the strategic objectives (Rauch et al. 2009). The result of this research is not in line with the research by Lumpkin & Dess (1996) and Ranto (2016), Mamun and Fazal (2017), Rezaei and Ortt (2018), Cho and Lee (2018) and also Tanjung et al (2019) that proves that innovation has effect on SMEs performance.

Coefficient of Determination Test Result(R^2)

Analysis of the coefficient of determination is conducted to determine the percentage of influence of each independent variable on the dependent variable.

Table 7. Coefficient of Determination Test Result (R^2)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.370[a]	.137	.100	7.863	2.185

Source: Processed Data of SPSS, 2021

Based on the results of the coefficient of determination test above, the adjusted R square value obtained is 0.100 which shows that the performance of SMEs that occur in the research sample is influenced by Digital Technology and innovation by 10% and the remaining 90% is influenced by other variables that have not been examined in this research.

Conclusion And Suggestion

Conclusion

This research aims to find out the effect of digital technology and innovation on the performance of micro, small and medium enterprises (SMEs) in Pelalawan Regency.This research's respondents totaled 50 people. In order to analyze the relationship between the variables, multiple regression testing was conducted. Based on the previous analysis and discussion, it can be drawn by this following conclusions: the following conclusions can be drawn:

1. Digital technology has effect on SMEs performance in Pelalawan Regency. It is shown by the value of $t_{count}$is greater thant_{table} (2,064>2,021) with significance (0,045< 0,05), which means the digital technology utilization, espsecially in distributing and marketing will improve the SMEs performance. The utilization of online media will simplify for SMEs to market their products so that the product can reacha wider market, especially during the New Normal and PPKM.
2. Innovation has no effect on the performance of SMEs in Pelalawan Regency. This can be seen from the value of $t_{count}<t_{table}$ (1.377 <2,021) with significance (0,175> 0,05), which means innovation has no effect on SMEs performance. Because it is difficult for SMEs to innovate on the products they sell during the New Normal Period and the existence of PPKM.The difficulty in innovating is caused by a lack of capital and knowledge to create these products.

Suggestion

1. This research was only conducted on SMEs in Pelalawan Regency. For future research, we will examine other areas in Riau Province so that the research results can be generalized.
2. This researchwas only used digital technology and innovation variables. For further research it's preferable to add other independent variables that can affect the performance of SMEs such as human resource competence, education level, competitive advantage, and so on.

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FACTORS THAT INFLUENCE THE VILLAGE FINANCIAL MANAGEMENT WITH APARATURE COMMITMENTS AS MODERATING VARIABLES

Abstract: *This study aims to examine the effect of implementing good governance, village autonomy, on the management of village fund finances with apparatus commitment as a moderating variable. The population of the study was all villages in Kempas, Indragiri Hilir Regency. This study involved 78 respondents as the sample selected using a purposive sampling method. This study employed quantitative methods in which the data were obtained through a questionnaire. The analytical method used in this study was multiple regression analysis and moderating regression analysis (MRA). The analytical instrument used in this study was SPSS version 23.0. The findings of the study indicate that (1) there was an effect of the application of good governance to the financial management of village funds; there was an autonomous influence on the financial management of village funds; (3) the commitment of the apparatus can moderate the relationship between the implementation of good governance and the financial management of village funds; and (4) the commitment of the apparatus can also moderate autonomy with the financial management of village funds.*

Key words: *Implementation of good governance, Village autonomy, The commitment of the apparatus, Financial management of village funds.*

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Introduction

Village financial management is an activity that includes planning, implementation, administration, reporting, and accountability of village finances (Regulation of Ministry of Home Affairs No. 20 of 2018). From 2015 to 2019, the government has allocated a village fund budget of Rp 257 Trillion, with details of Rp. 20.67 trillion (2015), Rp. 46.98 trillion (2016), Rp. 60 trillion (2018), Rp 60 trillion (2019), ad Rp 70 trillion (2019). The village funds were given to all villages in Indonesia. The large number of village funds that have been allocated to villages, in its management, there are still many problems.

According to the review of the State Finance Accountability Committee (Indonesian: Badan Akuntabilitas Keuangan Negara or BAKN) of the People's Representative Council of the Republic of Indonesia on the results of the examination of the Audit Board of the Republic of Indonesia (Indonesian: Badan Pemeriksa Keuangan Republik Indonesia or BPK) on the development and supervision of village

fund management in 2015 up to semester 1 of 2018 in 80 regencies, 5 cities, and 1,005 districts in 33 provincesthroughout Indonesia found problems in managing village funds, seen from the aspects of coaching and supervision, are as follows; There is no regulation on the stipulation of village government accounting standards and regulations on the implementation and guidance of village officials that are complete and up to date by higher regulations. The planning of village funds has not been done based on mapping and village needs, while the implementation of activities has not been fully following the priority scale of the use of funds. Seen from the aspect of supervision, it does not fully include evaluating the appropriateness of the Village fund with the priority scale of use and the lack of follow-up improvements in the monitoring report (The People's Representative Council of the Republic of Indonesia, 2019).

Similar problems were also found in Indragiri Hilir Regency, which based on the results of the inspection (Representative of Riau PBK, June 2017), for compliance with statutory provisions found that distribution of village funds, allocation of village funds, village financial assistance, and funds for tax and revenue sharing regional retribution to villages in Indragiri Hilir Regency was late accounted for. In connection with this issue, the BPK recommended that the Regent instruct the head of the BPMPD to postpone the disbursement of financial assistance of the village who neglected to submit accountability for village funds, ADD, village financial assistance, funds for tax revenue sharing, and regional retribution to villages that had not submitted accountability reports.

To overcome village financial management, good governance village is needed with 3 basic pillars that are interrelated with one another, namely transparency, participation, and accountability (Taufeni Taufik, 2009). Several studies on good governance had been conducted by Taufeni Taufik since2013. The results of the studies concluded that good governance has an effect on public sector performance and affecting the regional financial management on good governance (2017). Meanwhile, his study conducted in 2019 found that good governance can mediate the relationship between the implementation of the internal control system and the prevention of fraud.

Good governance studies on village fund management were also carried out by Maulina Agustiningsih (2020) as well as byKamilaus Konstanse Oki, and Damiana Mediantini Lafu (2018). They found that village fund management having a direct positive effect on good governance. Further study by Ni Wayan Rustiarini, 2016, found that there were still several weaknesses that could potentially lead to undirected village development. Planning and budgeting had not been fully adjusted to the needs of the community which enable the possibility to make village development ineffective, efficient, and economical.

Moreover, a study by Dasmi Husin, 2016, in 10 villages in Lhokseumawe and North Aceh found that some villages did not record and report the use of village funds due to the complex procedures and lack of understanding of the applicable regulations, which were per accounting standards. Justita Dura, 2016, also found that the accountability of financial management of village fund allocation, village policies, and village institutions jointly influence on community welfare.

A study conducted by Astri Juanita Makalalag, Grace B Nangoi, and Herman Karamoy, 2017, found that accountability for village fund management in villages in the South Kotamobagu sub-district, Kotamobagu City, and has been carried out based on the principles of transparency, accountability, and participation. They have carried out the reporting and accountability under the mechanism based on the provisions although there were still negligence of village officials and the technical manager of the activities. Management resource competence is still a major obstacle that requires government assistance. To increase accountability in the management of village funds, guidance, training, supervision, and evaluation on an ongoing basis to village officials are needed.

The principle of village regulation in Law No. 6 of 2014 is subsidiarity, namely the determination of local scale authority and local decision making for benefit of the community to enable the village to be independent. Village independence is a process carried out by the village government to carry out an activity to meet their needs with their abilities. The original autonomy granted to the village government means that the authority of the village government to regulate and manage the interests of the local community is based on the origin and socio-cultural values that exist in the local community. However, it should be organized in a prospective modern administration. Research related to village autonomy conducted by Hanura Siti (2015) in Baruta Lestari Village, Sangia Wambalu Sub-District, Southeast Sulawesi, found that village autonomy affected the management of the village fund. Meanwhile, a study conducted by Aziz (2016) concluded that village financial management was not effective for the inadequate capacity and capability of the village government and the active involvement of the community with village autonomy.

It takes dedication from the village organization to solve the problem of managing village funds. According to Luthans (1992 in EdySutrisno, 2007), commitment is a deep desire to be a leader of a community, a high business will for the organization, certain conviction, and recognition of the organization's values and goals. Concerning organizational commitment, Mayer and Allen (1990

in Edy Sutrisno, 2007) identified three different themes in defining commitment. Those three themes were an affective commitment to the organization (affective commitment), commitment as a cost that must be borne if leaving the organization (continuance commitment), and commitment as a kind of obligation to remain in the organization (normative commitment). The results of the study conducted by Kalimah (2017) show that commitment influences the successfulimplementation of the Village fund. Meanwhile, research conducted by AT Atmadja (2018) showed that local government commitment does not significantly influence the success of village fund management. In contrast, Safrizal (2018) finds that commitment influences village financial management.Windi (2020) argues that organizational commitment can mediate the relationship between compensation and work environment on the performance of budget managers. Febri Yulisa, et al (2020) found that organizational commitment cannot moderate the relationship between the government's internal control system and regional financial accountability.

The research problem formulation is whether the implementation of good governance and village autonomy affects the financial management of village funds. Besides, the commitment of the apparatus can moderate the relationship between good governance, village autonomy, and the financial management of village funds. Thus, the objective of this study is to empirically examine the effect of implementing good governance, village autonomy on the management of village funds as well as to test empirically the commitment of the apparatus in moderating the relationship between good governance and village autonomy with the financial management of village funds.

Literature Review

Agency Theory

Theories that explain the relationship between principals and agents are economic theory, decision theory, sociology, and organizational theory. Principal-agents theory analyzes the contractual arrangement between two or more individuals, groups, or organizations. A party (principal) makes a contract, both implicitly and explicitly with another party (agent) to enable the agent acting/doing work as desired by the principal (in this case the delegation of authority occurs). Contractual relations in the village refer to Law No. 6 of 2014. In article 34 of that law, it is stated that the village head is directly elected by the villagers. Article 26 of Law No. 6 of 2014 adds that the village head is tasked with organizing village governance, carrying out village development, fostering village communities, and empowering village communities. Furthermore, in article 27, it is stated, in carrying out the duties, authorities, rights, and obligations, the village head obliged to submit a report on the administration of the village government at the end of the fiscal year and the end of the term of office to the Regent/Mayor. Article 27 paragraph c and d states that the village head is obliged to provide a written report on government administration to the village consultative body and provide and/or disseminate information on governance to the village community at the end of each fiscal year. Village heads that do not carry out the obligations referred to in article 26 paragraph 4 and article 27 are subjected to administrative sanctions similar to verbal or written warnings.

Village Financial Management

Regulation of Ministry of Home Affairs No. 113 of 2014 defines village financial management as an activity consisting of planning, implementation, administration, reporting, and accountability of village finances. The principle of village financial management is carried out openly (transparently) by involving community participation, accountably, orderly, and in a disciplined manner. Village financial management is planned based on the vision, mission, and objectives, as well as programs that will be implemented in the village based on the plans for village-level development of the year concerned. Article 24 concerning implementation explains that (1) all village revenues and expenditures in the context of exercising village authority are carried out through the village cash account; (2) specifically, villages that do not yet have banking services in their area will be regulated by the Regency/ Municipal Government; (3) all village revenues and expenditures as referred to in paragraph (1) should be supported by complete and valid evidence. Article 35 explains at the financial administration stage, the village treasurer is obliged to keep records of each receipt and expenditure as well as close the books at the end of the month in an orderly manner and be held accountable for money through accountability reports which are submitted monthly to the village head. In article 37, the Village Head submits a report on the implementation of the Village Funds to the Regent/Mayor in the form of the first-semester report and year-end semester report. The first-semester report is in the form of the Village Funds realization report, submitted no later than the end of July of the current year. Article 38 explains the end of the year semester report submitted no later than the end of January of the following year. The village head submits the accountability report on the implementation of the Village Funds to the Regent/Mayor at the end of the fiscal year consisting of income, expenditure, and financing determined by village regulations.

Good Governance

According to LAN & BPKP (2000: 6-8), the word good in the term good governance has two meanings: (1) values that uphold the wishes or desires

of the people that can enhance people's ability to achieve national goals, independence, sustainable development, and social justice; and (2) aspects relating to the functions/tasks of the appropriate government in carrying out the achievement of these objectives. Therefore, it can be concluded that the form of good governance is the implementation of a solid and responsible as well as efficient and effective state government by maintaining the synergetic constructive interaction between the state, the private sector, and the community. The World Bank defines good governance as implementing solid and responsible development management in line with the principles of democracy and efficient markets by avoiding misallocation of investment funds, preventing corruption both politically and administratively, conducting budgetary discipline, and creating a legal and political framework for growing activities entrepreneurship. Meanwhile, UNDP defines good governance as a synergic and constructive relationship between the state, private sector, and society. Good governance in the management of village funds was realized based on the principles of transparency, participation, and accountability (Taufeni Taufik, 2009).

Village Autonomy

Village autonomy is genuine and complete autonomy which is not a given from the government. As a legal community unit that has an original arrangement based on privileges, villages can carry out legal actions both public and civil law, possess wealth and property and can be prosecuted as well as sue before the court (Haw. Widjaja, 2010). Article 1 of Indonesian Law No. 6 of 2014 relating to villages states that villages are a legal community unit with territorial boundaries allowed to administer and manage governmental affairs, local community interests based on community initiatives, original rights, and/or recognized traditional rights protected in the Republic of Indonesia system of government. The village government is the village head assisted by the village apparatus as an organizer of the village government. The village consultative body is an institution that carries out government functions whose members are representatives of the village population-based on regional representation and are democratically determined. Indicators of autonomy are village institutions and village authority.

Apparatus Commitment

According to Luthans (1992 in Edy Sutrisno, 2007) commitment is a deep desire to be a member in a group, a high business will for the organization, some conviction, and acceptance of the values and goals of the organization. Commitment can also be defined as assurances and commitments arising both directly and indirectly from the continuation of the exchange partnership (Gunlanch, 1995). Concerning organizational commitment, Mayer and Allen (1990 in Edy Sutrisno, 2007) identified three different themes in defining commitment. Those three themes are commitment as an affective commitment to the organization (affective commitment), commitment as a cost that must be borne if leaving the organization (continuance commitment), and commitment as a kind go obligation to remain in the organization (normative commitment).

Research Method

Research Design

This study was a quantitative study that employed a causal association research design. According to Sugiono (2017), the causal association method is used to examine specific populations or samples by collecting data using research instruments and analyzing quantitative/statistical data to describe and test the causal hypothesis. Thus, there were independent variables in this study which were the implementation of good governance and village autonomy (influencing variables). The dependent variable was the financial management of village funds (influenced). Meanwhile, the moderating variables were the commitment of the village apparatus, a variable that is strengthening or weakening the relationship between the independent and dependent variables.

Population and Sample

In a quantitative study, the population is a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be studied and then drawn conclusions (Sugiono, 2017). Meanwhile, the sample is part of the population. In this study, a population of 10 villages as recipients of village funds in Kempas Indragiri Hilir sub-districts namely the villages of Sungai Rabit, Danau Pulau Indah, Sungai Gantang, Karya Tani, Kempas Jaya, Kerta Jaya, Kulim Jaya, Pekan Tua, Rumbai Jaya, and Sungai Ara. The sampling method was in the form of purposive sampling, a sampling technique with certain considerations (Sugiyono, 2017).

Data Analysis Method

This study employed a moderating regression analysis (MRA) method with IBM SPSS version 23 for it used moderating variable that influence (strengthen and weaken) the relationship between independent and dependent variables).

Verification Analysis

Verification analysis according to Sugiyono (2017) is a study aimed at testing theory and research that might produce new scientific information or the status of a hypothesis in the form of a conclusion whether a hypothesis is accepted or rejected. The

statistical testing steps used in this study were as follows:

Classical Assumption Test

According to Suteja and Gunardi (2013:39), the linear regression model has several basic assumptions that are required to be met to produce a good estimate or known as the Best Linear Unbiased Estimator (BLUE). In estimating linear equations using the Ordinary Least Square (OLS) method, the basic assumptions of OLS are necessary to be met which include no symptoms of normality, multicollinearity, heteroscedasticity, and autocorrelation.

Normality Test

The normality test is used to test whether the distribution of the dependent variable for each value of a certain independent variable is normally distributed or not in a linear regression model. This assumption is shown by the error value normally distributed. A good regression model is a regression model that has a normal distribution or close to normal. Thus, it is worth doing a statistical test. According to Singgih Santoso (2012:393), the basis for decision making can be based on the following probabilities (Asymptotic Significance):

If the probability is > 0.05, then the distribution and regression model is normal.

If the probability is < 0.05, then the distribution and regression model are not normal.

Autocorrelation Test

Autocorrelation test aims to test whether the linear regression model is correlated between the errors of the intruder in the period t with the error of the intruder in the period t-1 (previous period). If there is a correlation, then there is a problem called autocorrelation. Accordingly, a good regression model is a regression that is free from autocorrelation (Singgih Santoso 2012:241). In the procedure of detecting autocorrelation problems, the Durbin-Waston quantity can be used.

Multicollinearity Test

Multicollinearity Test aims at checking whether a correlation between independent variables was observed in the regression model. There should be no correlation between a good regression model and in independent variables. The presence or absence of multicollinearity in the regression model can be detected from (1) the tolerance value and its opponents, and (2) Variance Inflation Factor (VIF). The cutoff value commonly used to show the presence of multicollinearity is the Tolerance ≤ 0.10 or equal to VIF ≥10. A good regression model does not have multicollinearity problems, let alone a correlation between the independent variables (Singgih Santoso, 2012:250).

Heteroscedasticity Test

The heteroscedasticity situation will cause the estimation of the regression coefficients to be inefficient and the estimated results can be less or exceed than they should. Thus, for the regression coefficients not to be misleading, the situation of heteroscedasticity is required to be removed from the regression model. To test the presence or absence of heteroscedasticity, the rank spearman test was used by tolerating the independent variable on the absolute value of the residual regression results. If the correlation coefficient between the independent variables and the absolute value of the residual is significant, the conclusion is heteroscedasticity (the variant of the residuals is not homogenous).

Moderating Regression Analysis

The data in this study were analyzed using a Moderating Regression Analysis, expressed in two forms of the equation below:

Equation (1) $SM = a0 + b1X1b2X2 + \varepsilon$

Equation (2) $SM = a0 + b1X1 + b2X2 + b3X4 + b4X4 + b5X5 + \varepsilon$

Hypothesis Testing

The hypothesis testing design was used to determine the correlation between the two variables studied. The stages in the design of this hypothesis testing began with the determination of the null hypothesis (Ho) and the alternative hypothesis (Ha), the selection of statistical tests, the calculation of statistical values, and the determination of a significant level. The detailed steps were explained as follows:

- T-test Statistical Significance (Partial Hypothesis Test)
  T-test was used to test the significant level of influence of partially independent variables on the dependent variable. T-test was carried out by comparing between t-count and the t-table. T-count can be seen from the results of data processing, coefficient.
- Coefficient of Determination
  The coefficient of determination was done to find out how much influence the independent variables have on the dependent variable. The coefficient of determination can be seen the magnitude of the effect both simultaneously and partially. The coefficient of determination can simultaneously be seen from R2.

Findings and Discussions

Conclusions

The descriptive statistical results in this study were presented below:

Table I. Descriptive Statistics Results

	N	Minimum	Maximum	Mean	Std. Deviation
Y	78	29.00	50.00	39.0641	4.69136
X1	78	101.00	146.00	125.2564	9.31893
X2	78	25.00	50.00	38.0897	5.32377
M	78	14.00	30.00	23.2949	3.92828
Valid N (listwise)	78				

Data source: processed in 2019

Classic Assumption Test Results

Data Normality Test Results

The results of the normality testing are visualized in Figure 1

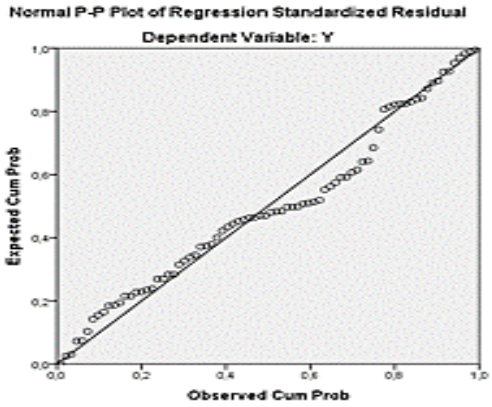

Figure 1. Data Normality Test Result

Based on Figure 1, it appears that the data were spread around and followed diagonal lines. Thus, it can be interpreted that the regression model meets normal assumptions.

Multicollinearity Test Results

The cut-off value commonly used to indicate multicollinearity was tolerance < 0.10 or equal to a VIF >10 (Ghozali, 2016).

Table 2. Multicollinearity Test Results

Model	Collinearity Statistics	
	Tolerance	VIF
X1 (good governance)	.948	1.054
X2 (village autonomy)	.677	1.478
M (commitment of village apparatus)	.695	1.440

a. Dependent Variable: Y; Village financial management

Data source: processed in 2019

Seen from Table 2 above, obtained VIF for all independent variables <10 and tolerance >0.10. It is concluded that the regression model is free from multicollinearity.

Heteroscedasticity Test Results

Following are the results of heteroscedasticity testing, as shown in Figure 2:

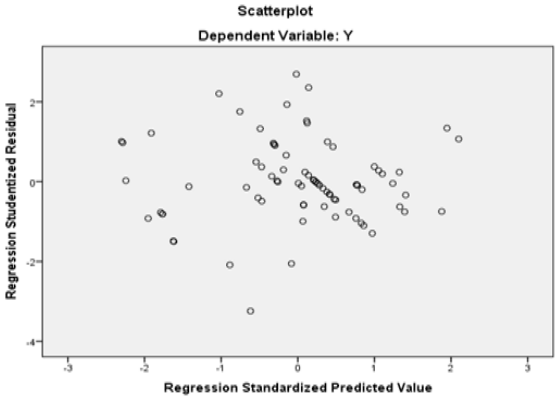

Figure 2. Heteroscedasticity Test Results

Figure 2 above visualizes the points spread above and below the number 0 on the Y-axis. It can be concluded that heteroscedasticity does not occur in the regression model.

Discussions

First Hypothesis Testing Results

The results of the first hypothesis test are presented in table 3 below.

Table 3. First Hypothesis Testing Results

Independent Variable	Beta	t_{count}	t_{table}	Sig	Description
Implementation of Good Governance (X1)	0.074	2.157	1.994	0.005	H_1 accepted

Dependent variable: Y (financial management of village funds)

Data source: processed in 2019

Table 3 above showed that tcount (2.157) ttable (1.994) and Sig. (0.005) < (0.05). This shows that Howas rejected and H1was accepted. Thus, the results of this study accepted the first hypothesis which states that good governance affects the financial management of village funds. This means that the better the good governance, the better the village financial management. The results of this study are by the principle of financial management of village funds in article 2 of Regulation of Ministry of Home Affairs No. 20 of 2018 which states that village financial management is managed based on the principles of transparency, accountability, and participation and are carried out in an orderly and budgetary discipline manner.

This also in line with Kartika's study (2012) which consider the community participation influences financial management of village funds in term of not only the planning, implementation, and supervision, but also, more importantly, is community awareness to be involved in developing villages for this could be a solution to advance village development. However, the results of Tumbel's study (2016) showed that in terms of the use and management of village funds, there is still minimal associated with community involvement or participation. Transparency for village financial management cannot properly provide open, honest, and broad information to the community about the administration of the village government. In the existing transparency is there only the fulfillment of obligations. Therefore, it is difficult for the community to know, provide input, evaluate, and assess the course of financial management of village funds.

The results of this study are in line with Sangki's study (2017) that there is no openness/transparency regarding the budget managed by the village government in the implementation of the budget. Thus, the general public does not know in detail about the village budget. Moreover, this transparency process does not bring a positive impact on existing governance and the openness of the government in making policies unknown to the public. A study by Atmaja (2016) also concludes that the public cannot yet access financial information for the village government has not provided administrative and information access. However, the study by Isniatul Khilmiayah (2016) showed that financial implementation is transparent. This shows that the more transparent the financial management and financial reporting, the more the financial management of village funds as a whole will improve.

The findings of this study are in line with the study by Gayatri (2017) that showed that accountability affects the financial management of village funds. However, the findings were in contrast with the results of a study conducted by Siti Ainul

(2017) where the accountability of financial management of village funds had not gone well due to the lacking Human Resources implementation team in making administrative reports. Therefore, more guidance and supervision from the regional government was needed.

Second Hypothesis Testing Results

The results of the second hypothesis test can be seen in Table 4 below.

Table 4. Second Hypothesis Testing Results

Independent Variable	Beta	t_{count}	t_{table}	Sig	Description
Village Autonomy (X2)	0.777	11.442	1.994	0.005	H_1 accepted

Dependent variable: Y (financial management of village funds)

Data source: processed in 2019

Table 4 above shows that tcount (11.442) ttable (1.994) and Sig. (0.005) < (0.05). This indicates that Ho was rejected and H1 was accepted. Therefore, the results of this study accept the second hypothesis which states that village autonomy affects the financial management of village funds.

Village autonomy is an authority of the village head and village apparatus to manage their households independently to increase the prosperity of the village community. The findings of this study state that village autonomy can affect the financial management of village funds. This means that village autonomy gives authority to the village head and village apparatus to manage their finances to increase the prosperity of the people in the village.

These findings are in line with the study of Hanura (2015) that village autonomy influences the management of the village budget including village funds therein. In contrast, a study by Aziz (2016) stated that village autonomy did not affect village financial management.

Third Hypothesis Testing Results

The results of the third hypothesis test can be seen in Table 5 below.

Table 5. Third hypothesis Testing Results

Hypothesis	Beta	t_{count}	t_{table}	Sig	Description
Effect of the Implementation good governance on the financial management of village funds with the commitment of village apparatus as a moderating variable	0.819	12.452	1.994	0.005	H_1 accepted

Dependent variable: Y (financial management of village funds)

Data source: processed in 2019

Table 5 presents that tcount (12.452),ttable(1.994) and Sig.(0.005) < (0.05). This shows that Ho was rejected while H1 was accepted. Thus, the results of this study accepted the third hypothesis which states that the commitment of the village apparatus can moderate the relationship between good governance and financial management of village funds.

The commitment of the village apparatus is the commitment of the village apparatus to carry out their duties and responsibilities based on expertise, knowledge, and a good attitude. This study found that the better the commitment of the village apparatus, accordingly it can strengthen the relationship of good governance with the financial management of village funds. In this case, it is expected that the village head and village apparatus as well as the community in the village carry out the financial management of village funds utilizing transparency by involving the community in every activity and program carried out to develop the village.As a result of transparency, community participation will arise. Thus, the village head and village apparatus are obliged to be able to account for all activities and programs to the community.

The results of this study are in line with Kartika's study (2012) which states that community participation influences the financial management of village funds. However, it was not in line with Tumbel's study (2016) which stated that the use and management of village funds were still minimal about community participation.

Fourth Hypothesis Testing Results

The results of the fourth hypothesis test can be seen in Table 6 below.

Table 5. Fourthhypothesis Testing Results

Hypothesis	Beta	t_{count}	t_{table}	Sig	Description
The effect of village autonomy on the financial management of village funds with the commitment of village apparatus as a moderating variable	0.819	12.452	1.994	0.005	H_1 accepted

Dependent variable: Y (financial management of village funds)

Data source: processed in 2019

Table 6 describes that tcount(12.452) ttable (1.994) and Sig. (0.005) < (0.05). This shows that Ho was rejected and H1 was accepted. Thus, the results of this study accept the fourth hypothesis which states that the commitment of the village apparatus can moderate the relationship between village autonomy and financial management of village funds. This means that the stronger the commitment of the village apparatus can strengthen the relationship between village autonomy and the financial management of village funds.

High commitment from the village head and village apparatus in managing village development programs and activities following their expertise or authority can strengthen the financial management of village funds, which results in increased village development and community welfare. The findings of this study are in line with the study of Kamaliah (2017) which states that commitment has a bearing on the successful implementation of village fund allocation. Meanwhile, Atmadja's study (2018) was not in line with this study for that study showed that the commitment of the local government did not affect the success of village budget management.

Conclusions And Recommendations

Conclusions

1. There is an influence of the implementation of good governance on the financial management of village funds.
2. There is an influence of village autonomy on the financial management of village funds,
3. Commitments to the village apparatus canmoderate the relationship between the implementation of good governance and the financial management of the village fund.

Recommendations

This study was limited to the object of the study which was only in villages in Kempas sub-district, Indragiri Hilir Regency. Therefore, it did not provide a clear picture of the financial management of village funds. Thus, more studies were needed in other villages in Indonesia. This study studied the variables of good governance, village autonomy on the village financial management, and the commitment of the village apparatus as a moderating variable. For this reason, other variables are needed to improve village financial management such as the use of accounting information systems, government internal control systems, human resources competencies, and others.

Conflict of Interest

The authors declare no conflict of interest with this research paper.

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Issue Article

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DIFFUSION OF SEXUAL VIOLENCE PREVENTION AND HANDLING POLICY INNOVATIONS (PPKS) IN THE RIAU

Abstract: *One area of concern in realizing gender forms is something that attracts gender attention. The purpose of this study is to analyze the diffusion process of policy innovations of the Minister of Education and Culture Number 30 of 2021 concerning the Prevention and Handling of Violence (PPKS) in the academic community at the University of Riau. The data used is primary data using 100 respondents from the academic community. The analytical method used is descriptive quantitative by spreading the research through google form. The results showed that most of the samples showed the results were at the implementation stage. This shows that the majority of the Riau University academic community have known, made decisions to accept policies and implement policies in daily life related to the Minister of Education and Culture Policy Number 30 of 2021 concerning Sexual Prevention and Treatment (PPKS) in Higher Education.*

Key words: *Gender, PPKS, Diffusion, Innovation, Implementation, Permendikbudristek.*

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Introduction

Gender is an important element in development, this is because all aspects related to development or sub-development will involve and come into direct contact with humans, meaning that humans or society are the main essence of development in a broad sense.

The development paradigm in any angle needs to see the relationship between the needs and interests of the community as the main factor of development [1].

The world's high attention and appreciation for the achievement of gender justice and equality as part of the success of development goals, requires every country to play a role in achieving development targets in all lines of development[2], [3], including Indonesia. The Universal Declaration of Human Rights (UDHR) in 1948 is one of the international human rights instruments in the realization of promoting and encouraging human rights and freedom as the foundation of justice, freedom and peace [4].

The agenda for the Sustainable Development Goals (TPB/SDGs) was formulated at the global level by involving the leaders of 193 UN member countries at the end of September 2015 raising the issue of gender in the fifth goal, namely achieving gender equality[5]. Gender mainstreaming is part of the development strategy in achieving gender equality and justice[6]–[8]. Gender equality and social inclusion (GESI) requires the implementation of equitable development in all lines of society including gender, women and children. Therefore, development policies that are in favor of gender equality are needed.

One area of concern in realizing gender equality is gender inequality in the form of sexual violence. After the collapse of the New Order regime in 1998 and the entry of the reformation era, many conflict events occurred in Indonesia and women have always been the target of various forms of violence, including sexual violence. Violence, discrimination and sexual violence against women is one of the violations of human rights in Indonesia. Based on data compiled by The National Commission on Violence Against Women of the Republic of Indonesia —commonly referred to as Komnas Perempuan—throughout 2020 there were 2,389 cases of violence and 53% of them were sexual violence.

The complexity of social problems regarding development can be sourced from injustice, including gender inequality, then if it is explored more deeply, it is the women who are often the most disadvantaged. For example, women's participation in access, many women do not have the same access as men both in decision making or opportunities to education, especially for women in rural areas who are vulnerable to dropping out of school[9]. The basic reason is the view of rural communities who still see that women cannot be separated from their duties and functions in the domestic area, in practice their role as mothers and taking care of the family is narrowed, so that it is considered that there is no need for higher education and developing their potential outside of domestic work.

According to the media *Kumparan News* published on November 12, 2021, there are 53% of violence against women that occurs not only in personal spaces, but also in public spaces such as educational institutions. More than 67 cases of sexual violence that occurred in the educational environment. Violence occurs from students to students, lecturers to lecturers, or other employees and workers. The head of Komnas Perempuan, Andy Yentritani, revealed that many cases of sexual violence were not reported to legal channels because they were considered consensual behavior.

Based on the results of a survey conducted by the Ministry of Religion of the Republic of Indonesia in 2019, it was revealed that there were 1,011 cases of sexual violence on campus. Meanwhile, the results of a survey conducted by the Ministry of Education and Culture of the Republic of Indonesia revealed that 70% of students, the academic community, educators, and employees stated that cases of violence did occur on campus.

In the era of globalization with the advancement of sophisticated technology, many women do not know and are not aware that they have been sexually harassed. This happens because of ignorance of the definition of sexual harassment. Things that always happen and are experienced by women when complaining and reporting sexual harassment problems are always being pressured or intimidated so that the perpetrators do not dare to speak up, even superiors always ask for evidence of the abuse experienced by the victim[10], [11]. In fact, it is very difficult to prove because it is nearly impossible for the victim to have recorded a video when she was harassed by the perpetrator. This is why many abusers are left untouched by the law and never brought to justice.

So far, there is no legal umbrella for sexual violence and harassment in the Higher Education environment so that perpetrators of sexual harassment are free to roam and victims of harassment so far have not dared to report and have not received legal protection. Slowly but surely, one by one the problems of sexual harassment that occurred on campus were exposed in the public media, cases of sexual harassment involving well-known universities in Indonesia.

In response to this condition, the Minister of Education, Culture, Research, and Technology (Mendikbudristek) Nadiem Makarim made a policy by issuing Permendikbud Number 30 of 2021 concerning the Prevention and Handling of Sexual Violence (PPKS) in Higher Education as one of the policy steps to address gender inequality in education. forms of sexual violence. This regulation is very important to be implemented immediately, because the problems of sexual harassment that have been detected so far are only a few of the many problems of sexual violence in universities that have not been revealed, so cases of violence in universities that have occurred so far are like pile of icebergs.

Minister of Education and Culture Regulation Number 30 of 2021 concerning the Prevention and Handling of Sexual Violence (PPKS) in Higher Education is the latest idea issued by the Minister of Education and Culture[12]. This Permendikbud is a regulation or legal umbrella for the Prevention and Handling of Sexual Violence (PPKS) in Higher Education which must be known, understood and implemented by the entire academic community in Higher Education.

Development basically aims to improve people's lives, both men and women as subjects of development, including the point in it is to achieve gender justice. In order for the development program as outlined in the policy to achieve its goals and objectives, development communication is required in delivering the program. One of development communication is in the form of innovation diffusion in development. Diffusion of innovation is a form of communication to convey development programs to the target community so that the objectives of the program can be achieved properly.

For the implementation of government programs through Permendikbud Number 30 of 2021 concerning the Prevention and Handling of Sexual Violence (PPKS) in Higher Education to realize gender equality and eliminate sexual violence, an appropriate delivery process is needed to the program target community. Therefore, the study of the diffusion of innovations on these government programs. Based on the above and the limited study of the diffusion of innovations in gender development, especially those related to sexual violence, it is necessary to study the diffusion of innovations against the Minister of Education and Culture Regulation Number 30 of 2021. Then in addition to facing the complexity of the existing issues, gender studies to date still have its own charm to continue to be studied as a response to existing social phenomena. Therefore, efforts are needed to find solutions through various sciences, especially in social science disciplines. This study aims to analyze the process of diffusion of policy innovations from the Minister of Education and Culture Regulation Number 30 of 2021 concerning the Prevention and Handling of Sexual Violence (PPKS) in the academic community at the University of Riau.

Literature Review

The concept of gender was born as a result of sociological and cultural processes related to the division of roles and positions between men and women in a society [13]. This shows that in the process of community development, habits, social and cultural values have been formed that distinguish a person's role based on gender[14], [15]. The social roles of women are usually considered second class and different from that of men[16], [17]. Concern about class differences will lead to easy oppression, violence and inequality.

The term gender focuses on the differences in the character of men and women based on socio-cultural constructions related to their nature, status, position, and role in society. Mosse in [18]explained that during the 1970s-1980s there were three approaches to women's studies, namely WiD (Women in Development), WaD (Women and Development), and GaD (Gender and Development). Each approach has different characteristics. The differences between the three can be seen as follows:

1. The WiD approach is strongly influenced by modernization theory thinking, which considers that women's backwardness is caused more by individual factors such as low education. This approach explains that the involvement of women in development activities is the main focus of overcoming inequality.
2. The WaD approach is influenced by the neo marxist feminist approach. The main focus of this approach looks at the relationship of women in the development process. The development process often leads to the marginalization of women. This is due to the existence of an unfair social, economic and political structure in society. The underdevelopment of women is considered to be the result of this unfair structure. The WaD approach sees that one form of impoverishment of one particular gender, in this case women, is caused by gender. There are several processes of marginalization of women due to gender differences that arise from various sources such as government policies, beliefs, religious interpretations, traditional beliefs and habits or scientific assumptions.
3. The GaD approach emerged in the 1980s, known as an effort to empower women. This approach is strongly influenced by the socialist feminist approach. GaD sees women as agents of change rather than passive objects in development. This approach criticizes the relationship between women's participation in the economy does not always raise the status of women. The low level of participation is correlated with the low status of women but the involvement of women is actually considered to plunge women, because they will be made into virtual slaves. The GaD approach emphasizes the need for empowerment in women and changing social constructions which are only objects in the development process. This approach understands development goals for women in terms of independence and internal strength and places more emphasis on making laws that address equality between men and women.

The theory of diffusion of innovations popularized by Everett Rogers in 1964. In his book entitled "Diffusion of Innovations" explains diffusion is a process when an innovation is communicated through several channels with a certain period of time

in a social system. Rogers explained that there are 5 stages in the diffusion of innovations, namely knowledge, persuasion, decision, implementation and confirmation. The five stages of innovation adoption are [19]:

1. The knowledge stage. In this stage, a person does not yet have information about the new innovation. For that information about the innovation must be conveyed through various communication channels. So that people know the existence of this innovation.
2. The persuasion stage. In the second stage, more of the process of measuring the benefits that will be obtained from adopting the innovation personally. Based on evaluation and discussion with others, a person will begin to tend to adopt or reject the innovation. At this stage there is a process of convincing the public that the innovation has many advantages over the previous condition. This stage is more effective if delivered through Personal Networks, namely figures or people who are influential in the community and are close to the target users of the innovation.
3. The decision stage. In this stage, a person makes the final decision whether to adopt or reject the innovation. However, after this decision has been taken, changes can still be made if deemed necessary.
4. Implementation stage. In this stage, a person begins to carry out innovations by continuing to learn about the innovation.
5. The confirmation stage. This stage is in the form of seeking other people's opinions from various sources whether the decision is correct or whether it is necessary to abandon the innovation.

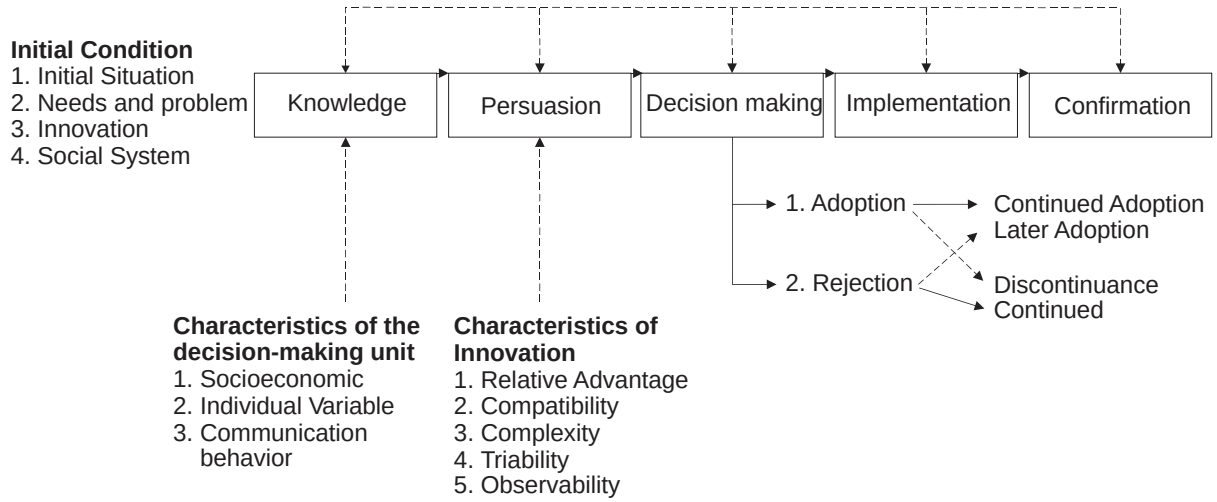

Figure 1. Rogers' Innovation Diffusion Process Model.

Society in responding to innovation can be grouped into 5 groups. According to Rogers and Shoemaker [20], people who face a diffusion of innovation absorption (innovation diffusion) are grouped into the following groups [21]:

1. Innovators are people who basically like new things, and are diligent in conducting experiments.
2. Early adopters, namely people who are influential, where friends around them get information, and are people who are more advanced than those around them.
3. Early majority, namely people who accept innovation one step ahead of the average of most other people.
4. Late majority, namely people who are only willing to accept an innovation if according to their assessment everyone around them has accepted the innovation.
5. Laggards, which is the last layer in accepting an innovation.

This theory will be able to explain the diffusion of innovation in the Riau University Academic Community which has entered the adoption stage and how the Riau University community group responds to policy innovations for the Prevention and Handling of Sexual Violence (PPKS). Identification of problems using the diffusion of innovation theory will facilitate decision/policy makers regarding appropriate policy recommendations in accordance with existing conditions in the field.

According to[22], in the Efforts to Prevent Sexual Violence, it shows that the Minister of Education, Culture, Research and Technology Regulation number 30 of 2021 is seen as a progressive step in the midst of anxiety over the high level of sexual violence in universities, then the formulation of rules and prevention mechanisms More technically,

sexual violence as a derivative rule from Permendikbudristek in higher education must involve all actors from the academic community.

Data And Methodology

This study uses primary data, with a population of 36,960 people consisting of 1,452 lecturers (3.93%), 428 educators (1.15%) and 35,080 students (94.91%). The sample in this study was 100 people who were determined by the Slovin formula, then the stratification method determined the number of samples from each academic community at the University of Riau based on their respective proportions. The analytical technique used to analyze the study of the diffusion of innovation policies on prevention and handling of sexual violence (PPKS) at the Riau University academic community uses quantitative descriptive analysis method by distributing research questionnaires via google form to the Riau University academic community as the research sample.

Results

The research on the diffusion of innovation policies on prevention and handling of sexual violence (PPKS) in the Riau University academic community according to that contained in Permendikbudristek Number 30 of 2021 uses the theory of diffusion of innovations from Everett Rogers, where there are 5 stages in the diffusion of innovations, namely knowledge, persuasion, decision, implementation and confirmation. The results of the research based on each stage in the diffusion of innovations in the prevention and handling of sexual violence (PPKS) policies in the Riau University academic community as outlined in Permendikbudristek Number 30 of 2021 concerning Efforts to Prevent Sexual Violence in Higher Education are described in table 1 below:

Table 1. Research Results of the Stages of Diffusion of Innovations from the Riau University Academic Community on PPKS Policy in Permendikbudristek Number 30 of 2021

No.	Innovation Diffusion Stage	Respondents	Percentage (%)
1	Knowledge	-	-
2	Persuasion	-	-
3	Decision making	20	20
4	Implementation	73	73
5	Confirmation	7	7

Source: Researchers' Data (2022)

From the results of the study, it is known that there is no academic community at the University of Riau who is in the early stage, namely the stage of knowledge and persuasion in the diffusion of innovations towards the policy of preventing and handling sexual violence (PPKS) in Permendikbudristek Number 30 of 2021. While in this third stage there are 20 percent of the Riau University community who are already at the decision-making stage of the prevention and handling of sexual violence (PPKS) policies at the University of Riau in Permendikbudristek Number 30 of 2021. The fourth stage in the innovation diffusion policy is the implementation stage which is the most common stage in the Riau University academic community in the policy of preventing and handling sexual violence (PPKS), as many as 73 percent of respondents are at this stage. Then in the last stage, namely the confirmation stage, there are only 7 percent of respondents who are in the confirmation stage in the policy on the prevention and handling of sexual violence (PPKS) at the University of Riau as stated in Permendikbudristek Number 30 of 2021.

Discussion

The following explains the discussion of the results of the research on the diffusion of innovation policies on prevention and handling of sexual violence (PPKS) in the academic community of the University of Riau based on Permendikbudristek Number 30 of 2021 concerning Efforts to Prevent Sexual Violence in Higher Education Environments by referring to the stages of diffusion of innovations from Everett Rogers.

Stage of Knowledge

The knowledge stage is the early stage in policy diffusion and innovation. At this stage a person is considered to have no information about new innovations, namely in this case the policy of preventing and handling sexual violence. Therefore, information regarding the PPKS policy needs to be conveyed or disseminated in various communication channels using mass media, social media and electronic media, so that the public becomes aware of the existence of innovations related to PPKS policies, especially in the university environment contained in Permendikbudristek Number 30 of 2021 concerning Efforts to Prevent Sexual Violence in Higher Education.

The results of the study indicate that there is no Riau University academic community, namely lecturers, students, and educators who are at this stage related to PermendikbudristekNumber 30 of 2021

concerning Efforts to Prevent Sexual Violence in Higher Education. This means that all the academics of the University of Riau already know the policies for preventing and handling sexual violence (PPKS) which are described in Permendikbudristek Number 30 of 2021 concerning Efforts to Prevent Sexual Violence in Higher Education. This happens because the Riau University academic community is a group of people with higher education levels making it easier for them to access policies related to PPKS that are conveyed through mass media, social media and electronic media, including PermendikbudristekNumber 30 of 2021 concerning Efforts to Prevent Sexual Violence. in the College Environment.

Based on these results, it is no longer necessary to disseminate information regarding Permendikbudristek Number 30 of 2021 concerning Efforts to Prevent Sexual Violence in Higher Education in the Riau University academic community. So that it can be said that the Riau University academic community is the early majority, namely the group of people who accept innovation one step ahead of the average person in accepting PPKS policy innovations related to Permendikbudristek Number 30 of 2021 concerning Efforts to Prevent Sexual Violence in the College Environment.

Stage of Persuasion

The persuasion stage is the second stage, after the knowledge stage in the innovation diffusion process. At this stage a person will form an attitude in himself to be able to approve and disapprove of an innovation. In the persuasion stage, someone will find out more information about the innovation, including the advantages or disadvantages of using the information. Based on the results of the research that has been carried out, it shows that there are no respondents or 0% of the Riau University academic community, both lecturers, students, and education staff who are at this stage related to Permendikbudristek Number 30 of 2021 concerning Prevention and Handling of Sexual Violence (PPKS) in the Higher Education Environment.

Based on the results of the study, it can be seen that respondents, both lecturers, students, and education staff at the University of Riau have agreed to Permendikbudristek Number 30 of 2021 as a legal tool to ensnare perpetrators of sexual violence at the University of Riau and respondents are able to take appropriate and appropriate attitudes if there is a problem of sexual violence in the Riau University environment.

Stage of Decision Making

The decision-making stage is part of the problem-solving process, in the problem-solving process, decision-making includes one of the stages called the mile stone or referred to as a crucial point and must be passed. The decision-making stages are carried out through a process of analysis, mapping and simulation by taking into account various possible alternatives that are most effective and efficient as well as realistic to be implemented.

Based on the results of the research on the diffusion of innovation policies on Prevention and Handling of Sexual Violence (PPKS) at the Academic Community of Riau University, the decision-making stage is the third stage after the knowledge stage and the persuasion stage in the innovation diffusion process and it can be seen that there are 20 respondents or 20% of the community. academics, both lecturers, students, and education personnel who are included in the decision-making category regarding Permendikbudristek Number 30 of 2021 concerning the Prevention and Handling of Sexual Violence (PPKS) in Higher Education.

Stage of Implementation

The majority of the samples showed the results were at the implementation stage. This shows that 73% of the Riau University academic community has known, made a decision to accept policies and implement policies in daily life related to the Minister of Education and Culture Policy Number 30 of 2021 concerning the Prevention and Handling of Sexual Violence (PPKS) in Higher Education. One year of implementation of the policy and 73% are already in the implementation stage, it means that the adopter type of the Riau University academic community is in the early adopter type.

Early adopters have the characteristics of those who in the majority together become the early followers of an innovation. Early followers showed a quick response to implementing innovations because it was driven by internal factors that occurred at Riau University after the enactment of Permendikbudristek Number 30 of 2021. Internal factors could be the characteristics of adopters who are in higher education, alleged cases that occurred at Riau University and the formation of a Prevention Task Force and Handling Sexual Violence at the University of Riau. So that information regarding Permendikbudristek Number 30 of 2021 can easily reach the academic community and be immediately responded to in an individual or institutional decision at the University of Riau.

The implementation stage will be easy to carry out in the diffusion of innovation if the community has decided to use innovation because innovation is considered to provide benefits and has positive value for adopters [23]. Positive values are also found in Permendikbudristek Number 30 of 2021 including:

1. The policy provides clear information on what is or is not included in sexual violence so that the target of the policy can avoid themselves from being

either perpetrators of violence or victims of sexual violence

2. The policy provides comfort to the academic community that they are protected from sexual violence.

3. Policies are able to facilitate the needs of victims of violence through implementation standards for handling sexual violence

Stage of Confirmation

The results of the research which are in the confirmation stage on the diffusion of the Innovation Policy of the Minister of Education and Culture Number 30 of 2021 concerning the Prevention and Handling of Sexual Violence (PPKS) in Higher Education are 7 people or 7% of the total sample. At this stage a person looks for reinforcement for the decisions that have been taken to participate[24]. Confirmation is done by going through the process of rethinking policy innovations to be continued or looking for other innovation alternatives. Strengthening will direct individuals to ensure their agreement or disapproval of each of the issues in Permendikbudristek Policy Number 30 of 2021.

Confirmation can also be done through group strengthening such as the results of research conducted by Hajaroh. The results of his research show that confirmation is in the form of strengthening the group[25]. Group strengthening within the University of Riau is still low. The low group reinforcement is shown only 7% of the sample is in the confirmation stage and is involved in group strengthening. Discussions on the issues contained in Permendikbudristek Number 30 of 2021 are still considered not feasible to be discussed together in a discussion group. This tendency can be caused by many things that need further research.

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Issue Article

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CURRENT STATE OF SOCIO-ECONOMIC DEVELOPMENT OF THE REPUBLIC OF KARAKALPAKSTAN AND DEVELOPMENT STRATEGY

Abstract: *The article deals with the current state of socio-economic development of the Republic of Karakalpakstan. And also made an analysis of the factors influencing the development of the region.*

Key words: *gross domestic product, industrial production of the region, investment, economic potential, export-import activity.*

Language: *Russian*

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СОВРЕМЕННОЕ СОСТОЯНИЕ СОЦИАЛЬНО-ЭКОНОМИЧЕСКОГО РАЗВИТИЯ РЕСПУБЛИКИ КАРАКАЛПАКСТАН И СТРАТЕГИЯ РАЗВИТИЯ

Аннотация: *В статье рассматривается современное состояние социально-экономического развития Республики Каракалпакстан. А также сделан анализ факторов влияющих на развитие региона.*

Ключевые слова: *внутренне валовый продукт, промышленное производство региона, инвестиция, экономический потенциал, экспортно-импортная деятельность.*

Введение

Республика Каракалпакстан расположена на северо-западе Узбекистана, ниже реки Амударья, в южной части Аральского моря. Каракалпакстан обладает большими природными, минерально-сырьевыми и сельскохозяйственными ресурсами, трудовым потенциалом, дорожными, транспортными и инженерно-коммуникационными сетями, производственной инфраструктурой, удобным географическим расположением и значительной территорией.

Валовой региональный продукт (ВРП) за пять лет увеличился на 32% и составил 26,3 триллиона сумов, промышленное производство выросло с 6,8 триллиона сумов до 16,6 триллиона сумов (рост 30%)[5].

Производство сельского хозяйства увеличилось на 20%, с 5 триллионов сумов в 2017 году до 12,3 триллиона сумов в 2021 году. Число действующих предприятий в регионе выросло на 59% с 19,2 тысячи в 2017 году до 27,4 тысячи в 2021 году. В сфере развития инфраструктуры в 2017-2021 годах было проложено и

отремонтировано 2278 км водопроводных сетей.

Основная часть.

За последние 5 лет достигнуты значительные позитивные результаты в социально-экономическом развитии Каракалпакстана. Валовой внутренний продукт (ВРП) увеличился на 32%, промышленное производство выросло на 30%, сельхозпроизводство на 20%. Число действующих предприятий в регионе возросло на 59%.

За пять лет в регионе было введено в строй 4 390 тыс. кв.м. жилья, создано 15,2 тыс. мест в дошкольных учреждениях, 38,3 тыс. мест в школах. С 2017 года охват детей дошкольным образованием вырос с 32% до 75%. За этот же период создано примерно 127 тыс. новых рабочих мест. За период 2011-2020 гг. ВРП на душу населения вырос в 6,9 раз.

Экономика Каракалпакстана в основном сосредоточена на производстве продукции сельского хозяйства (хлопка, зерна, риса и т. д.) и промышленного производства. Доля валового регионального продукта (ВРП) региона составляет 2,3% ВВП страны (таблица1), а на душу населения - 40,7% от среднего национального уровня. Доля аграрного сектора в ВРП в последние годы снизилась, а доля промышленности и сферы услуг увеличилась. Хотя доля общих услуг в ВРП составляет 48,5 процента, она остается ниже среднего по стране (52 процента).

Таблица 1. Роль Республики Каракалпакстан в социально-экономическом развитии Узбекистана,%[6]

Показатели	2000 г.	2006 г.	2012 г.	2021 г.	Место в стране (2021 г.)
Население	6,1	6,0	5,7	5,7	10
Валовой региональный продукт	3,7	3,6	3,3	4,1	11
Промышленные продукты	2,3	1,6	1,6	4,6	8
Товары народного потребления	2,6	1,3	1,5	2,0	13
Инвестиции в основной капитал	4,8	5,2	5,1	3,7	11
Иностранные инвестиции и кредиты	1,4	6,7	7,9	1,6	8
Строительные работы	5,6	3,7	4,6	3,7	10
Розничный товарооборот	2,9	2,8	3,1	3,4	12
Рыночные услуги		1,7*	2,9	3,0	11
Внешнеторговый оборот	1,2	0,8	0,8	2,3	8
в т.ч. Экспорт	1,6	1,0	0,8	3,3	4
Импорт	0,7	0,7	0,8	1,2	11

В плане социальной защиты населения и создания достойных условий жизни имеет большое значение решение таких задач, как обеспечение населения достойным жильем. В частности, за последние пять лет в регионе было введено в строй 4390 тысяч квадратных метров жилья, создано 15,2 тысячи мест в дошкольных учреждениях, 38,3 тысячи мест в школах. За этот же период было создано порядка 127 тысяч рабочих мест.

Как показал Индекс деловой активности (ИДА), рассчитанный Центром экономических исследований и реформ в январе месяце в региональном разрезе, Республика Каракалпакстан продемонстрировала самый высокий рост. Принятие постановления Президента «О мерах по комплексному социально-экономическому развитию Республики Каракалпакстан в 2020-2023 годах» от 11 ноября 2020 года придало новый импульс продвижению важнейших отраслей экономики в соответствии с «точками роста» городов и районов [1] стал правовым стимулом этого достижения.

Несмотря на значительный рост промышленного производства в последние годы, Каракалпакстан занимает одно из последних мест в промышленной структуре страны. Положительные изменения, которые произошли в последние годы, в значительной степени обусловлены централизованными инвестициями в развитие топливно-энергетического комплекса. Однако существенных изменений в развитии местных проектов не произошло. В результате относительная доля промышленного производства на душу населения почти в 4 раза ниже, чем на национальном уровне.

В регионе 22 крупных промышленных предприятия, кроме того, в регионе действуют более 50 совместных предприятий в легкой и пищевой промышленности. Тем не менее, большая часть промышленной продукции, потребляемой в регионе (за исключением некоторых пищевых продуктов), поставляется извне. Более 91,8% легкой промышленности является хлопкоочистительной промышленностью [6].

Доля Каракалпакстана в валовой продукции сельского хозяйства страны составляет около 3%. Около 29% населения занято в аграрном секторе (включая дехканские хозяйства). В то же время мелиоративное состояние 77,3 % обрабатываемых земель в регионе ухудшилась. По привлечению

инвестиций в экономику Каракалпакстан занимает 8-е место среди регионов страны, 3,7% инвестиций в основной капитал и 1,6% иностранных инвестиций приходится на регион. Конечно, преобладающая часть этих показателей составляет централизованные инвестиции, ориентированные на развитие топливно-энергетического комплекса и на снижение отрицательного влияния экологической катастрофы Аральского моря.

Регион занимает 11-е место по объему услуг на душу населения (50,6% от среднего уровня по страны) и является одним из наименее развитых регионов. Финансовые услуги составляли 35,4%, туристические услуги 11%, торговля и общепит 48%, коммунальные услуги 27,4 процентов от среднереспубликанского показателя.

Что касается экспортного потенциала, то регион занимает 4 место, основная часть экспорта - это топливно-энергетическая продукция, в основном природный газ. Доля экспорта региона в объеме экспорта страны в 2000-2021 годах увеличилась с 1,6% до 3,3%, а доля импорта увеличилась с 0,7% до 1,2%.

В целом, экономика Республики Каракалпакстан, как в аграрном, так и в промышленном секторах (за исключением топливно-энергетического сектора) развивается на недостаточном уровне. Из-за низкого уровня местных инициатив в использовании существующего природного и экономического потенциала региона реализация новых региональных проектов остается не на должном

Политическая и экономическая ситуация в соседних государствах (Казахстан, Туркменистан), экономические и социальные процессы в соседних регионах (Хорезм, Бухара, Навои), а также окружающая среда и изменение климата, а также макроэкономические процессы оказывают влияние на внутреннюю социально-экономическую ситуацию в Республике Каракалпакстан.

Макроэкономические факторы.

Глобальные тенденции и тренды во внешних рынках, изменение конъюнктуры рынка товаров, услуг и труда, условия и темпы экспортно-импортной деятельности, а также и макроэкономическая стабильность той или иной страны могут косвенно повлиять на экономическую и социальную ситуацию в Республике Каракалпакстан. Последствия этих процессов могут отразится в изменениях параметров инфляции, объемов иностранных инвестиций, спроса на производимые товары и услуг [2].

Например, по результатам эконометрического анализа выявлено, что 10% увеличение или уменьшение централизованных инвестиций в экономику региона может повлиять на реальный рост ВВП на 2-2,5%. Рост инвестиций в регионе оказывает мультипликативное влияние на рост экспорта.

Сотрудничество с соседними регионами.

Республика Каракалпакстан граничит с Хорезмской, Навоийской и Бухарской областями, которые связаны между собой магистральными сообщениями международного значения.

Что касается экономического потенциала, то регион значительно ниже соседних Навоийской и Бухарской областей. Эти регионы относительно привлекательны для привлечения инвестиционных проектов. С другой стороны, с относительно развитыми соседними регионами Каракалпакстан имеет возможность реализовать межрегиональные проекты, развивать перерабатывающих отраслей промышленности по цепочки добавленной стоимости.

Изменение климата.

Изменение климата в глобальном масштабе создает множество негативных проблем для региона. Повышение температуры воздуха и снижение влажности также может привести к отрицательным последствиям в экономики региона. Это можно рассматривать на примере влияние глобального потепления на водный баланс региона.

По оценкам экспертов Всемирного банка, ежегодный объем воды, протекающая в реке Амударья в весенне-летний период, уменьшается из-за повышения температуры воздуха. Согласно ожиданиям экспертов, к 2050 году температура воздуха в Центральной Азии к 2050 году вырастет на 1,5-2 градуса Цельсия, из-за этого и других неблагоприятных факторов, Площадь под орошением может быть уменьшена на 50 процентов. Такое изменение климата, несомненно, оказывает негативное воздействие прежде всего на сельское хозяйство и другие отрасли и сферы экономики.

Транспортные проблемы.

По территории Каракалпакстана проходят международные железнодорожные и магистральные автомобильные дороги, соединяющие регион с Россией, Казахстаном и европейскими странами. Несмотря на благоприятное географическое положение региона, транспортная инфраструктура эффективно не используется в развитии региональной экономики. Доступ к транспортным коридорам, прежде всего к железнодорожной системы расширяет возможности и повышает экономический потенциал г. Нукуса, Турткульского, Элликкалинского, Берунийского, Ходжейлийского, Тахиаташского и Кунградского

районов. Однако Тахтакупирский, Чимбайский, Кегейльский, Бозатауский и Караузакский районы региона не связаны с железной дорогой. По этому этих территорий можно классифицировать как «тупиковых» с точки зрения транспортной инфраструктуры [9].

Экологическая ситуация и ее последствия.

Республика Каракалпакстан находится в сложной экологической ситуации, связанной с Аральским морем. Из-за загрязнения, деградации и засоления сточных и подземных водных ресурсов накапливаются пестициды и другие сельскохозяйственные токсичные вещества. Протекающие каналы и дренажные воды в Сырдарью и Амударью приводит к увеличению засоленности почвы, хлорида и сульфата.

Особую озабоченность вызывает сегодняшнее состояние земли, посевных площадей. Проведенные исследования состояния почвы показали, что 56,6 тысяч гектаров всей орошаемой земли в Каракалпакстане сильно засолены, а засоленность 171,3 тысяч гектаров земель (34%) - среднего уровня. Засоленность земли весьма высока в Караузякском, Тахтакупырском районах. Вследствие этого сокращается урожайность хлопка, пшеницы, бахчевых культур, выращенных на высоко- и среднезасоленных посевных площадях. Именно с этим, а также с невозможностью нормального выращивания таких видов бахчевых культур как дыня, тыква и т.д., связано увеличение количества больных желудочно-кишечными, сердечно-сосудистыми, онкологическими заболеваниями, болезнями органов дыхания и т.д. В Республике Каракалпакстан регистрируются самые высокие показатели заболеваемости туберкулезом.

По существу, влияние окружающей среды на состояние здоровья человека происходит посредством воздуха, воды и почвы, а также через продукты питания, выращенные в данной среде. Анализ государственного контроля за воздухоохранной деятельностью предприятий показал, что валовой объем вредных веществ, поступающих в воздушный бассейн, колеблется от 55,2 тыс. тонн до 63,0 тыс. тонн. Основной вклад в выбросы от стационарных источников вносят: Кунградское управление магистральными газопроводами (56,7%); «Тахиаташская ТЭС» (13,9%); УП «Шимолигазтаъминат» (13,8%); СП ООО «Uz-Kor Gas Chemical» (22,3%); Кунградский содовый завод (15,6%). Наибольшее загрязнение атмосферного воздуха пылью наблюдается с марта по ноябрь месяцы. Загрязнение фенолом наблюдается с апреля по ноябрь месяцы, основными загрязнителями атмосферы являются асфальтобетонные, известковые цеха и кирпичные заводы[8]. По официальным данным КК Гидромета, наблюдается превышение годовой концентрации пыли в 2,7 раза. Превышение годовой концентрации пыли объясняется местными метеорологическими условиями региона (усиленными ветрами, соле-пылевыми бурями с высохшего дна Аральского моря, малым количеством дней с осадками)[4].

Население РК употребляет воду из 45822 ручных кранов и 182 колодцев. Более 60% проб воды, взятых из этих источников питьевой воды (колодцы и трубчатые колодцы, ручные краны для выкачки подземных вод), не соответствовали санитарным требованиям по химическому составу и 10,0% - по бактериологическому составу.

Одним из основных источников загрязнения окружающей среды являются полигоны «твердых бытовых отходов» и сточные воды канализации. По данным коммунально-эксплуатационных управлений хокимиятов городов и районов, по Республике Каракалпакстан в 2021 году на полигоны были вывезены и захоронены 160,93 тыс.м^3 твердых бытовых отходов, из них 1,3 тыс.м^3 - нечистот. Канализацией охвачены в Тахиаташе - 17,7%, Кунграде - 7,0% и Ходжейли - 2,9% населения. В остальных городах и райцентрах централизованная канализация отсутствует[7].

Анализ работы городских очистных сооружений показывает, что за счет морально устаревшего оборудования очистных сооружений не соблюдается технологический режим со стороны обслуживающего персонала. Очистные сооружения эксплуатируются технически неграмотно, они практически не работают или отсутствуют.

Заключение.

В целом, социально-экономическое развитие Каракалпакстана, улучшение жизни населения и преодоление экологического кризиса в Приаралье являются приоритетными задачами государственной политики, важной частью стратегии развития Нового Узбекистана. Принимаемые меры призваны обеспечить совместное строительство Нового Каракалпакстана.

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Issue Article

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SYSTEM OF PREPARATION OF FUTURE TEACHERS FOR TUTORING ON THE BASIS OF MODERN APPROACHES

Abstract: *The article under discussion considers the system of preparation of future teachers for tutoring on the basis of modern approaches. Introduction of the principle of education individualization is more than a topical issue nowadays, that's why at present there appear prerequisites for development of tutoring as pedagogical activity, distinguished by individualized interaction between a teacher and a student. The author of the article believes that a qualitative breakthrough in the development and implementation of tutoring in higher education requires, first of all, creating a redundant educational environment, in which tutoring functions will be implemented and pedagogical conditions of creative thinking in the process of designing a new type of learning process will be created. The search for means to establish and maintain proactive attitude to student's own activity design in higher education institution, determination of value and social aspirations, active introduction of tutoring technologies into the educational process, increasing the importance of information resources are the key to dynamic development of tutoring activity in higher education institutions.*

Key words: *tutoring, teacher, modern approaches, individualization, learner, interaction, development, competence, educational program.*

Language: *English*

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Introduction

The modern system of economy and labor market in Uzbekistan require graduates to update constantly their professional competence in the educational space "throughout life". The key component of such education is the formation and support of an active educational position of the learner at all levels of education. At the same time, the system of modern domestic education does not fully meet these needs of society and the learner, because it is characterized by an insufficient degree of implementation of personality-centered approach and technologies of individualization of learning. Improvement of the educational process in this direction will contribute to the introduction of tutoring practices, providing support for the active educational position of students and giving them the opportunity to build their own individual educational trajectory. At the same time, there is a need to change the pedagogical activity of the teacher to perform tutor functions, although it should be noted that modern teachers are not sufficiently prepared to perform the role of a tutor.

Discussion

A tutor in modern education in Uzbekistan is a new profession, but in European history this profession emerged as early as in the 12th century exactly in English universities and had the imprint of a monastic, special meaning. This is justified by the fact that educational institutions were created on the historical basis of monastic life.

Tutoring originated in the oldest universities, such as Cambridge and Oxford, which are models of

decentralized higher education with students studying and living on campus for the duration of their studies. In the absence of educational standards and great academic freedom, the student needed a tutor who could help navigate the vast array of educational services available and match them to the student's personal abilities and needs. The tutor by establishing a dialogue with the student helped to determine which practical classes and lectures to attend, assisted in drawing up an individual study plan, supervised the fulfillment of professors' requirements and the students' readiness for examinations.

By the 17th century, the tutor became the main figure in the educational process, replacing the professor in the organization of individual academic work: he gathered one or two students around him who chose him as their tutor, chose the scope and range of knowledge necessary for students and independently took exams and tests according to the results of mastering the materials given by him. John Locke, the famous English educator who lived in the 17th century, pointed out that a tutor does not only ensure that a student learns knowledge: “The task of the tutor is to develop the child's potentialities, which would prepare him for the work of his life. Tutoring is a process of character, mind and body building. The goal of the tutor is not only to teach a child everything that is known, but to educate him or her in a love and respect for knowledge [1].”. In other words, during this period the tutor became a teacher and educator who produced a "unique", "singular" educational product that could not be measured by any standards and could not in principle be reproduced by anyone else.

There are many definitions of the word “tutor”. For example, the word *tutor* comes from the Latin tutor "protector, guardian," derived from the verb *tueri* "to watch, observe; to guard". From the dictionary "Terminology in the system of additional professional education" it follows that tutor is a person, a teacher who facilitates the learning process, whose task is to be a knowledgeable mentor of his students [5].

Researchers distinguish three main components of the modern understanding of the term tutoring [4].

1. tutoring - support (a type of pedagogical activity aimed at formation of independence and autonomy of the subject in solving educational tasks).

2. tutoring - accompaniment (assistance aimed at implementation of individual educational programs, project works, research activities).

3. tutoring - facilitation (activity aimed at assistance in professional, cultural and personal self-determination).

The teacher, acting as a tutor in relation to the students, builds a qualitatively different relationship with them. The tutor's roles, such as consultant, mentor, conductor, etc., are related to the content of the tutor-learner relationship and can be called "content roles". The teacher, acting in any of the content roles, establishes relations with the learner in different forms: command-subordinate; partnership; paternal. The teacher-tutor can also perform other roles - "formal" roles that reflect the form of different content relations. The role of the teacher- tutor as an "equal" is based on the principle "learner-centered," thereby recognizing the learner's autonomy in the educational space. According to N. S. Serdyukova, E. V. Posokhina, L. V. Serkh, the most common roles of the teacher- tutor are as follows [4]:

- an educational tutor who performs the role of a tutor whose activities are aimed at the groups of students who have difficulties in learning activities. Conducting interviews and consultations, the learning tutor together with students identifies their didactic problems, develops ways to solve them, determines the points of growth of the student and develops a program to achieve them;
- the tutor in the research activity or the scientific supervisor, whose activity is aimed at assisting and accompanying the learner in the course of his or her scientific research. Using reflexive technology, the tutor helps the students to analyze their scientific activity and the obtained results, to determine the further course of the research;
- the tutor in the project activity that promotes activation of the learner's activity in the field of social projecting. In the form of individual or group consulting the tutor helps the students to master the technology of social design, identify problems in the society and develop ways to eliminate them;
- the tutor as a social producer, whose activity is aimed at organizing for the students professional probations, social practices, mastering the space of the future educational route of the student's professional training;
- the tutor is a psychologist whose activity is aimed at creating a psychologically comfortable educational environment with the use of psycho-emotional relaxation techniques, individual counseling and group training;
- the tutor is a specialist in professional self-determination, who works with the student's motivation, using technologies of educational geography, career guidance cards, cooperation.

These and other types of formal tutor roles are performed by a teacher in the modern conditions of individualization of domestic education. All this characterizes the teacher's activity as a tutor from the point of view of the diversity and novelty of his/her tasks, including assistance to students in developing individual educational plans, organization of tutor support in educational networks, etc. Therefore, the introduction of tutoring in the educational system should be systemic, focusing on the organizational aspect of its construction. Tutor activity is a product of teachers' work division, which becomes more complicated in the system of modern multilevel education. The result of this division is the

independent functions of tutors as assistants, consultants, organizers, etc.

In the new conditions tutor activity performs several important functions:

- axiological, contributing to the formation of a moral personality, as well as such general cultural competences as the ability to understand the meaning of culture as a form of human existence and to be guided in their activities by modern principles of tolerance, dialogue and cooperation or readiness to tolerant perception of social and cultural differences, respectful and careful attitude to the historical heritage and cultural traditions;
- worldview function, which forms the modern human view of the world and directly correlates with axiological function. Namely the worldview function defines a vector of tutor activity as a whole and promotes the formation of necessary competences among which the most important are the following: possession of a culture of thinking, ability to generalize, analyze, perceive information, set a goal and choose ways of its achievement, ability to analyze worldview, socially and personally significant philosophical problems and use the knowledge about modern natural-science worldview in educational and professional activity, to apply methods;
- educational, aimed at harmonization of the educational environment on the basis of values and knowledge and also defining a number of important general professional competencies: capable of using the systematized theoretical and practical knowledge of humanities, social and economic sciences in solving social and professional problems; capable of implementing the programs of basic and elective courses in different educational institutions, applying modern methods of diagnostics of students' achievements;
- communicative, allowing to realize such competencies, as ability to organize cooperation of students and pupils, to include in interaction with parents, colleagues, social partners, interested in providing quality of educational process;
- managerial, regulating the process of choosing individual educational programs by students and teachers in their professional development trajectory and implemented in the following professional competencies: able to develop and implement cultural and educational programs for various categories of the population, including using modern information and communication technologies, professionally interact with participants in cultural and educational activities, to identify and use the possibilities of the regional cultural educational environment for the organization of cultural and educational activities and is able to use domestic and foreign experience in organizing cultural and educational activities and, of course, is able to bear responsibility for the results of their professional activities.

Hence, in general, tutor support is considered as a special pedagogical position, due to the request for individualization of education at all levels. A.A. Terov aims at this issue when writes about two main strategies of individualization: the strategy of "taking into account the individual characteristics of a person" and the strategy of "individual educational and social trajectory of a person" [6].

Tutoring contributes to the formation of a reflexive environment in higher education institutions and reflexive thinking of both students and teachers. The educational function of the tutor at the stage of forming of an individual educational route becomes central, since it helps him/her to build the subjective position in education. There are two directions: academic and reflective tutoring. Academic tutoring is designed to help students and teachers orientate themselves in the educational space. Here the tutor allows the student to return to the initial understanding of himself/herself in order to understand his/her place in the educational space. Reflexivity implies diving into one's self and introspection. In this case the tutor solves the task of identifying not only difficulties in the process of mastering the curriculum, but also more significant moments related to reflection - "what can I do as a researcher, student, teacher". At this stage, a way out of stereotypical situations is made when new knowledge is mastered and the transition to the model of constructing professional knowledge and competencies based on this knowledge takes place. In this position the tutor acts as an expert in the field of knowledge. At the same time, tutor support provides not only mastering of methods and forms of scientific thinking, but also formation of students' independence in decision-making, development of criticality, initiative, abilities to predict, design and model a situation.

As a consequence, the role of students' project activities increases. Project method requires both classical pedagogical support and tutor support. The task of the project manager is step-by-step teaching the student the logic of constructing and achieving the goals and objectives of the project work and competent design and presentation of the project itself. The tutor's position differs from that of a supervisor, first of all, because one of the tutor's priority tasks is to keep the individual content of the project and the individual pace of the project and reflection. The tutor's support is especially important at the conception stage, i.e. conceptualization, modeling. At this stage the tutor acts as an intermediary between the project manager and the student. The result (as a criterion of the tutor's effectiveness) is a participant's proactive action [1].

We carry out the pedagogical process aimed at preparing a future specialist to implement the tutor's functions in several stages.

The first stage is the determination of students' cognitive interest and professional expectations. The

starting point in preparing a university student for the tutor's functions is his/her individual cognitive interest and professional expectations.

The second stage is the formulation of a professionally oriented educational question. Concreteness and locality of a student's educational question are the factors contributing to the efficiency of tutor's support of a future teacher by the university teachers. The main method for posing an educational question is discussion of the student's position by means of a tutor question: clarifying, alternative, provoking, etc.

The third stage is setting the goal of professional educational activity. The goal as an image of the expected result is formulated by the student together with teachers during the tutor's meeting.

The fourth stage is a search for educational resources and development of student's educational trajectory - development of "professional training roadmap". At this stage the task of tutor support is to show the prospects and advantages of tutoring in education, to reveal the necessity and availability of different sources and resources of education, means of achieving the goal.

The fifth stage - implementation and discussion, analysis, correction of the plan of professional educational activity - "portfolio accumulation". This is the main stage in terms of duration of interaction between the student and the tutor-teacher. At this stage the future teacher, who prepares himself/herself for the realization of the tutor's functions, mainly acts independently, meeting with the tutor to discuss the difficulties arising and the achieved results. The subject of the discussion is the portfolio of activities.

The sixth stage - analysis of the results of the future teacher's preparation for the tutor's work - is the key one. The choice of the form and level of the analysis by the student is fundamental. In this case the teacher-advisor acts as the main expert, but the decision is made by the student. At this stage the future specialist predicts different variants of employment, projects a roadmap of practical activity as a tutor and defines the points of his/her professionalism growth.

The seventh stage is the adjustment of the educational goal, determination of time perspectives. At this stage they discuss whether the goals set and achieved satisfy the future teacher, what new goals they formulate for themselves on the basis of the work done, whether they need tutor support from the university teachers to achieve these goals in the future [10].

The tutor's support becomes both an educational goal and a technology of the future teacher's preparation for the tutor's functions realization. As a result of applying the tutor's technology of independent educational activity support the student can clearly see the advantages of this technology, make a conscious choice of future tutor activity in terms of professional self-development and achieve the goal on the basis of tutor's support of professional training.

Conclusion

Thus, realizing the functions of tutor's support, the tutor represents an image of the teacher possessing the culture of innovative thinking, absorbing knowledge of pedagogical innovations, aspiring to constant self-development and self-knowledge, able to predict and model educational and educational process, competent in the sphere of innovative education, capable of generating pedagogical innovations. At the same time, a tutor has a set of special pedagogical abilities, which are a multidimensional system of his/her reflexive abilities to manage his/her professional improvement and self-organization of students.

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Issue Article

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ON THE IMPORTANCE OF INVESTMENT AND INFRASTRUCTURE PROJECTS FOR THE SOCIO-ECONOMIC DEVELOPMENT OF THE CHUKOTKA AUTONOMOUS OKRUG

Abstract: *in the article, the authors studied the role and significance of the development strategy for the economy of the Chukotka Autonomous Okrug in general and its key industries in particular, which is built in three scenarios: conservative, basic, target. The conservative scenario implies the inertial development of the region: the Okrug will continue to be mono-dependent on the gold mining industry, the volume of public and private investments attracted will be significantly lower than expected, the Baimskaya ore zone development project will not be implemented. The baseline scenario implies partial implementation of the investment projects stated in this Strategy: the volume of investments and coal production at the deposits of the Bering coal basin will be fixed at the minimum values specified in the agreement on the ASEZ (750 thousand tons), the project for the development of the Baimskaya ore zone will be implemented in full. The target scenario implies the full implementation of the investment projects stated in this Strategy, in particular, the development of the Baimskaya ore zone and bringing production at the deposits of the Verkhne-Alkatvaamsky site of the Bering coal basin to 5 million tons with the attraction of the necessary investment for this.*

Key words: *Advanced Development Territory, TOR, economic activity, significance, efficiency, socio-economic development strategy, financial condition, sustainable TEP, resources, profit, profitability, priority, preferences, demand, competitiveness.*

Language: *English*

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Introduction

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The main directions for the implementation of this Strategy in the Chukotka Autonomous Okrug are:

- development of the seaport of Pevek and its terminals;

- creation of a transport and logistics hub in the deep-sea year-round seaport of Provideniya;
- modernization of the Chaun-Bilibinsky energy center;
- development of transport infrastructure, including the construction of the interregional highway Kolyma - Omsukchan - Omolon - Anadyr;
- connection of the Nenets Autonomous Okrug to the unified telecommunications network of the Russian Federation by creating a submarine fiber-optic communication line Petropavlovsk-Kamchatsky - Anadyr;
- development of the Baimsky and Pyrkakaysko-Maysky mineral resource centers of precious and non-ferrous metals;
- development of the Bering coal mineral resource center, construction of a year-round terminal in the Arinai deep-water lagoon;
- creation of an emergency rescue unit and an Arctic crisis management center in the city of Pevek;
- the development of Arctic cruise tourism and the formation of ethno-ecological tourist clusters in the territories of Anadyr, Pevek and the village. Providence.

Over the past 5 years, the Chukotka Autonomous Okrug has secured the status of one of the largest gold mining regions in Russia. Building the economy around this industry for many years ensures the district achieves high GRP and per capita tax revenues, and allows attracting investment and labor. At the same time, the emphasis on the development of one flagship industry gives rise to mono-dependence and, as a result, the vulnerability of the regional economy to external pricing conditions.

Further intensification of economic activity should be based on the use of competitive advantages and opportunities of the district, on a comprehensive account of the natural, geographical, historical and deminographic features of the region. The analysis showed that the development of the Chukotka Autonomous Okrug until 2030 should be associated with the diversification of the extractive industry of the region, the development of traditional industries of the indigenous peoples of the Chukotka Autonomous Okrug and the social sphere (Figure 1).

As a result of the implementation of this Strategy, by 2035 the Chukotka Autonomous Okrug will become a region:

– specializing in the extraction and processing of various natural resources and using the most modern technologies for this;

– guaranteeing its population the level of income and quality of life corresponding to the successful northern territories of Canada and the USA;

– characterized by dynamic and sustainable growth of the economy and budget revenues.

Figure 1. Chukotka Autonomous Okrug

Main part

The basis for the development of the Strategy is a number of legal acts:

– Forecast of socio-economic development of the Russian Federation for the period up to 2035;

– Charter of the Chukotka Autonomous Okrug.

The Chukotka Autonomous Okrug is the most northeastern subject of the Russian Federation, belongs to the Far Eastern Federal District, borders on Yakutia in the West, the Magadan Region and the Kamchatka Territory in the south, and the state of Alaska of the United States of America in the East. The entire territory of the Okrug belongs to the Arctic zone of Russia.

The population as of January 1, 2018 was 49.3 thousand people (the smallest among all regions of Russia), GRP per capita - 1.32 million rubles. in 20120 (third place among the regions of Russia after the Tyumen and Sakhalin regions) (Figure 2).

In recent years, the development of the region has taken place in accordance with the Development Strategy of the Okrug until 2035, approved by the Decree of the Government of the Chukotka Autonomous Okrug dated July 16, 2014 No. 290-rp "On Approval of the Strategy for the Social and Economic Development of the Chukotka Autonomous Okrug until 2035".

In this Strategy, the basic directions of economic activity in the region were determined by the further development of the locomotive industry (gold mining), the development of traditional economic sectors of the indigenous peoples of the Chukotka Autonomous Okrug, as well as the diversification of the region's mining industry through the accelerated development of the coal and copper industries.

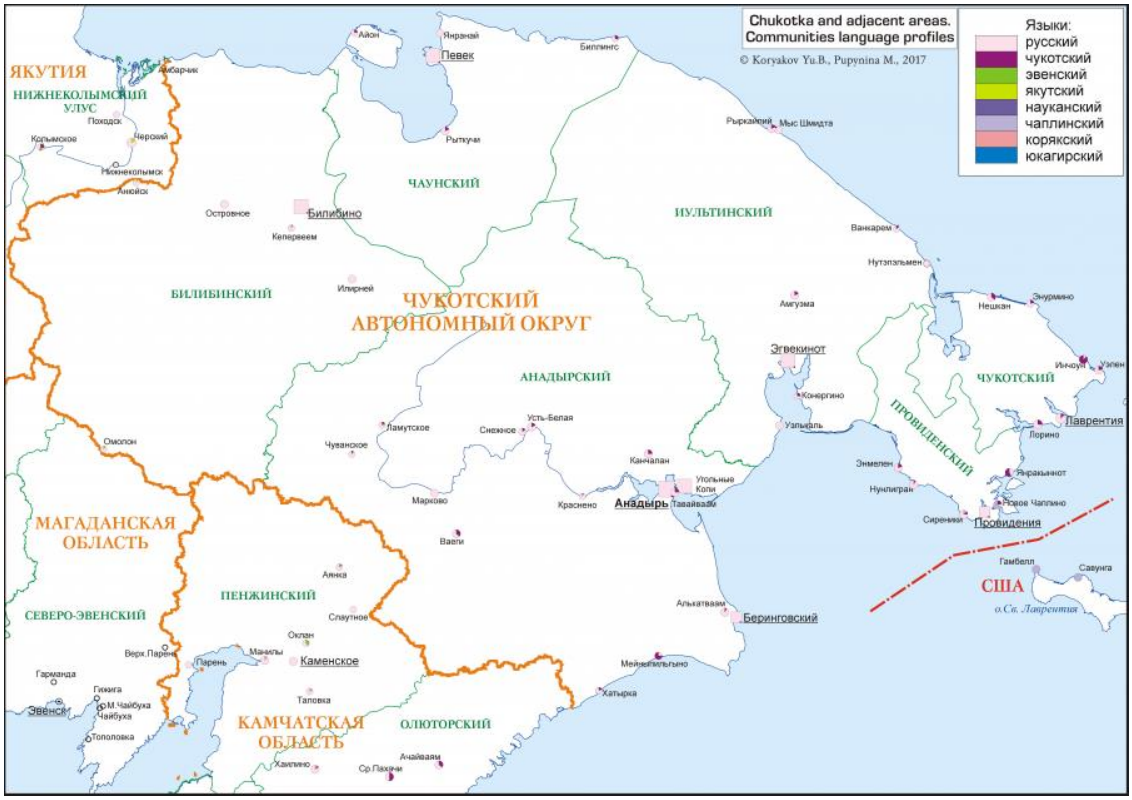

Figure 2. Administrative map of the Chukotka Autonomous Okrug

In order to ensure the successful implementation of the chosen areas of economic activity within the framework of the spatial development of the Chukotka Autonomous Okrug, the Strategy provided for the accelerated development of the Anadyr and Chaun-Bilibinsky regions through the development of rich deposits of coal and non-ferrous metals, respectively, the creation of the necessary conditions for the successful development of traditional industries of the indigenous peoples of the Chukotka Autonomous district and the necessary associated transport and energy infrastructure.

The focus of the development of the social sphere in the Strategy was to increase the income and living standards of the population of the Chukotka Autonomous Okrug (Figures 3-4).

Since 2013, the Okrug has experienced moderate growth in most key indicators of economic development. Industrial production grew by 21.5%, gross regional product - by 9.7%, while the same indicators for Russia as a whole amounted to 5.3% and -0.5%, respectively. Investments in the Okrug's fixed capital over the specified period decreased by 22.2%, which is associated with investment cycles for the development of the Okrug's deposits (the peak of investment activity fell on 2012-2013).

During this period, it was possible to achieve positive dynamics in the development of most of the key industries for the Okrug.

Gold production increased from 24.6 to 32.1 tons from 2013 to 2015. In 2016-2017 there was a planned decrease in production to 25.3 tons, associated with the depletion of rich ore reserves at the largest developed deposits.

Silver mining associated with gold mining in 2013-2017 decreased from 165.3 to 130.8 tons.

Brown coal production decreased from 233.9 to 189.4 thousand tons from 2013 to 2017, however, the total coal production in the Okrug increased from 354.0 to 438.8 thousand tons due to the start of production at

the Fandyushkinskoye field of Beringovsky coal basin.

Gas production is focused solely on meeting the internal needs of the Okrug. During the specified period, it increased by 29.2% (from 23.4 to 30.2 million m3).

According to the official data of the Federal State Statistics Service, electricity production in the Okrug increased from 564.6 million kWh in 2013 to 704.6 million kWh in 2017, which is associated with an increase in the needs of the extractive industry and the inclusion of isolated consumers.

The retail trade turnover and the volume of paid services to the population increased from 5.5 billion rubles. in 2013 to 9.1 billion rubles. in 2017 and from 4.2 billion rubles. in 2013 to 4.9 billion rubles. in 2017, respectively, in real terms, the growth was 6.8% and 11.7%, respectively. Taking into account the decrease in the average annual population of the Okrug by 2.1% over the specified period and the isolation of the Okrug from the "outside world", the achieved indicators are significant.

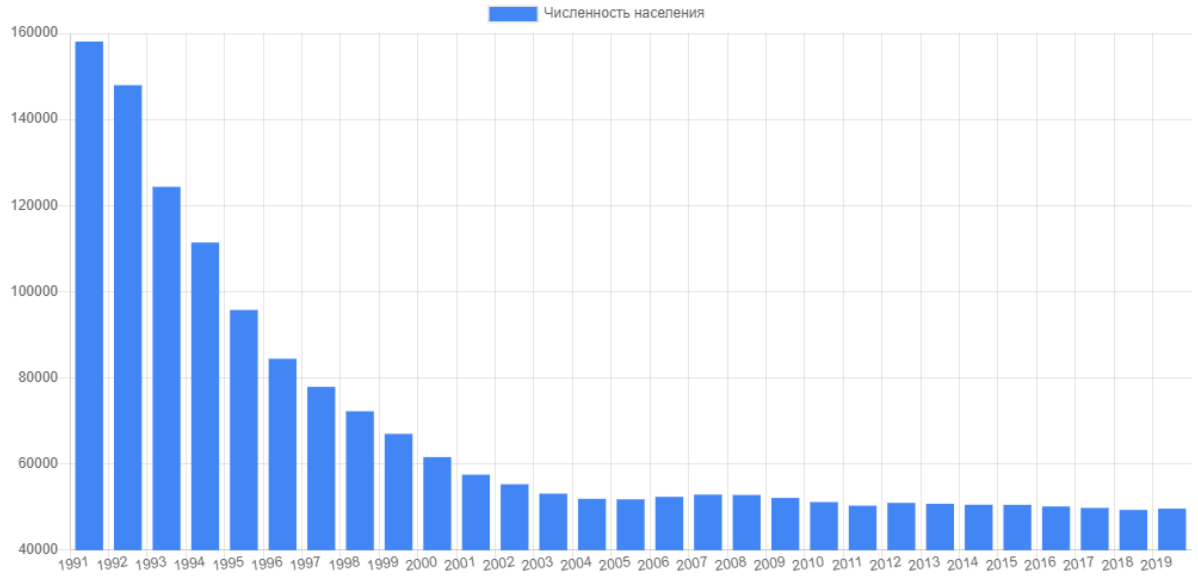

Figure 3. Population in the Chukotka Autonomous Okrug

Despite the higher level of prices relative to the average indicators for Russia and the Far Eastern Federal District, retail turnover per capita in the Chukotka Autonomous Okrug is lower by 9.5% and 13.7%, respectively, due to the underdevelopment of this industry in the region. Due to the multiple excess of tariffs for electricity, heat supply and utilities in the Okrug over the average Russian indicators, the volume of paid services per capita in the region significantly (by 56.2%) exceeds the corresponding indicator in Russia.

The traditional sectors of the economy of the Chukotka Autonomous Okrug include reindeer breeding, which provides 45-50% of the needs of the inhabitants of the Okrug in meat products, and marine fur hunting, which meets the needs of the indigenous population of coastal villages in the meat of sea animals. During the analyzed period (2018-2021), the number of deer decreased from 172.5 to 150.8 thousand heads, the volume of products of the marine fur trade - from 2.4 to 2.1 thousand tons. The reasons for the decline in the number of deer are abnormal weather conditions and organizational measures within reindeer breeding enterprises. Marine fur hunting is a regulated activity. Hunting is allowed and, as a result, quotas are allocated only to the indigenous peoples of Chukotka in order to preserve their national identity.

The average annual production of aquatic biological resources, taking into account the objects of fishing in the internal sea waters and the territorial sea of the Russian Federation, the exclusive economic zone and on the continental shelf of the Russian Federation, adjacent to the coast of the Chukotka Autonomous Okrug, as well as in inland freshwater reservoirs, is about 10 thousand tons (pollock, cod, halibut, crabs), salmon - 3 thousand tons, freshwater - 50 tons. Resources fully meet the needs of the population of the Okrug, and most of it is sold outside of it.

Restraining factors for the development of the fish processing industry are the territorial and climatic features of the region. The cost of products manufactured in the Okrug is higher than the products of other regions of the Far East, and the volume of the domestic market is small due to the small population.

The development of other types of agricultural activities in the Okrug is complicated by the harsh climatic conditions of the regions of the Far North, the needs of the population are met mainly through the import of products.

Due to climatic conditions and low population density, the manufacturing industry in the Chukotka

Autonomous Okrug is poorly developed. The vast majority of food, clothing, vehicles and other consumer goods, machinery and equipment are brought into the District by sea during the navigation period from June to November, or by expensive air.

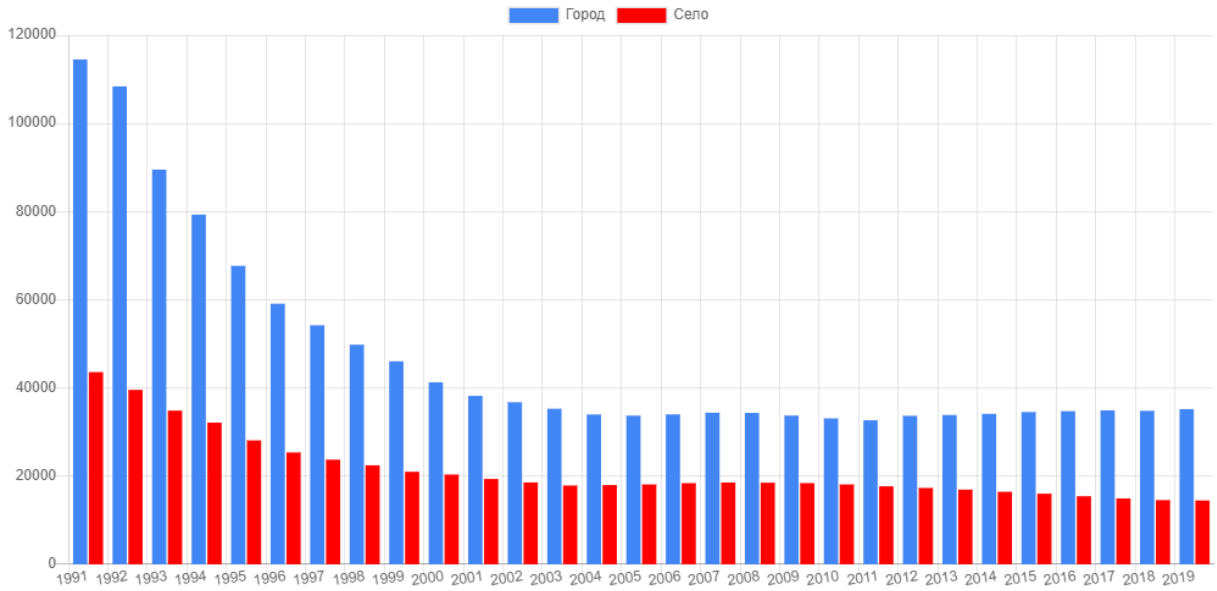

Figure 4. The share of the urban and rural population in the Chukotka Autonomous Okrug

GRP structure from 2018 to 2021 changed towards a significant increase in the contribution of the extractive industry to the final indicator (from 33.2% to 50.1%), which is associated with an increase in the extraction of minerals with a decrease in the output of traditional industries (agriculture and forestry, hunting, fishing and fish farming) and services. As a result, in 2018, more than half of the GRP (50.1%) was in the mining industry, 32.3% in the service sector, 11.3% in the production of electricity, gas and water, 5.2% in construction, 0.7% - for traditional industries, 0.4% - for the manufacturing industry.

The territory of the Chukotka Autonomous Okrug is divided into 6 districts: Anadyrsky, Bilibinsky, Iultinsky, Providensky, Chaunsky and Chukotsky. The Anadyrsky district, together with the Chaunsky and Bilibinsky districts, is the center of the accelerated economic development of the region, other areas are centers for the development of traditional folk crafts and the preservation of the cultural heritage of the Okrug's indigenous population. The administrative center, as well as the center for the development of the social sphere and the provision of public services in the region, is the capital of the Okrug, Anadyr.

On the territory of the Anadyr industrial zone, the Zapadno-Ozernoye gas field is currently being successfully developed, aimed at covering the internal needs of the Okrug. Annual gas production is about 30 million m3.

A promising project for the development of the Anadyr industrial zone is the project for the development of deposits in the Bering coal basin with total resources of over 1 billion tons of high-quality coal that meets international standards. Foreign investors have been involved in the development of the basin's deposits. In order to ensure comfortable business conditions, in 2015 the Chukotka Territory of Advanced Socio-Economic Development (hereinafter TOP) was created. As of October 1, 2018, the volume of investments made by anchor investors under the ASEZ agreement is 917 million rubles. In 2019, the implementation of the first stage of the investment project for the development of the Bering coal basin (development of the Fandyushkinskoye field) began, 249.4 thousand tons of hard coal were mined. The project has an export orientation, 65% of the produced in 2019.

The Chaun-Bilibino industrial zone is rich in non-ferrous metal deposits. Currently, several large gold deposits are being mined (Kupol, Maiskoye, Dvoynoye - 81.6% or 20.7 out of 25.3 tons of gold mined in 2019 in the Okrug). The Kekura and Klen gold deposits are being prepared for commissioning in 2022. The reserves of the deposits are about 62.1 and 18.0 tons of gold, respectively. Exploration, preparatory and design work is being carried out at the Kekura gold deposit. The design documentation for the mining and processing plant is being developed. A temporary shift camp has been built at the Klen gold and silver deposit, and sites are being prepared for the construction of a factory and a mine. The volume of implemented for 2018-2021. private investment is 4.6 and 1.0 billion rubles. for the Kekura and Klen deposits, respectively.

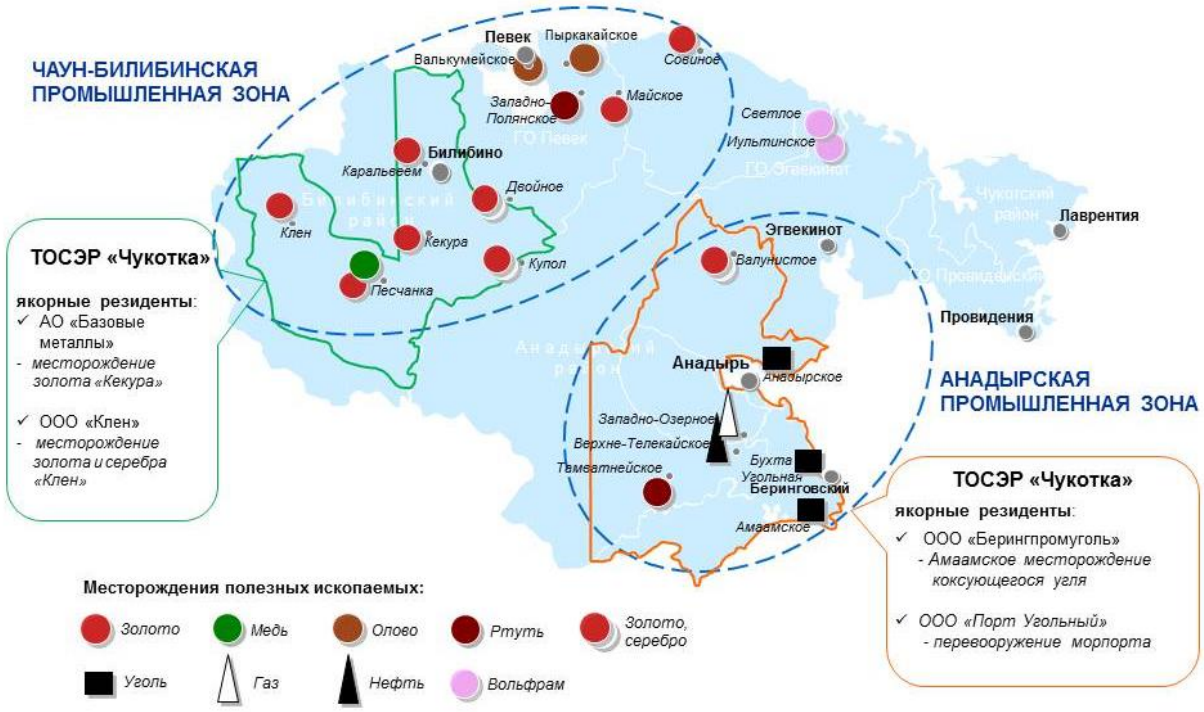

Figure 5. Mining in the Chukotka Autonomous Okrug

The largest promising project for the development of the Chaun-Bilibino industrial zone is the development of deposits of the Baimskaya ore zone, primarily the gold-bearing porphyry copper deposit Peschanka, one of the largest copper deposits in the world (the resource potential of the deposit is 27 million tons of copper and 1,600 tons of gold). Geological exploration is currently being completed at the Peschanka deposit (for 2018-2021, the volume of private investment in exploration amounted to about 4 billion rubles) and the technical design of the mining and processing plant and its infrastructure is underway.

In order to improve the standard of living of the population by reducing prices for essential goods, as well as ensuring food security, the Government of the Chukotka Autonomous Okrug is implementing measures aimed at increasing the attractiveness of the development of the food industry and agriculture. In order to attract private investment in the manufacturing industry of the region, in July 2016, Pevek was included in the territory of the free port of Vladivostok (hereinafter referred to as FPV). The focus of FPV Pevek is the development of small businesses in consumer sectors. As of the end of October 2018, 4 food industry enterprises are being created on its territory. The power system of the Chukotka Autonomous Okrug is a technologically isolated territorial power system. As part of the energy system of the district, three power centers operate in isolation from each other: Anadyrsky, Egvekinotsky and Chaun-Bilibinsky and a zone of decentralized energy supply, represented by 35 rural settlements. Also, there are industrial consumers in the region that have their own generating capacities, isolated from the general power system. To supply heat and hot water to the settlements of the Chukotka Autonomous Okrug, centralized open heat supply systems are used.

The largest volume of electricity consumption falls on mining industrial enterprises. The dynamics of electricity supply to consumers is mainly determined by the level of production of non-ferrous metals and the weather factor. The main consumers of productive supply of electricity in power centers are:

– 45-46% - industrial enterprises (Table 1);

– 20-25% - own and economic needs of enterprises of housing and communal services;

– 10-11% - the population and the management companies providing services to them;

– 3% - transport and communications;

– 20% - other industries (fish processing enterprises, food complex, construction companies, etc.).

The largest volume of heat consumption falls on residential and administrative buildings (table 2). The dynamics of heat supply to consumers is mainly due to the weather factor.

Table 1. The largest industrial consumers of electricity and power in the Chukotka Autonomous Okrug

Name of the main large consumers of electrical energy	Name of the power unit to which the consumer is connected	Total capacity of equipment, MW	Average annual electricity consumption, mln kWh
Joint Stock Company "Chukotka Mining and Geological Company"	Own generation, isolated	28.7	139.7
Public corporation "Mine Karalveem"	Chaun Bilibinsky	9	40.6
Limited Liability Company "Rudnik Valunisty"	Egvekinotsky	3.5	25
Limited responsibility of "Gold Mining Company "Mayskoye"	Chaun-Bilibinsky	12	64.0

Table 2. The structure of thermal energy consumption in the Chukotka Autonomous Okrug

Consumers, (thousand Gcal)	year 2013	2018	2019	2020	2021
Total heat production	1156	1133	1070	980	961
Own needs	49	48	46	48	48
Losses in heat networks	101	99	94	74	56
Total sold to consumers, including:	1006	986	930	858	857
public utilities and population	493	484	457	422	427
industry	211	207	198	182	180
other sectors of the economy	302	295	275	254	250

The generation of heat and electricity is carried out at power plants and coal-fired boilers with a total installed electricity and heat capacity of 246.49 MW and 721.91 Gcal/h, respectively. In the structure of the installed capacity of power plants of the energy system of the Chukotka Autonomous Okrug (table 3) the share of combined heat and power plants (hereinafter referred to as CHPP) is 54%, the share of a nuclear power plant (hereinafter referred to as NPP) is 19%, 26% is accounted for by diesel power plants (hereinafter referred to as DPP) and about 1% - by a wind power plant (hereinafter referred to as WPP).

Table 3. Installed capacity structure

	Name of generating companies	Installed electric power, MW	Installed thermal power, Gcal/h	Source type	Main type of fuel
1	JSC Chukotenergo (subsidiary of PJSC Magadanenergo)	132.25	399.28		
1.1	Anadyr CHPP	50.0	140	CHP	Gas and coal from local deposits
1.2	Anadyr GMTPP (property of the Government of the Chukotka Autonomous Okrug, leased to JSC Chukotenergo)	18.25	68.28		
1.3	Egvekinotskaya GRES	34.0	92		Coal from local deposits
1.4	Chaun CHP	30.0	99		
2	Branch of Rosenergoatom Concern JSC - Bilibino NPP	48.0	67	nuclear power station	Nuclear fuel
3	Enterprises of housing and communal services	66.24	255.63	DES, boiler houses	Imported diesel fuel, Coal from local deposits
Total		246.49	721.91		

The power supply to consumers is carried out through the electric network 0.4-110 kV with a total length of power lines (hereinafter referred to as power lines) of 2221.26 km and an installed transformer capacity of 619.95 MVA. The total depreciation of 35-110 kV electrical networks in the Chukotka Autonomous Okrug exceeds 80%.

The total length of heating networks operated by

organizations of the housing and communal complex is 468.3 km, mainly networks with a diameter of up to 200 mm. The greatest length of networks in the Anadyr and Bilibino districts. An analysis of the state of heating networks in the district shows that in 2018, 30.8 km of networks (6.6% of the total length) reached the standard operating life, and by 2025 another 16 km will be reached.

The balance of consumption/production of power and energy historically develops with a significant surplus. The Anadyr and Chaun-Bilibinsky energy centers have the largest free capacities of power plants exceeding 30 MW. The low loading of generating capacities, the high value of unit rated capacities of power units of stations and their low maneuverability adversely affect the technical and economic performance of the power systems under consideration. The costs associated with servicing unused excess capacity ultimately significantly affect the rise in the cost of electricity tariffs for consumers. Between 2018 and 2021 the demand for electric power remained practically unchanged (table 4). There was a slight increase in the maximum load in the Egvekinot power center (from 10.5 MW in 2018 to 12.36 MW by 2021) and the same decline in the maximum load in the Chaun-Bilibinsky power center (from 45.2 MW to 43.2 MW by 2021 year). The changes were due to natural factors.

Table 4. The power balance structure of the energy system of the Chukotka Autonomous Okrug

Name of the power center	Name of parameters	2013	2018	2019	2020	2021
Anadyr	The maximum demand for e-mail. power, MW	20.5	24.0	24.5	20.76	22.5
	Available generation capacity, MW	68.25	68.25	68.25	68.25	68.25
	Surplus (+) / Deficit (-), MW	47.75	44.25	43.75	47.49	45.75
Egvekinotsky	The maximum demand for e-mail. power, MW	10.5	13	13.29	12.06	12.36
	Available generation capacity, MW	30	30	30	30	30
	Surplus (+) / Deficit (-), MW	19.5	17	16.71	17.94	17.64
Chaun-Bilibinsky	The maximum demand for e-mail. power, MW	45.2	46.3	43.4	42.3	43.2
	Available generation capacity, MW	78	78	78	78	78
	Surplus (+) / Deficit (-), MW	32.8	31.7	34.6	35.7	34.8

The actual indicators of electricity consumption did not demonstrate the growth that was previously planned during the development of the power industry of the Okrug (table 5). Electricity demand for 2018-2021 stayed at the same level. The actual indicators of productive electricity supply to consumers in the Chukotka Autonomous Okrug decreased from 435.5 million kWh in 2018 to 409 million kWh by 2022. A slight decline occurred due to the decline in industrial production and natural migration of the population.

Table 5. Dynamics of electricity consumption

	2018	2019	2020	2021	2022
Fact, million kWh	435.5	411.2	411.2	398.6	409.0
Planned indicators of productive supply of electricity, million kWh	562.4	562.4	523.0	491.6	562.7
Deviation from the plan, %	- 22.6%	-26.9%	-21.4%	-18.9%	-27.3%

The actual indicators of useful supply of heat energy to consumers in the Chukotka Autonomous Okrug decreased from 930,475 Gcal in 2018 to 766,218 Gcal in 2021. The actual indicators of productive supply of hot water supply are from 1,833,514 m3 in 2018 to 1,262,246 m3 by 2021.

The required gross revenue (RGR) for servicing the energy infrastructure in 2021 increased by 16.8% compared to 2018 and amounted to 6,733.36 million rubles. The largest growth was shown by the costs of electric power infrastructure, which increased by 21.6% and amounted to 5,591.84 million rubles.

A significant increase in NGR for the maintenance of the electric power infrastructure is due to the following reasons:

– low specific indicators of loading of energy sources due to reassessment of forecast indicators of demand for heat and electricity;

– high specific indicators of standard fuel

consumption for heat and electricity generation;

– high cost of imported fuel (transport component reaches 70%);

– lack of synchronization of strategic planning documents for the development of energy infrastructure both with documents for the strategic development of municipalities and with investment programs of resource supply organizations (RSOs);

– low efficiency of technical and economic measures for assessing the feasibility of building infrastructure facilities and assessing the costs of maintaining the technical condition of facilities;

– low efficiency of measures to reduce the cost of maintenance and repair;

– low quality of the analysis of the feasibility of building or replacing equipment with a new one.

Between 2018 and 2021 tariffs for electricity from the sources of Chukotenergo JSC showed a significant increase (from 8.7-10.11 rubles / kWh in 2018 to 17 rubles / kWh (average boiler tariff) as of January 1, 2022, which is in 3-4 times higher than the average tariff in Russia). In order to reduce the negative impact of high tariffs for heat and electricity on the standard of living of the population, the Government of the Chukotka Autonomous Okrug subsidizes up to 70% of the cost of purchased heat and electricity. Also, from the consolidated budget of the Okrug, subsidies are paid to resource-supplying organizations to cover production costs: the purchase of fuel, fuel and energy resources for their own needs, and repairs. The average annual volume of subsidies directed by the RSO from the budgets of all levels of the Chukotka Autonomous Okrug in 2013-2017 was at the level of 4 billion rubles.

In order to equalize electricity tariffs for consumers in the Far Eastern Federal District to the average Russian level, the Federal Law of December 28, 2016 No. 508-FZ “On Amendments to the Federal Law “On the Electric Power Industry” was adopted. As part of this mechanism, the amount of subsidies for JSC Chukotenergo required to reduce the tariff for consumers to the average Russian level is 4.9 billion rubles in 2018.

It is planned to stop equalizing tariffs at the expense of consumers in the central part of Russia from January 1, 2025. The Chukotka Autonomous Okrug does not have a developed network within regional highways, which is associated with a significant fragmentation of the population settlement, the climatic conditions of the regions of the Far North, and is also not connected (isolated) with highways in neighboring regions.

At the moment, the role of the main freight transport route that provides the Chukotka Autonomous Okrug with the necessary consumer goods, food, raw materials, machinery, equipment and materials is performed by the "northern" delivery during the navigation period.

Cargo traffic in the internavigation period, as well as passenger traffic, incl. forced (for example, for the purpose of sanitation), all year round are provided on the territory of the Chukotka Autonomous Okrug by expensive air. For most of the year, aviation is the only mode of transportation available, and therefore plays an exceptional and vital role for the District.

The vast majority of the settlements of the Chukotka Autonomous Okrug are provided with mobile communication services (there is no coverage by cellular operators in 3 settlements with a total population of less than 500 people, or about 0.9% of the Okrug's inhabitants) and digital television (there is no possibility of receiving digital channels in 9 settlements with population of less than 1,600 or about 3.1% of the District's residents).

Worse is the situation with Internet access. The Chukotka Autonomous Okrug is the only subject of the Russian Federation, on the territory of which there is no fiber optic communication. Internet traffic is provided exclusively through satellite communication channels, which significantly reduces the quality (including speed) and significantly increases the cost of Internet access services. As part of the elimination of the digital divide between urban and rural residents in the settlements of the Chukotka Autonomous Okrug with a population of 250-500 people in 2021, free WI-FI access points were installed (one free access point per settlement), as well as Internet access the vast majority of educational and healthcare organizations are provided, however, a significant uncovered demand for Internet access services remains. Per capita Internet traffic consumption in the Okrug (20.3 gigabytes/person) is one of the lowest among Russian regions and 9.6 times lower than the national average (194.4 gigabytes/person). The high cost and low quality of Internet access services significantly complicate the implementation of projects for the provision of state and municipal services to the population in electronic form, the implementation of distance learning, the development of telemedicine, etc.

The development of the social sphere and, as a result, the standard of living of the population is one of the key characteristics of the attractiveness of the region for living and the ability to realize the long-term development goals of the Okrug. Close attention should be paid to the quality of life of people, which is especially important for the northern regions, whose climatic features have a negative impact on the standard of living of the population.

At the same time, improving the quality of life of the population is inextricably linked with health care, education, culture, physical culture and sports, as well as social protection and the quality of public services provided. Therefore, in the Chukotka Autonomous Okrug, an active policy is being pursued within the framework of the social sphere, designed to make improvements in each of the above areas. The average annual population of the Chukotka Autonomous Okrug in 2021 was 49,585 people. Compared to the same value for 2018, there was a decrease of 2% (50,668

people in 2018). The urban population is 70% of the total number of inhabitants (34,844 people), the share of the rural population is 30% (14,741 people).

Between 2018 and 2021 In the Chukotka Autonomous Okrug, there was a positive trend in natural population growth and average life expectancy. The number of newborns remained stable throughout the period. In 2020, the number of newborns was 649 people, the total fertility rate was 13.1 ppm, which is 1.6 ppm higher than the average Russian level and the average value of this indicator in the regions of the Far North by 0.8 ppm. At the same time, a steady decrease in the number of deaths was observed - the number of registered deaths decreased by almost 12.4% (533 in 2018, 467 in 2021). The mortality rate decreased by 1.1 ppm and in 2021 amounted to 9.4 ppm, being below the average values for Russia and the regions of the Far North (12.4 and 10.3, respectively). There are no cases of maternal death. As a result, the natural growth rate at the end of 2021 amounted to 3.7 ppm, an increase of 1.1 ppm compared to 2018 (2.6 ppm) and exceeding the same indicator for Russia and the regions of the Far North, respectively, by 4.6 and 1.6 ppm.

The main problem of the demographic development of the Chukotka Autonomous Okrug is the migration outflow observed against the background of natural population growth. At the end of 2021, it amounted to 656 people, an increase of 85% compared to the same indicator for 2018 (354 people). The basis of the migration flow is interregional migration. The presence of a migration outflow exceeding the natural increase led to a decrease in the average annual population for the period from 2018 to 2021. from 50.6 to 49.3 thousand people.

In addition to federal programs to strengthen the trend to improve the demographic situation in the Okrug, regional measures are being implemented aimed at stimulating the birth rate and increasing the average life expectancy of the population:

– provision of regional maternity capital;

– compensation payments for utilities for families with three or more minor children;

– social support for large families in the form of lump-sum payments for the purchase of food, clothes, shoes;

– lump-sum social payments for the purchase of housing to families with children;

– social payments for the purchase of housing in order to improve housing conditions for young families.

These measures of state support are in high demand, in some cases, especially in terms of social payments for the purchase of housing for large families, the demand from the population exceeds the current capabilities of the consolidated budget of the Okrug.

The incidence rate of the population of the Chukotka Autonomous Okrug significantly (by 72.4%) exceeds the average Russian indicators (1342.9 cases of morbidity per 1000 people in the region in 2021 against 778.9 cases on average in Russia), which is associated with unfavorable living conditions and low prevalence of preventive health services in the County. There is a negative trend: since 2018, the incidence rate in the Okrug has increased by 19.6%.

About 60% of all registered cases of morbidity are related to respiratory diseases. The frequency of these cases exceeds the average Russian level by 118% (771.8 versus 353.5), there is a negative trend: the growth rate since 2018 (564.6) was 36.7%.

A similar situation is observed for diseases of the digestive system, blood and eyes. The incidence exceeds the national average by 77%, 60% and 49.4%, respectively, the growth since 2018 in the Okrug was 36.5%, 47% and 25.1%, respectively.

A consistently high (58% higher than the national average) incidence rate is observed for diseases of the musculoskeletal system and connective tissues, there is no negative trend.

Starting from 2019, the Chukotka Autonomous Okrug has a three-tier system for providing medical care. The third-level institution is the Chukotka District Hospital, which provides specialized medical care services to the population. Second-level institutions include inter-district medical centers in Egvekinot and Bilibino, which act as inter-municipal centers. First-level institutions include district hospitals and their structural subdivisions that provide primary health care (including feldsher-obstetric stations). As of 2021, there are 42 medical institutions in the Chukotka Autonomous Okrug. Only 2 settlements (the village of Tavaivaam and the village of Cape Schmidt) are not provided with medical institutions, located in close proximity and, as a result,

A significant problem is the significant deterioration of the buildings of medical institutions, which is largely associated with adverse climatic conditions and the cost of repairs, which exceeds the average for Russia.

In order to combat wear and tear, the material and technical base is being strengthened: the reconstruction of the Chaunsky district hospital, the construction of a new building of the district hospital and the district hospital in Markovo are being carried out. All-terrain vehicles and ambulances have been supplied to medical institutions.

The Okrug has a social and medical service "Mobile Brigades", serving patients in hard-to-reach settlements at home. Over four years, more than 15 thousand trips were made, more than 1.1 thousand people were served.

The annual medical examination for children is carried out mainly by the doctors of the district hospital, who, according to the schedule, travel to the settlements of the Okrug.

Air ambulance is actively involved in the region. More than 300 flights are carried out per year. In 2021, as part of the pilot priority project of the Russian Ministry of Health "Development of air ambulance",

implemented to increase the availability of emergency medical care to residents of remote and hard-to-reach settlements, the air ambulance fleet of the Chukotka Autonomous Okrug was replenished with a helicopter equipped with a modern medical module.

The opportunities for residents of the Chukotka Autonomous Okrug to receive high-tech medical care outside the district were expanded: the number of patients referred for treatment in the central regions of Russia increased from 589 in 2018 to 1112 in 2021.

The Okrug has one of the highest levels of medical personnel in Russia (74.8 doctors per 10,000 people in 2021), however, there is a shortage of personnel in a number of narrow specialties, especially in pediatric doctors.

In the conditions of scattered settlement of residents to ensure the logistical accessibility of medical services for the population, the specific need for medical personnel, infrastructure and equipment increases disproportionately. This makes the formally high levels of provision with medical personnel in the conditions of the Chukotka Autonomous Okrug actually insufficient (in 15 settlements there are only paramedical personnel).

To strengthen the staff of healthcare organizations, a number of programs are being implemented to stimulate the involvement of specialists, for example, the Arctic Doctor and the Arctic Paramedic, which give the right to receive additional cash payments if they work on the territory of the Okrug, as well as scholarship support for clinical residency. Over the past 5 years, 91 medical workers have been recruited.

In recent years, the Okrug has begun work on informatization of health care. Electronic document management and a regional medical information system are being introduced.

On the territory of the Chukotka Autonomous Okrug there are: 14 institutions of preschool education, 41 general education institutions (of which 30 institutions have preschool groups in their structure), 14 organizations of additional education, 4 - secondary vocational, 1 - additional professional (institute for advanced training) and 1 institution (branch) of higher education. The secondary school in Bilibino is one of the 100 best general education schools in Russia with a social and humanitarian profile.

As of the end of 2021, the enrollment of children in pre-school and secondary education was 100%.

Coverage of additional education for children aged 5 to 18 years was 70%. With a total number of additional education organizations of 14, their branches (structural divisions) are available in all settlements of the Okrug. Additional education services are also provided by general educational organizations, on the basis of which sections and circles of various kinds work.

About 15% (6 out of 41) of general educational organizations of the Chukotka Autonomous Okrug have classes of part-time (evening) education. 26 schools of the Okrug (63% of the total number of educational institutions in the region) have joined the project "Online Lessons in Financial Literacy", supported by the Central Bank of the Russian Federation.

In 2017, 15 exam points were organized in remote settlements to eliminate the need to take exams in district centers and the district capital.

The professional educational organizations operating in District 4 are located on a territorial basis and train specialists of secondary vocational education and workers of mass professions in accordance with the needs of the regional economy. To meet the needs of the population in obtaining vocational education in remote national villages, 11 "remote" research groups were opened. In 2021, these educational institutions trained 526 people for the following sectors of the economy of Chukotka: agriculture - 161 people (31%), industry - 104 people (20%), healthcare - 29 people (6%), construction - 55 people (10 %), economics and accounting - 35 people (6%), service sector - 142 people (27%).

Higher education services are provided by the Chukotka branch of the Federal State Autonomous Educational Institution of Higher Professional Education “North-Eastern Federal University named after M.K. Ammosov, which was opened in 2011. In 2021, 36 specialists were graduated in the following areas of training: Applied Geology, Informatics and Computer Science, Power Engineering and Electrical Engineering, Thermal Power Engineering and Heat Engineering. All graduates were employed at the enterprises of the Chukotka Autonomous Okrug.

To strengthen the staff of educational organizations, a number of measures are being implemented aimed at increasing the attractiveness of working in the educational institutions of the Okrug: additional payment for high pedagogical skills, payment for accommodation of attracted teachers of additional education in the field of sports, creation of specialized housing stock, etc.

There are 44 cultural and leisure institutions, 44 libraries, and 8 museums on the territory of the Okrug. At the same time, only one locality does not have any of the above institutions (Mys Shmidta), and its residents use the infrastructure of a neighboring locality.

In order to develop culture in the district, extensive work is being done. Grants are being issued to support the development of culture in the Okrug, including the development of cinematography, spiritual and moral values, and the holding of tours by concert and theater organizations. The amount of funds allocated to finance culture in 2021 increased by 35%. These funds are directed to the development of cultural facilities, increasing the wages of cultural workers, and preserving the cultural traditions of indigenous peoples. On average, residents of the Chukotka Autonomous Okrug attend cultural events nine times a year.

Free access to all museums of the district is provided. In 2021, 278 museum exhibitions were held, the total number of visitors was 67 thousand people.

In 2020, joining the Theater HD project was carried out, providing residents of the District with the opportunity to see the performances of the best theater groups on cinema screens.

The development of physical culture and sports is one of the priority areas of development in the social sphere. There are 4 children's and youth sports schools, 11 municipal institutions of culture and sports on the territory of the district. In total, over 140 institutions, enterprises, associations and organizations involved in sports, about 200 workers of physical culture and sports are involved in the territory of the Chukotka Autonomous Okrug. 44 sports have been developed. Among them, the most popular are futsal, basketball, hockey, swimming, skiing and various types of wrestling.

One of the key tasks in this area is to involve residents of all ages and categories in active physical education and sports. To accomplish this task, mass physical culture and sports events are held on the territory of the district, for example, mass cross-country races, public races, passing the TRP standards (winter and summer decades), student sports days, etc. Percentage of the population systematically involved in sports in the period from 2018 to 2021 increased by 5.4 p.p. (from 27.4% to 32.8%), which corresponds to the average Russian level.

To date, close attention is required to the housing sector and the sphere of public services.

The features of the development of the housing sector of the Chukotka Autonomous Okrug are largely determined by the peculiarities of its geographical location, namely, unfavorable natural and climatic conditions, high transport costs, uneven settlement, and the temporary nature of residence in the North. As a result, the value of the housing commissioning indicator per person is 14.5 times less than the average Russian values, while the cost is significantly higher than the average Russian indicators.

The existing housing stock is characterized by high rates of depreciation, significantly exceeding the national average. To address this issue, the District has a number of programs in place to address high wear and tear. In 2021, the resettlement of emergency houses, which were recognized as such before January 1, 2017, was completed ahead of schedule. As a result of the implementation of this program, 314 citizens were resettled from 5.5 thousand m2 of housing stock, which is in disrepair. In 2021, through the regional operator, 44 apartment buildings were repaired, in which more than 6% of the total population of Okrug apartment buildings (more than 3 thousand people) lived. In addition, families with many children, medical and pharmaceutical workers, as well as young families are provided with support for the purchase of housing, incl.

There is an acute issue of providing state housing certificates within the framework of the program operating at the federal level when residents leave for the CRS. The federal budget has not provided funds for residents of settlements that are closing since 2017, which exacerbates social issues associated with previously closed settlements.

The main challenges in the utilities sector are high tariffs and problems with the quality of water supply. Since 2020, work has been carried out to improve water quality in 10 settlements of the Chukotka Autonomous Okrug. Water quality has been improved in 9 settlements, where over 14 thousand people live, which is more than a third of the district's population.

The main activity within the framework of social protection of the population is the provision of social guarantees for the residents of the Okrug, as well as improving their quality of life by providing a number of targeted support measures.

In 2021, 944 citizens received social services, including 722 people at home, 16 people (minors) in a semi-stationary form, 206 people (including 109 minors) in a stationary form. 436 people received urgent social services. In order to prevent the need for social services, 639 citizens were provided with social support services.

The greatest demand among all types of social services is social services (provision of food, soft inventory, living space, etc.), their share in the total amounted to more than 70%.

As part of supporting families with children in the region, various allowances and subsidies are paid to increase their disposable income, maintaining it at a level exceeding the subsistence level. Measures are being taken to improve the living conditions of large families. Between 2019 and 2021 living conditions of 20 families were improved. The granting of free land plots owned by the municipality is carried out. In addition, large families in the Okrug are provided with regional maternity capital. Taking into account various types of state support, the average amount of payments per large family in 2017 amounted to 83 thousand rubles.

The Okrug is implementing the program "Chukotka without orphans!", thanks to which more than 600 orphans have found families. There is a monthly supplement to the subsistence level for non-working pensioners and payments for resettlement to economically developed regions of the Chukotka Autonomous Okrug and regions of the Russian Federation favorable for living for single pensioners over 69 years old (in 2021, 25 elderly citizens living alone received a payment).

A significant role within the social policy of the Okrug is assigned to the formation of an accessible living environment for the disabled (this category of the population is 1642 people, 3.3% of the total population of the Okrug). Currently, about 2,000 specialists trained in the specifics of working with people with disabilities work in the field of education, culture, sports and healthcare. Measures are being

taken to increase the physical accessibility of socially significant facilities. Between 2020 and 2021 ramps and a lifting platform were installed for the Chukotka Social and Rehabilitation Center for Juveniles, a stationary ramp was installed at the Chukotka District Complex Center for Social Services for the Population, adaptive equipment was purchased (tablets and pictograms with Braille duplication, tactile stickers, etc. .d.

Increased attention is also paid to social support for veterans of the Great Patriotic War. In 2017, 13 WWII veterans lived in the Okrug. In addition to the social support measures provided for at the federal and regional levels, compensation is provided for actually incurred expenses for sanatorium and resort treatment, a one-time payment for repairs in the living quarters of WWII veterans, since 2020, all veterans living in the Okrug are provided with a monthly cash payment in the amount of 10 thousand rubles.

The main direction of development in the provision of public services was the simplification of the mechanisms for the population to apply to various structures. The main successes in the provision of public services were achieved by increasing the availability of the Internet in the region. In addition, computer literacy training for non-working pensioners has been organized since 2019 in order to enable them to receive public services in electronic form. For the period 2019-2021, 99 pensioners were trained in the educational organizations of the Okrug.

The growth of requests to My Documents centers in 2021 amounted to about 80%, 4 times more documents were issued compared to 2020. In 2021, 72 residents processed documents under the Far Eastern Hectare program through the MFC, which is 12 times higher than in 2020 (6 people).

Much attention in the policy of the Chukotka Autonomous Okrug is paid to the well-being and development of the indigenous peoples of the North. To this end, a number of measures are being implemented in the region to support the traditional way of life of indigenous peoples, as well as to preserve their culture.

As part of the implementation of the State Program "Development of the Agro-Industrial Complex of the Chukotka Autonomous Okrug for 2018-2020", emphasis was placed on the development of two traditional economic sectors for the peoples of the Okrug: reindeer herding and sea fur hunting, which are supported by a significant amount of funds from both the district and from federal budgets. In addition, the Chukotka ASEZ creates new jobs for indigenous peoples.

In 60% of schools (27 out of 45) there are opportunities for learning native languages: Chukchi, Even, Eskimo. The training of specialists with the right to teach the language is carried out at the Chukotka Multidisciplinary College.

Work is underway to strengthen interethnic relations and develop the traditional intangible cultural heritage of the indigenous peoples of the Chukotka Autonomous Okrug, for example, literary competitions and festivals.

Measures are being taken to preserve, use and protect cultural heritage sites. 310 objects of cultural heritage are under state protection in the Chukotka Autonomous Okrug. On the territory of the district there are 81 objects included in the Unified State Register of Cultural Heritage Objects (monuments of history and culture) of the peoples of the Russian Federation.

In order to maintain and develop national sports, promote a healthy lifestyle of indigenous people in the region, mass sports events are annually organized and held: the Erakor reindeer sled race, the Nadezhda dog sled race, the Chukotka national wrestling championship in memory of A.S. Malyvanov, Beringia leather kayak regatta, northern all-around championship of the Chukotka Autonomous Region. In 2021, the Reindeer Sled Race "Ruilet" was resumed.

Own revenues of the consolidated budget of the Chukotka Autonomous Okrug from 2018 to 2020 increased by 29.3% (from 12.9 to 16.7 billion rubles), in 2021 there was a decrease in revenues to the level of 2018, caused by a planned decrease in gold production and, as a result, the tax base for income tax and revenues and taxes, dues and regular payments for the use of natural resources, which are the two largest items of tax and non-tax revenues of the District (in 2021, 68% and 17% of revenues, respectively).

The expenses of the consolidated budget of the Okrug increased by 13.0% from 27.9 billion rubles. in 2018 to RUB 31.5 billion in 2021. The increase is due to a significant increase in spending on housing and communal services (by 3.9 billion rubles or 72.4% from 5.4 billion rubles in 2018 to 9.3 billion rubles in 2021) and social policy (by 0.8 billion rubles or 47.1% from 1.7 billion rubles in 2018 to 2.5 billion rubles in 2021), while spending on the national economy decreased over the specified period by 16.9% (from RUB 10.2 billion in 2018 to RUB 8.5 billion in 2021). This line of the budget is subject to the greatest volatility, associated primarily with investment cycles for the implementation of infrastructure construction projects in the region.

The expenses of the district budget throughout the analyzed period significantly (1.8-2.2 times) exceeded their own revenues, which reduces the stability of the regional budget.

As a result of a significant increase in the expenses of the consolidated budget of the Chukotka Autonomous Okrug in 2018-2021. there was a significant increase in gratuitous receipts to the consolidated budget of the region, including from the federal budget, from 5.4 billion rubles. in 2013 to 17.2 billion rubles. in 2021

Growth in budget revenues (the sum of own budget revenues and gratuitous receipts), outstripping growth in spending led to a reduction in the deficit of the consolidated budget and the state debt of the

Chukotka Autonomous Okrug from 9.6 and 13.4 million rubles. in 2018 to 1.4 and 10.7 billion rubles. in 2021 respectively. The results of the analysis of the socio-economic situation and the results of the implementation of the Development Strategy of the Chukotka Autonomous Okrug of 2014 seem to be appropriate to summarize and structure using the system capabilities of the SWOT analysis (table 6).

Table 6. SWOT-analysis of the socio-economic situation of the Chukotka Autonomous Okrug

Strengths	**Weak sides**
1. A rich mineral and raw material base of the main minerals: non-ferrous and precious metals, stone and brown coal, oil and gas 2. Availability of experience and competencies in attracting large industrial investors to the development of the Okrug's fields 3. Operation of mechanisms stimulating economic activity in the Okrug: ASEZ Chukotka, FPV Pevek 4. Support of the Federal Center for the Development of the Okrug's Infrastructure 5. Renewable natural resources: significant stocks of fish, aquatic invertebrates, algae and marine mammals in ecologically clean water bodies; reindeer pastures with rich forage base for reindeer herding	1. Unfavorable natural climatic factors for living and farming 2. The high cost of living and doing business in the District, incl. electricity cost 3. Low level of availability and quality of social services for the population and the service sector 4. Transport remoteness, lack of internal and interregional land transport 5. Lack of own sources of income (planned unprofitability) for maintenance and development of energy and communal infrastructure 6. Monodependence of the Okrug's economy on gold mining 7. Unsustainable budgetary system of the District: high dependence on gratuitous receipts from the federal budget 8. Low depth of processing bioresources (products of reindeer breeding and sea fur hunting)
Capabilities	**Threats**
1. Growth of economic activity in Asia-Pacific countries 2. Intensification of the development of the Northern Sea Route in terms of improving "outside" logistical links and ensuring the District has access to liquefied natural gas	1. Reduction of gratuitous receipts from the federal budget 2. Underfunding (lack of project financing) and, as a result, a backlog in the implementation of approved infrastructure projects 3. Deterioration of the price environment for the main export commodities of the Chukotka Autonomous Okrug

Based on the above SWOT analysis, the goal, objectives, development factors, as well as areas of activity of the Chukotka Autonomous Okrug until 2035 are determined.

The key goal of implementing the Strategy for the socio-economic development of the Chukotka Autonomous Okrug until 2035 is to increase incomes and living standards of the population while moving towards a balanced and sustainable regional budget. Achieving the goal of the Strategy requires the solution of several tasks.

The task in the field of economic development is the creation of new enterprises in the mining industry of the Okrug and the production of socially significant goods.

The task in the field of spatial development is the removal of infrastructural restrictions, primarily in the field of transport, energy and information and telecommunication technologies, for the integrated socio-economic development of the Chukotka Autonomous Okrug.

The task in the field of development of the social sphere is to improve the quality of the provision of social services.

To successfully achieve the goals and objectives set, the Strategy of the Chukotka Autonomous Okrug should be built taking into account key factors and experience in the development of the Northern Territories:

Firstly, the climatic features of the Chukotka Autonomous Okrug relative to other regions of Russia (low average annual temperatures, short duration of the summer season, permafrost, etc.) largely determine the socio-economic parameters of the region's development: high cost of living (as of October 2018 the cost of a fixed set of goods and services in the Okrug (25.7 thousand rubles) is the highest among the regions of the Russian Federation, 68.5% higher than the national average (15.3 thousand rubles)), high tariffs for electricity and housing -utilities, undeveloped transport network, economic and infrastructural isolation from the rest of the country and the most developed Russian and Asian markets;

secondly, it is advisable to carry out the economic development of the northern territories based on one sector of the economy (as a rule, the extractive industry), as evidenced by both domestic and foreign experience in the development of the northern

territories of the USA, Canada, Denmark, etc. However, in order to reduce vulnerability from the external price environment, the sectoral development of this sector should be diversified. For the Chukotka Autonomous Okrug, as part of the diversification of the mining industry, the most promising projects are the development of the Baim ore zone and the Bering coal basin;

thirdly, the Chukotka Autonomous Okrug has a significant export potential. The potential of the extractive industry far exceeds the needs of the region's domestic market. From a logistical point of view, export to the Asia-Pacific countries is much more feasible than entering the Russian market. An effective tool for the implementation of the export-oriented model is the territories of priority development with competitive conditions (including tax incentives and support for the creation of the necessary infrastructure) relative to neighboring countries;

fourthly, the solution lies in the need for the active participation of the federal center, about which, incl. evidenced by foreign experience in the development of the northern territories. The governments of the United States and Canada are stimulating further industrial development of the northern territories by investing in the necessary energy, transport, information and communication infrastructure. Support is provided for the geological study of poorly explored territories, the assessment of promising areas, the search and exploration of mineral deposits, incl. previously not mined in the territory of the corresponding region;

fifthly, the success of the socio-economic development of the Chukotka Autonomous Okrug is the obligatory preservation of the habitat, culture of the indigenous peoples of the North, as well as the development of traditional industries of the indigenous population.

The economic development of the Chukotka Autonomous Okrug until 2035 is based on two areas of industrial activity: the coal industry and the extraction of ores of non-ferrous (precious and non-precious) metals, as well as the traditional economic sectors of the indigenous population of the Okrug.

The development of the coal industry in the Okrug until 2035 is to increase the production of hard coal to the design capacity at the deposits of the Bering coal basin, primarily at the Fandyushkinskoye field deposit, then at other deposits of the Verkhne-Alkatvaamsky area and the Amaamskoye deposit.

The first stage of development of the fields in the basin has been completed: in 2021, production began at the Fandyushkinskoye field. The second stage (2025-2030) involves increasing production to 750 thousand tons per year. Further dynamics of production at this field is critically dependent on the situation in coal prices. In the conservative and baseline scenarios, production will remain at the level of 750 thousand tons until 2035, in the target scenario it will gradually increase to 5 million tons per year due to the expansion of production at this field, as well as the start of development of other fields in the Verkhne-Alkatvaamsky area.

In the conservative and baseline scenarios as part of the development of the Fandyushkinskoye field in 2025-2030. private investments in the amount of 1.3 billion rubles will be attracted. Investments will be directed to the acquisition of heavy mining equipment, the development of the infrastructure of the field, as well as the construction and overhaul of the road from the field to the seaport of Beringovsky. The implementation of the target scenario will require an increase in investment, incl. for the construction of a processing plant.

The largest prospective deposit of the Bering coal basin is the Amaam deposit (resources are estimated at 521 million tons, potential production volumes are 5-7 million tons per year). To date, prospecting and appraisal, geological exploration and design and survey work have been carried out. However, due to the lack of debt financing, as well as low prices for coking coal, active development of this deposit is currently suspended. The inclusion of the fields of the Bering coal basin in the Chukotka ASEZ, carried out in 2021, will allow the implementation of the Fandyushkinskoye Pole field development project in a short time, and will also increase the attractiveness of the development of other fields in the basin.

One of the key directions for the development of the economy of the Chukotka Autonomous Okrug until 2035 is the launch of the mining of non-ferrous metal ores at the Peschanka deposit of the Baim ore zone. The volume of production of copper, molybdenum, gold and silver in concentrate when the enterprise reaches its design capacity will be about 285 thousand tons, 4 thousand tons, 15 tons and 120 tons, respectively.

For 2018-2035 it is planned to invest about 290 billion rubles in the development of the Peschanka deposit. private investment, including 5.3 billion rubles. - in geological exploration, 248.6 billion rubles. - in production assets (including the construction of a mining and processing plant), 15.4 and 20.5 billion rubles. – to the transport and energy infrastructure of the field, respectively.

As part of the project, about 3,000 new jobs will be created. The need for labor resources will be satisfied through the rotational method of work. The enterprises will organize shift camps and create the necessary social infrastructure to ensure the livelihoods of employees coming from other territories.

The development of such a large deposit greatly increases the Okrug’s needs for electricity and power (when the Baimsky GOK reaches its design capacity, the annual demand for electricity and power of the Baimsky GOK will be about 1,900 million kWh and 240 MW, respectively, with the Okrug’s current demand of ~ 700 million kWh and 78 MW). In order to meet this demand, electricity flow will be organized within the Okrug and from the Magadan Region (from the Ust-Srednekanskaya HPP), for which it was decided to technically combine the Chaun-Bilibinsky

energy hub of the Chukotka Autonomous Okrug with the energy system of the Magadan Region.

The basic direction of the economic development of the Okrug until 2035 is to support the progress made in the gold mining industry. The planned decline in production at current deposits will be compensated by the commissioning of new deposits: in 2023 - Klen (annual gold production after the deposit reaches its design capacity will be about 1.5 tons) and Kekura (annual production - about 6 tons), in 2025 city - Peschanka (annual production - about 15 tons).

From 2018 to 2035 the development of the Kekura and Klen deposits will attract private investments in the Okrug in the amount of 16.0 and 7.1 billion rubles, and will create about 1,170 and 600 new jobs, respectively.

It is planned to supply the Klen field with energy from its own generation (diesel power plant), and the Kekura field - from the same energy sources as the Peschanka field.

As a result, gold production in 2021-2026 will be about 24.1-24.4 tons, in 2022, after the launch of the Kekura and Klen fields, it will increase to 29.1 tons. For 2022-2023 it is planned to complete mining operations at two large deposits of the Okrug (Kupol and Dvoynoye deposits - 64.5% of gold mined in 2018 on the territory of the Okrug) and, as a result, gold production will decrease to 22.8-25.1 tons. This decrease will be offset by the commissioning of the Peschanka field. In 2024, gold production in the region will recover to the level of 2021 (28.6 tons). Production growth is expected from 2025, in 2025-2035. will be from 24.3 to 34.0 tons.

To accelerate the development of gold and polymetallic deposits in the Chaun-Bilibinsky industrial zone, the territory of the Bilibinsky municipal district has been included in the Chukotka ASEZ since January 2019.

The reserve for the region is to maintain and, if possible, increase the level of production of alluvial gold, significant reserves and resources of which are available in the Okrug. It is necessary to take into account the fact that placer gold mining employs a significant part of the able-bodied population of the districts of the Okrug. The level of alluvial gold mining during this period will remain at the level of 2.5-3 tons per year.

In addition to the large copper and gold deposits mentioned above, the largest tin deposit in the east of Russia, the Pyrkakay stockworks, is located on the territory of the Chaun-Bilibino industrial zone (the approved reserves of tin ore are 119 million tons). The field is located 65 km from the city of Pevek, relatively close to the developed infrastructure of the area with a road to the site and close to passing power lines. The deposit is prepared for open-pit mining with a large volume of ore extraction. The development of the deposit is currently not expected due to the low metal content in the ore (tin content - from 0.21% to 0.24%, tungsten - from 0.01% to 0.02%) and, as a result, low profitability development of the deposit at the current relatively low prices for tin. Change in price environment

Reindeer husbandry and sea fur hunting are an integral part of the cultural heritage and livelihoods of the indigenous population of the Chukotka Autonomous Okrug. Violation of the nutrition structure, by replacing with other products, leads to a deterioration in the health of the population, a reduction in life expectancy, and a deterioration in the anthropological indicators of children and adults. Therefore, the main focus of the Strategy is to ensure the volume of production of these socially significant types of products at a level not lower than the current one. For the reindeer herding economy, this is expressed in the growth of the number of reindeer from 150.8 thousand heads in 2021 to 153.2 in 2035, which will ensure the production of meat in slaughter weight in the amount of 411.2 tons by 2035. For marine animal hunting - in not reducing the volume of allocated quotas and increasing the depth of product processing.

The northwestern part of the Bering Sea is one of the most important fishing areas in the Far East. Estimation of stocks of aquatic bioresources of coastal seas and inland waters (fish, marine mammals, invertebrates) according to the data of fishery science makes it possible to annually produce about 0.6 million tons.

Until 2035, a project will be implemented for the construction of a federal property facility designed for comprehensive servicing of fishing fleet vessels in the deep-sea, year-round seaport of Provideniya with a length of 150 linear meters. The amount of financing will amount to 675 million rubles. from the state budget, 80 million rubles. from the district budget and 375 million rubles. from extrabudgetary sources. The fish marine terminal will allow comprehensive servicing of fishing vessels for the transportation, storage and distribution of fish products. The average annual volume of transshipped products will be more than 50 thousand tons.

A fish processing plant will be put into operation with deep processing of catches of aquatic biological resources and the production of semi-finished products with a production volume of 10 tons per day. The amount of financing will amount to 50 million rubles. from the regional budget and 280 million rubles. from extrabudgetary sources. The plant will provide deep processing of fish, including from the volumes allocated by OJSC Chukotrybpromkhoz and LLC Chukotopttorg for catching (harvesting) aquatic biological resources in inland sea waters and the territorial sea of the Russian Federation adjacent to the coast of the Chukotka Autonomous Okrug. The resulting organic products will differ in environmentally friendly content and quality due to the short period from the catch to the finished product.

As part of the project, about 100 new jobs will be created.

The need for labor resources will be met at the

expense of the local population.

The implementation of the project will allow servicing fishing vessels engaged in fishing in the Far East basin for further transportation of fish products by the Northern Sea Route to the central regions of the country.

Changes in the typology of the territories of the Chukotka Autonomous Okrug until 2030 are not envisaged. Anadyrsky district will continue to develop as an administrative center, a center for the development of the social sphere and the coal industry of the region, Chaun-Bilibinsky - a center for the development of non-ferrous metallurgy, other areas - centers of traditional economic sectors of the Okrug's small indigenous peoples.

The internal spatial development of the territories and, as a result, the demand for the maintenance and/or construction of infrastructure facilities and institutions for the provision of social services in the Chukotka Autonomous Okrug until 2035 is determined by the dynamics (the emergence of new and the closure of current ones) of demand points for these facilities and services. The emergence of new and the closure of current points of demand, in turn, is determined by the dynamics of the development of the industrial enterprises of the Okrug.

The current structure of settlement and employment of the indigenous and non-indigenous population of the Okrug until 2035 and the expected changes in the population of individual settlements associated with the planned closure of city-forming enterprises and, as a result, the likely migration outflow or even the closure of settlements is a determining factor in spatial development region.

A typical example is the city of Bilibino, in whose economic development until 2030 significant structural changes are planned. At the moment, the vast majority of employees work at the two largest enterprises: the Bibilino Nuclear Power Plant and the Karalveem gold mine. The conservation of the Bilibino NPP is scheduled for 2022, the cessation of production at the Karalveem mine after 2035. The Okrug is faced with the task of determining what the socio-economic image of the city will be after 2035 and, as a result, either organize the resettlement of residents or create new workers places, for example, at new deposits of the Chaun-Bilibino industrial zone (it must be taken into account that the largest of the deposits expected to be developed before 2035 (Peschanka, Kekura, Klen) are outside the transport accessibility for residents of Bilibino and, as a result,

Secondly, the emergence of new large industrial facilities (development of new large deposits) requires the involvement of a large amount of labor resources on an ongoing basis for a long time and, as a result, the creation of new or development of existing (if any in the immediate vicinity) settlements.

For the sustainable economic development of the region, it is important to ensure the availability and possibility of technological connection to the energy infrastructure for business and the population within an acceptable time frame. As target indicators for the timing of connection, it is planned to use the targets of the roadmap "Increasing the availability of energy infrastructure", approved by the Order of the Government of the Russian Federation.

Figure 6. Energy infrastructure in the Chukotka Autonomous Okrug

In order to provide electricity and capacity in the region, it is planned to build and reconstruct a number of large energy infrastructure facilities. These objects perform two tasks:

− replacement of decommissioned capacities of the Bilibino NPP;

− providing energy to promising industrial consumers in the Chukotka and Bilibino regions.

At the moment, the creation of several objects is being considered (table 7).

Table 7. List of energy infrastructure facilities considered for creation

Problem being solved	Main activities
Replacement of retired capacities of Bilibino NPP in 2022	– Extension of the operation life of the Chaun CHPP until 2025 inclusive – Construction of an energy source in Bilibino with off-site infrastructure
Replacement of retired capacities of Chaunskaya CHPP by 2026	– Construction of a new thermal power plant in Pevek – Integrated LNG project in Pevek
Ensuring power supply to promising industrial consumers at the Kekura and Peschanka fields	– Construction of an overhead transmission line 110 kV overhead line Bilibino - Peschanka I circuit with a tap at the Kekura substation – Construction of two single-circuit power lines 110 kV between the cities of Pevek and Bilibino
Ensuring uninterrupted power supply to consumers and reducing accidents in the Egvekinot power center	– Reconstruction of OHTL 110 kV EGRES – Bouldery in the most damaged areas
Consolidation of the Anadyr and Egvekinot energy centers	– Construction of SS 110 kV Anadyrskaya on the left bank of the Anadyr Estuary – Construction of an intersystem overhead line 110 kV Anadyrskaya CHPP - Valunisty with SKRM
	– Reconstruction of the substation Valunisty
Ensuring power supply to the potential Tumannaya Ploshchad gold deposit	– Design and construction of power grid facilities (overhead lines and substations) from Egvekinotskaya GRES to the field – Phased restoration of the 110 kV overhead line EGRES - Iultin with a branch line at 87 km – Reconstruction of the existing 110 kV overhead line EGRES-Valunisty – Reconstruction of ORC 110 kV EGRES with installation of SKRM – Construction of a new generation in the Egvekinot energy center for the amount of power shortage (reserve) or reconstruction of the EGRES with an increase in installed capacity
Development of the Central Chukotka geological and economic region, which has rich deposits of minerals	- Construction of a 110 kV overhead line at the Iultin substation - with. Ryrkaypiy

A large proportion of energy facilities are being built in the Okrug using budget funds, while in most regions the practice of attracting extra-budgetary funding for the construction and reconstruction of energy infrastructure facilities is already being actively implemented. The need to intensify the efforts of the Government of the Okrug in this area is in line with the "Main Directions of Activities of the Government of the Russian Federation for the period until 2025" (approved by the Government of the Russian Federation on September 29, 2018) in terms of attracting non-state non-tariff sources of investment in the scope of activities of subjects of natural monopolies.

In the conditions of construction and reconstruction of significant volumes of energy infrastructure, and, as a result, a significant increase in the cost of its subsequent maintenance, it is especially important to provide economically justified tariffs for business development in the region. The level of tariffs should be lower than the prices for energy generated by the objects of own generation. Otherwise, industrial consumers will switch to their own generation, and the built energy infrastructure will not be in demand.

According to the tariff forecast until 2025 (table 8.) and the projected price for electricity of own generation at 18 rubles/kWh, this condition is met. To ensure acceptable economic tariffs, the presence of such large consumers as the Baimsky GOK is especially important, so the region needs to make every effort to keep them in the overall balance of energy consumption in the region.

Table 8. Forecast of Economically Justified Tariff Dynamics

Economically justified one-part tariff for consumers of Chukotenergo JSC	year	2019	2020	2021	2022	2023	2024	2025
	RUB/kW*h	18.89	27.75	20.96	12.66	13.87	14.14	12.49

To determine the list of objects of centralized energy systems implemented in 2020-2030, it is necessary to further refine the main documents for the development of the energy sector in terms of determining demand and its elasticity from tariff dynamics, technical solutions, the cost of objects and the impact on tariff growth. Documents requiring updating: schemes and programs for the development of the electric power industry and investment programs of resource supply organizations (RSO).

In order to support the population and consumer groups equated to them by reducing the tariff to the average Russian one by subsidizing the costs of resource-supplying organizations, it is necessary to direct efforts to improve the energy efficiency of these consumer groups, for which it is necessary to finalize the energy efficiency program of the region in terms of detailing measures. The subsequent areas of work of the Government of the Okrug to improve the efficiency of resource-supplying organizations serving the population and equated consumer groups will be aimed at synchronizing the development programs of the North Ossetia with each other and with the plans for the development of municipalities in order to reduce the costs of developing and maintaining housing and communal services facilities. It is required to develop programs for the integrated development of the communal infrastructure of settlements,

To implement all the above areas, it is important to increase the cost efficiency of resource-supplying organizations for maintaining the technical condition, construction and reconstruction of energy infrastructure facilities to the level of average Russian companies, taking into account the influence of climatic and territorial conditions. It is necessary to develop a regional program to improve the efficiency of resource-supplying organizations with the active use of long-term tariff formation mechanisms that encourage RNOs to implement programs to improve operational efficiency.

Increasing the energy independence of the region from expensive imported fuel will remain an important direction. In this direction, work will continue in the region on the introduction of the use of renewable energy technologies and energy-saving technologies in the production, transmission and consumption of energy. First of all, this concerns the housing and communal sector of isolated settlements, which consume significant volumes of imported fuel and the largest possible distance for its delivery from ports. At the same time, it is necessary to note the high potential for the development of renewable energy in the Okrug. Estimated wind energy resources of the Chukotka Autonomous Okrug reach 1.5 trillion. kWh per year and are highly stable. In most of the Okrug, the average annual wind speed is 4-6 m/s. On the southeastern coast of Chukotka, the average annual wind speed reaches 6-9 m/s. The implementation of such projects will require the region to take into account the availability of highly qualified personnel and technical solutions from companies planning to invest and operate energy infrastructure facilities. An increase in the number and volume of renewable energy generation will require the introduction in the Okrug of a centralized digital platform that performs the functions of monitoring, managing and maintaining equipment and energy facilities, taking into account the significant disparity in the location of objects on the territory of the Okrug and the high complexity of organizing the presence of highly qualified technical personnel on the ground. planning to invest and operate energy infrastructure facilities. An increase in the number and volume of renewable energy generation will require the introduction in the Okrug of a centralized digital platform that performs the functions of monitoring, managing and maintaining equipment and energy facilities, taking into account the significant disparity in the location of objects on the territory of the Okrug and the high complexity of organizing the presence of highly qualified technical personnel on the ground. planning to invest and operate energy infrastructure facilities. An increase in the number and volume of renewable energy generation will require the introduction in the Okrug of a centralized digital platform that performs the functions of monitoring, managing and maintaining equipment and energy facilities, taking into account the significant disparity in the location of objects on the territory of the Okrug and the high complexity of organizing the presence of highly qualified technical personnel on the ground.

In order to replace expensive imported coal and diesel fuel as energy sources of centralized energy systems and provide an acceptable economically justified tariff for industrial consumers, further development of options for replacing currently used fuels with cheaper gas and oil solutions is required. Firstly, due to the currently actively developed export routes of liquefied natural gas (LNG) of NOVATEK along the Northern Sea Route. According to preliminary estimates, the reconstruction of the existing Chaunskaya CHPP or the construction of a new LNG-fired CHPP in Pevek will make it possible to achieve the price of electricity from the plant busbars at ~ 9 rubles/kWh. This is 2 times lower than the cost of electricity in the framework of the alternative option for building a coal-fired station (18 rubles/kWh).

The implementation of projects aimed at increasing the energy independence of the region from

expensive imported fuel should be subordinated to the goals of reducing the tariff burden on industrial consumers and reducing the amount of subsidies from the regional budget to cover the difference between tariffs for the population and the costs of operating organizations. The main direction for the development of the transport infrastructure of the Okrug until 2030 is to move away from the transport isolation of the region through the development of the road network, reconstruction and expansion of the port infrastructure, reducing the cost and improving the quality of internal and external air traffic.

The largest project in the development of the Okrug's transport infrastructure is the construction of the Kolyma-Omsukchan-Omolon-Anadyr highway with access roads to Bilibino and Egvekinot, with a total length of about 2.3 thousand km and a cost of more than 150 billion rubles. In addition to solving the problem of the isolation of the regions of the Chukotka Autonomous Okrug from each other and from other regions of Russia, the construction of this highway is caused by the needs of industrial enterprises that are being created on the territory of the Chaun-Bilibino industrial zone, including the construction of an energy bridge for power supply to the deposits of the Baim ore zone.

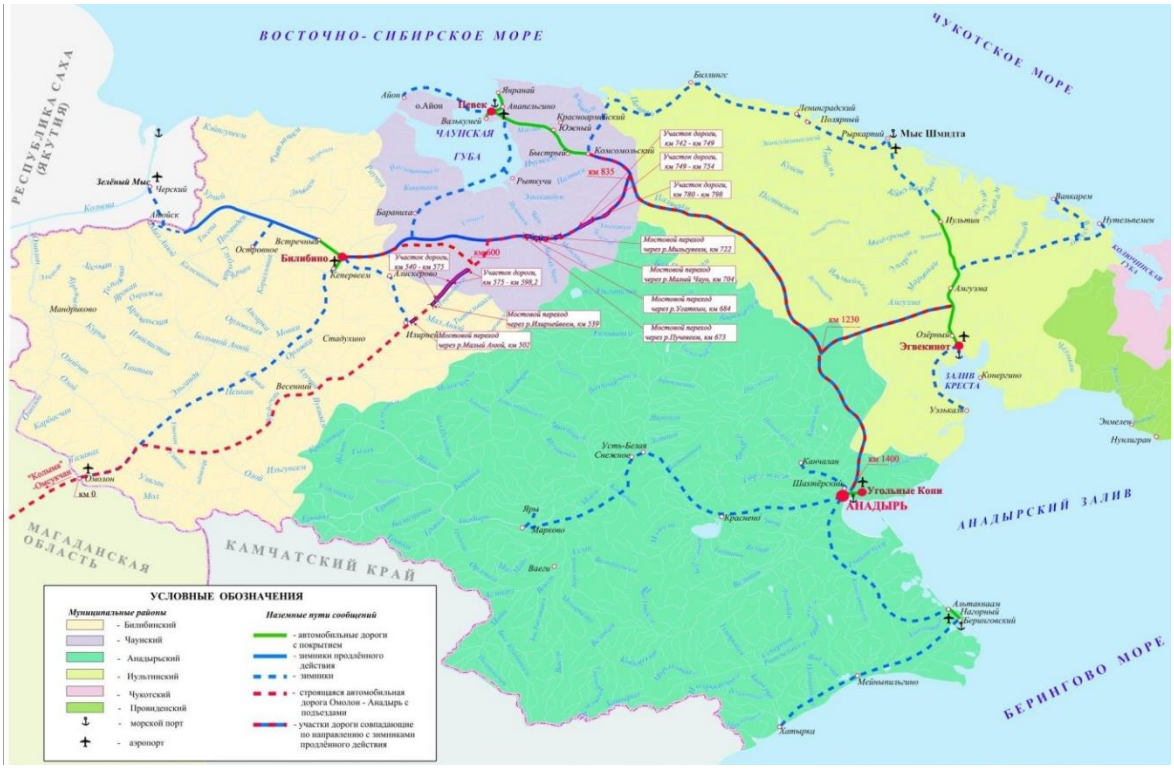

Figure 7. Map of roads in the Chukotka Autonomous Okrug

Strategically important from the point of view of providing the Okrug with essential goods, as well as the development of enterprises focused on exporting products to the Asia-Pacific countries, is the port infrastructure, the state of which critically affects the efficiency of importing essential goods during the navigation period. In order to improve the efficiency of the "northern" delivery, as well as to ensure economic growth, within the framework of the Strategy, it is planned to reconstruct and expand the port infrastructure of the Chukotka Autonomous Okrug, incl. the seaport of Beringovsky, necessary to increase the number and further development of residents of the Chukotka ASEZ (Figure 7).

To ensure economic growth and improve the living standards of the population until 2030, it is necessary to increase the number of domestic and international flights with a simultaneous decrease in their cost, as well as the reconstruction of airport infrastructure that provides cargo traffic during the non-navigation period and passenger traffic all year round (Figure 8).

An important external factor in overcoming the isolation of the Chukotka Autonomous Okrug from other regions of the Russian Federation and other states is the planned multiple increase in the traffic of the Northern Sea Route, which will reduce the cost and increase the range of goods imported during the navigation period (including the possibility of importing and, as a result, , use of liquefied natural gas for energy needs of the District). The implementation of this project will require a large-scale reconstruction of the port infrastructure of most of the "northern" cities of Russia, incl. seaport of Pevek.

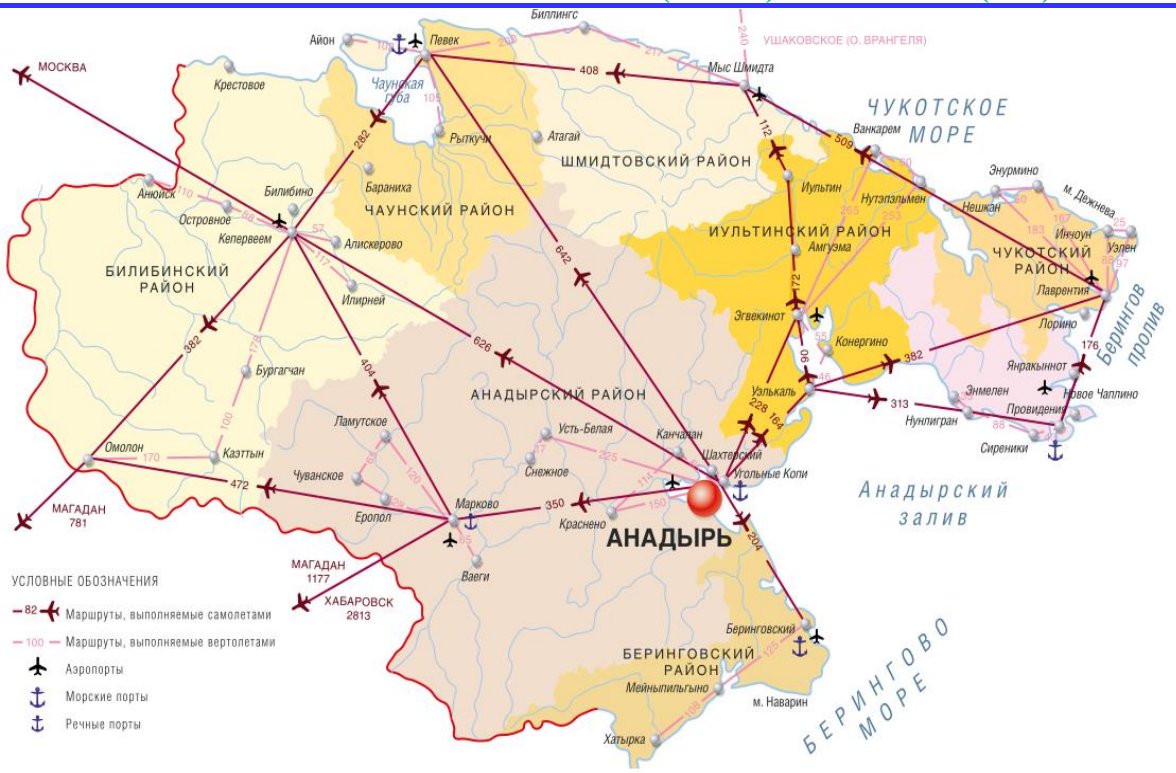

Figure 8. Air traffic in the Chukotka Autonomous Okrug

The key direction for the development of the Chukotka Autonomous Okrug in the field of information and telecommunication technologies is to improve the quality (including speed and coverage) and reduce the cost of Internet access services, necessary to improve the quality of life of the population of the Chukotka Autonomous Okrug, incl. through the development of telemedicine, distance learning and e-government services. Improving the quality of communications can be implemented in two ways: The first is to expand the resource of satellite communications coming to the Chukotka Autonomous Okrug. The second is the construction of FOCL.

The expansion of the satellite communication resource does not require significant capital and operating costs, and can also be implemented in a short time (unlike the construction of fiber optic lines), however, to reduce the cost of Internet access, significant annual subsidies for tariffs for these services will be required, as well as periodic (as growth in demand) re-expansion of the resource. This option is optimal for the settlements of the Chukotka Autonomous Okrug, to which, due to the small number and remoteness, it is not economically justified to lay FOCL.

The construction of FOCL is a more capital-intensive, but more systemic solution that will significantly improve the quality of Internet access services provided while significantly reducing their cost. As part of the implementation of the Strategy, it is necessary to determine the option for laying the cable. At the moment, an option is being considered that implies providing the western part of the Okrug with high-speed Internet by synchronizing the laying of fiber optic lines with the energy bridge construction project, and the eastern part by building an underwater fiber optic trunk from the Kamchatka Territory to the Chukotka Autonomous Okrug. According to preliminary estimates, the cost of construction will be about 4 and 8 billion rubles. respectively.

To select the optimal option for providing the Okrug with high-quality and affordable Internet, a feasibility study of each of the considered options is required.

To date, in the demographic policy of the Chukotka Autonomous Okrug, the most priority area of the Government's activity is to reduce the migration outflow of the resident population. To this end, the Okrug will work to increase the number of economic and social benefits available to the population, which will increase the attractiveness of the region, reducing the proportion of the population migrating to other regions. In addition, the attraction of labor force to the facilities planned for development should lead to a migration influx of the population.

Other areas that will also receive attention include:

− Increasing birth rates by developing mechanisms to support young families and families raising children within the framework of social support for the population;

− reduction of mortality rates due to the development of the healthcare sector.

The development of the Okrug's health care will be focused on solving key problems: increasing the logistical accessibility of the services provided and the

provision of the population with medical personnel, incl. through the use of modern technical solutions.

The key areas of healthcare development in the Chukotka Autonomous Okrug include eliminating the shortage of personnel, especially narrow specialists. To solve this problem, it is planned to implement programs to attract medical specialists and develop telemedicine.

The use of modern telecommunication technologies is one of the most promising areas in the healthcare sector, allowing to increase the availability and quality of services provided while reducing costs. With their help, it is possible to organize consultations for residents of remote settlements, where there is an objective lack of opportunity to accommodate the necessary specialist on a permanent basis, and the costs of visiting the necessary specialist to the patient are high. This is especially true in the context of a shortage of medical specialists, incl. narrow specialists.

An important direction in the development of health care in the Okrug is to increase the availability of medical diagnostics, including high-tech ones. Due to the low population density in the Chukotka Autonomous Okrug, there are problems with the provision of diagnostic services to all residents, which makes this area extremely relevant. One of the main options for solving the problem under consideration is the placement of diagnostic equipment in settlements without the placement of specialists involved in the interpretation of diagnostic results in the field. The results will be transmitted to healthcare institutions with the necessary specialists, using telecommunication technologies. This measure will reduce the workload, as well as improve the quality and availability of diagnostic services for the population.

Another tool for providing healthcare services "at a distance" is the development of systems for remote monitoring of the health of patients, providing patients with the means to independently monitor their health in order to detect diseases in a timely manner.

The priority areas of development include reducing the degree of depreciation of the infrastructure of medical institutions. Due to the climatic features of the regions of the Far North, the cost and frequency of capital and current repairs of infrastructure facilities significantly exceeds the average Russian indicators. The use of telemedicine and the creation of mobile medical centers will reduce the demand for the creation of new health infrastructure facilities, but will not affect the need for major repairs of existing facilities. In order to improve the quality of services provided, additional capital investments are required to renovate the district's medical facilities.

Additional areas of development in the healthcare sector include:

− elimination of territorial disproportions in the provision of medical personnel and medical services (in addition to the use of telemedicine, it is necessary to develop the social and medical service “Mobile Brigades”);

− development of specialized emergency medical care and medical evacuation, mainly air ambulance as the main method of emergency medical evacuation, taking into account existing infrastructural restrictions and climatic conditions (including through the acquisition of a second specialized aircraft);

− development of advanced training programs for medical workers;

− development of a regional medical information system;

- increasing the volume of medical care provided for prevention purposes;

− improving measures to combat socially significant diseases, carrying out activities to raise public awareness of the risks associated with the consumption of tobacco and alcohol products, drugs.

The main vectors for the development of the education sector in the Chukotka Autonomous Okrug until 2030 are increasing the availability and quality of education, as well as modernizing the educational infrastructure.

In order to improve the availability and quality of education, especially in remote areas, attention will be paid to the development of distance education systems using information and communication technologies, e-learning. At present, the digitalization of society sets new educational standards. Increasing the availability of information and communication technologies in educational institutions will provide additional opportunities in education for students, will allow classes with specialists who are not available in the educational institution itself, and will also increase the availability and variety of additional education disciplines.

One of the most urgent problems in the field of education in the Chukotka Autonomous Okrug is the transition of all schools in the district to teaching in one shift. In accordance with the list of instructions of the President of Russia dated December 5, 2014 No. Pr-2821 and the order of the Government of the Russian Federation dated October 23, 2015 No. 2145-r "On the program" Assistance in the creation in the constituent entities of the Russian Federation (based on the predicted need) of new places in general educational institutions” for 2018-2025” in general educational institutions, a transition to one-shift training is required, which necessitates the creation of a new educational infrastructure that can meet the established requirements.

The need to expand the educational infrastructure in connection with the transition to one-shift training is exacerbated by the problem of significant accumulated depreciation of the existing infrastructure. Significant funding is required to overhaul the existing infrastructure, as well as to build new buildings.

Among other areas of development in the educational sphere, the following stand out:

− creation of own higher educational institution;

− increasing the percentage of coverage of children with additional education services, including

through the construction of new infrastructure and distance learning;

- increasing the level of individualization of general education programs, as well as their integration with programs of additional and professional education;

− improving the conditions for providing full-fledged education opportunities for people with disabilities, including through the development of distance learning, the construction of new infrastructure;

− expanding the use of WorldSkills methods in secondary vocational education aimed at raising the status and standards of vocational training, increasing the flexibility of educational programs;

− improving the professional competencies of employees of educational institutions through the implementation of advanced training programs, the development of mentoring;

− attracting qualified specialists (including young ones) from other regions in the field of secondary vocational education and higher education.

In the sphere of culture of the Chukotka Autonomous Okrug, the following areas of development are distinguished:

− ensuring the preservation and development of the cultural heritage of the Chukotka Autonomous Okrug;

− attraction of qualified specialists (including young ones) from other regions;

− modernization of the material and technical base of cultural institutions;

− increasing the availability of cultural services for the population, including through the introduction of information technologies.

In the field of physical culture and sports, it is planned to work in the following areas of development:

− development of sports infrastructure in order to increase the availability of physical culture classes;

− promoting a healthy lifestyle among the population, increasing the proportion of people involved in physical activity;

− development of folk games and national sports of the peoples of the Chukotka Autonomous Okrug.

Attracting skilled labor and reducing migration outflow is impossible without providing the population with comfortable living conditions that meet modern standards, which is especially important for the northern regions due to adverse climatic conditions.

The key direction of development in this area is to reduce the degree of depreciation of the housing stock. To this end, it is planned to implement a project to relocate Okrug residents from buildings that were recognized as unsafe after January 1, 2012. According to preliminary estimates, this program will affect about 1,300 residents. At this stage, it is planned to resettle 635 emergency residential premises, for which more than 20 thousand m2 of new housing space will be built. Due to budgetary restrictions, about 30% of residential premises (~300 premises) will remain unaffected. Their resettlement will require the allocation of additional funding. Other areas of development in the housing sector include:

− issuance of federal housing certificates to residents of closed settlements;

− keeping utility tariffs close to the average Russian level;

− further improvement of water quality in settlements, incl. through the implementation of measures to improve the quality of water in settlements, as well as the creation of local treatment facilities;

− attraction of investors in order to increase investment activity in the housing market.

Within the framework of social protection of the population, in addition to the activities already implemented, the following priority areas of development are identified:

− improvement of mechanisms for providing targeted payments to socially unprotected categories of the population;

− increasing the availability and quality of social services, including expanding the list of social services provided remotely, modernizing the material and technical base of social protection organizations and developing mobile points for the provision of social services.

In order to promote the socio-economic development of the indigenous peoples of the North, the following key areas are identified:

− support and development of the main types of traditional economic activities: domestic reindeer breeding and sea fur hunting;

− measures to ensure employment of the rural population by involving in the construction and repair of social infrastructure facilities, organizing self-employment, developing the infrastructure for traditional folk crafts (fishing, hunting, collecting wild plants, bone carving);

− improvement of measures to reduce the susceptibility of indigenous peoples to alcoholism;

− preservation of interethnic peace and harmony, harmonization of interethnic (interethnic) relations;

− preservation of the national and cultural identity of the peoples of the Chukotka Autonomous Okrug: folk art, cultural traditions, linguistic heritage, including through the continuation of the successful practice of holding festivals of the culture of indigenous peoples and national sports.

The forecast of indicators for the development of the economy of the Chukotka Autonomous Okrug in general and its key industries in particular is built in three scenarios: conservative, base, target.

The conservative scenario implies the inertial development of the region: the Okrug will continue to be mono-dependent on the gold mining industry, the volume of public and private investments attracted will be significantly lower than expected, the Baimskaya ore zone development project will not be implemented.

The baseline scenario implies partial

implementation of the investment projects stated in this Strategy: the volume of investments and coal production at the deposits of the Bering coal basin will be fixed at the minimum values \u200b\u200bspecified in the agreement on the TOP (750 thousand tons), the project for the development of the Baimskaya ore zone will be implemented in full.

The target scenario implies the full implementation of the investment projects stated in this Strategy, in particular, the development of the Baimskaya ore zone and bringing production at the deposits of the Verkhne-Alkatvaamsky site of the Bering coal basin to 5 million tons with the attraction of the necessary investments for this. Implementation of promising, but currently not being developed projects (for example, the development of the Amaam deposit in the Bering coal basin, the Pyrkakai stockwork tin deposit, the gold ore deposits of the Chaun-Bilibino industrial zone not specified in this Strategy, as well as oil and gas fields in the Anadyr basin) within the framework of no target scenario.

Within the framework of the section, the expected results of the implementation of the Strategy by 2030 for the target scenario are given. The values of the Okrug's key development indicators for other scenarios are given in the Appendix to this Strategy.

By 2035, as a result of the implementation of this Strategy, the Okrug's economy is expected to grow significantly. The main growth will occur due to a multiple increase in coal production, as well as the start of industrial production of copper concentrate. The development of the Okrug's infrastructure will provide opportunities for the intensive development of the extractive industries, which, taking into account the multiplier effect, will increase the revenue of the Chukotka Autonomous Okrug by 2.9 times, and the gross regional product by 2.7 times.

The active implementation of projects for the development of the Okrug's deposits rich in minerals will qualitatively change the structure of the gross regional product. The share of the Okrug’s base sector (extraction of precious metals) in GRP will decrease from 41.7% in 201710 to 14.6% by 2035, which, along with the development of the copper and coal industries, will allow diversifying the Okrug’s mining industry (avoiding single-product industry) and, as a result, will ensure greater sustainability of the development of the region's economy. The contribution of the extractive industry as a whole to GRP will increase from 43.0% in 2017 to 57.7% in 2035.

The key result of the implementation of the Strategy will be a significant increase in income and living standards of the population of the Chukotka Autonomous Okrug, supported by economic growth and improved quality of social services. As a result, from 2017 to 2035. it is planned to increase the income of the population by 67.0%.

The implementation of the Strategy will make it possible to significantly increase the own revenues of the consolidated budget of the Chukotka Autonomous Okrug. The accelerated growth of the mining industry and, as a result, the tax base for key taxes for the Okrug (profit and income tax and taxes, fees and regular payments for the use of natural resources) will ensure a 2.5-fold increase in tax revenues of the budget by 2035.

A significant increase in own revenues will significantly reduce the amount of subsidies to the consolidated budget of the Chukotka Autonomous Okrug (by 2.1 times by 2035) without reducing the volume of public investment, make a net cash flow for the federal budget (the difference between the amount of revenues to the federal budget of taxes and fees from the Chukotka Autonomous Okrug and the value of gratuitous receipts to the consolidated budget of the region from the federal budget) positive by 2028.

In 2028-2035 net cash flow for the federal budget will stabilize at the level of 10 billion rubles. and will continue to grow. Such significant growth will be ensured by increasing production at the fields of the Bering coal basin in 2019-2025. and the launch of the Peschanka deposit in the Baimskaya ore zone in 2025.

Conclusion

To achieve the goal and objectives of this Strategy, the main activities of the Government of the Chukotka District should be coordinated with actions at the federal and municipal levels, and it is also necessary to develop various forms of public-private partnership.

To attract investments in the mining industry of the Okrug and the production of socially significant goods, it is necessary:

− provide the necessary transport and energy infrastructure for the Chukotka ASEZ (with the involvement of budgetary and non-budgetary sources of financing);

− to develop the transport infrastructure of the FPV Pevek in order to attract residents and develop the production of consumer goods (with the involvement of budgetary sources of financing);

− provide comprehensive consulting, informational and administrative support to potential investors.

As part of the spatial development (removal of infrastructure restrictions) of the Chukotka Autonomous Okrug, it is necessary to:

− introduce digital mechanisms for planning, selecting options for the development of the energy system and assessing the economic (tariff) consequences of the construction and operation of energy infrastructure facilities;

− update program documents for the development of energy infrastructure: schemes and programs for the development of the electric power industry, programs for the integrated development of housing and communal services and investment programs of resource-supplying organizations;

− develop plans for the use of alternative sources of fuel and energy resources in connection with the

opening of access to the market for LNG supplied from the South Tambey gas condensate field (Yamal LNG);

− encourage private investment in the construction and operation of energy infrastructure through the principles of concessions and public-private partnerships;

− develop and implement measures to improve the energy efficiency of the population and equivalent subsidized categories of consumers;

− develop and implement regional programs to improve the performance of resource-supplying organizations with the introduction of additional regulatory tools that encourage companies to optimize costs (required gross revenue) in the long term;

− create a telecommunications infrastructure that provides the population with high-quality Internet access at low prices (with the involvement of budgetary sources of financing). To select the optimal option, a detailed study of the feasibility study of two options for expanding Internet access is required. It is necessary to comprehensively take into account the parameters of the predicted volume of data transfer on the one hand and the volume of capital and operating costs, as well as subsidies on the other, in order to most effectively solve the problem of the existing deficit.

To improve the quality of the provision of social services to the population of the Chukotka Autonomous Okrug, it is necessary to:

− develop modern forms of providing social services (health care, education, culture, sports) and public services to the population of remote small settlements, incl. remote (using digital technologies) and mobile forms of providing medical services, additional education and services of cultural and leisure organizations;

− carry out a major overhaul and reconstruction of the existing ones, as well as build the missing social facilities, incl. through the development of concessions and outsourcing in the field of maintenance and operation of social facilities;

− provide support to socially vulnerable groups of the population, incl. in the purchase of housing;

− promote the resettlement of the population from areas with declining economic activity;

− provide financial and organizational support for the development of traditional industries of the indigenous population and the preservation of the cultural heritage of the Chukotka Autonomous Okrug.

The strategy provides for co-financing of a number of projects and activities from the federal and regional budgets as part of the implementation of priority national projects, federal and regional (state) targeted programs, as well as from extrabudgetary sources using public-private partnership mechanisms. Considering the features of the strategy of socio-economic development of the Chukotka Autonomous Okrug - in order to provide favorable conditions for attracting investments in it, ensuring comfortable living conditions for the population of this region. At the same time, in this region it is planned to implement the problems caused by the unsatisfactory state of transportation, namely, the need to build and commission new and reconstruct existing roads,

The system of 7 strategic directions is linked to 7 long-term strategic goals and is generally aimed at creating conditions for the integrated development of human potential and the consolidation of the population in the republic through providing basic needs in education, healthcare, infrastructure, a favorable environment, jobs, including highly qualified, concomitant development of services and institutions (Table 9).

Table 9. Priority areas and strategic goals of the Strategy

Strategic Direction	Strategic goal
Infrastructure for life	Improvement of transport, engineering, housing and communal infrastructure as a necessary condition for the development of the economy and the social sphere
Development of the economy and entrepreneurship	creating new jobs, increasing investment attractiveness, pursuing a cluster policy, developing traditional industries and services, creating conditions for the development of new industrial clusters
Development of tourism and hospitality industry	preservation of the cultural and historical heritage of the Arctic regions: Yamal - Nenets Autonomous Okrug, Krasnoyarsk Territory, Republic of Sakha (Yakutia), Chukotka Autonomous Okrug, Komi Republic, creation of a modern hospitality industry in the Arctic regions: Yamal - Nenets Autonomous Okrug, Krasnoyarsk Territory, Republic of Sakha (Yakutia), Chukotka Autonomous Okrug, Komi Republic.
Sustainable spatial development	expansion of international cooperation, implementation of a balanced spatial policy aimed at strengthening the economies of municipalities in the regions of the Russian Arctic: the Murmansk region, the Republic of Karelia, the Arkhangelsk region, the Nenets Autonomous Okrug, the creation of a comfortable urban environment, the introduction of new technologies
Enhancing environmental sustainability and safety	implementation of the value system of sustainable development, green economy, ensuring the reproduction of a healthy population, as well as the growth of life expectancy and quality by solving environmental problems to pass on to future generations for subsequent multiplication of the opportunities that the region currently

	has
social development	ensuring a high quality of life for the population by increasing the availability of high-quality social services, the implementation of spiritual and cultural development, interethnic harmony
Effective Governance: Implementation Tools	creation of a modern development management system, introduction of advanced practices of public participation, new instruments of tax, budget and investment policy

The implementation of the Strategy is designed to respond to the main demographic challenge of the long-term development of the Russian Arctic regions. In conditions of rather high mobility of the population, people choose to live in those regions where they can realize their potential. The answer to this should be an appeal to the needs and capabilities of each inhabitant of the regions of the Russian Arctic and positioning the state as an assistant, the role of civil society in governance should be radically changed, mechanisms for effective feedback from residents should be established. Therefore, at the center of the Strategy are people and their well-being.

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